COUNTRY PROFILE

Ethiopia

Ethiopia has given priority to TB, HIV/AIDS and malaria prevention and control for more than a decade. The DOTS strategy is being implemented in most districts, and almost all hospitals and health centres provide DOTS services. However, basic health services are not yet accessible to about 40% of the population, and intensive efforts are being made to ensure better access throughout the country. Health facilities suffer from a high turnover of staff to deliver TB services; this constraint is being addressed through a comprehensive HRD plan and training programmes. Available data suggest that the incidence of TB has risen in recent years, partly as a result of the impact of the HIV/AIDS epidemic. Special efforts are being made to address the needs of TB patients coinfected withHIV coinfection. Ethiopia has carried out its first national drug resistance survey and found that the rate of MDR-TB is low. The country has successfully maintained an uninterrupted supply of anti-TB drugs for several years. Approval of a grant from the GFATM opened up additional possibilities to expand and improve TB control services in 2004 and 2005.

System of TB control

The health policy in Ethiopia, dating from 1993, gives priority to the control of communicable diseases, including TB, HIV/AIDS and malaria. The health system is being progressively decentralized under the country's primary health-care strategy. Recently, a four-tier health-care delivery structure was established to implement this policy. The primary health-care unit is the basic level of health care for Ethiopia and consists of a health centre with five satellite health posts, each serving 5000 people. In 2005, this network will be extended by the addition of two health extension workers for each subdistrict (kebelle). The health system also includes district (woreda), regional and specialized hospitals, serving 250 000, 1 000 000 and 5 000 000 people, respectively. During the past year, further decentralization to the woredas in major regions of the country has led to an increase in the transfer of health personnel from regions and zones to woredas and a decreasing role of the zone in TB control activities.

In 1994, the NTP (known locally as the TB and Leprosy Prevention Control Team) was established. Since 2000, it has been part of the Disease Prevention and Control Department of the Federal MoH. In 1996, a Project Development Plan (PDP), designed to support TB control through the NTP for five years, was signed by the Government of Ethiopia, WHO and KNCV. In 2001, this plan was extended for an additional year.

The laboratory services in Ethiopia include one NRL, regional reference laboratories in some regions and peripheral laboratories.

Surveillance and monitoring

The steady rise in case notifications since 1993 is because of increasing DOTS coverage, improved reporting and the impact of HIV/AIDS. While the relative contributions of these three factors are uncertain, it has been assumed that the national smear-positive case detection rate by the DOTS programme has remained constant at around 36%, while incidence has increased. The case detection rate within DOTS areas was only 38% in 2003, due largely to the important difference between DOTS coverage as defined in this report (95%) and the proportion of the population thought to have access to health services of any kind, including for TB (50%). The proportion of notified cases diagnosed as smear-positive is low in Ethiopia, and has stayed within the range 27–35% during the period 1995–2003.

Despite the moderately high prevalence of HIV infection (4.4% of adults aged 15–49 years in 2003), it remains difficult to explain the extraordinary proportion of cases that are reported as extrapulmonary TB (>34% in 2003, regional variation 29–54%). The vast majority of extrapulmonary cases are reported as lymph node TB; this phenomenon is currently being investigated through a large operational research study in six sites in four regions.

Treatment success among new patients was only 76% in the 2002

PROGRESS IN TB CONTROL IN ETHIOPIA

Indicators	
DOTS treatment success, 2002 cohort	76%
DOTS case detection rate, 2003	36%
NTP budget available, 2004	100%
Government contribution to NTP budget, including loans, 2004	8%
Government contribution to total TB control costs, including loans, 2004	31%
Government health spending used for TB control, 2004	10%

Major achievements

- Provision of DOTS services by 98% of hospitals and health centres
- Uninterrupted drug supply for several years
- Strong HRD plan with up-to-date training material and methodology
- Drug resistance survey completed with relatively low MDR-TB rate reported

Major planned activities

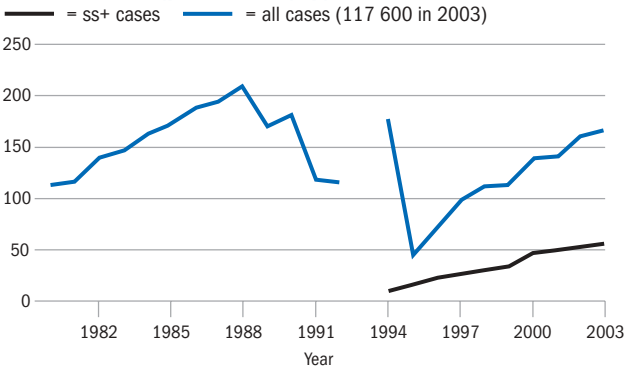
- Commence collaborative TB/HIV activities in pilot sites as well as in hospitals scheduled to provide ART
- Involve communities and private providers in TB control
- Conduct major training activities in all regions and woredas following the recent HRD plan

ETHIOPIA

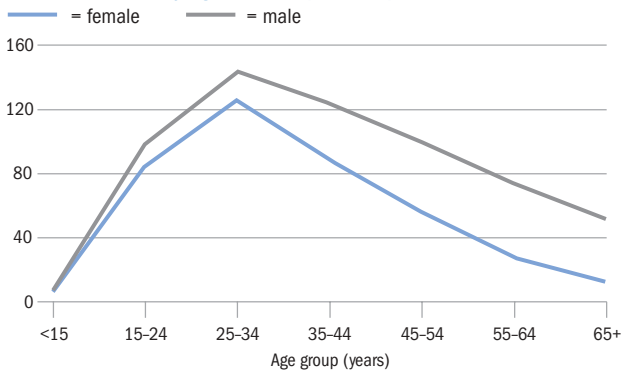
LATEST ESTIMATES[a]	
Population	**70 678 002**
Global rank (by est. number of cases)	7
Incidence (all cases/100 000 pop/year)	356
Incidence (new ss+/100 000 pop/year)	155
Prevalence (all cases/100 000 pop)	533
TB mortality (all cases/100 000 pop/year)	79
TB cases HIV+ (adults aged 15–49, %)	21
New cases multidrug resistant (%)	2.3

TRENDS	2000	2001	2002	2003
DOTS coverage (%)	85	70	95	95
Notification rate (all cases/100 000 pop)	139	141	160	166
Notification rate (new ss+/100 000 pop)	47	49	53	56
Detection of all cases (%)	45	43	47	47
Case detection rate (new ss+, %)	35	35	36	36
DOTS case detection rate (new ss+, %)	35	35	36	36
DOTS case detection rate (new ss+)/coverage (%)	41	50	38	38
DOTS treatment success (new ss+, %)	80	76	76	–

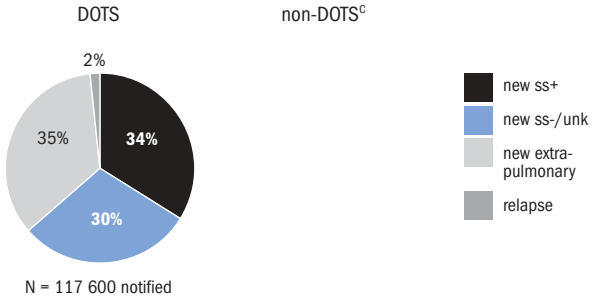
Notification rate (per 100 000 pop)



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

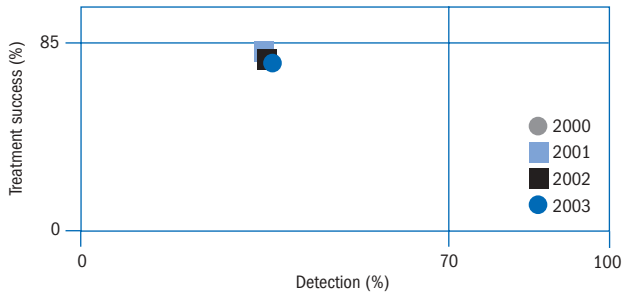


Case types notified

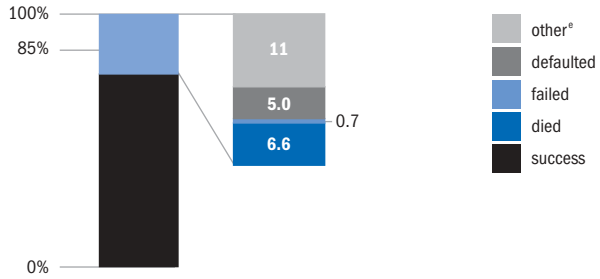


N = 117 600 notified

DOTS progress towards targets[d]



DOTS treatment outcomes (new ss+)



N = 36 541 registered (36 541 initially notified)

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.

cohort, considerably lower than Ethiopia's maximum of 80% reported for 2000. However, this decrease is explained by the fact that the NTP now includes all notified cases in the analysis. Among new patients who were registered for treatment in 2002, the outcome of treatment is not known for 10% following transfer between treatment units; 7% died and 17% completed treatment without evidence of smear conversion.

Improving programme performance

In recent years, the high turnover of staff involved in TB control and the effects of decentralization have resulted in a workforce that is not well trained in the principles of TB control. HRD in the NTP therefore received special emphasis in 2003, with the completion of a comprehensive HRD plan, production of a first edition of TB/leprosy training modules and associated materials for all levels of staff involved in TB control, and the creation of a pool of 53 competent TB and leprosy trainers distributed over all regions. Detailed regional training plans for 2005 have been drafted and funding for their implementation secured. The first phase of the plans focuses on in-service training; the second phase will also involve incorporation of TB control principles in the pre-service curricula.

Anti-TB drugs and laboratory supplies are procured by the Pharmaceutical Administration and Supplies Services of the Federal MoH using international competitive bidding, with funding from the GFATM. Despite delays in the procurement process, there has not been any interruption to the availability of drugs, mainly because of the continued maintenance of a one-year buffer stock. NTP training increasingly includes pharmacy staff. Four-drug FDCs have been introduced for the intensive phase of treatment for new patients.

Although almost 95% of the woredas have at least one health facility providing DOTS services, more than half of the smaller health stations/posts do not provide directly observed TB treatment. Covering all these units is one of the main objectives of the NTP, but implementation has been constrained by a shortage of staff for monitoring and supervision as well as a delay in HRD.

Ethiopia's first drug resistance survey is close to completion, with preliminary results indicating 1.7% MDR among new cases, somewhat lower than the WHO estimate of 2.3%.

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

Diagnostic and laboratory services

All laboratories are supplied with microscopes and reagents by the NTP, and staff are included in TB-related training activities. A system of quality assurance is in place, but implementation is weak. The NTP developed and issued a national laboratory manual for smear microscopy in 2002, which will be revised and re-edited in 2005.

TB/HIV coordination

A national TB/HIV coordinating body has been established and specific terms of reference developed. The committee includes the Federal MoH, academia, bilateral donors and the technical partners of the TB and HIV programmes. Nine pilot sites have been selected to pilot collaborative TB/HIV activities under the guidance of the committee. A national TB/HIV surveillance plan is being finalized. TB/HIV activities are managed by a national TB/HIV coordinator (WHO) based at the Federal MoH.

A national TB/HIV orientation workshop and various training courses have been conducted for the staff of pilot sites, in management of TB and other opportunistic infections in PLWHA and in VCT. Guidelines have been developed for the use of isoniazid preventive therapy in PLWHA infected with *M. tuberculosis* and for the use of co-trimoxazole preventive therapy in HIV-infected TB patients. Isoniazid (through the GDF), co-trimoxazole and HIV test kits (both through the Federal MoH) have been distributed. Ethiopia hosted, facilitated and participated in three major international activities: the meeting of the TB/HIV Global Working Group, TB/HIV Surveillance International Workshop (CDC/WHO) and two global TB/HIV managers training courses (WHO/GLRA).

Links with other health-care providers

Observations during monitoring and supervision as well as a small scale study in Addis Ababa have shown that many patients are managed in private clinics. Patient management is generally limited to diagnosis since, officially, anti-TB drugs in Ethiopia are available only in government health facilities. Most patients in whom TB is diagnosed in the private sector are referred to public health centres for registration and treatment. However, anti-TB drugs have been shown to circulate illegally, and treatment of an unknown number of patients is initiated in the private sector, disregarding national treatment guidelines. A pilot project is planned in Addis Ababa so that private providers will be increasingly involved in training activities as well as laboratory quality assurance activities.

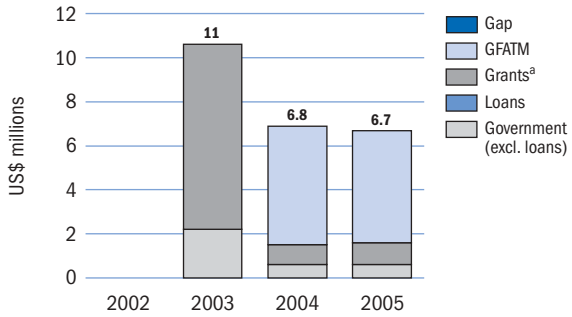
Links with the community

Given the sparse distribution of health facilities, and the consequent limited access to DOTS services in Ethiopia, plans are under way to involve the community in TB control. With GFATM funding, pilot projects will start in four districts of four regions. National guidelines for community involvement in DOTS and training modules and materials have been developed and distributed.

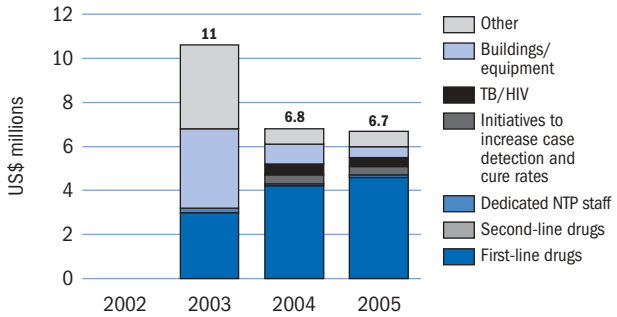
Partnerships

For many years, the NTP has been consistently supported by the Royal Netherlands Embassy, GLRA and WHO. More recently, support has been received from the GFATM, with a large grant approved in the first round of applications. Other partners are CDC and USAID. MSF Belgium is providing support in the Somali Region, but this will be discontinued in 2005 when the regional health bureau assumes responsibility for the region.

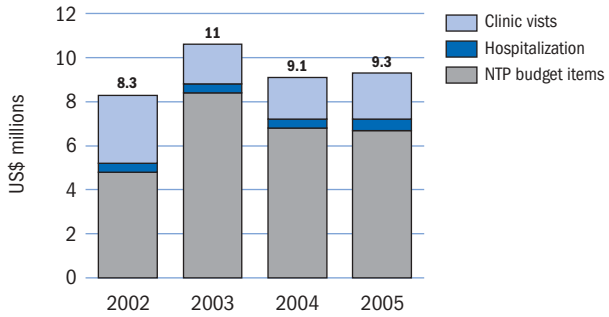
(a) NTP budget by source of funding



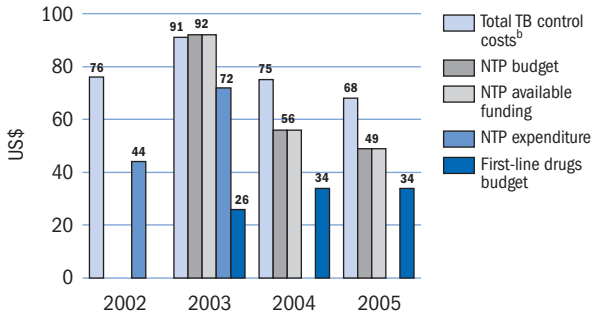
(b) NTP budget by line item



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



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



[a] The 2003 budget data provided to WHO did not separate the GFATM contribution from other grants.
[b] 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.

Budgets and expenditures

The total NTP budget was US$ 11 million in 2003, and lower at around US$ 7 million in both 2004 and 2005 (US$ 92 and US$ 49 per patient in 2003 and 2005, respectively). The relatively high total in 2003 was a result of a large budget for capital investments (included in the "buildings and equipment" category) as well as a large budget in the "other" line item category. In practice, only 53% and 34%, respectively, of these budgets were spent. Following approval of a GFATM grant in round 1 of US$ 11 million for the first two years, Ethiopia has not reported any funding gaps for 2003–2005. Grants, including from the GFATM, represent more than 90% of the NTP budget in 2004 and 2005, making the NTP highly dependent on external funding. Programme sustainability is a concern, as grants support key areas such as first-line anti-TB drugs. In addition, continuous funding from the GFATM will depend on NTP performance during the first two years of the grant.

As the expected number of TB patients to be treated is increasing, the first-line drug budget is steadily expanding to reach US$ 4.6 million in 2005, and remains the largest budget item.

The total TB control cost per patient (including the estimated costs of bed-days and clinic visits as well as the costs reflected in NTP budgets and expenditures) has remained relatively low, varying from US$ 68 to US$ 91 between 2002 and 2005.