

The Malawi National Tuberculosis Programme: an Equity analysis

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Abstract

Background: Until 2005, the Malawi National Tuberculosis Control Programme (NTP) has been implemented as a vertical programme. However, in the first half of 2005 the NTP reoriented its planning, approach and budgeting in line with the Sector Wide Approach (SWAp). Monitoring of equity performance of the programme requires synthesis of baseline information on TB programming, access and development of strategies to promote equity.

Methods: A consultation was undertaken with key stakeholders on critical equity issues in tuberculosis (TB). The results are situated within a synthesis of reports and studies on equity and access to services. An additional analysis of routine data enabled a national overview of access to TB services by socio-economic status to be created.

Results: TB cases have increased rapidly. This increase has been attributed to HIV/AIDS. Although there is no TB prevalence data, the WHO estimates that only 48 percent of TB cases are detected in Malawi. Equity analysis of routine data highlights a lower utilisation of TB services by popula-

tions with limited access to health facilities. The complexity of TB diagnosis requires repeated visits, long queues, and delays in sending results. This reduces the poor's ability to access and adhere to services. The costs of seeking TB care are high for poor women and men - up to 240 percent of monthly income as compared to 126 percent of monthly income for the non-poor.

Conclusion: The NTP has attempted to be responsive to the needs of different social groups, for example through the development of interventions in prisons, decentralisation of treatment and piloting of community based activities to improve equitable access to services. The Programme of Work which is being delivered through the SWAp is a good opportunity to enhance equity and pro-poor health services. The major challenge is to increase case detection, especially amongst the poor, where we assume there are many 'missing cases'. In addition, the Programme needs a prevalence survey which will promote service access amongst 'missing' women, men, boys and girls.

Background

The development and implementation of the EHP was adopted as the sector's main pro-poor strategy and contribution to the Malawi Poverty Reduction Strategy Papers (MPRSP).¹ The Ministry of Health (MoH) has adopted the Sector Wide Approach (SWAp) to health development as the overarching strategy for the implementation of the Programme of Work (PoW). The PoW outlines health activities to be implemented by MoH, development partners and major NGOs such as CHAM (Christian Health Association of Malawi).² The PoW will be implemented through the existing decentralisation structure. In this context health activities will be devolved to District Assemblies. The MoH through the District Health Management Teams will involve district assemblies in development and implementation of the District Implementation Plans.

In the first half of 2005, the Malawi NTP began the process of realigning its planning, approach and budgeting to be in line with the SWAp. For the NTP, working within the SWAp offers both challenges and opportunities in promoting equity and pro-poor TB services. The objectives of the synthesis study by REACH were:

1. To conduct a broad analysis of equity concerns in TB control programming in Malawi
2. To analyse evidence on different group's vulnerabilities to tuberculosis
3. To assess and correlate information on pathways and care seeking patterns of patients and the impact of tuberculosis on different socio-economic groups.
4. Develop practical recommendations for the TB programme and the broader health sector in Malawi.

Methods

Initially a workshop was held with REACH Trust researchers working on tuberculosis and colleagues from the NTP to agree

on key priority areas for consideration in this report and sources of information to use. This was followed by a search for relevant published and unpublished reports within the Ministry of Health, including the NTP, National Statistics Office and REACH Trust. Reports within the Ministry of Health on the SWAp, EHP, Programme of Work and studies on access to services and notification of tuberculosis cases were also identified for reviewing. An analysis of routine data was undertaken to assess access to TB services by socio-economic status

There are several approaches to measuring poverty. These include aspects of deprivation of income or basic needs, absence of infrastructure, a lack of power and voice, and an unravelling of social structures.³ We used an inclusive approach to poverty in this review. Studies reviewed also used geographical indicators and proxy measures of poverty.^{4,5} The quantitative and qualitative studies provided complementary findings that included a gender analysis.⁶ These studies also enabled documentation of the extent to which TB services currently meet the needs of poor women, men, boys and girls, and identified priority areas for action.

Results

TB Programming and equity issues

The Malawi NTP has successfully implemented the WHO recommended Directly Observed Treatment Short Course (DOTS) strategy for nearly two decades. The DOTS strategy has five elements; government commitment, case detection through passive case finding, administration of standardised short course chemotherapy to at least all confirmed sputum smear positive cases of tuberculosis under proper management conditions; establishment of system of regular drug supply; and establishment and maintenance of a monitoring system⁷.

The standard DOTS strategy has been adapted in Malawi to include decentralisation of observation of patients taking their

drugs (from health workers to community and family members)⁸ arguably a pro-poor initiative. Other adaptations include the integration of HIV/AIDS activities. This is critical as TB and HIV are interlinked and the prevalence of HIV/AIDS amongst TB patients in Malawi is 77 percent.⁹ In response, the NTP developed HIV/AIDS activities which include routine VCT for TB, administration of cotrimoxazole to reduce the effect of opportunistic infections (OI) and referring TB patients for ART within all districts.¹⁰ However there is need to document the challenges which poor and vulnerable TB patients face in accessing HIV/AIDS services, especially those from rural areas. The Malawi NTP has a strong history of operational research, including collaboration with Equi TB Knowledge Programme and REACH Trust. Decentralisation of DOTS was implemented in response to research findings. Community-based pilot interventions were developed in response to barriers to accessing care. An example is 'Extending Services to Communities' project being pilot-tested in urban Lilongwe. Through this intervention the NTP works with storekeepers to equip them with advisory and referral skills to refer chronic cough cases and with community leaders to develop skills on health promotion.

Poverty, vulnerability and tuberculosis

In Malawi poverty levels are very high, and higher in rural areas (67%) as compared to urban areas (54%).¹¹ Malawi's poor are not a homogeneous group but consist of a cross-section of the population, including smallholder farmers with less than one hectare of land, estate tenants, the urban poor and female-headed households. Women between 14 to 24 years of age are 4 times at risk of contracting HIV/AIDS than other groups¹², and it is likely that the proportion of women in this age group who contract TB will also rise. TB cases have increased rapidly from 5,334 in 1985 to 24,000 in 2002. The increase has been attributed to HIV/AIDS. Urban populations form only 20 percent of the national population, but account for up to 50% of TB notifications.¹¹

It is likely that poor people, the rural poor in particular, make up many of the missing TB cases in Malawi. Findings from qualitative research projects summarised in this article highlight some of the barriers poor women and men face in accessing services. Unfortunately, without prevalence data it is not possible to identify prevalence rates of TB amongst different groups. Studies conducted among specific vulnerable groups such as prisoners and households of index TB patients show a high prevalence of TB. A study conducted in 1996 revealed that the prevalence rate was 5 percent among prisoners and 4.5 percent among prison staff.¹³ This translates to an annual notification rate for 2000 of 4,478 per 100,000 as compared to 183 per 100,000 for the general population.¹³ A survey was also conducted to assess prevalence of TB among households with smear positive patients in 22 districts. It was found that within these households 1.7 percent had a member who had developed TB as compared to 0.19 percent ($p=0.01$) of those with not living in the same household as a case of smear-positive TB.¹⁴

Access and pathways to seeking care

WHO estimates that only 48% of TB cases are detected in Malawi, meaning that 52% of people with TB are 'missing' from TB services and hence TB notification rates.¹⁵ The TB and Poverty Network undertook an equity analysis of routine data from 1998 to 2004 for all Malawian districts for Action Secretariat.¹⁶ The purpose of the analysis was to assess correlation between poverty levels and TB notification rates. The assessment revealed no significant association between TB notification rates and poverty (Figure 1) but a strong association with HIV prevalence and a positive correlation with percentage of the population with access to EHP (Figure 2). Districts with high HIV prevalence and good access to EHP had higher TB notification rates. These results need to be interpreted with caution as they only focus on confirmed TB cases (notification rates), and do not provide any insight into the missing cases.

Figure 1: Scatter diagram for poverty levels and notifications for all districts

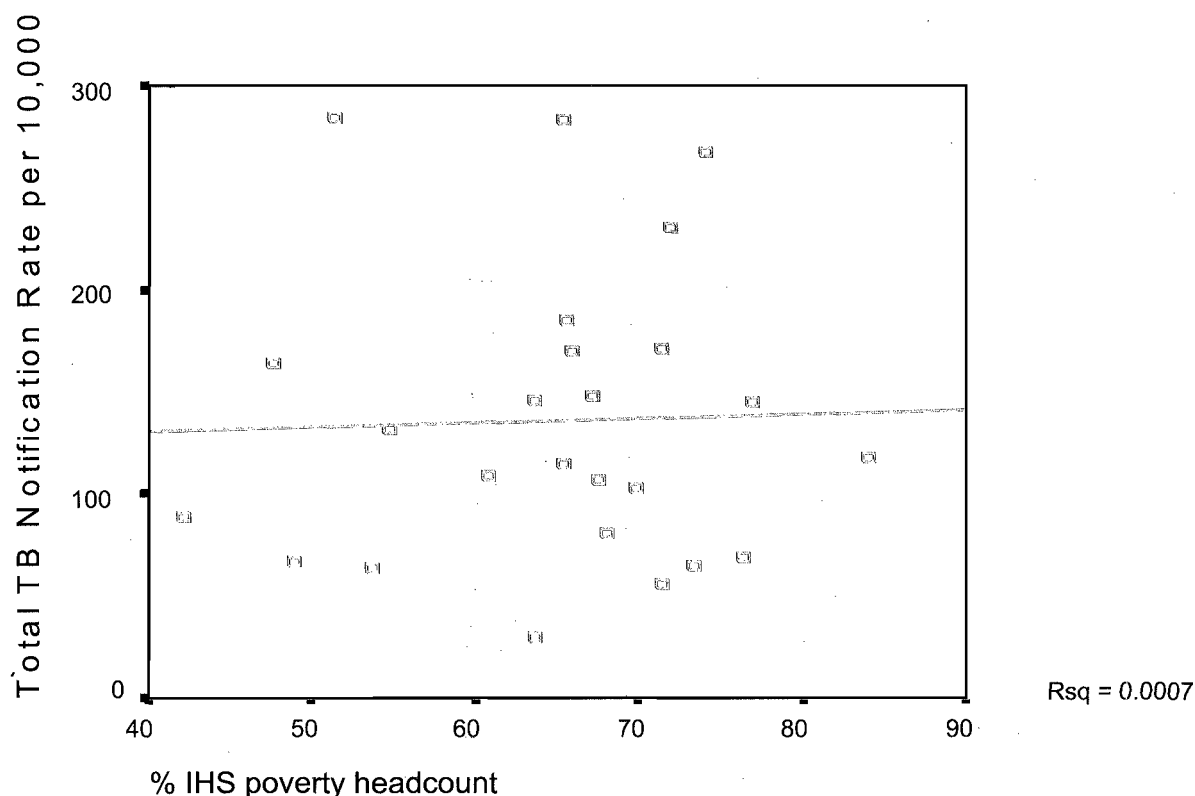
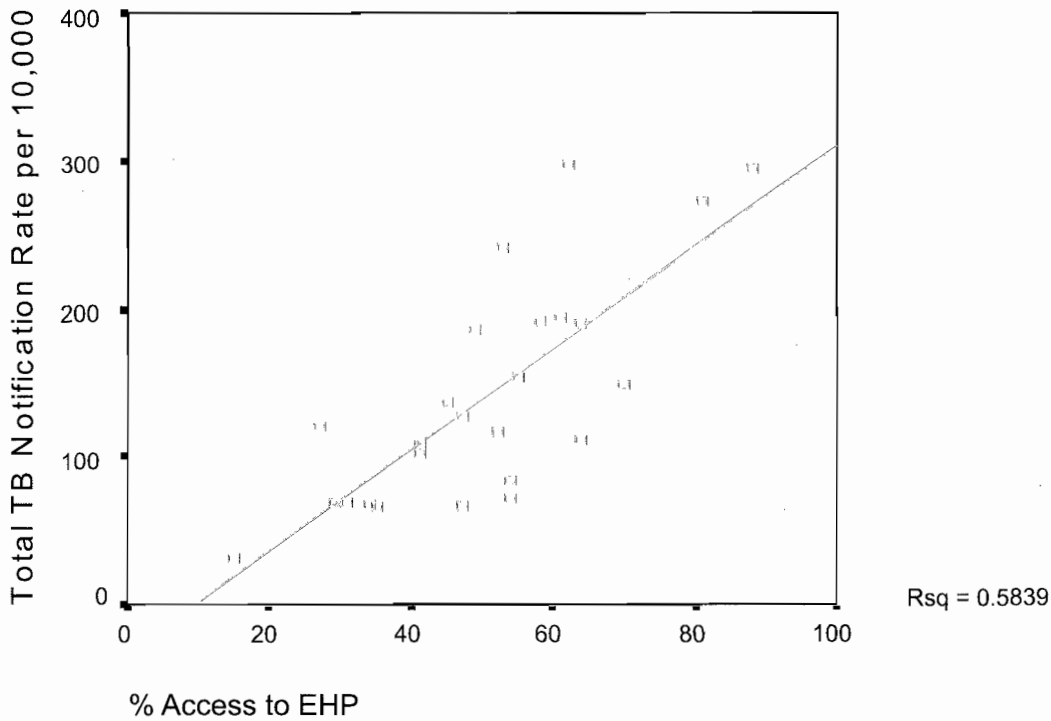


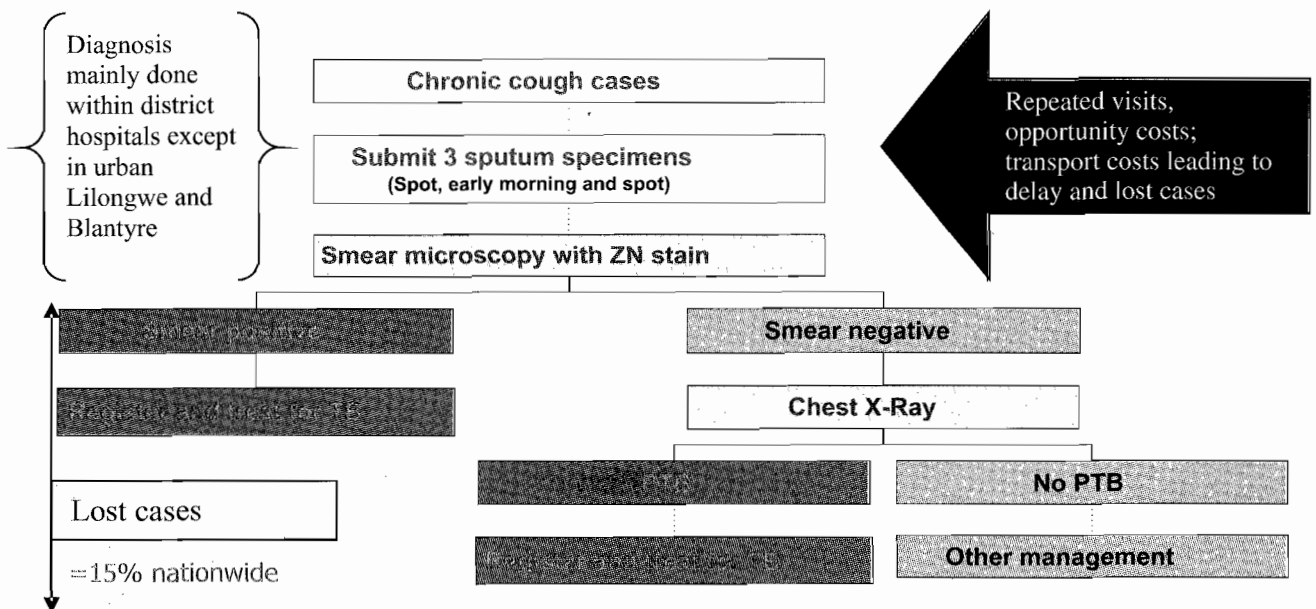
Figure 2: Correlation between TB notification rates and % with access to EHP



Where are the missing cases? An analysis of barriers to seeking care

The care seeking pathway through which people with symptoms of TB move through can be depicted in the form of a linear journey (see Figure 3). In reality, this pathway is rarely linear, with people seeking a range of remedies from a variety of health providers at all stages of their illness¹⁷⁻¹⁹.

Figure 3: TB Diagnosis process



Barriers that prevent people from successfully moving through this pathway are health service related, and are also affected by interplay of poverty, gender, geography and socio-cultural factors.

Health service related barriers pose particular challenges for the poor

The complexity of TB diagnosis requires repeated visits to health facilities, long queues, and delays in sending results that

reduce the poor person's ability to access and adhere to services (Figure 4). Most of the diagnosis within the rural areas is done at district hospitals and only treatment is decentralised to the rural health facilities. This approach of diagnosis entails sputa being sent to the hospitals or patients going to the district hospital for diagnosis or X-ray. Due to resource constraints, sending results back to health facilities is generally complicated, and can take more than one month.²⁰

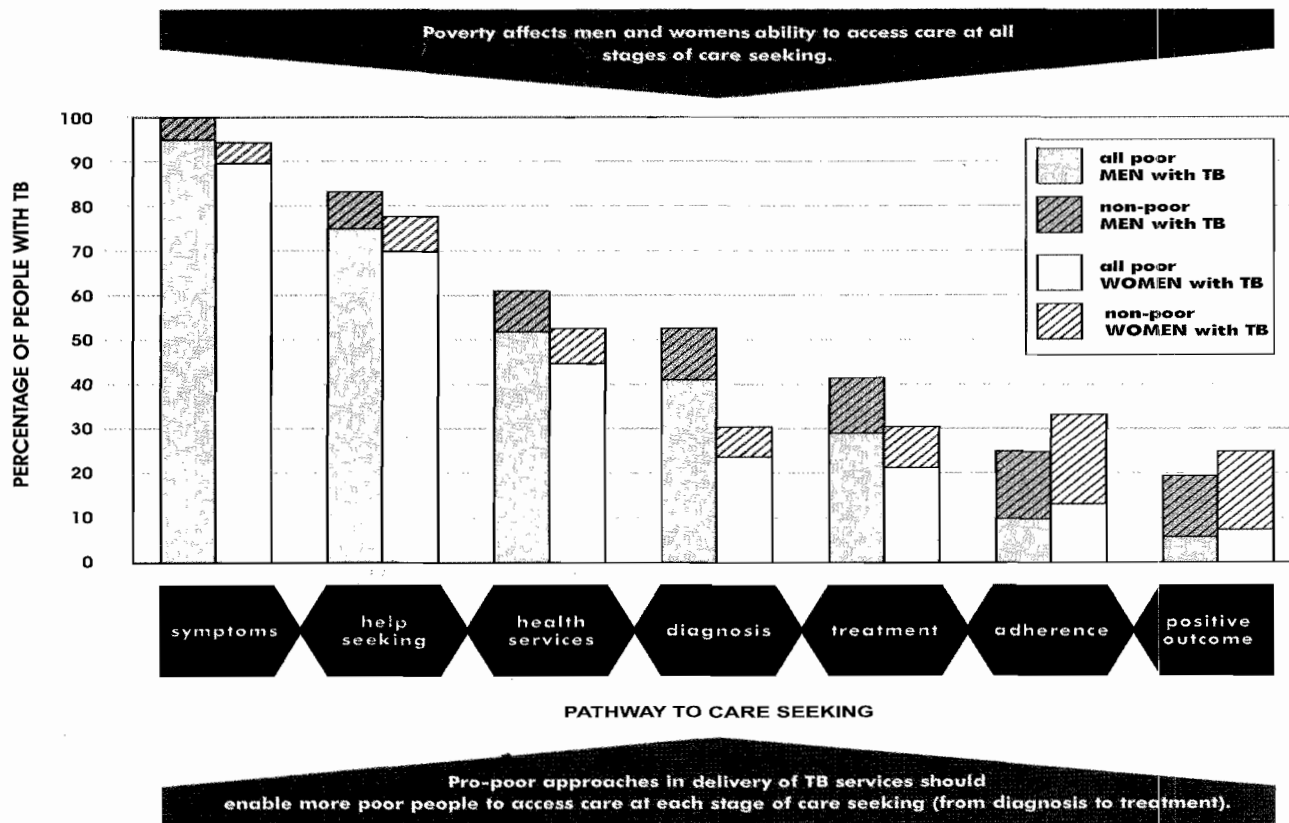
A study from Ntcheu District revealed that structural barriers related to the health care system were the major factors behind delays in receipt of sputum results, along with the misconception that negative smears excluded the diagnosis of tuberculosis.²⁰ Typical quotes from qualitative research with patients/patients' families illustrating these structural barriers are as follows:

"We came back to wait for the result, we waited and waited but the result never comes out. We went to the health centre to find out about the result only to be told that the sputum was sent to Ntcheu District hospital, if the result came we will inform you."

We waited and waited then we went again for a second time, third time only to be told we shall be called. We stayed at home..."

"She used to go to the health centre thinking they could help but there was nothing they could find...she was sure that she had TB...but the hospital was saying that they could not find TB, so she was sure that she had TB only the hospital was failing to do their job...they did the sputum examination but they told us she had no TB"

Figure 4: The pathway to care



Source: Nhlema et al 2003. Systematic analysis of TB and Poverty. Technical Report. World Health Organisation, Geneva

An additional important barrier is hospitalisation for TB patients in rural districts for the first two weeks of their treatment regardless of whether the patient is sick or not. This presents significant costs for poor rural patients.

Patient related barriers to care seeking

In Malawi, like in other resource poor contexts, poor people depend on low incomes. For example within urban settings, most poor people do ganyu work (daily employment), petty trading and in extreme cases begging to earn a living.²¹ This leaves them with limited disposable income to use for care seeking. The situation is similar in rural areas; most of the poor depend on ganyu work or tend fields to earn a living.¹¹ Poverty therefore affects one's ability to access services due to the necessary expenditure on transport and food costs for patient and guardians alike, despite TB services and drugs being free.

Evidence available in Malawi indicates that the total delay for TB patients before diagnosis is up to 2 months.²² In Malawi, studies have revealed that the first provider is the storekeeper, local pharmacies or traditional healers and that afterwards most patients go to public health facilities.²³ Poor patients in particular are likely to go first to the informal private sector where they face less costs and opportunity costs. Once within the formal health system patients need to make several visits due to the

requirements for diagnosis. The longer pathways undertaken by the poor are given some credence by the Geographical Information Systems Analysis in Lilongwe.²⁴ This revealed very high rates of TB amongst those presenting with chronic cough from Area 56 (a very poor area). 25% of cases tested positive from Area 56, as compared to 15% in Areas 18 or 49 (less poor areas)(ibid.). This may indicate that people presenting from Area 56 are already very sick, and have faced a longer pathway to accessing care for TB than those from Areas 18 and 49.

The term gender refers to social and culturally constructed behaviour, roles, expectation and responsibilities all women and men learn in the context of their own societies. Gender differences in access to resources at household level in Malawi affect access to health services.²⁵ Most women have to seek permission from their husbands to use resources for care seeking, which can lead to delay.

Impact of care seeking and TB on patients and their households in Malawi

The social and economic consequences of tuberculosis not only affect the livelihood of patients, but also their households. In Malawi quantitative and qualitative studies were conducted under the TB Equity Project (which preceded REACH Trust), to

analyse the impact of care seeking and TB illness on patients and their households. The impact of TB on patients was analysed mainly by assessing the costs of TB before and after diagnosis. Costs of seeking care were classified as direct and indirect. Direct costs comprised of transport costs for the patient and guardian(s), food costs and any payments for diagnosis and treatment²⁶. Indirect costs included number of working days lost due to illness, reduced income due to illness as well as loss of productivity in the medium term. The costs incurred were gen-

erally higher before diagnosis. One of the factors contributing to this is the fact that patients had to make several visits to health providers before diagnosis. Most expenditure incurred was for transportation for both patients and their guardians.

Although aggregate costs for poor people in all studies tend to be lower in real terms than other social groups, costs relative to annual or monthly income are much higher for the poor than the non-poor (Table 1).

Table 1: Total cost (in Kwacha) for a TB diagnosis in urban Malawi

	All patients (urban)	Poor patients	Non-poor patients
Number of respondents (% Total)	179	128 (72%)	51 (28%)
Total direct costs (MK)	942	798	1293
Total opportunity costs (MK)	1197	351	2170
Total costs (MK)	2139	1149	3463
Total costs as percentage of monthly income	134%	248%	124%
Total costs as percentage of monthly income after food expenditure	206%	584%	176%

US\$1=75.7 Malawi Kwacha

Source: Mann et al. 2002 (Report)

Note: Poor and non-poor patients are defined against the urban poverty line measure of the 1998 Malawi Integrated Household Survey

Discussion

There is low utilisation of TB services by poor populations in Malawi. This is due to poverty and gender related barriers of seeking care, which are particularly problematic for the rural populations whose diagnosis depends on efficient transport and communication between rural health facilities and district hospitals. These findings call for the development of strategies that increase the numbers of people taking TB drugs who are in need of them. An example of a strategy would be to employ an evidence-based health promotion strategy and increase community-based activities. Furthermore, simplification of the laboratory and diagnostic processes can also help to reduce the costs poor patients face. This includes approaches to improve the speed and turnaround of results, shortening the diagnostic pathway (technology used and numbers of smears submitted) and reconsidering the need for rural patients to spend their first 2 weeks after TB diagnosis in hospital. There is a need to bring services closer to communities and Health Surveillance Assistants have a pivotal role to play here.

In order for the Ministry of Health to properly monitor equity performance of TB control activities at district and national levels, there is urgent need for a prevalence survey amongst different social groups (gender, age, socio-economic status and geography) which will enable ongoing equity monitoring and inform further interventions to promote access and adherence.

The NTP entrance into the SWAp, together with an increasing focus on decentralisation means that NTP staffs need to

strengthen relationships with District Health Officers. This will ensure quality TB services that reflect the needs of poor women and men, increased case notification and simplified diagnostic pathways at the district level.

Conclusion

The Malawi NTP is well established with a good reputation within the sub Saharan region. The programme has attempted to be responsive to the needs of different social groups such as interventions in prisons, decentralisation of treatment and piloting of community-based activities to improve access to services for different groups. The Programme of Work that is being delivered is a good opportunity to enhance equity and pro-poor health services. The major challenge is to increase case detection amongst poor men and women. In addition, the NTP needs a prevalence survey that will enhance equity monitoring using routine data.

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