COUNTRY PROFILE

Mozambique

Mozambique has a longstanding commitment to TB control, and the DOTS strategy was introduced in all districts by 2000. Nevertheless, the NTP still faces substantial difficulties in providing adequate TB services throughout the country. Efforts are being made to strengthen the country's health infrastructure, which has suffered in the past from inadequate resources as well as the destructive effects of civil unrest and natural disasters. Despite these difficulties, TB case detection and cure rates have improved in recent years. The award of a GFATM grant will greatly increase the amount of funds available for TB control in 2005 and make it possible to address problems related to staffing, training and medical supplies and equipment. With improvements in facilities for diagnosis and patient care, case detection and cure rates should continue to improve in the next few years. Progress will be gradual because it will take time to build up the necessary cadre of well-trained staff to carry out the full programme of DOTS activities. With the help of international partners, Mozambique is beginning to tackle the special challenges associated with high rates of Tb and HIV coinfection. The extent of MDR-TB is being investigated in a new national survey.

System of TB control

The NTP was officially established in 1977 and consists of a central unit, 3 regional coordinators, 12 provincial coordinators and 149 health area district coordinators. There are 3 central hospitals (one in each region), 7 provincial hospitals, 27 rural hospitals and 162 health centres, all involved in DOTS implementation. There are also approximately 800 health posts, managed by rural health workers, which are not part of the DOTS programme.

The TB laboratory network has an NRL in Maputo City that performs culture and DST. There are 45 intermediate laboratories, 11 of which are located in the capital cities of the provinces, and 163 peripheral laboratories located mostly in health centres of the district capital cities. There are no microscopy services in any of the health posts.

Surveillance and monitoring

The total number of TB cases notified, both smear-positive and all forms, continued to increase between 2002 and 2003. The proportion of new pulmonary cases diagnosed as smear-positive was 67% in 2003. This is towards the lower end of the expected range of 65–80%, as often seen in countries with high rates of HIV infection. For Mozambique, as for some other countries in southern Africa, the accuracy of the estimated case detection rate (45% in 2003) is uncertain. The treatment success rate was 78% for the 2002 cohort and has improved each year since 1995. In 2002, 11% of patients died and 10% defaulted or were lost to follow-up after transfer to other treatment centres. Both of the latter indicators were high for patients undergoing re-treatment following relapse, failure or default; the overall re-treatment success rate was 67%. Considering progress towards the MDGs, the priority for Mozambique is to bring treatment success and case detection rates closer to target levels.

Improving programme performance

Implementation of the NTP's five-year national strategic plan began in 2003. Financial constraints have hindered almost all aspects of programme performance in Mozambique, partly because of a change in financial transfer mechanisms at the central level. Future improvements in the programme rely heavily on the GFATM grant, which was signed in April 2004. Disbursement of funds started in September 2004 but has not yet reached the sub-recipients. However, it may prove difficult for the central unit to meet the staffing requirements needed to begin implementation of the overall GFATM plan. A number of key staff need to be recruited, including TB coordinators for the central, southern and northern regions as well as

PROGRESS IN TB CONTROL IN MOZAMBIQUE

Indicators	
DOTS treatment success, 2002 cohort	78%
DOTS detection rate, 2003	45%
NTP budget available, 2004	44%
Government contribution to NTP budget, including loans, 2004	30%
Government contribution to total TB control costs, including loans, 2004	46%
Government health spending used for TB control, 2004	6%

Major achievements

- Implementation of a five-year strategic national plan for the NTP (2003–2008)
- Approval of GFATM funding for overall NTP strengthening, and GDF funding for FDC anti-TB drugs
- Development of a national TB/HIV collaborative project

Major planned activities

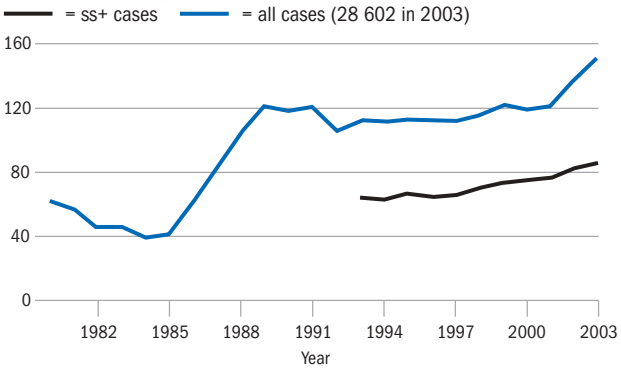
- Develop a drug management system to estimate the number of drugs and supplies needed at central and provincial level, and a plan to manage drug shortages
- Establish laboratory quality control in collaboration with provincial laboratory supervisors
- Commence collaborative TB/HIV activities in demonstration project sites, including surveillance of HIV in TB patients in 2005 and the introduction of isoniazid preventive therapy and co-trimoxazole preventive therapy

MOZAMBIQUE

LATEST ESTIMATES[a]	
Population	**18 863 291**
Global rank (by est. number of cases)	18
Incidence (all cases/100 000 pop/year)	457
Incidence (new ss+/100 000 pop/year)	190
Prevalence (all cases/100 000 pop)	636
TB mortality (all cases/100 000 pop/year)	129
TB cases HIV+ (adults aged 15–49, %)	49
New cases multidrug resistant (%)	3.5

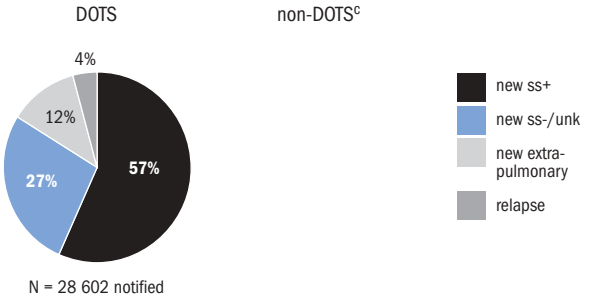
TRENDS	2000	2001	2002	2003
DOTS coverage (%)	100	100	100	100
Notification rate (all cases/100 000 pop)	118	121	138	152
Notification rate (new ss+/100 000 pop)	74	77	82	86
Detection of all cases (%)	30	29	32	33
Case detection rate (new ss+, %)	45	44	45	45
DOTS case detection rate (new ss+, %)	45	44	45	45
DOTS case detection rate (new ss+)/coverage (%)	45	44	45	45
DOTS treatment success (new ss+, %)	75	77	78	–

Notification rate (per 100 000 pop)

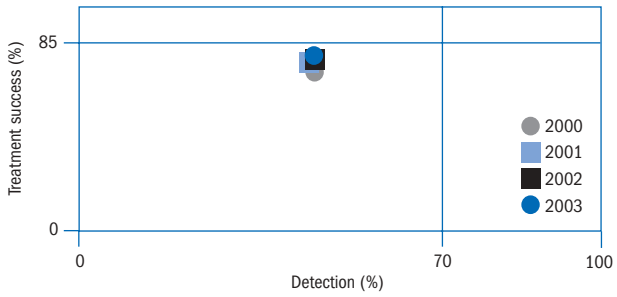


Notification rate by age and sex (new ss+)[b]

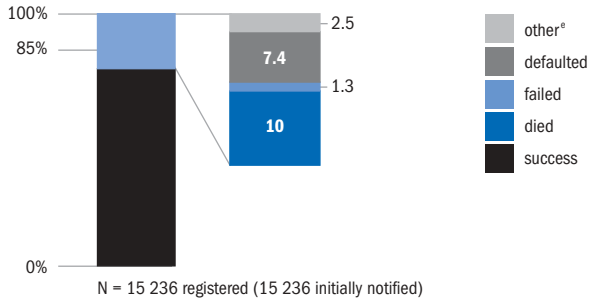
Case types notified



DOTS progress towards targets[d]



DOTS treatment outcomes (new ss+)



Non-DOTS treatment outcomes (new ss+)

Notes

ss+ indicates smear-positive; ss-, smear-negative; pop, population; unk, unknown.

Absence of a graph indicates that the data were not available or applicable.

[a] See Methods for data sources. Prevalence and mortality estimates include patients with HIV.

[b] The sum of cases notified by age and sex is less than the number of new smear-positive cases notified for some countries.

[c] Non-DOTS is blank for countries which are 100% DOTS, or where no non-DOTS data were reported.

[d] DOTS case detection rate for given year, DOTS treatment success rate for cohort registered in previous year.

[e] "Other" includes transfer out and not evaluated, still on treatment, and other unknown.

technical and administrative support staff and laboratory technicians. In preparation for the GFATM grant, six TB managers were trained at the WHO Collaborating Centre for TB and Lung Disease in Sondalo, Italy, in July 2003.

In 2003 and 2004, a serious shortage of anti-TB drugs occurred because of lack of funds. In May 2004, there were no stocks of ethambutol or pyrazinamide at the central level and a severe shortage of drugs was reported in some provinces. Fortunately, a three-year grant was approved by the GDF at the time of these shortages. FDC anti-TB drugs will be procured in place of loose formulations from 2004. A drug management system will be developed with GFATM funds; this will include a simple computer spreadsheet to estimate the amount of drugs and supplies needed at the central and provincial levels, a mandatory one-year national buffer stock of drugs and laboratory reagents to be maintained at the central level, and a mechanism for responding to unforeseen shortages by mobilizing additional support.

A new national drug resistance survey is planned. The protocol has been finalized and implementation should start in January 2005. DST is performed on isolates from patients failing re-treatment. However, no proper treatment is available for MDR-TB patients. A proposal will be submitted to the GLC in 2005.

Three other areas where programme performance needs to be improved are diagnostic and laboratory services, TB/HIV coordination and links with other health-care providers.

Diagnostic and laboratory services

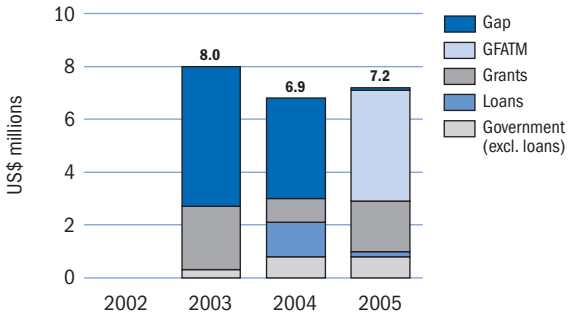
The quality of DOTS implementation is limited by the poor laboratory network. Existing laboratories are inadequately distributed throughout the country, and more than half of the population is served by health centres that are 10 km or further from a diagnostic facility. The protocol for quality assurance of smear microscopy has been finalized but was not put into practice as scheduled in January 2004 because of lack of funds. Regular laboratory supervision has also stopped due to a lack of funds. There are plans to establish laboratory quality control (LQC) in collaboration with provincial laboratory supervisors and to identify and train staff in LQC. Provision of culture testing and quality control call for the upgrading of laboratories in Beira (central region) and Nampula (northern region), but infrastructure improvements have been postponed until GFATM funding becomes available. The NRL will be strengthened only if funds can be obtained from sources other than the GFATM. During 2003, a number of health facilities that had been out of service were rehabilitated and several health posts upgraded to health centres with smear microscopy services.

The lack of technicians throughout the laboratory services in Mozambique will be addressed through intensified training of existing technicians and, with forthcoming funding, re-hiring of qualified technicians.

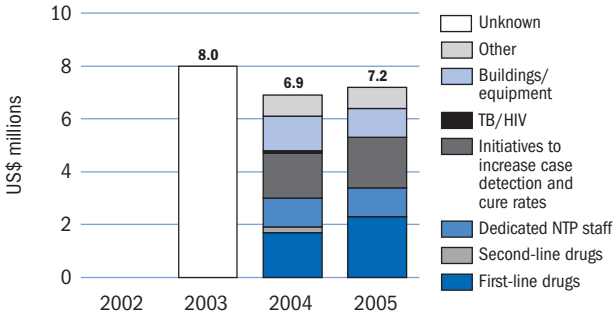
TB/HIV coordination

A collaborative TB/HIV project (2004–2005) is being funded by WHO and USAID and implemented with support from KNCV. Good progress is being made at the central level. A TB/HIV coordinator has been recruited and a body to coordinate collaborative TB/HIV activities at all levels established. The team will oversee the develop-

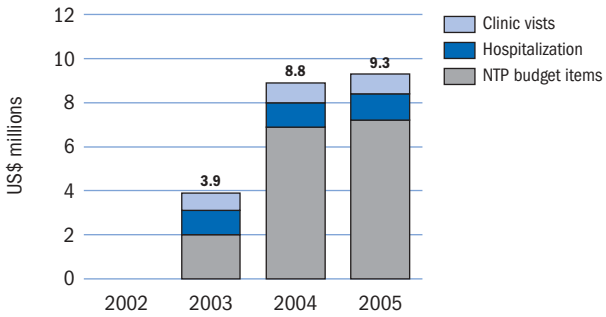
(a) NTP budget by source of funding



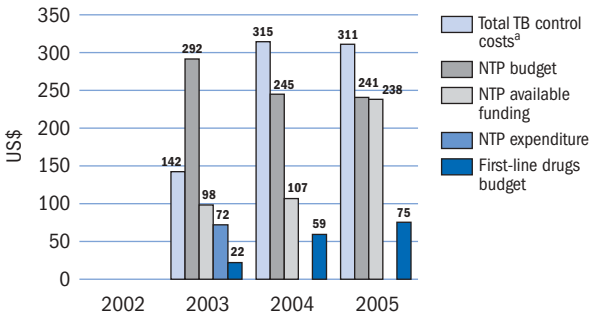
(b) NTP budget by line item



(c) Total TB control costs by line item[a]



(d) Per patient costs, budgets, available funding and expenditures



[a] Total TB control costs for 2002 and 2003 are based on expenditures, whereas those for 2004 and 2005 are based on budgets. Estimates of the costs of clinic visits and hospitalization are WHO estimates based on data provided by the NTP and from other sources. See Methods for further details.

ment of a national policy for collaborative TB/HIV activities and its implementation, including planned demonstration projects. Planned project activities include surveillance of HIV in TB patients in 2005 and the introduction of isoniazid and cotrimoxazole preventive therapy. Training materials for TB/HIV are being developed and a workshop is planned. An important step has been the inclusion of the TB/HIV monitoring and evaluation indicators in the integrated health network system for HIV/AIDS; good progress is being made.

Links with other health-care providers

Private sector involvement is restricted to a few private hospitals that diagnose and treat TB under NTP guidance. The NTP is beginning to involve medical colleges, specialist TB clinics, and prison, army and police health facilities in DOTS activities.

Partnerships

External funding for TB control comes from the governments of Italy, Norway and the USA (USAID) and from the GFATM. WHO and KNCV are the main technical partners; CARE International, CDC and MSF-Belgium/Luxembourg are additional partners in the TB/HIV project.

Budgets and expenditures

The NTP budget decreased from an estimated US$ 8.0 million in 2003 to US$ 6.9 million in 2004. However, available funding has increased from around US$ 3 million in 2003 to almost US$ 7 million in 2005. This means that the funding gap has fallen from 66% of the budget in 2003 to a projected 1% of the budget in 2005. This improved funding situation is mainly a result of an increase in loans and grants, including approval of a GFATM grant in round 2. The 2005 budget will be highly dependent on external financing, with around 85% of funds provided by grants, even though the government's contribution to the NTP budget has remained constant in absolute terms.

One of the largest budget line items is first-line anti-TB drugs. This budget has been increasing in recent years to allow creation and consolidation of a buffer stock (this is why the budget per patient for first-line drugs has increased since 2003). There has also been a large increase in the budget for initiatives to increase case detection and cure rates between 2003 and 2005. These initiatives will be scaled up once GFATM funds become available. For the first time, there is a budget for collaborative TB/HIV activities in 2004 and 2005; however, this represents only around 1% of the NTP budget.

The total TB cost per patient based on budget data is about US$ 300 for the years 2004 and 2005. However, the total cost per patient based on actual expenditure was substantially lower in 2003 at US$ 142 because of the large funding gap. The total annual cost of TB control (including visits to health clinics and hospitalization as well as NTP budget items) is projected to increase from US$ 3.9 million in 2003 to US$ 9.3 million in 2005.