Effective tuberculosis control and health sector reforms in Kenya: challenges of an increasing tuberculosis burden and opportunities through reform

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SUMMARY

During the period from 1980 to 1997, the annual number of new tuberculosis cases increased four-fold in Kenya, and had reached approximately 50 000 cases by 1998. During the same time period, the government per capita expenditure on health dropped from US$9.5 to US$3.5. Since 1983, Kenya has been decentralising financial responsibility and decision-making power to the districts. In addition, the late 1980s saw the introduction of cost-sharing schemes for most health services, excluding tuberculosis (TB) treatment. In the midst of these changes, a dual epidemic of TB and HIV/AIDS emerged, and is presently over-burdening the traditional public health system. In response, the National Leprosy and Tuberculosis Control Programme (NLTP) is seeking a wider network of service providers and new approaches to the prevention and treatment of TB in the country. The history of health sector reform in Kenya is summarised and the role of the NLTP in these reforms assessed. Recent approaches taken by the NLTP to sustain effective TB control, which draw on the environment of a changing and flexible health system, are expressed. Participation of the NLTP in components of health sector reform, particularly decentralisation, integration, financing through cost-sharing and public/private mix, are highlighted.

KEY WORDS: Kenya; tuberculosis; HIV/AIDS; health sector reform; disease control

OVERVIEW OF THE TUBERCULOSIS EPIDEMIC IN KENYA

As in many countries in sub-Saharan Africa, the incidence of tuberculosis is increasing rapidly in Kenya. The number of cases reported annually has more than tripled since 1987, reaching over 49 000 cases in 1998 (Figure).1 Despite this worsening burden, Kenya has maintained an exemplary national tuberculosis control programme (NLTP: national leprosy and tuberculosis programme), which achieved a 77% treatment success rate nationally in 1997.2 The high rate of deaths due to the human immunodeficiency virus (HIV) makes it virtually impossible for Kenya to reach the global target of 85% cure. While the reported death rate is 6%, it is estimated that at least another 3% of cases reported as transferred or lost are actually deaths due to TB/HIV. Implementation of the DOTS strategy (directly observed treatment, short-course), initiated in 1993, has been standard in all districts since 1995. With financial support from the Government of the Netherlands, technical support from the Royal Netherlands Tuberculosis Association (KNCV) and a strong internal management network, the NLTP has ensured the development of a growing laboratory network, a stable supply of quality drugs, and sufficient human resources with technical expertise to provide DOTS throughout the country.

The expectation for the future of TB control in Kenya is one of many more cases and fewer resources with which to manage them. The increase in TB cases can be largely attributed to a worsening HIV/AIDS epidemic. UNAIDS estimated that 1.6 million Kenyans were living with HIV/AIDS at the end of 1997.3 Sentinel surveillance from a cross-section of antenatal clinics in Nairobi showed an increase in the median prevalence of HIV infection from 2.7% in 1987 to 15.9% in 1997.3 The interaction between HIV/AIDS and TB is overburdening the health system. A survey conducted in 1997 in Nairobi revealed that 80% of in-patient hospital stays could be attributed to HIV/AIDS and/or active tuberculosis,4 while a study from Kenyatta National Hospital in Nairobi further showed that among adult HIV+ patients who died in hospital, 49% had tuberculosis.4

While demands on the public health system are increasing exponentially due to TB and HIV/AIDS, the resources available to the health system are decreasing.
Per capita expenditure for health fell from US$9.5 in 1980/1981 to US$3.5 in 1996/1997 (Figure). At present levels of spending, the procurement of sufficient anti-tuberculosis drugs to treat all new cases annually would require 25% of the country’s overall drug budget. This proportion would rise to 50% in the next 5 years. Furthermore, the present project for Dutch support to the NLTP will end on 31 December 2000. Due to a re-focusing of international aid policy, the Netherlands may not consider continued funding of the Kenyan NLTP at the end of the present project period.

Effective TB control in Kenya will require increased financial resources, perhaps through innovative financing schemes, the identification of additional partners for the provision of services, and the prevention of TB among those living with HIV/AIDS.

THE HISTORY OF HEALTH SECTOR REFORM IN KENYA

Kenya’s diverse population and vast territory make the provision of standardised primary health care services quite complex. Kenya has consequently long held the belief that services must be locally planned and provided if they are to address the needs of specific populations appropriately. At the same time, national health indicators illustrate that certain health concerns such as the control of tuberculosis, prevention and care of HIV/AIDS, control of malaria and management of childhood illness are priorities throughout the country. The Ministry of Health (MOH) has therefore delicately balanced the normative technical and managerial roles of its central body with the locally adapted strategies for service provision.

Where the district level demonstrates a comparative advantage in planning and delivering services, Kenya has been gradually decentralising financial and operational power. In 1983, a strategy to promote a District Focus for Rural Development (DFRD) was established to transfer authority and responsibility for the provision of health services to district-level government bodies. Intensive training and orientation of district-level personnel accompanied this increased level of responsibility. In the late 1980s, the MOH began to develop and introduce cost-sharing mechanisms for service delivery, in an attempt to provide additional funds to district-level facilities that could be utilised to support local health service activities, such as the upgrading of laboratories. By 1992, it was agreed that a formal body should be created within the districts to plan for and monitor the utilisation of funds mobilised through these cost-sharing mechanisms. To promote local ownership of the communities’ health, it was also agreed that non-technical community representatives would be involved in this formal body. District Health Management Boards (DHMBs) were subsequently established to serve as the priority-setting and fund management body for health delivery at the district level. The DHMBs are supposed to periodically evaluate and monitor the performance of the local health system. In September 1998, the duration of service for all secretariat on all DHMBs expired, and new members...
are presently being nominated by the districts for appointment by the MOH.

Where the central MOH has demonstrated a comparative advantage for establishing policy, setting technical norms, conducting training, procuring and disseminating supplies, and monitoring national health outcomes, Kenya has worked to strengthen its central office. To effectively develop and introduce policy that supports the overall health aims of the country, Kenya has maintained a core group of health economists, health planners and health reform experts to evaluate/regulate change throughout the sector. Strategic planning, priority setting, resource mobilisation and planning and partnership building occur at the national level. In addition, the central MOH has maintained the key function of procuring quality essential drugs for the country. The procurement has been conducted through the Medical Supplies Coordinating Unit (MSCU), which has been heavily criticised for inefficiencies. As a result, a national consensus meeting was held in mid-1998 which resulted in the recommendation that the MSCU be privatised. A cabinet paper to this effect was finalised and is in the process of being operationalised. Consequently, all hospitals, including district hospitals, will be responsible for obtaining drugs on a ‘cash and carry’ basis through the privatised network. The MOH agreed that anti-tuberculosis drugs and vaccines were two priority public health goods that would not be included in this new system, and the respective MOH programmes will remain responsible for their procurement and distribution. As is true in many sub-Saharan African countries, various donors support disease control in Kenya through the funding of specialised programmes at the central level. For purposes of co-ordinated planning, joint drug procurement, and strategic strengthening of the health sector as a whole, the central MOH has had to focus intensively on the co-ordination of donors and non-governmental organisations working in Kenya.

The critical difference between the overall health sector and the NLTP is the strong provincial level that remains part of the NLTP. One of the primary criticisms of Kenya’s decentralisation plan is that the link between districts and the central MOH has been lost (Kenya Ministry of Health National Health Strategic Plan 2000; unpublished). As a result, priorities at local level are not translated into national priorities, and national initiatives/norms are not always carried out at district level. The NLTP has established an ongoing partnership between the national level and districts through the maintenance of an effective normative/co-ordinative body at central level and the efficient use of provincial co-ordinators.

THE NLTP WITHIN THE REFORM PROCESS

In Kenya, there are two channels of ‘reform’ that must be considered when looking at the TB control programme. The first is the Ministry-wide reform process and the role of the NLTP in that process. The second is the internal reform of the NLTP—the response of the NLTP to the changing epidemiological and financial realities, supported by the national context of a changing and flexible health system. To date, the strength of the NLTP has been its ability to reform internally to respond to changing needs. However, the sustainability of the programme may depend on the strengthening of its partnership with the overall health system.

Since mid-1999, the NLTP has become more actively involved in the Ministerial reform process. The NLTP recently joined the secretariat of the national health sector reform team and continues operational discussions with the newly privatised central medical drug stores. Previously, the NLTP procured, accounted for and distributed all of its own drugs. Improved accountability of the national system for drug procurement would allow the NLTP to draw on the resources of the central medical stores for this time-intensive activity.

The NLTP has also joined the move to develop a national health plan that responds to the priority health needs of the country in a comprehensive, cohesive manner. In this respect, the NLTP is changing its internal planning process such that needs identification, priority setting of tuberculosis within the context on all public health activities and strategic planning are initiated by the districts. It is hoped that by drawing in the general district and provincial decision-makers, ownership of TB control will be expanded beyond the NLTP. TB control activities will now become an integral part of all district and provincial level plans without any responsibility being stripped from the NLTP for ensuring that successful TB control is implemented. It is hoped, however, that this change will increase ownership of TB control among communities, districts and provinces.

The success of NLTP efforts in becoming a key player in the Ministerial reform process will be seen in time. At present, more concrete discussions must focus on the successes of the NLTP in responding to the changing epidemiological and financial constraints of controlling TB in Kenya. Examples follow of innovations by the NLTP, described by area of reform component from which the innovation emerged.

Response of the NLTP to specific health reforms

Decentralisation

A mid-term review of the NLTP, completed in June 1999, highlighted the lack of ownership for TB control by non-TB-specific health providers and decision makers at district and provincial levels. TB control is considered the domain of the NLTP. The strong network of central, provincial and district TB co-ordinators and an independent source of funding has allowed the NLTP to plan, implement and monitor TB control rel-
atively independently, with little interaction with the overall health system. As decentralisation strengthens district-level responsibility and power for priority-setting and budget allocation, the lack of ownership for TB control by the district primary health care network becomes a great concern.

The NLTP's response to this concern has been to alter its planning process for 2000–2003 such that TB control activities are planned as part of a district's overall activities, with TB being prioritised amidst other local health concerns. It is hoped that if/when donor funds for TB control are reduced, districts will have sufficient ownership of the TB epidemic and understanding of the technical/operational needs for TB control that it will be adequately included in district plans and budgets.

The NLTP has utilised decentralisation as a means of furthering its human resource base for the provision of DOTS. It has conducted annual training of district TB co-ordinators who are able to further train local health workers. This is yielding results in terms of the number of staff in health clinics that are trained on the DOTS strategy. For example, in Nairobi, where one quarter of the nation's patients receive treatment, the number of treatment centres with staff trained on DOTS has increased from four to 33 in the last 5 years.

Integration

The epidemiological interaction between HIV/AIDS and TB is well documented. At the service delivery level, TB and HIV/AIDS patients are more and more often the same patients. In 1995, it was estimated that in Kenya approximately 40% of TB patients were dually infected; in some districts, the percentage was as high as 76%. At the national level, the response to this 'dual epidemic' was to marry the TB, Leprosy, HIV/AIDS and STD (sexually transmitted diseases) programmes under a unified division within the MOH in 1996. To operationalise this partnership, the MOH, in collaboration with the World Health Organization (WHO), called on service providers from all levels of the health system to provide input into the activities that should emerge from the new division. A meeting of public, private and non-governmental service providers and donors reviewed existing activities, human and financial resources, and identified priorities in order to map out a plan for future collaboration and the more effective allocation of all available resources and responsibilities. The emerging recommendations proposed new levels of collaboration for 1) training; 2) prevention, care and control; 3) monitoring and surveillance; and 4) advocacy, resource mobilisation and sustainability (C Hanson, HIV/AIDS and TB integrated workshop. Unpublished WHO travel report, 1997).

With limited national funding and existing donor agreements for non-integrated TB and HIV/AIDS activities, it has been difficult to launch new initiatives targeting this integrated approach. Despite these constraints, the integration has resulted in more collaborative planning and resource mobilisation. For example, a consignment of drug and laboratory supplies needed by the NLTP was tendered in 1999 through a joint TB/HIV/AIDS/STD project funded by the World Bank.

At the community level, the partnership has supported operational research to bring TB treatment (DOT) to patients via community HIV/AIDS care networks. Treatment results from 1998 in Machakos District show treatment completion rates of almost 81% among new smear positive patients (J Kangangi, Unpublished progress report to WHO on the ongoing community based tuberculosis care in Machakos District, Kenya 1999). The success of the initial research project suggests the scaling up of community-based DOTS as an important care component for people living with HIV/AIDS.

Where the HIV/AIDS control programme and its non-governmental organisation (NGO) partners have been able to support counselling and testing services, the TB programme hopes to introduce preventive therapy for HIV-infected individuals. The NLTP also recently approached the National AIDS Council for inclusion of a TB agenda in this multi-sectoral council.

Financing schemes

The financing of the NLTP has become one of the main areas of concern in the last year. The present financial support from the Netherlands Government will end on 31 December 2000. Other donor agencies are being approached for bilateral assistance, but it is not yet clear how the NLTP will be financed in future. It is probable that some anti-tuberculosis drugs will continue to be procured with World Bank funds for HIV/AIDS care. However, at present the MOH is only able to finance approximately one-half of the overall budgeted drug requirements.

Even with the free supplies of anti-tuberculosis drugs available today, many health facilities find it difficult to provide free treatment for TB patients. The reduction in Kenya's government expenditures for health have meant that health workers must rely on funds mobilised through community/patient cost-sharing schemes for the operational costs of running the clinics. As TB services are mandated to be free, providers are finding that they must either turn away TB patients or charge them unofficially (Ministry of Health, Kenya and WHO, Switzerland, joint tuberculosis consensus meeting: sustaining DOTS in the era of health sector reform; meeting report by Intermedia, Nairobi, Kenya, unpublished, December 1998).

The NLTP will conduct operational research to assess the impact of user fees on provider willingness to treat TB patients, and consequently on TB patient access to treatment and on cure rates. Where financial
realities constrain national policy for free TB treatment, the NLTP hopes to respond with a nationally accepted financing scheme that matches patient ability and willingness to pay with provider needs.

**Increased quality of care in the private sector**

Although decentralisation and integration have helped to broaden the human resource base available for TB control, the public health network is in general overburdened and cannot be expected to fully absorb the increasing TB/HIV load. In 75% of public hospitals, occupancy is above 100% on a regular basis. Among other factors, this is encouraging many TB patients to turn to the private sector for services. It is believed that the majority of private sector providers do not comply with the technical guidelines of the NLTP, increasing the risk of drug resistance due to inadequate drug regimens and inhibiting the ability of the NLTP to accurately monitor the national trends in tuberculosis.

With the aim of improving the quality of care for all TB patients, the NLTP is reaching out to the private sector. The benefits to the NLTP of involvement of the private sector in the activities of the NLTP are clear, assuming that the private sector will adopt the national guidelines for tuberculosis control: 1) additional service providers; 2) more cost-efficient diagnostic practices; 3) increased case identification/notification; 4) improved treatment outcomes; 5) reduced risk of promoting drug resistance; and 6) strengthened surveillance. The benefits to the private sector provider are less clear, and the NLTP has had to identify mechanisms for providing incentives to private sector providers to comply with the DOTS strategy.

To serve the needs of TB patients (cost-effective diagnosis and quality treatment), the private sector provider (independence, tools to provide good service to patients, revenue) and itself, the NLTP is testing a revolving fund strategy. This involves giving low-cost, quality drugs to private sector providers through the Kenya Association for Prevention of Tuberculosis and Lung Diseases (KAPTLD) channels in exchange for patient data. Private providers sell the drugs to patients for a minimal profit only and agree to treat patients utilising the nationally recommended approach, including DOT, follow-up smear examinations, and reporting of treatment outcomes. Patients will pay regular consultation fees to the hospitals and physicians taking part in the trial. In this way, the NLTP will be able to regulate the drug regimens and quality of drugs given/sold to patients, and monitor the treatment progress of patients. At the same time, the public health network is relieved of some burden as more cases are managed, and managed appropriately, by the private sector.

The KAPTLD will report to the NLTP and will only make a small profit as is needed for growth. In addition, patients being treated in the private sector will be required to pay for all drugs required for the full course of treatment and for all diagnostic and follow-up smears at the time of registration for treatment in the private sector. This will prevent patient default in the middle of treatment on the basis of financial constraints and may, in fact, provide an additional incentive for patients to complete treatment as this completion will be seen as the most ‘value for money’.

NGO involvement in TB control has also been fostered by the NLTP. All church hospitals and clinics are supplied with free anti-tuberculosis drugs and laboratory reagents through the NLTP, in exchange for treatment completion reports and adherence to NLTP guidelines. The same applies to NGOs providing health services in various areas of the country, particularly in refugee camps housing people from Sudan, Ethiopia and Somalia. All patients reported in the refugee camps are not, however, included in the national data, but are recorded separately.

The environment of reforms has made it possible for the NLTP to look outside the narrow vision of government as the only public health provider. Through the reform process, the health sector is being considered as a whole, and how this multi-faceted sector can best serve the needs of the population has become the priority.

**LESSONS LEARNED**

Health sector reform, in Kenya’s case, has not been an isolated event but rather a response, over time, to the changing needs of the population and the changes in resource availability. The successful interventions have been largely opportunistic, using human and financial resources that already exist and improving their efficiency. If any lesson is to be learned by the TB community from the Kenya experience, it would be that reforms must be seen as an opportunity to expand ownership of TB control beyond the NLTP. TB control is an integral part of a well-functioning health system and the burden of tuberculosis must, therefore, be carried by all stakeholders of public health. Reforms that do not fully involve technical partners such as the TB programme will not respond to community needs in a sustainable manner. The message for NLTPs is therefore that involvement in the reform process is not an alternative. It is a prerequisite to the operation of a successful NLTP.

**References**

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Durante el período 1980 a 1997, el número anual de casos nuevos de tuberculosis aumentó en Kenia cuatro veces, y alcanzó aproximadamente los 50 000 casos en el año 1998. Durante el mismo periodo, el gasto gubernamental per capita en salud cayó de US$9,5 a US$3,5. Desde 1983, Kenia ha descentralizado la responsabilidad financiera y la toma de decisiones a nivel de los distritos. Además, en las postrimerías de los años 80 se observó la introducción de esquemas de participación en los costos para la mayoría de los servicios de salud, excluyendo el tratamiento de la tuberculosis (TB). En medio de estos cambios, emergió una epidemia dual de TB y VIH/SIDA que actualmente desborda al sistema de salud pública tradicional. En respuesta, el Programa Nacional de Control de la Lepra y de la Tuberculosis (NLTP) está en búsqueda de una red amplia de proveedores de servicios y de nuevas propuestas para la prevención y el tratamiento de la TB en el país. Se resume la historia de la reforma del sector de salud en Kenia y se evalúa el papel del NLTP en estas reformas. Se comentan las medidas actuales tomadas por el NTLP para mantener el control efectivo de la TB dentro de un sistema de salud flexible y cambiante. Se hace resaltar la participación del NLTP en los componentes de la reforma del sector de salud, principalmente en lo referente a la descentralización, integración, financiamiento a través de la participación en los costos y el papel de los sectores público y privado.