COUNTRY PROFILE

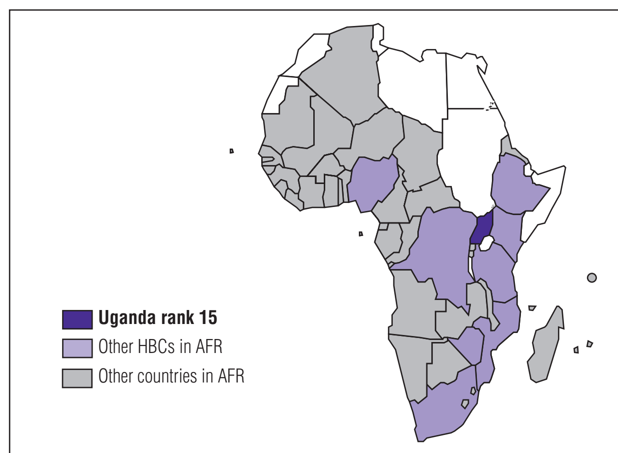
Uganda

Two of the core components of DOTS (smear microscopy for diagnosis and direct observation of treatment) are still not routinely performed in all districts of Uganda. Treatment outcomes were reported for almost all patients included in the 2004 and 2005 cohorts of new smear-positive cases. However, in both years Uganda had the highest default rate of any high-burden country, despite the use of community-based TB care. Collaborative TB/HIV activities are expanding, but still in 2006 only one quarter of TB patients were tested for HIV. Although funding needs for 2007–2008 are higher than for previous years, the amount available is lower and limited funding is expected from central government for 2007–2008, resulting in increasing funding gaps. Even where funds are allocated, disbursement and absorption are problematic.

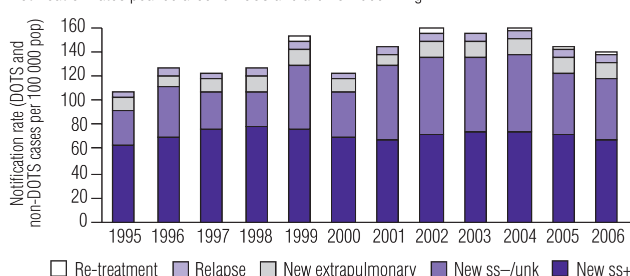
SURVEILLANCE AND EPIDEMIOLOGY, 2006

Population (thousands)[a]	29 899
Estimates of epidemiological burden1	
Incidence (all cases/100 000 pop/yr)	355
Trend in incidence rate (%/yr, 2005–2006)2	**-4.1**
Incidence (ss+/100 000 pop/yr)	154
Prevalence (all cases/100 000 pop)2	**561**
Mortality (deaths/100 000 pop/yr)2	**84**
Of new TB cases, % HIV+[b]	*16*
Of new TB cases, % MDR-TB (1997)[c]	0.5
Of previously treated TB cases, % MDR-TB (1997)[c]	4.4
Surveillance and DOTS implementation	
Notification rate (new and relapse/100 000 pop/yr)	136
Notification rate (new ss+/100 000 pop/yr)	68
DOTS case detection rate (new ss+, %)	**44**
DOTS treatment success (new ss+, 2005 cohort, %)	**73**
Of new pulmonary cases notified under DOTS, % ss+	58
Of new cases notified under DOTS, % extrapulmonary	10
Of new ss+ cases notified under DOTS, % in women	40
Of sub-national reports expected, % received at next reporting level[d]	97
Laboratory services3	
Number of laboratories performing smear microscopy	726
Number of laboratories performing culture	3
Number of laboratories performing DST	2
Of laboratories performing smear microscopy, % covered by EQA	71
Management of MDR-TB	
Of new cases notified, % receiving DST at start of treatment	–
Of new cases receiving DST at start of treatment, % MDR-TB	–
Of re-treatment cases notified, % receiving DST	–
Of re-treatment cases receiving DST, % MDR-TB	–
Collaborative TB/HIV activities	
National policy of counselling and testing TB patients for HIV?	Yes (to all patients)
National surveillance system for HIV-infection in TB patients?	Yes
Of TB patients (new and re-treatment) notified, % tested for HIV	26
Of TB patients tested for HIV, % HIV+	59
Of HIV+ TB patients detected, % receiving CPT	23
Of HIV+ TB patients detected, % receiving ART	8

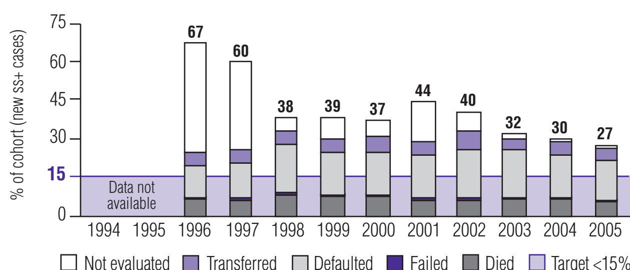
WHO Africa Region (AFR)
Rank based on estimated number of incident cases (all forms) in 2006



Case notifications
Notification rates peaked around 2003 and are now declining



Unfavourable treatment outcomes, DOTS
Low cure rate and high default rate continue to hinder achievement of treatment success rate target; outcomes reported for almost all new ss+ patients



DOTS expansion and enhancement	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DOTS coverage (%)	–	0.0	100	100	100	100	100	100	100	100	100	100
DOTS notification rate (new and relapse/100 000 pop)	–	–	126	126	132	123	145	155	154	156	142	136
DOTS notification rate (new ss+/100 000 pop)	–	–	76	78	77	70	68	73	75	75	71	68
DOTS case detection rate (all new cases, %)	–	0.0	37	37	44	34	38	38	37	39	37	37
DOTS case detection rate (new ss+, %)	–	–	56	56	56	48	44	44	44	45	44	44
Case detection rate within DOTS areas (new ss+, %)[e]	–	–	56	56	56	48	44	44	44	45	44	44
DOTS treatment success (new ss+, %)	–	33	40	62	61	63	56	60	68	70	73	–
DOTS re-treatment success (ss+, %)	–	32	58	60	48	64	63	55	60	68	–	–

IMPLEMENTING THE STOP TB STRATEGY[1]

DOTS EXPANSION AND ENHANCEMENT

Political commitment, standardized treatment, and monitoring and evaluation system

Achievements

- Uganda Stop TB Partnership contracted 3 NGOs to provide additional human resources and to support TB control in 8 districts, general TB control activities in 7 districts and external quality assurance of sputum smear microscopy in Kampala
- Received approval for Global Fund round 6 proposal for TB control activities
- Printed more TB registers and reporting forms incorporating 2005 revisions to capture information about collaborative TB/HIV activities
- Produced 4th annual report of NTP activities

Planned activities

- Expand DOTS by involving more private-for-profit health providers in referral of TB suspects, diagnosis and treatment
- Use the MSH "management and organizational sustainability tool" (MOST) to assess management of NTP

Quality-assured bacteriology

Achievements

- Expanded external quality assurance of sputum smear microscopy using blinded rechecking
- Conducted refresher training courses on AFB smear microscopy at NRL and Buluba training centre, with participation of 127 laboratory technicians
- Expanded QA to 73 out of 80 districts
- Conducted monthly supervisory visits to districts by laboratory team

Planned activities

- Complete expansion of external quality control and assurance of microscopy services to remaining 7 districts: Abim, Apac, Kabong, Kotido, Lira, Moroto and Nakapirpirit
- Establish specimen referral system for DST
- Continue to retrain staff identified during supervisory visits in AFB smear microscopy and replace 200 old microscopes
- Together with FIND, establish a molecular laboratory for testing validating new technologies in the NRL by March 2008
- Introduce use of liquid culture media

Drug supply and management system

Achievements

- Carried out quality control of imported anti-TB drugs
- Conducted training in all districts on new logistic management information system (LMIS), which was operational in all districts in 2006

Planned activities

- Provide adequate stationery to enable districts and health facilities to record drug use and make drug requisitions
- Support supervision to monitor and motivate peripheral-level health workers to use LMIS appropriately. This includes identification of problems and helping health workers to find solutions, collaborative work on job training, assistance for missing equipment and repair of microscopes.
- Procure HPLC machine for national drug authority to increase capacity for batch testing
- Initiate discussions with manufacturer and NDA for fast-tracking registration of anti-TB drugs

TB/HIV, MDR-TB AND OTHER CHALLENGES

Collaborative TB/HIV activities

Achievements

- Expanded collaboration to more districts through training of district health workers on TB/HIV collaborative activities
- Developed and utilized training modules (health workers from 13 districts trained on these modules)
- Developed and adapted IEC materials to district settings

Planned activities

- Continue training to expand collaborative TB/HIV activities to 20 more districts with TBCAP/IUATLD support
- Increase proportion of TB patients tested for HIV, and proportion of HIV patients screened for TB
- Improve referral mechanisms between NTP and NAP services so that HIV-positive TB patients obtain appropriate care

Diagnosis and treatment of multidrug-resistant TB

Achievements

- Applied to Global Fund for funds for second-line anti-TB drugs and for DRS
- Established collaboration between MSF France, CDC, Medical Research Council, Cape Western University and the Mulago hospital, other regional hospitals and NRL to collect data on drug-resistant TB
- Managed 14 identified cases of MDR-TB
- Mulago hospital initiated treatment of 6 MDR-TB patients (14 patients known to be on second-line drug treatment in December 2007)
- Obtained, through GLC, second-line drugs to treat 50 MDR-TB patients

Planned activities

- Develop management protocol for drug-resistant cases
- Train clinicians and nurses to manage drug-resistant TB
- Conduct DST tests by NRL
- Apply to GLC for technical assistance
- Procure from GLC 100 courses of second-line drugs under Global Fund round 6 grant

[1] Unless otherwise specified, achievements are for financial year 2006; planned activities are for financial year 2007.

High-risk groups and special situations

Achievements

- Set up additional TB service points in camps for internally displaced people in 5 districts: Amuru, Gulu, Kaberamaido, Kitgum and Pader

Planned activities

- Establish TB services in 3 regional prisons of Gulu, Kabarole and Luzira in collaboration with ICRC
- Establish ACSM meetings with regional prisons and national army

HEALTH SYSTEM STRENGTHENING, INCLUDING HUMAN RESOURCE DEVELOPMENT

Achievements

- Involved broad range of partners from health and other sectors, including NGOs, in planning for TB control
- Held refresher training courses on AFB smear microscopy for 127 laboratory technicians at NRL and at Buluba training centre
- Supervised peripheral-level health workers, identifying gaps and finding appropriate solutions
- Developed PAL guidelines for clinical officers

Planned activities

- Recruit additional staff to address human resource shortages

ENGAGING ALL CARE PROVIDERS

Achievements

- Conducted training on DOTS and community-based DOTS strategies for non-NTP health-care providers
- Continued collaboration with private not-for-profit faith-based organizations
- Initiated agreements for collaboration with private providers

Planned activities

- Conduct situation analysis for PPM
- Design collaboration mechanism between NRL and districts to improve communication between private health providers and district supervisors by better defining roles and responsibilities
- Train and engage more private health providers (100 private practitioners in Kampala)
- Disseminate ISTC through planned regional workshops and meetings

EMPOWERING PEOPLE WITH TB, AND COMMUNITIES

Advocacy, communication and social mobilization

Achievements

- Carried out advocacy activities during commemoration of World TB Day in Mpigi District in 2007
- Held radio talk shows on TB and TB/HIV

Planned activities

- Commemorate World TB Day 2007 by organizing radio talk shows to mobilize community, especially in dancing and drama schools
- Continue monthly radio talk show to inform general public that TB is curable, that treatment is available at health centres and that it is important to complete treatment
- Provide daily information on TB/HIV
- Finalize TB communication strategy
- Activate ACSM Working Group of Uganda Stop TB Partnership

Community participation in TB care

Achievements

- Involved communities in TB control in all 78 districts; community volunteers selected as treatment supporters
- Community volunteers used in some districts to identify and refer TB suspects for sputum examination

Planned activities

- Mobilize communities on TB control, especially in referral of suspects and selection of TB volunteers

Patients' Charter

Achievements

The Patients' Charter was published in 2006 and was therefore not available for use in countries until then.

Planned activities

- Adapt, print and disseminate Patients' Charter in clinics and during all meetings
- Develop methodology to strengthen collaboration with Uganda National Health Consumers' Organisation

RESEARCH, INCLUDING SPECIAL SURVEYS AND IMPACT MEASUREMENT

Achievements

- Completed "Barriers to TB/HIV collaborative activities" study supported by IUATLD and USAID
- Initiated recruitment of patients for study of HAART in TB patients in Buluba

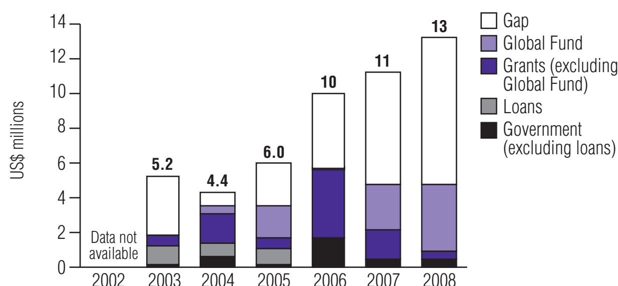
Planned activities

- Conduct DRS to establish prevalence of and patterns of resistance
- Carry out national census of laboratories with support from FIND
- Conduct disease prevalence survey in 2008
- Commence in-depth analysis of routine surveillance data in 2008

FINANCING THE STOP TB STRATEGY

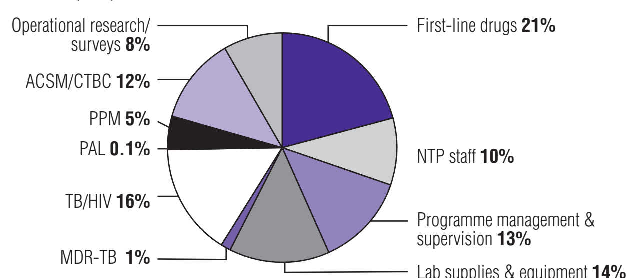
NTP budget by source of funding

Decreased government funding and persistently large funding gaps



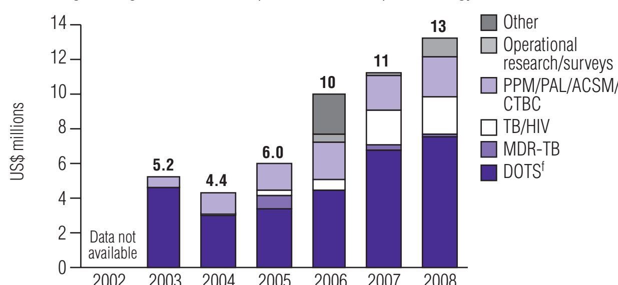
NTP budget by line item, 2008

The largest components of the NTP budget are DOTS (58%) and collaborative TB/HIV activities (16%)



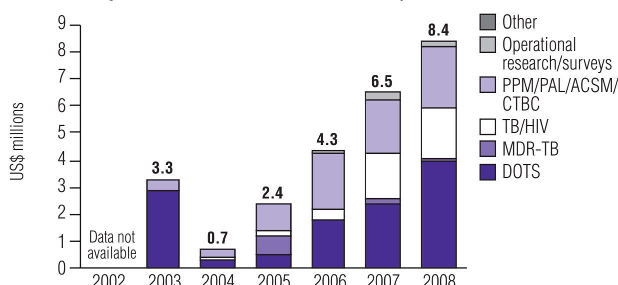
NTP budget by line item

Increasing funding needs for all components of the Stop TB Strategy



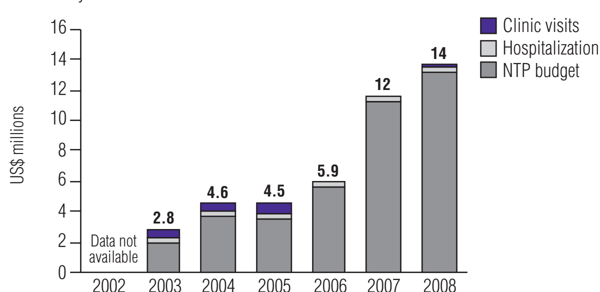
NTP funding gap by line item

Almost all budget for TB/HIV, PPM, ACSM and community involvement is unfunded



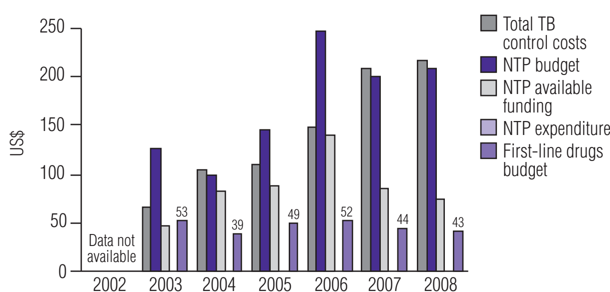
Total TB control costs by line item[4]

Cost of clinic visits for DOT per TB patient based on 12 visits (2003–2005) and 3 visits (2006–2008); small number of visits to health facilities reflects role of community volunteers



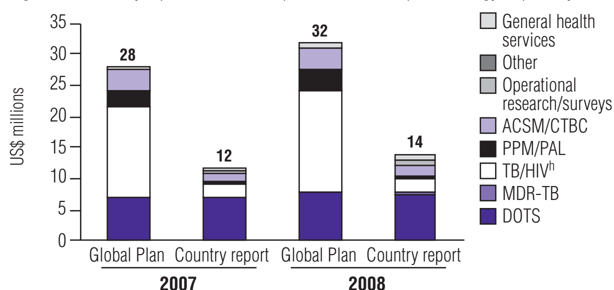
Per patient costs, budgets and expenditures[5]

Increasing costs per patient but decreasing available funding per patient



Comparison of country report and Global Plan:[g] total TB control costs, 2007–2008

Global Plan and country report similar for DOTS component; costs in Global Plan much higher than country report for other components of the Stop TB Strategy, especially TB/HIV



NTP budget and funding gap by Stop TB Strategy component

(US$ millions)	2007 BUDGET	2007 GAP	2008 BUDGET	2008 GAP
DOTS expansion and enhancement	6.8	2.4	7.5	4.0
TB/HIV, MDR-TB and other challenges	2.2	1.8	2.3	2.0
Health system strengthening	0.02	0.02	0.02	0.02
Engage all care providers	0.5	0.5	0.6	0.6
People with TB, and communities	1.5	1.5	1.6	1.6
Research	0.3	0.3	1.1	0.2
Other	0	0	0	0

Financial indicators for TB

	2007	2008
Government contribution to NTP budget (including loans)	4.6%	4.0%
Government contribution to total cost of TB control (including loans)	8.6%	7.9%
NTP budget funded	42%	36%
Per capita health financial indicators (US$)		
NTP budget per capita	0.4	0.4
Total costs for TB control per capita	0.4	0.4
Funding gap per capita	0.2	0.3
Government health expenditure per capita (2004)	6.2	
Total health expenditure per capita (2004)	19	

SOURCES, METHODS AND ABBREVIATIONS

a–h Please see footnotes page 169.

1 Incidence, prevalence and mortality estimates include patients infected with HIV. Incidence estimate originally based on assumption of 65% ss+ case detection rate in 1997. Trend in incidence estimated from 3-year moving average of notification rate (new and relapse).

2 MDG and STB Partnership indicators shown in bold. Targets are 70% case detection of smear-positive cases under DOTS, 85% treatment success, to ensure that the incidence rate is falling by 2015, and to reduce incidence rates and halve 1990 prevalence and mortality rates by 2015. Estimates for 1990 are prevalence 296/100 000 pop and mortality 56/100 000 pop/yr.

3 For routine diagnosis, there should be at least one laboratory providing smear microscopy per 100 000 population. To provide culture for diagnosis of paediatric, extrapulmonary and ss-/HIV+ TB, as well as DST for re-treatment and failure cases, most countries will need one culture facility per 5 million population and one DST facility per 10 million population.

4 Total TB control costs for 2003–2006 are based on available funding, and those for 2007–2008 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.

5 NTP available funding for 2003–2008 is based on prospectively reported budget data, and estimated as the total budget minus any reported funding gap.

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