Ethiopia

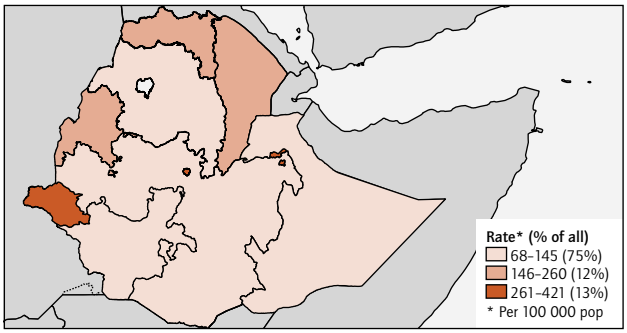
In 2007, the Ministry of Health expanded the network of general health-care facilities and engaged health extension workers and private health clinics in a concerted effort to increase the case detection rate. Increases in the NTP budget for laboratory strengthening activities and intensified case-finding among HIV patients are expected to contribute to an improved case detection rate. Five regional laboratories are being rebuilt and equipped to conduct culture, DST and line-probe assays, in collaboration with GLI/FIND/WHO. Although constrained by staff shortages, the NTP benefits from the global focus on the health worker crisis and the associated development of strategies to "treat, train, and retain" health workers. Piloting of MDR-TB treatment is under way, and a national survey of the prevalence of TB disease is planned for 2009–2010.

SURVEILLANCE AND EPIDEMIOLOGY

Population (thousands)[a] 83 099

Estimates of epidemiological burden, 2007[b]	ALL	IN HIV+ PEOPLE
Incidence		
All forms of TB (thousands of new cases per year)	314	61
All forms of TB (new cases per 100 000 pop/year)	378	74
Rate of change in incidence rate (%), 2006–2007	**–2.6**	**–3.0**
New ss+ cases (thousands of new cases per year)	135	21
New ss+ cases (per 100 000 pop/year)	163	26
HIV+ incident TB cases (% of all TB cases)	19	–
Prevalence		
All forms of TB (thousands of cases)	481	31
All forms of TB (cases per 100 000 pop)	**579**	37
2015 target for prevalence (cases per 100 000 pop)	**156**	–
Mortality		
All forms of TB (thousands of deaths per year)	76	23
All forms of TB (deaths per 100 000 pop/year)	**92**	28
2015 target for mortality (deaths per 100 000 pop/year)	**20**	–
Multidrug-resistant TB (MDR-TB)		
MDR-TB among all new TB cases (%)	1.6	–
MDR-TB among previously treated TB cases (%)	12	–

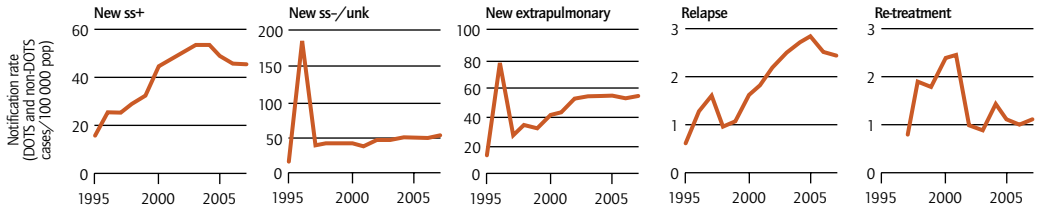
TB notification rate (new and relapse), 2007



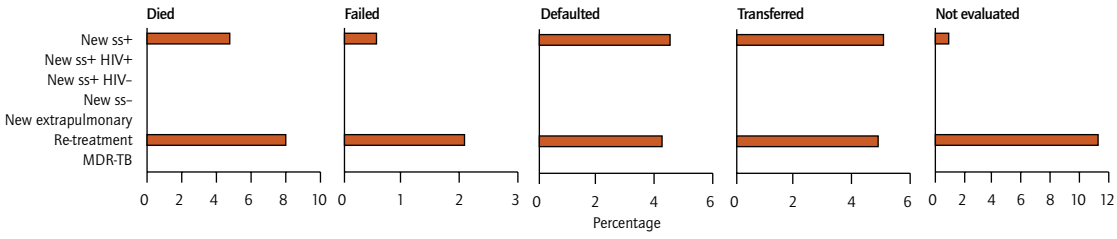
Total notifications, 2007

Notified new and relapse cases (thousands)	129
Notified new and relapse cases (per 100 000 pop/year)	155
Notified new ss+ cases (thousands)	38
Notified new ss+ cases (per 100 000 pop/year)	46
as % of new pulmonary cases	47
sex ratio (male/female)	1.2
DOTS case detection rate (% of estimated new ss+)	**28**
Notified new extrapulmonary cases (thousands)	45
as % of notified new cases	36
Notified new ss+ cases in children (<15 years) (thousands)	2.3
as % of notified new ss+ cases	6.0

Case notifications



Unfavourable treatment outcomes, 2006 cohorts



	2000	2001	2002	2003	2004	2005	2006	2007
DOTS coverage (%)	85	70	95	95	70	90	100	95
Notification rate (new & relapse cases/100 000 pop)	131	133	151	157	160	157	151	155
% notified new & relapse cases reported under DOTS	100	100	100	100	100	100	100	100
Notification rate (new ss+ cases/100 000 pop)	44	46	50	53	54	49	45	46
% notified new ss+ cases reported under DOTS	100	100	100	100	100	100	100	100
Case detection rate (all new cases, %)	39	36	39	39	39	39	38	40
Case detection rate (new ss+ cases, %)	31	30	30	31	31	28	27	28
Treatment success (new ss+ patients, %)	80	76	76	70	79	78	84	–
Re-treatment success (ss+ patients, %)	71	64	60	60	54	56	69	–

Note: notification, case detection and treatment success rates are for the whole country (i.e. DOTS and non-DOTS cases combined).

DOTS EXPANSION AND ENHANCEMENT

Overview of services for diagnosis of TB and treatment of patients

Description of basic management unit	Health centre or hospital
Number of units (DOTS/total), 2007	580/611
Location of NTP services	
Rural Health centre	
Urban Health centre or hospital	
NTP services part of general primary health-care network?	Yes
Location where TB diagnosed	
Rural Health center	
Urban Health centre or hospital	
Diagnosis free of charge?	Yes (all suspects)
Treatment supervised?	All patients in all units
Intensive phase	Health-care worker, community member
Continuation phase	Health-care worker, community member
Category I regimen	2(HRZE)/6(HE)
Treatment free of charge	All patients in all units
External review missions	last: 2002
	next: –

Political commitment

National strategic plan?	Yes (2007–2010)
Mechanism for national interagency coordination?	Yes (established 2007)
National Stop TB Partnership?	No (planned 2009)

Financial indicators, 2009

(see final page for detailed presentation)	%
Government contribution to NTP budget (incl loans)	4.0
Government contribution to total cost TB control (incl loans)	27
Government health spending used for TB control	11
NTP budget funded	31

Per capita health financial indicators, 2009

	US$
NTP budget per capita	0.3
Total costs for TB control per capita	0.4
Funding gap per capita	0.2
Government health expenditure per capita (2005)	3.9
Total health expenditure per capita (2005)	6.4

Quality-assured bacteriology

National reference laboratory? Yes

All TB laboratories performing EQA of smear microscopy or DST under the supervision of the National Reference Laboratory

	Smear				Culture		DST			
	Number	per 100 000	EQA	% adeq perf	Number	per 5 000 000	Number	per 10 000 000	EQA	% adeq perf
2007	833	1.0	–	–	1	0.1	1	0.1	0	–
2008	1 000	1.2	512	–	6	0.4	6	0.7	6.0	–

Note: for routine diagnosis, there should be at least one laboratory providing smear microscopy per 100 000 population. To provide culture for diagnosis of paediatric, extra-pulmonary and ss-/HIV+ TB, as well as DST of re-treatment and failure cases, most countries will need one culture facility per 5 million population and one DST facility per 10 million population. EQA column shows number of laboratories for which EQA was done. Adeq perf; adequate performance for microscopy based on results of EQA.

System for managing drug supplies and laboratory equipment

	Central level			Peripheral level		
	2005	2006	2007	2005	2006	2007
Stock-outs of laboratory supplies?	–	No	No	–	No	Some units
Stock-outs of first-line anti-TB drugs?	No	No	Yes	No	No	Some units

Monitoring and evaluation system, and impact measurement

NTP publishes annual report?	Yes (since 2004)
% of BMUs reporting to next level in 2007	
Case-finding	–
Treatment outcomes	–

Burden and impact assessment		last	next
In-depth analysis of routine surveillance data	No	–	–
Prevalence of disease survey	Yes, national	–	2009
Prevalence of infection survey	No	–	–
Drug resistance survey	Yes, national	2005	–
Mortality survey	No	–	–
Analysis of vital registration data	No	–	–

MDR-TB, TB/HIV AND OTHER CHALLENGES

Multidrug-resistant TB (MDR-TB)

	2005	2006	2007
	Number (% of estimated ss+ MDR-TB)		
Estimated incidence of ss+ MDR cases	3 088	3 088	3 086
Diagnosed and notified	– (–%)	– (–%)	145 (4.7%)
Registered for treatment	– (–%)	– (–%)	– (–%)
GLC	0	0	0
non-GLC	–	–	–

MDR-TB, TB/HIV AND OTHER CHALLENGES (CONTINUED)

Detection and treatment of HIV in TB patients, 2007

TB patients for whom the HIV test result was known	20 723
as % of all notified TB patients	16
TB patients with positive HIV test	6 342
as % of all estimated HIV+ TB cases	10
HIV+ TB patients started or continued on CPT	4 529
as % of HIV+ TB patients notified	71
HIV+ TB patients started or continued on ART	2 658
as % of HIV+ TB patients notified	42

Screening for TB in HIV-positive patients, 2007

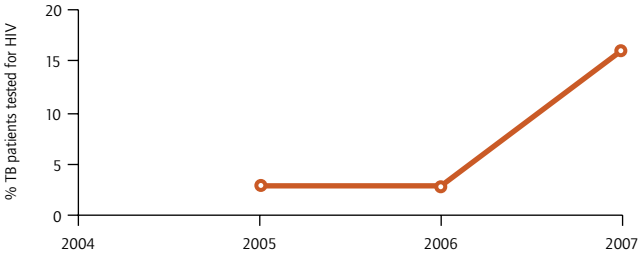
HIV+ patients in HIV care or ART register	58 000
Screened for TB	7 879
as % of HIV+ patients in HIV care or ART register	14
Started on TB treatment	2,000
as % of HIV+ patients in HIV care or ART register	3.4
Started on IPT	2 381
as % of HIV+ patients without TB in HIV care or ART register	4.3

High-risk groups, 2007

Number of close contacts of ss+ TB patients screened	–
Number of TB cases identified among contacts	–
% of contacts with TB	–
Contacts started on IPT	–
% of contacts without TB on IPT	–

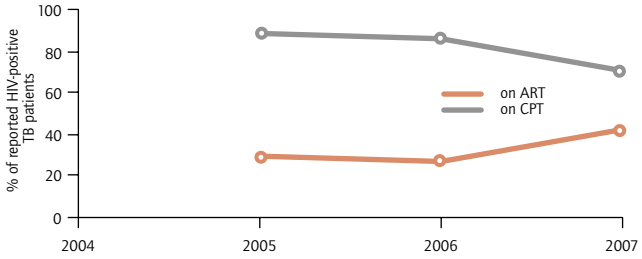
HIV testing for TB patients

In 2007 there was a six-fold increase in the proportion of TB patients screened for HIV compared with 2006



CPT and ART for HIV-positive TB patients

The provision of ART to HIV-positive TB patients almost doubled in 2007 compared with 2006, while the provision of CPT has fallen



CONTRIBUTING TO HEALTH SYSTEM STRENGTHENING

The public health-care system, into which TB control is fully integrated, is constrained by a lack of human resources and difficulties in providing outreach services, particularly in rural areas. Expansion of the network of general health-care facilities will improve access to health care and ultimately help to achieve targets for TB control. TB control is aligned with this expansion of health care through the national health plan and the SWAP.

Practical Approach to Lung Health (PAL), 2007

Number of health-care facilities providing PAL services	0	As % of total number of health-care facilities	0

ENGAGING ALL CARE PROVIDERS

Public-public and public-private approaches (PPM), 2007

Number of providers collaborating with the NTP[c]			
	Number collaborating (total number of providers)	% total notified TB Diagnosed	Treated
Public sector	96 (96)	–	–
Private sector	108 (–)	1.8	1.8

International Standards for Tuberculosis Care (ISTC)

ISTC endorsed by professional organizations?	No
ISTC included in medical curriculum?	No

EMPOWERING PEOPLE WITH TB, AND COMMUNITIES

Advocacy, communication and social mobilization (ACSM)

ACSM has been integrated into the National Strategic Plan 2008–2010. A KAP survey is planned for 2009, and an ACSM Task Force has been established.

Community participation in TB care and Patients' Charter

The successful Health Extension Programme employs almost 30 000 health service extension workers, the majority of whom are women who are trained and supervised and who receive salaries. This programme is the backbone of every intervention carried out at the community level and is designed to provide preventive services, including the detection and referral of TB suspects, in all rural villages. No data on use of the Patients' Charter were reported.

ENABLING AND PROMOTING RESEARCH

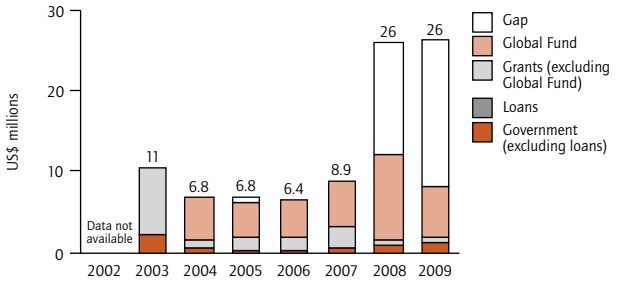
Programme-based operational research, 2007

Operational research budget (% of NTP budget)	0%

FINANCING

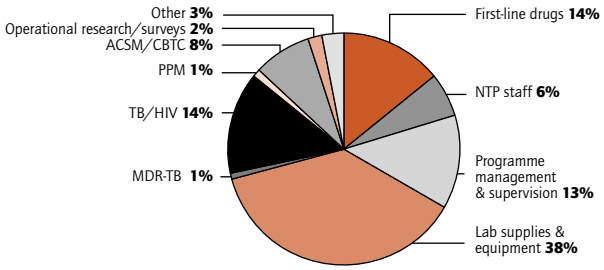
a. NTP budget by source of funding

Large increase in budget in 2008 and 2009 but large funding gaps; Global Fund is the main source of financing



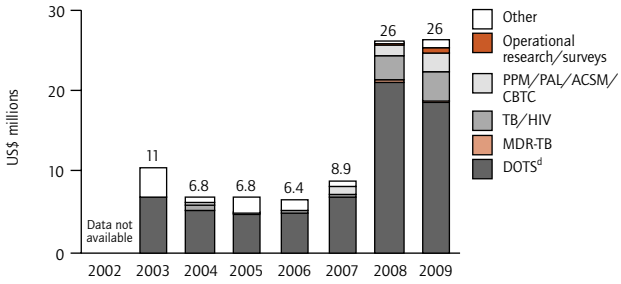
b. NTP budget line items in 2009

Plan and budget developed for almost every component of the Stop TB Strategy; DOTS is the largest component (71%) followed by TB/HIV (14%)



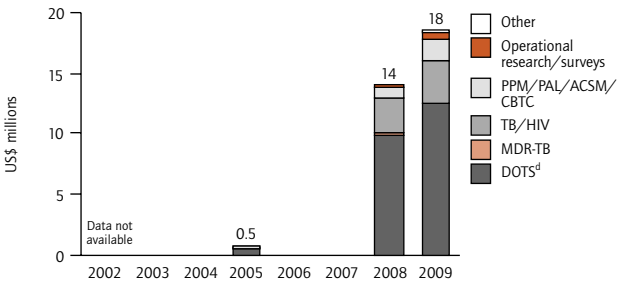
c. NTP budget by line item

Increased budget within DOTS mainly for laboratory supplies and equipment, including establishment of 6 culture and DST sites and country-wide expansion of health facilities; bigger budget for TB/HIV is for scale-up to additional 340 sites



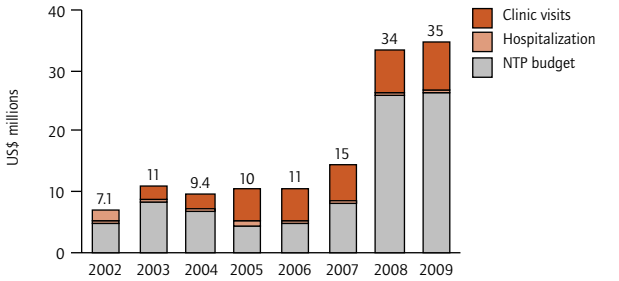
d. NTP funding gap by line item

Funding gap within DOTS mainly for first-line drugs (2009) and laboratory supplies and equipment (2008–2009)



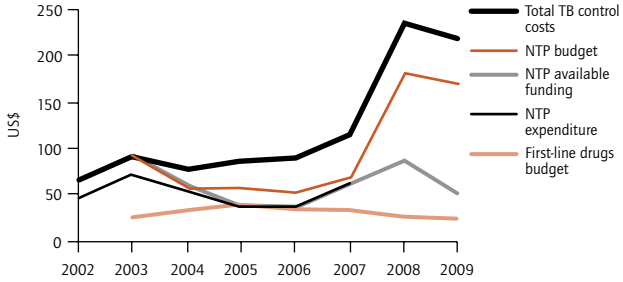
e. Total TB control costs by line item[1]

Costs for clinic visits based on 66 outpatient visits per new TB patient to health facilities during treatment; very limited use of hospitalization



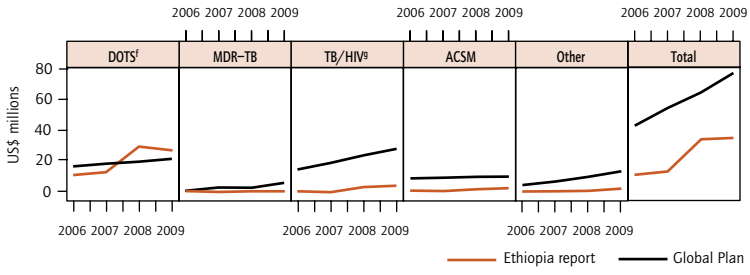
f. Per patient costs, budgets and expenditures[2]

Big increase in costs and budget per patient from 2008 as activities broadened in line with the Stop TB Strategy



g. Global Plan compared with country reports[e]

Country implementation behind Global Plan targets 2006–2007; country plans for 2008–2009 ahead of Global Plan for DOTS, in contrast to other components of TB control, although difference for TB/HIV probably exaggerated after downward revision in estimate of HIV prevalence



h. NTP budget and funding gap by Stop TB Strategy component (US$ millions)

	2009 BUDGET	GAP
DOTS expansion and enhancement	19	12
TB/HIV, MDR-TB and other challenges	3.9	3.3
Health system strengthening	0	0
Engage all care providers	0.1	0.1
People with TB, and communities	2.1	1.6
Research and surveys	0.6	0.6
Other	0.9	0.1

SOURCES, METHODS AND ABBREVIATIONS

[a–g] Please see footnotes page 169.

[1] Total TB control costs for 2002–2007 are based on expenditure, whereas those for 2008–2009 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.

[2] NTP available funding for 2004–2007 is based on the amount of funding actually received, using retrospective data; available funding for 2002–2003 and 2008–2009 is based on prospectively reported budget data, and estimated as the total budget minus any reported funding gap.

– indicates not available or not applicable; pop, population; ss+, sputum smear-positive; ss–, sputum smear-negative pulmonary; unk, pulmonary – sputum smear not done or result unknown.