The leprosy elimination campaign in Jigawa, Nigeria: an opportunity for integration

ABDULLAH NAMADI*, JAN VISSCHEDIJK** & KEFAS SAMSON***
*State Tuberculosis and Leprosy Co-ordinator, Jigawa State, Nigeria
**Public Health Specialist, KIT (Royal Tropical Institute), Amsterdam, The Netherlands
***Medical Advisor, Netherlands Leprosy Relief, Bukuru, Nigeria

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Summary Integration of leprosy control into the general health services is regarded as an important condition for increasing the accessibility and sustainability of leprosy services. However, it is often difficult to embark on such an integration process. In Jigawa State in Northern Nigeria, the leprosy elimination campaign was used as the initiator and catalyst for the integration process. In this article, this challenging process is described and analysed. Available information is used to identify the constraints that emerged and to assess the consequences of integration for important aspects of leprosy control, such as case detection and case-holding and the accessibility and quality of the provided services. Some lessons from this experience are drawn that can be helpful for integration in other States or countries.

Introduction

There is world-wide consensus that in endemic countries, leprosy services should become an integral part of general health services to ensure the sustainability of leprosy control.1 In this context, integration means that leprosy control activities are conducted mostly in multi-purpose settings by health workers within the general health services. Integration enhances the cost-effectiveness and accessibility to leprosy services.2,3 Furthermore, integration of disease control programmes, including leprosy control, is part and parcel of health sector reforms that are currently taking place.4 Hence, in many countries, including Nigeria, integration has been adopted as a core strategy in national health policies.5 However, at the same time, some doubts have been expressed regarding the consequences of integration for the quality of leprosy services6 In addition, the process from a vertical to a more integrated approach has been regarded as a challenging one, in which several hurdles have to be taken and some basic conditions have to be fulfilled.3,7

Correspondence to: J. Visschedijk, Department of Health, KIT (Royal Tropical Institute), PO Box 95001, 1090 HA Amsterdam, The Netherlands (e-mail: j.visschedijk@kit.nl)
In this paper, we describe and assess the experiences in Jigawa State, Nigeria in the process of integrating leprosy services over the past 3 years. It illustrates that leprosy elimination campaigns (LECs) can constitute an opportunity to facilitate the integration process. The paper first elaborates on the context in which leprosy services are provided in Jigawa State and describes how a LEC was used in the process towards integration. Then, the consequences in terms of coverage and quality of services will be indicated. Finally, lessons learned and conditions for successful integration are presented.

**Leprosy and leprosy services in Jigawa, Nigeria**

Nigeria is a federal republic, consisting of 36 semi-autonomous states and a Federal Capital Territory (FCT). The political and administrative structure is such that significant power resides at State level to carry out statutory responsibilities including health care delivery. Though a National Tuberculosis and Leprosy Control Programme (NTBLCP) exists, the State is responsible for the implementation of disease control programmes, including a combined leprosy and tuberculosis programme. Each State consists of a varying number of Local Government Areas (LGAs). While the State is responsible for the secondary health institutions, LGAs are in charge of the primary health care (PHC) units. In some of these units leprosy multi-drug therapy (MDT) clinics are located.

Leprosy is an important public health problem in Jigawa. The prevalence in 1998 was 2.0 cases per 10,000, while the case detection rate was 1.9 per 10,000. The majority of the cases were multi-bacillary (MB). The proportions of patients with WHO grade 2 disability and children were still high (14% and 21%, respectively, in 1998).

Jigawa is one of the most Northern States in Nigeria, bordering Niger. In 1998 it had an estimated population of 3.6 million. Jigawa State is divided into 27 LGAs and has 368 health facilities. In 1998, MDT clinics were located in 75 out of the 368 health facilities (mostly PHC-units), in which the leprosy services were provided by vertical LGA leprosy staff, with very limited participation of the general health staff. At best, general health staff referred suspected cases to the MDT clinics, which were fixed on certain ‘clinic days’. During these days, the vertical LGA leprosy staff (one for every two to four LGAs) visited the MDT clinics to diagnose, treat and follow up patients. The programme was managed by the State Tuberculosis and Leprosy (TBL) Control Programme Team, which was headed by the State TBL Co-ordinator. Financial inputs to the programme were provided by the Federal Government, the State government and the Netherlands Leprosy Relief (NLR).

**Process of integration**

Already in 1996, the State TBL Control Programme Team considered integration as the most appropriate strategy to address its most pertinent challenges: i) leprosy was still widely spread and affected all LGAs and ii) vertical leprosy staff had to travel long distances to deliver treatment, enhancing costs tremendously and hampering the availability and quality of services.

Consequently, advocacy visits were made by the State TBL Control Team to all the LGAs to explain the importance of integration. This was followed in the same year by training of general health staff of the PHC units. Unfortunately, this effort was not very successful. After
the training courses, only about 25% of the trained general health staff attended the MDT clinic sessions and less than 10% participated actively. These disappointing results were attributed to fear of contracting the disease, the stigma of leprosy and lack of incentives which were normally given to vertical LGA leprosy staff (allowances and motorcycles), combined with the reluctance of the vertical staff to hand over the services. Even when in 1997, a special bill by the State Council was formulated indicating that leprosy patients should be treated like any other patient in all health facilities in Jigawa State, no significant change in the participation of general health staff in leprosy services occurred.

However, in 1999, a new opportunity emerged when WHO proposed to carry out a Leprosy Elimination Campaign (LEC) in Jigawa State, which was supplemented by NLR. The State TBL Control Programme Team reconsidered the introduction of integration, this time by utilizing the LEC. The advantages and disadvantages of LECs were assessed (see Box 1).

**Box 1. Leprosy Elimination Campaigns — pros and cons**

Leprosy Elimination Campaigns (LEC)s have been introduced by WHO to strengthen the process of ‘elimination of leprosy as a public health problem’. Guidelines were provided for the implementation of these campaigns.\(^8\) LECs have been implemented in different modes in several leprosy endemic countries, including Nigeria.\(^9\) The main objective of LECs was to detect patients, particularly the hidden cases in the communities, and to cure them with MDT. LECs were originally intended to be ‘one-time’ activities.\(^10\) Many new cases have been found worldwide and the number of new cases detected has increased substantially.\(^11\) However, disadvantages have also been observed. As a result of the strong focus on quick results, particularly when they are dominated by active case-finding surveys, LECs may hamper the development of effective and sustainable leprosy services.\(^10,12\) Furthermore, LECs may enhance over-diagnosis and unnecessary treatment of self-healing types of leprosy. In addition, actively detected patients are more prone to default than self-reporting cases and special activities may increase the stigma of leprosy as a special disease.\(^10\) Experience and evaluation of these campaigns are necessary to improve their methodology.\(^13\)

The State TBL Control Team felt that the funding opportunities and the momentum created by the LEC could be utilized as a start and catalyst for the integration process. Furthermore, it was decided, as part and parcel of the integration process, to accelerate the expansion of leprosy services, i.e. making these services available in many more health facilities.\(^14\) Some limited expansion of the vertical leprosy services had taken place since 1994, when only 28 MDT clinics existed. The integration process aimed to have leprosy services, such as diagnosis, treatment, detection of complications and monitoring, carried out by general health staff. It was accepted that at the LGA level a specialized supportive category of staff would still be required. Therefore, the previous vertical LGA staff would be converted into technical leprosy (and tuberculosis) supervisors for the general health staff.

As preparation for the integration process, the State LTB Control Programme Team held a special meeting with all vertical LGA leprosy staff. This meeting revealed that most vertical leprosy staff were not in favour of integration, mainly due to the perceived threat to their job, status and incentives, including their project motorcycles. Their fears were the result of uncertainties about their future role in the general health services. However, these concerns
were taken seriously and discussed. Particularly the new responsibilities to give technical support to the general health workers and to monitor the programme were emphasized. It was also agreed that general health staff would not only run the new MDT clinics but that current MDT clinics would also be ‘handed over’ to the general health staff.

Since the LEC was used as a start of the integration of leprosy services, general health staff had to be trained on all aspects of leprosy control, such as case-finding, treatment, detection of leprosy reactions and patient-monitoring. This made the initial planned 4-h training time insufficient. With supplemental donor funding, the training time could be extended to 3 days. A total of 304 general health workers and 368 community volunteers were trained within 2 weeks, in order to enhance leprosy awareness not only among the health staff, but also in the various communities. In order to ensure the confidence and co-operation of the vertical LGA leprosy staff, it became expedient to train them specially in functioning as real supervisors. They were prepared by the Jigawa State LTB Team, which followed a special training on supervision at the National TB and Leprosy Training Centre (NTBLTC). Advocacy visits were made to all stakeholders at State and LGA level and community awareness was raised through messages in the local radio and television stations. Posters and town criers were also used during the campaign.

The campaign was conducted between February and May 1999. PHC staff screened the suspects and LGA leprosy staff confirmed the diagnosis before registration. When cases were registered, the PHC staff were immediately given the responsibility for their treatment. They were further informed on how to implement monthly examination of patients, drug administration and how to suspect and treat (and, if required, to refer) complications. The new role of the LGA leprosy staff as technical supervisors and facilitators was reiterated. The state team monitored the exercise. Teams to trace irregular patients were formed. They comprised of PHC staff, village voluntary health workers, community leaders and some cured leprosy patients.

During the exercise, data were routinely collected by the State TBL Team in relation to coverage of services and case detection. Other aspects of quality of care, such as case-holding, tracing of irregular patients and detection of leprosy reactions were monitored in a later phase.

Findings and results

Coverage and Expansion

In 1999, 76 new, integrated MDT clinics were opened and the existing 75, which were previously run by the LGA leprosy staff, were transferred to general health staff. Therefore at the end of the year 1999, Jigawa state had 151 MDT clinics out of the existing 368 health facilities (see Figure 1). All these clinics were fully integrated. The experiences gained during the LEC were utilized to further train PHC staff and open more MDT clinics. At the end of the year 2000, leprosy services were being provided by general health staff in 264 health facilities.

Case Finding

In 1999, 1971 new cases were found of which 922 were diagnosed during the LEC. In the year after integration (2000) the number of the new cases detected was 692 (see Figure 2 and
Figure 1. Expansion of leprosy services within 368 existing health facilities (1995–2000).

Figure 2. Case detection rate (1995–2000).

Table 1). Almost all patients were detected through self-reporting. The proportion of patients with WHO disability grade 2 among the new cases in 2000 was 10.8%, against 13.7% reported in 1998.

QUALITY OF SERVICES

Two aspects of the quality of services could be assessed, i.e. case holding and detection of leprosy reactions. The proportions of patients completing treatment in the year before the integration exercise (1998) were 90.7% for PB and 69.7% for MB, while in 2000 these figures were respectively 83.7% and 82.8% (see Figure 3). In 2000, 78.8% (104 out of 132) of the patients that were irregular were traced against 63.7% (58 out of 91) in 1998. Patients were considered irregular when they did not report for 2 consecutive months.

In 2000, 26 patients with leprosy reactions were detected against 15 patients in 1998. Often these patients were referred from the field to the State TBL Referral Centre.
Table 1. Basic indicators leprosy control 1995–2000, Jigawa State

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<tr>
<td>Total number of cases registered at the end of the year</td>
<td>766</td>
<td>906</td>
<td>1105</td>
<td>687</td>
<td>1131</td>
<td>836</td>
</tr>
<tr>
<td>Prevalence rate per 10,000</td>
<td>2.7</td>
<td>3.0</td>
<td>3.3</td>
<td>2.0</td>
<td>3.7</td>
<td>2.3</td>
</tr>
<tr>
<td>Total no. of cases detected during the year</td>
<td>367</td>
<td>524</td>
<td>521</td>
<td>649</td>
<td>1971</td>
<td>692</td>
</tr>
<tr>
<td>Case detection rate per 10,000</td>
<td>1.3</td>
<td>1.6</td>
<td>1.5</td>
<td>1.9</td>
<td>5.5</td>
<td>1.9</td>
</tr>
<tr>
<td>Proportion of new cases with disability grade 2 (%)</td>
<td>19.3</td>
<td>13.7</td>
<td>24.9</td>
<td>13.7</td>
<td>10.8</td>
<td>10.8</td>
</tr>
<tr>
<td>Proportion of children among new cases (%)</td>
<td>10.6</td>
<td>13.7</td>
<td>15.9</td>
<td>20.9</td>
<td>20.4</td>
<td>20.2</td>
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Figure 3. Proportion of patients completing treatment (1998–2000).

Discussion

The integration process, utilizing the LECs, has increased the number of new MDT clinics substantially. This has significantly improved the accessibility to leprosy services. The coming years will clarify what the impact will be on case-finding and case-holding of leprosy patients. Comparing the number of new cases detected 1 year before and 1 year after integration, a slight increase can be found. This is remarkable, since as a result of intensified active case-finding fewer patients are expected in the year immediately after such an exercise. However, the enhanced coverage of MDT clinics, an increase in community awareness, or over-diagnosis of leprosy by the general health staff may be contributing factors.

In 1999, more than three times the usual number of leprosy patients were found. Together, with the high proportion of children among the new patients it illustrates that the leprosy problem in Jigawa State is far from over. In fact, these figures stress the need for sustained leprosy control efforts. They also highlight the fact that many patients were not reached by the limited MDT-clinics available before 1999. They underline the need for better coverage and for more sustainable leprosy services, and thus for integration of leprosy control within the general health services.

Improved coverage should not be at the expense of the quality of services. Although it is difficult to assess the long-term consequences, the information available so far gives some
indication of important aspects of the quality of the integrated leprosy services. Figures for case-holding do not reveal any deterioration of compliance. In fact, a higher proportion of MB patients completed treatment in 2000 than in 1999. Also, information available concerning the prevention of disabilities during MDT indicates that after the integration process more leprosy reactions were found than before. Though not yet conclusive, such early results are important, particularly to demonstrate to other stakeholders and decision-makers that integration is a feasible option. In Jigawa these results have enhanced the commitment towards the integration process.

As in many other places, in Jigawa the LEC was initially seen as a means of reaching hidden cases and bringing them under treatment. The high proportion of MB patients, the high proportion of disability grade 2 among newly detected cases, and the high proportion of children were regarded as a justification for the campaigns. The intention of the Jigawa State TBL Control Team to enhance the sustainability and coverage has given the LEC a new dimension. Elements of the LEC such as community involvement, awareness and training of health workers were not only used for detection of new cases but also to prepare for the establishment of integrated leprosy control services. Advocacy visits to policy makers, for instance, were carried out to announce the elimination campaign and to discuss the integration process.

The failure to begin integration in 1996 illustrates that integration is not simple process. It requires careful planning and implementation. It may even start with a small number of health facilities as a pilot project or in a phased manner. Progress and constraints should be evaluated from time to time and, when necessary, corrective measures should be implemented. Also, in Jigawa, several hurdles had to be overcome. The vertical LGA leprosy staff had, for instance, to be convinced about the importance of integration. But, even after they understood the justification for integration, they were afraid of losing their special role in the programme or their job. Therefore, they sometimes tried to disrupt the integration process. Hence, it is crucial that during the integration process, LGA leprosy staff should have their roles clearly spelt out, including acceptable arrangements regarding remuneration and allowances.

The attitudes and fears of general health workers towards leprosy and leprosy patients were another constraint in the integration process. Though specialized leprosy workers may feel such fears unjustified and repulsive, they have to be taken seriously and they have to be addressed. In this context, it should be realized that the knowledge of leprosy among general health staff is generally rather limited. Furthermore, several operational constraints were encountered. Initially, there was, for instance, some over-diagnosis of leprosy by the general health staff. This was mainly caused by recycling of already treated patients with persistent skin patches. It was identified during supervisory visits by the state team. Such cases were reviewed by the LGA supervisors and removed from the register.

It was expected that the defaulter rate would be much higher. Because of a strict, though somewhat costly, strategy to trace irregular patients, most new patients completed their treatment. Nevertheless, despite the existence of tracing teams, irregularities of treatment were noticed among patients detected during LEC. It is expected that in future when most patients will report voluntary, less effort will be needed to ensure that they do not default.

The experience in Jigawa indicates that the start of an integration process requires substantial determination and funding. LECs can sometimes provide this starting capital and commitment and can be utilized for long-term achievements instead of short-term gains. In
Jigawa integration seems to be a promising option for sustainable and effective leprosy services, from which several lessons can be drawn (see Box 2).

**Box 2. Lessons learned**

- A process such as integration often needs starting capital and extensive campaigning. LECs can provide such an opportunity.
- Before starting integration, all relevant stakeholders should be consulted and consensus has to be reached about the integration process.
- It is important to involve vertical leprosy staff from the start. They should be informed about the advantages of integration and their own roles. Care has to be taken that they do not consider themselves as the losers in the integration process.
- The fears and reservations of general health workers towards leprosy and leprosy patients should be taken seriously. These should be addressed through training and discussions.
- Training of general health workers needs to be allocated adequate time to impart reasonable knowledge of basic leprosy to enable them to function in an integrated setting.
- Though integration is a process aimed at long-term gains, it is important to also have short-term results. Such results can convince other stakeholders and decision-makers, and will enhance the commitment towards the integration process.

So far, the available data concerning the integration process are promising, though should be interpreted with care. Long-term follow up is required to assess the full impact of integration. Operational research will be necessary to assess in more depth the exact consequences of integration on the quality of services.

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**References**