

Uganda

DOTS is implemented throughout the country, but the case detection rate has been below target and relatively stable since 2001. The treatment success rate remains low because of the high proportion of patients who die, default from treatment or for whom the treatment outcome is not evaluated. Training on collaborative TB/HIV activities based on standardized national guidelines has been provided to around half of the districts. Inadequate funding, linked in part to problems with disbursement of Global Fund grants, has hampered the progress of the national programme. Shortages of first-line anti-TB drugs have also been reported. To improve current estimates of the epidemiological burden of TB, a survey of the prevalence of TB disease is planned for 2009; however, there is inadequate funding for this project.

SURVEILLANCE AND EPIDEMIOLOGY

Population (thousands)^a 30 884

Estimates of epidemiological burden, 2007^b ALL IN HIV+ PEOPLE

Incidence

All forms of TB (thousands of new cases per year)	102	39
All forms of TB (new cases per 100 000 pop/year)	330	128
Rate of change in incidence rate (%), 2006-2007	-5.7	-8.6
New ss+ cases (thousands of new cases per year)	42	14
New ss+ cases (per 100 000 pop/year)	136	45
HIV+ incident TB cases (% of all TB cases)	39	-

Prevalence

All forms of TB (thousands of cases)	132	20
All forms of TB (cases per 100 000 pop)	426	64
2015 target for prevalence (cases per 100 000 pop)	103	-

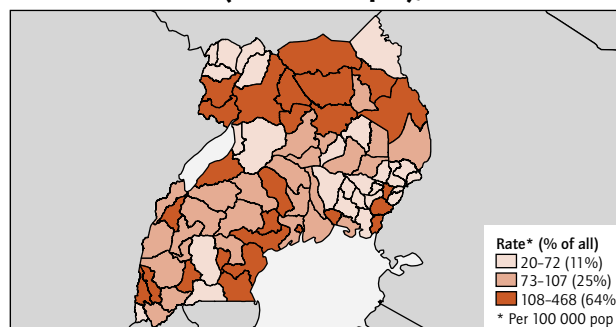
Mortality

All forms of TB (thousands of deaths per year)	29	16
All forms of TB (deaths per 100 000 pop/year)	93	52
2015 target for mortality (deaths per 100 000 pop/year)	35	-

Multidrug-resistant TB (MDR-TB)

MDR-TB among all new TB cases (%)	0.5	-
MDR-TB among previously treated TB cases (%)	4.4	-

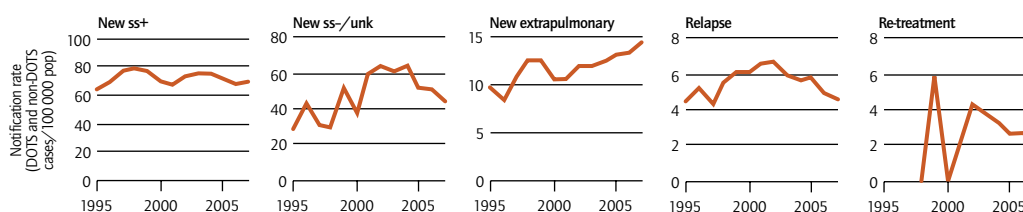
TB notification rate (new and relapse), 2007



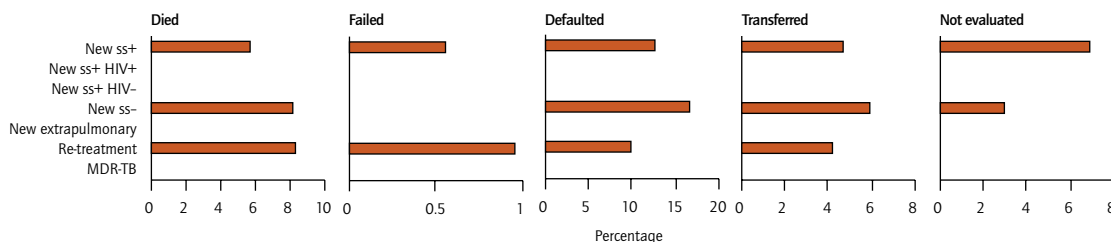
Total notifications, 2007

Notified new and relapse cases (thousands)	41
Notified new and relapse cases (per 100 000 pop/year)	132
Notified new ss+ cases (thousands)	21
Notified new ss+ cases (per 100 000 pop/year)	69
as % of new pulmonary cases	61
sex ratio (male/female)	1.5
DOTS case detection rate (% of estimated new ss+)	51
Notified new extrapulmonary cases (thousands)	4.5
as % of notified new cases	11
Notified new ss+ cases in children (<15 years) (thousands)	0.6
as % of notified new ss+ cases	2.7

Case notifications



Unfavourable treatment outcomes, 2006 cohorts



	2000	2001	2002	2003	2004	2005	2006	2007
DOTS coverage (%)	100	100	100	100	100	100	100	100
Notification rate (new & relapse cases/100 000 pop)	123	145	155	154	156	142	136	132
% notified new & relapse cases reported under DOTS	100	100	100	100	100	100	100	100
Notification rate (new ss+ cases/100 000 pop)	70	68	73	75	75	71	68	69
% notified new ss+ cases reported under DOTS	100	100	100	100	100	100	100	100
Case detection rate (all new cases, %)	34	38	38	37	39	37	38	39
Case detection rate (new ss+ cases, %)	51	47	47	47	48	47	48	51
Treatment success (new ss+ patients, %)	63	56	60	68	70	73	70	-
Re-treatment success (ss+ patients, %)	64	63	55	60	68	-	76	-

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	Hospital
Number of units (DOTS/total), 2007	80/80
Location of NTP services	
Rural	Health centre
Urban	Hospital
NTP services part of general primary health-care network?	Yes
Location where TB diagnosed	
Rural	Health centre
Urban	Hospital
Diagnosis free of charge?	Yes (if TB is confirmed)
Treatment supervised?	All patients in some units
Intensive phase	Health-care worker, community member, family member
Continuation phase	Health-care worker, community member, family member
Category I regimen	2(HRZ)E2/6HE
Treatment free of charge	All patients in all units
External review missions	last: 2008 next: 2009

Political commitment

National strategic plan?	Yes (2006–2011)
Mechanism for national interagency coordination?	Yes (established 2003)
National Stop TB Partnership?	Yes (established 2004)

Financial indicators, 2009

(see final page for detailed presentation)	%
Government contribution to NTP budget (incl loans)	7.5
Government contribution to total cost TB control (incl loans)	14
Government health spending used for TB control	9.9
NTP budget funded	37

Per capita health financial indicators, 2009

	US\$
NTP budget per capita	0.5
Total costs for TB control per capita	0.6
Funding gap per capita	0.3
Government health expenditure per capita (2005)	6.4
Total health expenditure per capita (2005)	22

Quality-assured bacteriology

National reference laboratory?	Yes
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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	716	2.3	716	81%	3	0.5	2	0.6	2.0	100%
2008	741	2.3	741	–	4	0.6	2	0.6	2.0	–

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	–	Some units	Some units
Stock-outs of first-line anti-TB drugs?	Yes	Yes	Yes	Yes	Some units	Some units

Monitoring and evaluation system, and impact measurement

NTP publishes annual report?	Yes (since 2003)	Burden and impact assessment		last	next
% of BMUs reporting to next level in 2007		In-depth analysis of routine surveillance data	No	–	–
Case-finding	100%	Prevalence of disease survey	Yes, national	–	2009
Treatment outcomes	99%	Prevalence of infection survey	Yes, national	1970	2009
		Drug resistance survey	Yes, sub-national	1997	Ongoing
		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	508	497	485
Diagnosed and notified	46 (9.1%)	– (–%)	7 (1.4%)
Registered for treatment	– (–%)	– (–%)	7 (1.4%)
GLC	0	0	0
non-GLC	–	–	7

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	15 844
as % of all notified TB patients	38
TB patients with positive HIV test	9 526
as % of all estimated HIV+ TB cases	24
HIV+ TB patients started or continued on CPT	380
as % of HIV+ TB patients notified	4.0
HIV+ TB patients started or continued on ART	220
as % of HIV+ TB patients notified	2.3

Screening for TB in HIV-positive patients, 2007

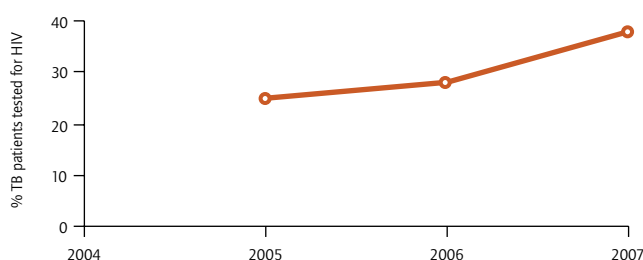
HIV+ patients in HIV care or ART register	244 969
Screened for TB	71 647
as % of HIV+ patients in HIV care or ART register	29
Started on TB treatment	3 566
as % of HIV+ patients in HIV care or ART register	1.5
Started on IPT	121
as % of HIV+ patients without TB in HIV care or ART register	0.1

High-risk groups, 2007

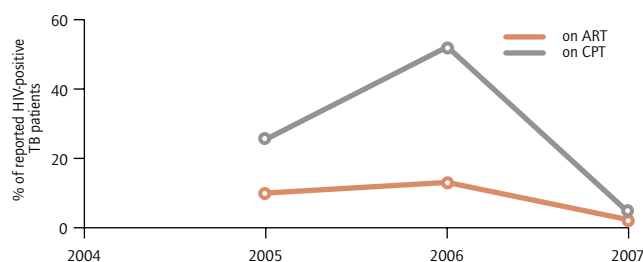
Number of close contacts of ss+ TB patients screened	–
Number of TB cases identified among contacts	–
% of contacts with TB	–
Contacts started on IPT	–
% of contacts without TB on IPT	–

HIV testing for TB patients

The proportion of TB cases tested for HIV continues to increase

**CPT and ART for HIV-positive TB patients**

Provision of CPT and ART under-reported in 2007

**CONTRIBUTING TO HEALTH SYSTEM STRENGTHENING**

The main weaknesses of the health system – a shortage of qualified personnel, poor access to primary health care and low levels of funding for health care – have had a negative impact on the NTP, which is integrated into the primary health-care system. The NTP is improving the capacities of laboratories and human resources through training, monitoring and quality control, all of which benefit the entire health-care system. Engagement of communities by the NTP is strengthening the role of civil society in the country.

Practical Approach to Lung Health (PAL), 2007

Number of health-care facilities providing PAL services	–	As % of total number of health-care facilities	–
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ENGAGING ALL CARE PROVIDERS**Public-public and public-private approaches (PPM), 2007**

	Number collaborating (total number of providers)	% total notified TB	
		Diagnosed	Treated
Public sector	80 (269)	–	–
Private sector	252 (–)	–	–

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)**

The NTP works in close collaboration with the ACSM Working Group of the national Stop TB Partnership to guide and implement ACSM activities. A national ACSM strategy for control of TB and TB/HIV has been developed.

Community participation in TB care and Patients' Charter

Community-based care has been available throughout the country since 2005. Patient support in rural areas is usually provided by neighbours or friends who are in regular contact with the health services. In urban areas, this support is usually provided by family members. Activities to raise awareness about TB are conducted mostly through sensitization of village leaders in rural areas, and through media campaigns in urban areas. The Patients' Charter is being used.

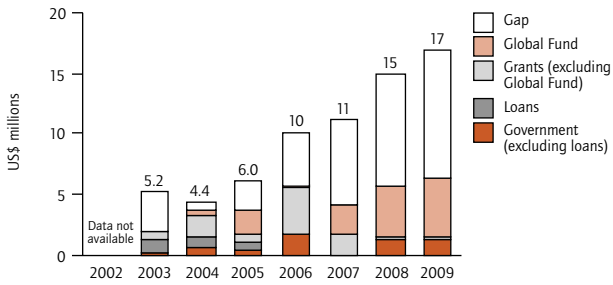
ENABLING AND PROMOTING RESEARCH**Programme-based operational research, 2007**

Operational research budget (% of NTP budget)	2.5%
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FINANCING

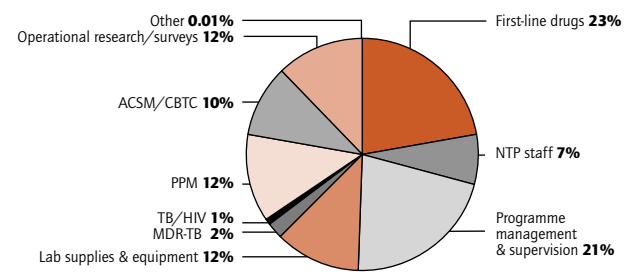
a. NTP budget by source of funding

Increasing NTP budget and increasing funding gaps



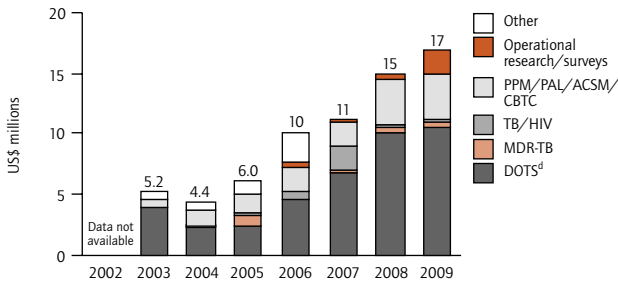
b. NTP budget line items in 2009

DOTS implementation accounts for 62% of budget, followed by ACSM including community TB care



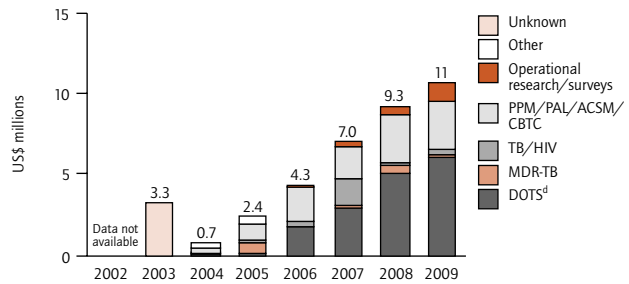
c. NTP budget by line item

Within DOTS, increased funding needs for programme management and supervision activities; operational research includes budget for disease prevalence survey in 2009



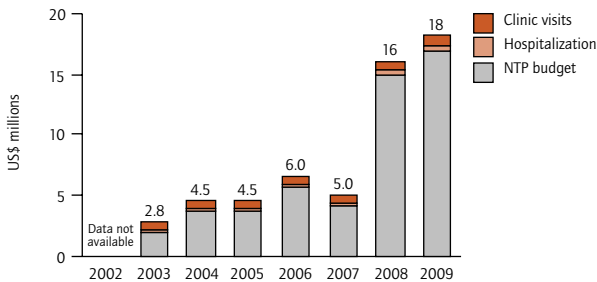
d. NTP funding gap by line item

Funding gap within DOTS is mainly for first-line drugs and routine programme management; half of the budget required for a disease prevalence survey is unfunded



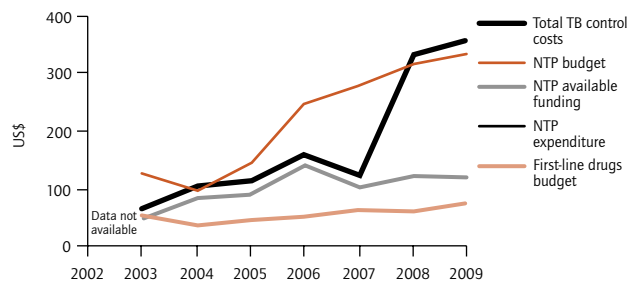
e. Total TB control costs by line item¹

Cost of clinic visits based on 12 visits for DOT per TB patient (2003-2009); small number of visits to health facilities reflects role of community volunteers



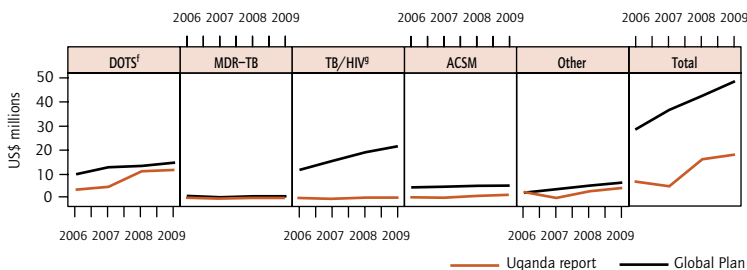
f. Per patient costs, budgets and expenditures²

To date, expenditure data have not been reported



g. Global Plan compared with country reports^a

Biggest difference between country report and Global Plan is collaborative TB/HIV activities, which at least in part reflects funding and implementation of some activities by the national AIDS control programme; expenditure data are not available to allow comparison for 2006 and 2007



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

Component	2009 BUDGET	GAP
DOTS expansion and enhancement	11	6.1
TB/HIV, MDR-TB and other challenges	0.6	0.4
Health system strengthening	0.002	0.002
Engage all care providers	2.0	2.0
People with TB, and communities	1.8	1.1
Research and surveys	2.1	1.1
Other	0	0

SOURCES, METHODS AND ABBREVIATIONS

^{a-g} Please see footnotes page 169.

¹ Total TB control costs for 2003-2007 are based on available funding, 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 2003-2009 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.