Linking private and public sectors in tuberculosis treatment in Kathmandu Valley, Nepal

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Tuberculosis (TB) is a major public health problem and the world’s foremost cause of death from a single infectious agent. Despite the increasing number of TB patients who seek help in the private sector, there are few practical examples of how to create a public/private linkage of TB services. The paper presents a pilot service-linkage project between the public and private sector in TB control in Kathmandu Valley, Nepal.

The study documents and examines the process of the service-linkage project through the undertaking of a longitudinal analytical case study. A detailed description of the project from formulation to a short-term evaluation is given. The analysis relates the activities and early outcomes of the service-linkage project to the context, characteristics and interactions of the organizations involved.

The study reveals that although the involved organizations initially agreed on the objective of the service-linkage project, differences in capacity, motivation, environment and needs had implications for the implementation and short-term success of the project. The public sector, despite the will, did not have the structure or resources to engage with the private sector. The private sector lacked interest in public health aspects of TB treatment and trust in the public sector. The study points to two different organizations that have the potential capacities to act as mediators between the public and private sectors: international research institutions and non-governmental organizations.

Key words: tuberculosis, service linkage, public/private sectors, Nepal

Introduction

Tuberculosis (TB) is the world’s foremost cause of death from a single infectious agent and a leading cause of morbidity in Asia (Raviglione et al. 1995). Control strategies include improvement of socioeconomic conditions, vaccination and treatment (Rodrigues and Smith 1990). This study focuses on the latter strategy, which targets both the individual with the disease, by curing him/her, and the community by preventing further spread of the bacilli. The organizations delivering the treatment are a key component in the TB control strategy, but have often been neglected in the analysis of programme effectiveness.

The World Health Organization (WHO) has promoted Directly Observed Therapy, Short course (DOTS) as the policy for delivering treatment (WHO 1994a). This strategy has largely been communicated to the public health sector and implemented with various degrees of success (Chaulk et al. 1995; Frieden et al. 1995; Morse 1996; Neher et al. 1996; Zhao Feng-Zeng et al. 1996; Chowdhury et al. 1997; McKenna et al. 1998; Zwarenstein et al. 1998). However, when public services are insufficient or do not meet the patients’ needs, TB patients turn to the rapidly growing private health sector. Studies from India have shown that two-thirds of TB patients had visited private practitioners when they first developed chest symptoms, and more than half had been diagnosed by private doctors (Juvekar et al. 1995; Uplekar and Rangan 1996; Uplekar et al. 1998). All of the published studies from Asia have identified important shortcomings in diagnosis and case-management of TB patients by private practitioners, including reliance on radiological diagnosis alone, inappropriate treatment regimens, failure to educate patients and poor case holding (Uplekar and Shephard 1991; Hong et al. 1995, 1999; Uplekar et al. 1996, 1998; March et al. 1996; Singla et al. 1998). The fear of ineffective treatment leading to continued transmission of infection and the promotion of multi-drug resistant TB has led to a debate about how to involve the private health sector in TB control (WHO 1994a; Brugha and Zwi 1998, 1999).

The traditional definition (Bennett 1991) of the private health sector includes the group of health care organizations and individuals not administered by the state. However, non-governmental or charitable organizations that are privately funded can be deemed to have a public mandate (Giusti et al. 1997). A public mandate is defined by a social perspective, non-discrimination, respect for the state’s health care policy and non-profit goals. In this paper the private practitioners are defined as licensed for-profit practitioners, excluding allopathic doctors working for non-governmental organizations (NGOs) or for-profit practitioners with a non-allopathic training. The public sector is defined as health care services
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of DOTS began in 1996 (NTP 1998a). The private sector
was adopted as a national policy in 1995. The implementation
5-year plan was developed (HMG/WHO 1995) and DOTS
focus was to implement an intensified TB control programme
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increase in the risk of infection in urban areas. It is estimated
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background.

tobacco industry (MoH 1991) and a special interest was taken in
allopathic licensed practitioners. The allopathic health sector has, from the beginning of its introduction in Nepal, been a
private element. Professionals commonly practise in both the
private and public sector, and private resources are the most
important source of health care financing. Little was known,
however, about referral patterns and the performance of the
private sector in general and private TB care in particular.

It was thought that Lalitpur municipality in the Kathmandu
valley was an appropriate location to set up a pilot project to
explore issues of service-linkage. TB was a serious public
health problem, the private sector was growing rapidly and the
political situation was relatively stable.

Methods

The study evolved through three overlapping phases, where
as much emphasis was placed on the process as on the out-
comes (Rist 1994; Morgan 1997).

The first phase of planning and exploration included the
conduct of a literature review, and meetings between the
representatives of the National Tuberculosis Centre, Nepal
and Nuffield Institute for Health (NIH), UK, for discussions
about the role of the private sector and the National
Tuberculosis Programme (NTP) in the SLP. In the summer of
1996, a Nepali researcher was hired by the NIH to implement
the project, which had been designed by the NTP with the
assistance of the NIH. One year later a European research
student joined the project. They were assisted by a former
District Tuberculosis/Leprosy Assistant. Door-to-door surveys
were conducted in the municipality to map the private sector
and provide pre-intervention data (Hurtig et al. 1999, 2000a,
b). Thirty semi-structured interviews with TB patients treated
in the municipality NTP programme were conducted.

The second phase of the study included the formulation and
implementation of the SLP. While the Nepali researcher was
firmly engaged in management of the SLP and action, the
main task of the European research student was to assist in
observation and documentation of the SLP. This intervention
process comprised of a constant interplay between action and
reflection guided by a quasi-ethnographic style of research
based on the principles described by Morgan and Smirchich
(1980) and Morgan (1997). It is an approach to research that
tries to document and understand the situation being encoun-
tered as fully and richly as possible, but is not always able to
produce the ‘thick descriptions’ on which pure ethnography
is based. The approach builds on the pragmatist tradition of
finding ways of linking theory and practice so that knowledge
can be action based and derived from practice in the real
world, and has frequently been used in organizational
research (Morgan 1993, 1997).

Observations were conducted, generally described as partici-
pant observation (Bernard 1988), while assisting in the daily
activities of the formulation and implementation of the SLP.
Records were taken immediately after or during events on
what people said and did, together with personal reflections.
Notes were typed daily for the sake of clarity. Participant
administered by the state. NGOs form their own independent
group of actors.

A need to explore the different incentives necessary to ensure
appropriate treatment of TB patients in the private sector has
been identified. Despite this, there are few practical examples
of how to create a public/private linkage in order to improve
the TB treatment service (Swan and Zwi 1997; Uplekar 1999).
The paper presents a pilot service-linkage project (SLP)
between the public and private sector in TB control in Nepal.
The analysis is explorative, seeking to discover the role of
different organizations in the SLP. The study aimed to
document and examine the process of the SLP through the
undertaking of a longitudinal analytical case study. The study
relates the activities and early outcomes of the SLP to the
case, characteristics and interactions of the organizations
involved.

The pilot project was initiated by the National Tuberculosis
Centre (NCT) in Nepal and the Nuffield Institute for
Health (NIH), Leeds, UK and implemented in Lalitpur
municipality, Kathmandu valley, Nepal. The project was
designed as ‘action research’ (Hart and Bond 1995; Morgan
1997). its aim to link public and private sectors in order to
improve treatment outcomes for TB patients initially
seeking care in the private sector, and to develop a detailed
protocol which could serve as a guideline for similar projects
elsewhere.

Background

In Nepal over 20 000 new cases of TB are diagnosed each
year, representing over 50% of estimated TB patients. The
treatment success rate is 77% of evaluated cases (65% of
registered cases) (NTP 1998a). The case notification rate is
currently 50 per 100 000 for smear positive TB and 107 per
100 000 for all forms of TB (NTP 1997), with rates of infec-
tion four times higher in the urban areas than mountainous
areas. The increased population density, migrating popu-
lation, homelessness and HIV infection all contribute to an
increase in the risk of infection in urban areas. It is estimated
that up to 50% of patients with TB are managed in the private
sector in urban areas, despite free treatment for TB being
available at most government health posts and district
hospitals (HMG/WHO 1995). The National Tuberculosis
Programme (NTP) has been strengthened and it has been
stated by WHO that there are good prospects for developing
a model programme for Southeast Asia (Pio et al. 1997).

After a joint review by His Majesty's Government of Nepal
and the WHO of the NTP in 1994, the immediate need of a
revised NTP was recommended. A WHO medical officer was
appointed to assist His Majesty's Government to plan and
implement the revised NTP. A clear national policy and
strategy for an intensified programme was developed. The
focus was to implement an intensified TB control programme
through the existing primary health care delivery system. A
5-year plan was developed (HMG/WHO 1995) and DOTS
was adopted as a national policy in 1995. The implementation
of DOTS began in 1996 (NTP 1998a). The private sector
was growing rapidly (NESAC 1998), encouraged by the
government (MoH 1991) and a special interest was taken in
allopathic licensed practitioners. The allopathic health sector
has, from the beginning of its introduction in Nepal, been a
private element. Professionals commonly practise in both the
private and public sector, and private resources are the most
important source of health care financing. Little was known,
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It was thought that Lalitpur municipality in the Kathmandu
valley was an appropriate location to set up a pilot project to
explore issues of service-linkage. TB was a serious public
health problem, the private sector was growing rapidly and the
political situation was relatively stable.
organizations were reviewed. Internal documents from local, national and international practitioners and public health sector personnel. Official and as NGO staff, representatives of donor agencies, private practitioners and public health sector personnel. Official and internal documents from local, national and international organizations were reviewed.

The third phase of the study was the evaluation and reflection of the first year of the SLP. Referral rates from the private sector and the 2-month sputum conversion rate were calculated (WHO 1996). Referral and sputum conversion data were noted on the treatment card of the patient. Such cards were provided to all patients within the NTP. Three hundred and thirty-three structured interviews were conducted with TB patients during the SLP to get more detailed information on referral patterns. The clinical records of all patients referred from the private sector were reviewed. Key informant interviews were conducted with seven private doctors who were known to frequently treat TB patients, with staff of NGO clinics and NTP representatives. Group discussions were also held with members of involved organizations on a local and national level. Forty-nine semi-structured interviews were conducted with private pharmacists (Hurtig et al. 2000a) to follow up the survey results from phase one of the study.

Patient and staff interviews were conducted in Nepal by the research assistant (the former District Tuberculosis/Leprosy Assistant) and interviews with private practitioners, donors and expatriates were conducted in English by the European research student. Group discussions were held by the Nepali researcher as part of implementation activities.

Analysis of quantitative data

Responses to structured questions were analyzed using EpiInfo statistical package version 6.04 (Centers for Disease Control, Atlanta, GA 30333, USA). The same software was also used for cohort analysis (WHO 1996) of TB patients in the study.

Analysis of qualitative data

The framework of analysis described by Morgan (1997) was used allowing for multiple and contradictory interpretations of the SLP. Eight metaphors (not presented in the paper) for the SLP were developed to allow exploration in an open-minded mode (Hurtig 2000c). A preliminary analysis was carried out 6 months after the implementation of the SLP to enable later research to focus on areas where data were inadequate or confusing. Many observations and interpretations of data were cross-checked during discussions with other people involved in the SLP and/or the health sector in Nepal. These insights were then confirmed, refuted and reformulated throughout. The interpretations were then brought together in trying to develop guidance for future action.

Service-linkage project: description of a case

The creation of the project

In the mid-1990s the NTP wished to explore strategies to involve the private sector in TB control. It was a wish that coincided with the research interests of the Nuffield Institute for Health, Leeds University, UK. At the time, the NIH was supported by the Department for International Development (DFID), UK, to develop operational research in TB control. There was also a general interest from international agencies to involve the private sector in TB control and the DOTS strategy (WHO 1994b).

It was felt that to ensure the local acceptance of any scheme it was important to form a local working group, made up of representatives of organizations potentially involved in the SLP, to formulate the structure of the SLP and its implementation. The plan was to expand the SLP to the rest of Kathmandu valley and other urban areas of Nepal as soon as experience was gained from the pilot site.

The pilot area

Lalitpur municipality is a city with an estimated population of 150,000 (Lalitpur district). The district is one of the more developed in Nepal (NESAC 1998). There were several places in the municipality for people with chest symptoms (e.g. cough) to seek help, including the National Tuberculosis Centre situated in a neighbouring area. Another site for those with chest symptoms to visit was Patan hospital, a semi-government hospital run by the United Mission to Nepal. The TB clinic at the District Health Office had closed in the mid-1990s and since then all patients in the public sector in the municipality (approximately 650 patients annually) had been treated at the TB clinic at Patan hospital (unpublished hospital data). Very few TB patients in the municipality were treated by other NGOs. The District Tuberculosis/Leprosy Assistant was based at the District Health Office. He/she provided supervision to the clinics in the district and prepared quarterly cohort reports that were presented to the National Tuberculosis Centre.

In the private sector there was a wide range of private clinics. No routine data were available for the National Tuberculosis Centre from the private sector, but it was estimated that up to 50% of TB patients in the municipality were treated in the private sector (NTP 1998a; Hurtig et al. 2000b). At the time of the SLP, 93 licensed allopathic practitioners provided private consultations in the study area. Fifty-nine were chest physicians, general surgeons, orthopaedic surgeons, paediatricians and general practitioners, a group known to see TB patients. The majority were working part-time in private clinics and also affiliated to public sector facilities. The doctors commonly worked out of a consultation space located within a private pharmacy. Fifty pharmacies were identified in the area (Hurtig et al. 2000a). Each pharmacy could have several doctors attached and doctors also moved between pharmacies. Doctors were also attached to small inpatient units called ‘nursing homes’ or to shared group practice facilities, ‘polyclinics’. There was no association for private practitioners in the area (Hurtig et al. 2000a).
Twenty private laboratories were identified in the municipality (Hurtig et al. 1999).

The SLP working group

A working group co-ordinated by the Nepali researcher was set up in the summer of 1997 with the task of developing the specific strategies for the SLP. The working group was composed of the director and representatives of the NTP, WHO, Patan hospital, the private sector and NGOs in the municipality. Although it was planned to gather the working group twice each month, this was found to be impossible because of time constraints and political instability in the country. In total three meetings were held between June and November 1997.

A relationship was developed with private practitioners in the area through visits by the research team (the Nepali researcher and the European research student) to their clinics with the objective of ascertaining their views on the running of the NTP and potential areas of collaborations. This process was facilitated by the Nepali researcher who had several years of clinical experience within the NTP. The practitioners regarded him as a colleague. Private practitioners generally perceived public sector services to be unattractive due to their long waiting hours and unmotivated staff, and thought that NGOs often provided better services. They felt private practitioners gave a more personalized service, but recognized that many TB patients had difficulties affording private care. The main problem perceived among the private practitioners regarding TB patients was the cost of the anti-TB drugs. While private laboratories were trusted for other tests, they often recognized the lack of quality control in sputum examination. Their opinions and suggestions were fed into the working group by the research team.

The adopted strategy

There were no regulatory restrictions in dispensing of anti-TB drugs or private TB care. The working group also agreed that no regulatory approach of the private sector could be implemented due to the lack of a regulatory mandate. DOTS was not yet in place in the municipality, but the National Treatment Card (NTP) was in place. They proposed a DOTS management protocol for the treatment of TB patients. The protocol would be distributed to all the private practitioners in the municipality. Although it was planned to gather the working group twice each month, this was found to be impossible because of time constraints and political instability in the country. In total three meetings were held between June and November 1997.

Box 1. The SLP strategy developed by the working group, 1997

**Provider education**: A management protocol for the diagnosis of pulmonary TB was developed. This was incorporated in a clinical manual (NTP 1998b) based on WHO’s recommendations (WHO 1996) but modified for the context of private practitioners in Nepal. It was also decided that periodic ‘refresher’ workshops should be held for private doctors and newsletters sent out at regular intervals.

**Patient education**: The working group agreed that the NTP had the overall responsibility for educating the society about TB and should use all the media available in Nepal. It was decided that it was important to provide educational material for patients treated in the private sector. Suggestions included use of drug envelopes with simple information and the use of NTP health education materials. With help from NGOs it would also be important to hold health education workshops and to initiate patient support groups.

**Free sputum microscopy**: In order to ensure the use of quality sputum microscopy, several suggestions were put forward. To provide quality control to all existing private laboratories was not thought to be feasible, nor was the use of private clinics as collection centres. The desired solution would be to have a strong laboratory service at the District Health Office, but with present managerial problems and frequent transfers of District Health Officers and staff it was not found to be feasible. It was therefore suggested that a diagnostic centre be set up in collaboration with an NGO. Private practitioners would then be encouraged to refer their chest symptoms to this service.

**Management of TB patients referred from the private sector to DOTS clinics**: Private doctors would be encouraged to refer their TB patients to DOTS treatment centres set up in the municipality. Patients referred from the private sector would be treated in one of several suggested DOTS centres. After initial registration, all TB patients, depending on the place of residence, were to be put under DOT. The drugs would be supplied by the NTP and be free of cost for the registered patients. Each of the treatment centres should have an identified catchment area for the daily DOT of TB patients. The referring physician’s name would be maintained in the treatment register and the patient’s identity card. The patient’s identity card would contain all the information necessary to monitor the patient and would be kept by the patient. The patient would be requested to show the card to the referring private practitioner so that the private doctor could see the patient’s progress at all times and would not feel that their patient had been lost. Defaulter chasers would be trained and linked to the DOTS clinics.

**Management of TB patients not referred to DOTS clinics**: It was acknowledged that some TB patients would always remain outside the DOTS strategy in the private sector. However, it was thought that there was no mechanism whereby such patients could be provided free drugs from the NTP at an initial stage of the SLP. On the other hand, assistance in keeping treatment cards in the private sector would be tried. It was agreed that the private sector would use the same treatment cards and registers as the NTP. Mechanisms to help in defaulter chasing would also be developed.
Tuberculosis Centre and NIH saw it as a precondition for the implementation of any scheme and the strategy was not directly discussed at the working group meetings. A local DOTS committee was instead formed to deal with the practicalities of the DOTS implementation in the municipality.

The strategy for the SLP that was finally agreed emphasized the education of private practitioners and managerial strategies, including encouragement of referrals of TB patients from the private to the public sector, and easily accessible free sputum examination (Box 1).

Prepared by the public sector: linking with NGOs

It was realized that the public services had to be attractive to the private doctors if any collaboration was to take place. The District Health Office, the only truly public clinic in the municipality, did not agree to provide TB treatment because of a lack of manpower. However, technical support and the drug supply would be given by the District Health Office to clinics following the NTP guidelines. The NTP had no shortage of drugs due to an existing donor programme.

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It was decided to include clinics outside Patan hospital to deliver DOT, and private clinics and NGOs were approached.

Initially six NGOs and one private nursing home showed interest. Three NGOs disappeared during the process, one because of a lack of registration with the Ministry of Health (MoH), and two because their representatives did not show commitment during the 6-day training given to all potential DOTS clinic staff. The private nursing home initiative came from one chest physician who worked at the National Tuberculosis Centre as a senior chest physician in the daytime and in the nursing homes in the evenings. Despite the clinics’ willingness to start DOTS, the actual implementation was delayed because of political instability on a national level and several changes of District Health Officers at the District Health Office. The NTP lacked the human resources to coordinate the DOTS implementation and it became the task of the Nepali researcher. In mid April 1998, DOTS was introduced in the municipality in five clinics (Box 2). Also by April 1998, several new organizations were involved in TB control in the municipality (Figure 1).

Reaching out to the private sector

In April 1998, all 93 identified private practitioners in the area were personally invited to a workshop on the SLP at a five-star hotel in the municipality. The workshop took place at the end of the annual international review of the NTP. All

Box 2. Organizations providing DOT in Lalitpur municipality (excluding Patan hospital)

<table>
<thead>
<tr>
<th>No.</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yalla Urban Health Project (YUHP) – a United Mission to Nepal project which had been involved in community health work in Lalitpur municipality since the early 1970s. Activities focused on maternal child health (MCH) and it ran MCH clinics in the area. Another key component was the renovation and chlorination of public drinking water wells. The programme operated in co-operation with the municipality, local NGOs, e.g. library clubs and social clubs, as well as with international NGOs. The manager was a British nurse with many years of experience of working in Asia. Approximately 20 local staff were employed by the project. There were no laboratory or X-ray facilities and no doctor was attached to the project.</td>
</tr>
<tr>
<td>2</td>
<td>Care &amp; Fair – ‘Aktion gegen kinderarbeit’ – a German association founded by carpet importers in Germany. They promoted and supported welfare activities for children and their families in a number of carpet-making regions in Asian countries. The health clinic in Lalitpur municipality was established in the mid-1990s. It concentrated on curative clinical services, immunization and family planning programmes. An outpatient clinic (OPD) clinic was run mornings and evenings. It had two doctors and two staff nurses working part time. It had a laboratory but no X-ray facilities. The manager and several staff were Tibetans. The population served by the clinic was also predominantly Tibetan refugees working in the carpet industry, although the clinic was open to everyone in the neighbourhood.</td>
</tr>
<tr>
<td>3</td>
<td>Hargaan’s Nursing Home – a private clinic established in the mid-1980s. Ten to 15 doctors of different specialties ran their private outpatient clinics in the morning and evenings. It had capacity for 12–15 inpatients. The nursing home had X-ray facilities and a laboratory.</td>
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<tr>
<td>4+5</td>
<td>NATA/GENETUP clinic – a clinic run by two organizations. Nepal Anti Tuberculosis Association (NATA), a national NGO, was founded in 1953 and had activities in 22 districts of Nepal. It had focused on educational activities in school and communities but still played a role in service delivery. The NATA president of the municipality, a retired NTP director, ran a private nursing home. German-Nepal-Tuberculosis Project (GENETUP) was started in Kathmandu in 1986, initiated and supervised by the Kuratorium Tuberkulose in der Welt e.V. and supported by the German Ministry for Economic Co-operation and Development. The project was the first to start DOT in Nepal (Neher et al. 1996). After negotiations the two organizations had agreed to start daily services in an existing NATA clinic in Lalitpur. It was also agreed that they would provide manpower for microscopy services while the microscopy and supplies were provided by NTP. The clinic was staffed by health care workers and onepeon. No doctor was working at the clinic.</td>
</tr>
</tbody>
</table>
delegates of the review were invited and there were presenta-
tions from representatives of IUATLD (International Union Against Tuberculosis and Lung Disease), WHO, the NIH, National Tuberculosis Centre and the private sector on global TB control strategies, the policies of the NTP and experiences with private practitioners and TB control in India. Data from the private sector in Lalitpur were also presented. Twenty-three private practitioners from the municipality participated. The recommendations from the working group (Box 1) were disseminated to the private practitioners as well as a clinical manual.

During the following months individual visits were made by the research team to private practitioners and pharmacies to explain the SLP and to distribute the clinical manuals, a map showing the treatment centres location and a guideline for referral. Private providers were not asked to sign up for collaboration but were encouraged to participate.

A short-term evaluation of the adopted strategy in practice

One year after the SLP was launched, NGO clinics played an important role in acting as well-functioning DOTS centres in the municipality while the links with the private sector were still mostly informal and sporadic. The majority of the doctors did not want to comply with a uniform system of recording or referrals; they trusted their individual judgement. The District Health Office did not provide any clinical TB services. However, it was central in the organization as linking the

Figure 1. Organizations involved in TB control before and after the SLP
National Tuberculosis Centre to local DOTS centres through the District Tuberculosis/Leprosy Assistant (Figure 1). He provided technical support, was responsible for keeping the treatment registers and distributed medicines to the centres.

The research team was changing its members in Nepal as well as in the UK. Much effort had been given during the year to seek additional funding to the project but without success. While the majority of individual members of the SLP working group continued to be important for the project, the group as such ceased to function during this period. Discussions were instead held with the research team in the different clinics and institutions. The specific strategy points (Box 1) had been implemented with various degrees of success (Hurtig 2000c).

Provider education
The research team had distributed the clinical manual to doctors in the municipality and funding had been available to distribute the manual to all doctors in Nepal. A description of the SLP had been given during a national conference of the Nepal Medical Association as well as a meeting arranged by a pharmaceutical company for members of the chest physicians association. Individual visits were made to all private doctors and pharmacists during the year by the research team in order to inform them about the SLP. Despite manuals and individual visits, some private practitioners argued that it had little effect: “Many still don’t know about treatment regimens and how to refer. They do not bother, it is easier to start treatment . . . and they think that the patient will take treatment for 6–8 months.”

The public health sector had little direct interaction with the private practitioners. Representatives from NTP recognized that the human resources within the organization to form relationships with the private sector were insufficient: “The private sector is not necessarily our enemy, but can be an important ally. However, this means adopting a non-confrontational approach to all dealings with the private sector . . . The NTP lacks the time, and to a lesser extent the credibility, to do this, and it will therefore usually be necessary to find someone else to act . . .”

Patient education
The researchers had tried to contact the pharmaceutical companies selling anti-TB drugs to the private drug retailers in the area in order to discuss the information/marketing material used in the private sector. It was thought that such material could be used in the health education of TB patients in the private sector. There was, however, no dialogue because it was against the companies’ policies to share such material. The DOTS clinics provided health education on a one-to-one basis. There was no special material being produced for TB patients in the private sector. An article was written for one of the main national newspapers in order to present the issues around treatment of TB patients in the private sector (Hurtig and Pande 1998).

Free sputum microscopy
No chest symptomatics were referred for free sputum examination from the private sector to the services set up in

![Graph showing number of registered TB cases in Lalitpur municipality, 15 August 1996–14 December 1998](image-url)
one NGO clinic during the first year. However, the laboratory was used for follow-up sputum of patients registered at the DOTS clinic. There had been problems with keeping daily microscopy services, as the microscopist had not been given the salary agreed upon. After 6 months without payment, the microscopist stopped coming. After 2 weeks a new microscopist started on a voluntary basis. When no microscopy was available, patients had been referred to the District Health Office which had sent the patients back without performing any tests.

**TB patients being treated in the DOTS clinic**

None of the NGO clinic managers regretted that they had become involved in TB control activities. In some occasions the staff made home visits if the patients were too ill to come. Words as ‘love’ and ‘obligation to help’ were used when describing their work and the importance of staff/patient interactions were stressed. One NGO manager commented: “Building a relationship is marvellous. To build relations, trust and hope . . . hope that they will get cured.”

Four hundred and fifty-six patients were registered during the first 8 months of the study. There was no increase in registered TB patients compared with before implementation of the SLP (Figure 2). The five DOTS centres were all functioning. The District Tuberculosis/Leprosy Assistant co-ordinated the drug supply and supervised staff by daily visits to the different clinics. Still some clinics suffered from a shortage of drugs and staff had to go to get drugs direct from the District Health Office. Patan hospital found it difficult to put all patients under DOT; 27% (123/456) of the total number of patients treated in the municipality during the first 8 months were registered as non-DOT patients (mainly children and non-municipality residents).

There was no major shift of patients from the private to the public sector during the first 8 months. In total 39 (8.6%) patients were referred from private practitioners, 14 of these were referred from private practitioners who also were affiliated to the NTP or any of the DOTS clinics. During the 8 months before the SLP, the 2-month smear conversion rate among new smear-positive cases was 83.3% (65/78), and during the first 8 months after the SLP it was 86.8% (125/144), which is not a significant difference. A defaulter tracer system was in place at the Yalla Urban Health Project while some of the other clinics found it difficult to implement such a system. Many patients referred to DOTS clinics from private practitioners never returned to the private doctor, hence a lack of feedback. No formal system was in place to report the referred patient’s progress to the private practitioner.

**Private TB patients not referred to the DOTS clinic**

During individual visits a year earlier many of the private doctors had agreed to refer an increased number of TB cases; the reality had proven to be different. There was a belief that the patients who come to private clinics stated: “The patients come to the private sector because they want the privacy and the convenience it offers. The patient would think it is very strange if the doctor refers. He will just go to another doctor.” To come daily was thought to be “I had a patient from Kupondole and even to take the taxi daily was too costly, so the patients preferred to take medicine from a pharmacy.”

During the workshop in April 1998, private practitioners were encouraged to keep treatment cards of their TB patients. Later, private doctors with a high caseload of TB patients were approached individually by the Nepali researcher in order to encourage registration of such patients. There was, however, no working system set up during the first year and no routine data available from the private sector. None of the doctors kept any records. One chest physician explained: “It’s a hell, not only from a clinical view but for the tax . . . they come, we say we have no records . . . otherwise they will take all my salary.” It was common to rely on the report the patients carry with them: “I tell them [the patients] that they have to bring all prescriptions. X-rays and laboratory reports when they come. If they come without I send them back.”

A survey among the private drug retailers showed a decrease in anti-TB drugs being sold in the private pharmacies. However, such a decrease is difficult to interpret as there was a fluctuation seen even in the public sector.

While doctors generally appreciated the effort, some questioned the sustainability of the system. It was evident that 1 year was not seen to be a very long time for a project and that it was too early to tell what impact it would have. One doctor explained that he had seen substandard anti-TB drugs being provided by the government four or five times during his 20 years of practice: “Time has not gone very far for the project. Time will prove. Time will show if it is the same . . . Accept criticism. All programmes have already betrayed the general people. If the programmes get unsuccessful it will result in lots of [drug] resistance. How long will it [the programme] sustain its quality? Faith has to be developed . . . and then how long will it sustain?”

**Discussion**

The described case study of a SLP between the public and private sector in TB control reflects the particularities of the Nepali context. The importance of this case study, however, is the generalizable insights provided of the organizational context in any TB control effort.

**The public sector: the will is not enough . . .**

To initiate a project like the SLP it is important to have leadership at the NTP committed to the concept. In countries such as Nepal, where NTPs are resource poor and there is a risk of quick turnover in leadership, the importance of individuals is striking. In addition, the quick changes that can occur after these individuals move are transferred have to be considered.
To have strong leadership is not enough, however. The NTP needs human resources to interact with the private sector, and there needs to be time for educational material to be developed and for workshops to be conducted. There also needs to be capacity to analyze the priorities in the public-private relationship. In the Nepal NTP there was a lack of these resources and capacities.

When the NTP depends on peripheral public health institutions for service delivery, these clinics are crucial in any direct service-linkage between the public and private sector. The SLP visualized the NTP’s lack of power and authority to influence peripheral public sector facilities. Frequent transfers of staff in the District Health Office and apathy were predominant features. There was a lack of institutional capacity to form relationships with private practitioners at a municipality level.

Existing national and international policies are likely to underpin any TB control programme. Control strategies recommended internationally are very important for determining the direction of a project like the SLP. It is important that policies such as DOTS are used as a catalyst for understanding of the needs of TB patients and the implementation of control strategies locally adapted. The SLP was an initiative in this direction, however, that the public sector needs to collaborate with other organizations in the implementation of such activities.

The private sector: lack of interest and trust

Private doctors and pharmacies are often preferred by patients because of their more convenient hours and more personalized service. They can offer a wide variety of curative services, are often more accessible to the general population and are frequently the first contact with the health care system when a person falls ill (Thorogood 1992; Aljunied 1995; Goel et al. 1996; Swan and Zwi 1997). Private clinics can be maintained as many urban settings have an increased proportion of citizens with ability to pay. The migrating population, over-represented in urban areas, also often seeks private health care (Wares 1998). The private doctors’ interest and professional pride is the care of individual patients. They tend to be more interested in new medicines and diagnostic tools than in preventive interventions. The public health aspects of TB treatment (e.g. case holding of TB patients) are likely to remain a challenge in clinics where not even records are kept.

The private doctors could not be seen as a united group; they were not members of active national or local professional organizations with which they could identify. Doctors tended to move frequently between clinics and it was difficult to negotiate any permanent system of ‘service-linkage’. The individual doctor’s interest in taking part in any collaboration with the public sector was therefore paramount.

The size and nature of the private sector is closely linked to the public sector structure, not only by laws and regulation. The staff of the public sector found ways of supporting themselves when their government salary did not sustain them (Ferrino et al. 1998). The more chaotic and poorly paid the government structure was, the more rapidly would the private health sector grow, as long as there were no groupings or policies that would make it too costly to join.

Linking the two . . . ?

The difficulties faced by the service-linkage project during its first year can be explained by the characteristics of the two sectors as described above. The public sector had no power to provide either positive or negative incentives to the private sector for engaging in the delivery of appropriate TB treatment. The pilot project showed that any direct linkage between the two sectors in a resource poor country like Nepal is currently difficult to establish or maintain.

The linkage therefore needs to have a mediator. The case study points to two different kinds of organizations that have the potential capacity to act as mediators between the public and private sectors: international research institutions and NGOs.

Researchers: the challenge of international collaboration

The NHI and the NTP initiated the service-linkage project. The support the NHI gave to the NTP was in the form of a Nepali researcher and a European research student. The NTP lacked human resources and the small research team filled that gap to some extent. The senior researcher was based at the National Tuberculosis Centre but paid by the NHI. He was seen as a representative of the NTP, advocate of the NTP policy and became ‘the NTP change agent’. However, the role of the Nepali researcher became increasingly difficult as it lacked definition and the role as a researcher increasingly changed to be that of a manager with multiple loyalties. The role of the researcher in any future service-linkage projects has to be well defined.

While it might be argued that the researcher should not take on the role as the sole co-ordinator of these strategies, there are ample possibilities to engage in research at different stages of the programme. The researcher can facilitate the understanding of the dynamics between the different organisations and in what way they respond to agreed strategies. A regular evaluation should be carried out not only on cure rates, but also on the overall strategies used, organizational constellations and priorities. The organizations should also be given an opportunity to identify non-operational aspects of the programme and, if the capacity exists within the organization, to follow the adopted strategy on a day-to-day basis.

The importance of international research in a setting like Nepal will depend on good communication between local and international researchers where the unique resources, which both sides hold, can be utilized. International research institutions alone potentially distort the local context through short time scales and financial benefits which tend to weaken...
informal networks, historical alliances and encourage enmities. While the resources from international organizations are important, they should be distributed carefully and in part help local researchers to maintain a long-term commitment to a project like the SLP as well as benefit from their knowledge of informal networks and rituals.

NGOs providers of individual care in the public sector

Several NGOs were willing to form a relationship with the NTP. The public health dimension of TB control convinced NGOs not previously involved in TB control that it was worth doing. Their main concern was the well-being of the patients they were serving and they had a strong ideology of care and support. They therefore managed to balance the need of the public and the individual in a way that was not apparent in either the public or private sector. They depended on technical support and medical supplies from the NTP. Free medicine was given by the NTP in exchange for data on patients under treatment. The NGOs had no formal interaction with the private sector, but as always in a setting like Nepal, informal relationships were formed depending on personal relationships.

NGOs have the potential to play a very important role as a mediator between the private and public sector; not necessarily by direct interaction with the private sector but as providers of good care. Maybe good care in NGO clinics over time can convince both patients and private doctors that these clinics provide an option. Such an effect cannot be measured in a short-term evaluation but rather by monitoring the project on a long-term basis. The concept of a public-private service linkage in TB control should be exchanged for an NGO-NTP collaborative programme. NGOs, who have knowledge of the local context, long-term objectives, a culture of care of the patients and the public, have the means to support the NTP in their activities. Private doctors who have the interest would be welcome to join in. Formal links with the NTP and NGOs should be established where possible. Informal contacts and support between NGOs and private practitioners should be encouraged, recognized and if possible formalized.

Conclusion

Because of the existing inter-relationships on all levels, the interaction between international, national and local levels can be visualized as a complex web. The question is therefore not if decisions should be taken locally, national or internationally, but rather how a balance between the different levels can be achieved.

Instead of trying to change the behaviour of the private doctors, it might be beneficial to find organizations with the institutional capacity to be involved in TB control. If the objective of an organization is to deliver public health rather than clinical services, it will minimize the need for incentives. The capacity of the public sector to provide technical support and supply drugs might be enough for such organizations to deliver high quality care to TB patients. If the concern is that migrant populations use private services but do not complete their treatment, NGOs with a special interest in this group might be very well suited to deliver treatment, even if they have no previous experience.

On a local level, the managerial aspects of any programme, and the responsibilities, have to be well defined. It is desirable that the co-ordination is made by someone affiliated to a local clinic, as this is likely to increase the sustainability and credibility of any scheme. Information to the private doctors should preferably be given by a doctor who is attached to a clinic in the area and is part of the scheme. Guidelines for drug supply and technical support from the national level have to be clear. It is important that NGOs and private clinics agreeing to carry out TB control activities do not face shortage of drugs because of negligence from within the public sector.

A service-linkage project should not only address what needs to be done but also show it can be achieved. The SLP exemplified how difficult it is to transform international concerns into local action, and to translate public health needs into changes in individual clinics. While international agencies conceptualize needs for action from a perspective which is global and diffuse, private doctors experience their own and patients' needs in a lived reality. Only if there is a point of understanding of these potentially different perceptions, can any meaningful activities take place. The organizations that deliver treatment to TB patients have to move into the centre of concern and attention in any TB control programme.

References


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