

## COUNTRY PROFILE

# Bangladesh

The treatment success and case detection rates in Bangladesh continue to improve, although the case detection target of 70% had not yet been met in 2006; the proportion of smear-negative cases receiving treatment is estimated to be even lower. Collaboration with the private sector is increasing, which may help to improve case-finding. Preparation is under way for the introduction in 2007 of collaborative TB/HIV activities and of the management of MDR-TB.

### SURVEILLANCE AND EPIDEMIOLOGY, 2006

**Population** (thousands)<sup>a</sup> 155 991

#### Estimates of epidemiological burden<sup>1</sup>

Incidence (all cases/100 000 pop/yr)	225
Trend in incidence rate (%/yr, 2005–2006) <sup>2</sup>	-1.0
Incidence (ss+/100 000 pop/yr)	101
Prevalence (all cases/100 000 pop) <sup>2</sup>	<b>391</b>
Mortality (deaths/100 000 pop/yr) <sup>2</sup>	<b>45</b>
Of new TB cases, % HIV+ <sup>b</sup>	0.0
Of new TB cases, % MDR-TB <sup>c</sup>	3.6
Of previously treated TB cases, % MDR-TB <sup>c</sup>	19

#### Surveillance and DOTS implementation

Notification rate (new and relapse/100 000 pop/yr)	93
Notification rate (new ss+/100 000 pop/yr)	65
DOTS case detection rate (new ss+, %)	<b>65</b>
DOTS treatment success (new ss+ cases, 2005 cohort, %)	<b>92</b>
Of new pulmonary cases notified under DOTS, % ss+	81
Of new cases notified under DOTS, % extrapulmonary	10
Of new ss+ cases notified under DOTS, % in women	33
Of sub-national reports expected, % received at next reporting level <sup>d</sup>	100

#### Laboratory services<sup>3</sup>

Number of laboratories performing smear microscopy	687
Number of laboratories performing culture	3
Number of laboratories performing DST	0
Of laboratories performing smear microscopy, % covered by EQA	99

#### 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

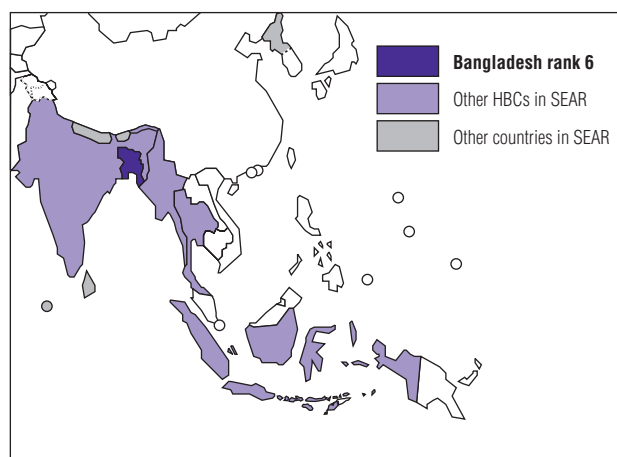
National policy of counselling and testing TB patients for HIV?	—
National surveillance system for HIV-infection in TB patients?	Yes
Of TB patients (new and re-treatment) notified, % tested for HIV	—
Of TB patients tested for HIV, % HIV+	—
Of HIV+ TB patients detected, % receiving CPT	—
Of HIV+ TB patients detected, % receiving ART	—

#### DOTS expansion and enhancement

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DOTS coverage (%)	41	65	80	90	90	92	95	95	99	99	99	100
DOTS notification rate (new and relapse/100 000 pop)	11	24	31	39	52	43	45	50	60	65	80	93
DOTS notification rate (new ss+/100 000 pop)	7.2	15	20	25	25	26	27	32	36	42	55	65
DOTS case detection rate (all new cases, %)	4.2	9.5	12	16	21	17	18	20	25	28	34	40
DOTS case detection rate (new ss+, %)	6.4	14	18	23	23	24	26	30	35	40	54	65
Case detection rate within DOTS areas (new ss+, %) <sup>a</sup>	16	21	22	25	26	26	27	32	35	41	55	65
DOTS treatment success (new ss+, %)	71	72	78	80	81	83	84	84	85	90	92	—
DOTS re-treatment success (ss+, %)	75	57	58	74	72	76	—	69	73	81	80	—

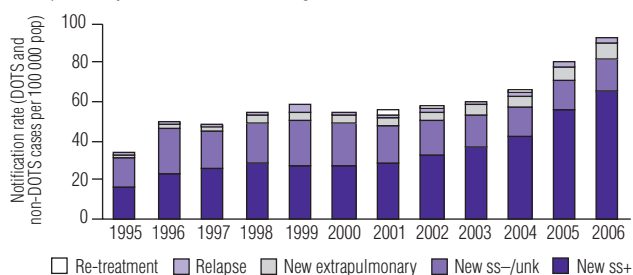
#### WHO South-East Asia Region (SEAR)

Rank based on estimated number of incident cases (all forms) in 2006



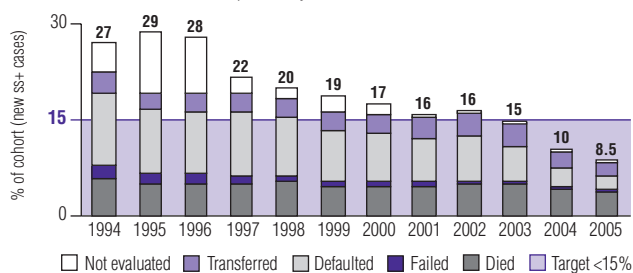
#### Case notifications

Continued sharp increase in ss+ notifications; high proportion of cases ss+; extra-pulmonary notification rate increasing



#### Unfavourable treatment outcomes, DOTS

Treatment success rate above target for third consecutive year; default rates significantly lower for last two cohorts than in previous years



**IMPLEMENTING THE STOP TB STRATEGY<sup>1</sup>****DOTS EXPANSION AND ENHANCEMENT****Political commitment, standardized treatment, and monitoring and evaluation system****Achievements**

- Developed strategic plan for 2006–2010, which was approved by national government
- Strengthened supervision and monitoring activities through establishment of network of national, divisional and district-level supervisors and appointment of new supervisors at sub-district level
- Produced 6th annual report of NTP activities

**Planned activities**

- Further strengthen supervision and monitoring system through collaboration with NGOs and WHO
- Revise national guidelines to incorporate guidelines for management of childhood TB

**Quality-assured bacteriology****Achievements**

- Increased number of microscopy centres included in EQA from 28 in 2005 to 33 out of 687 in 2006
- Initiated process of establishing NRL for culture and DST
- Conducted “training of trainers” for laboratory supervisors on EQA and AFB microscopy

**Planned activities**

- Establish an NRL for culture and DST
- Establish regional TB reference laboratories
- Continue to scale up EQA
- Further strengthen laboratory supervision through training and staff development

**Drug supply and management system****Achievements**

- Developed GDF drug procurement policy and plan

**Planned activities**

- Introduce drug management software
- Establish an effective drug procurement system for new category I and category II regimens

**TB/HIV, MDR-TB AND OTHER CHALLENGES****Collaborative TB/HIV activities****Achievements**

- Developed mechanism for coordination between NTP and NAP
- Conducted 2nd survey of HIV prevalence in TB patients
- Signed agreement with Asharaloo, an NGO working with HIV-positive people, for provision of ART for TB patients

**Planned activities**

- Initiate collaboration between NTP and NAP
- Implement planned collaborative TB/HIV activities
- Address human resource development issues surrounding TB/HIV through advocacy and training

**Diagnosis and treatment of multidrug-resistant TB****Achievements**

- Received GLC approval for project to treat MDR-TB patients
- Established MDR-TB coordination committee, clinical management and social support committee and laboratory working group
- Held workshop to finalize operational guidelines for management of MDR-TB
- Damien Foundation disseminated results of hospital-based MDR-TB pilot project

**Planned activities**

- Obtain accreditation of NRL through proficiency testing
- Initiate GLC-approved project to manage MDR-TB (50 TB patients to be treated in first year)
- Conduct in-country “training of trainers” for management of MDR-TB management
- Implement MDR-TB projects at National Institute of Diseases of Chest and Hospitals, Dhaka

**High-risk groups and special situations****Achievements**

- Set up health centres for prisons in collaboration with NGOs in Dhaka, Chittagong and Gazipur
- Set up additional service points and adjusted clinic hours for TB patients in order to increase access to TB diagnosis and treatment in a number of big cities, and for the armed forces and police

**Planned activities**

- Conduct assessment of TB and address special needs for TB control in refugee camps
- Expand DOTS for prisoners to all districts
- Provide DOTS to refugee camps at Cox Bazaar in collaboration with UNHCR and BRAC

**HEALTH SYSTEM STRENGTHENING, INCLUDING HUMAN RESOURCE DEVELOPMENT****Achievements**

- Collaborated with ministries of education, justice and defence, the NAP, NGOs and professional associations in planning for TB control

**Planned activities**

- Initiate use of X-ray services in all chest disease clinics
- Strengthen laboratory capacity for diagnosing smear-negative, extrapulmonary and childhood TB

**ENGAGING ALL CARE PROVIDERS****Achievements**

- Disseminated PPM guidelines
- Implemented PPM activities in all districts, with central planning
- Scaled up PPM in workplaces and metropolitan cities

**Planned activities**

- Develop and distribute PPM training materials, and conduct “training of trainers”
- Develop and distribute advocacy material to private providers

<sup>1</sup> Unless otherwise specified, achievements are for financial year 2006; planned activities are for financial year 2007.

**EMPOWERING PEOPLE WITH TB, AND COMMUNITIES****Advocacy, communication and social mobilization****Achievements**

- Developed draft ACSM operational guidelines
- Initiated development of ACSM strategy

**Planned activities**

- Organize meeting of stakeholders to finalize ACSM operational guidelines
- Begin implementation of ACSM operational guidelines

**Community participation in TB care****Achievements**

- Organized DOTS committee meetings in collaboration with community leaders
- Developed a mechanism to involve community health volunteers (shasthya shebikas, village doctors, cured patients) in building awareness of TB, referral of suspects, motivation and advocacy for uninterrupted treatment and treatment supervision
- Established TB DOTS clubs consisting of cured patients at different levels (26% of TB suspects referred for diagnosis came from these clubs in 2006)

**Planned activities**

- Strengthen TB DOTS clubs through provision of government support and involvement of senior religious leaders (these clubs are currently being run by NGOs)
- Further involve community outreach centres in DOTS activities
- Train and mobilize health assistants (government paid employees at sub-district level of which there are around 2200 at peripheral level) for involvement in TB control

**Patients' Charter****Achievements**

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

**Planned activities**

- Distribute the Patients' Charter as part of ACSM strategy

**RESEARCH, INCLUDING SPECIAL SURVEYS AND IMPACT MEASUREMENT****Achievements**

- Established research committee within NTP
- Began preparation for national surveys of disease prevalence and infection
- Partner NGOs undertook and published various studies

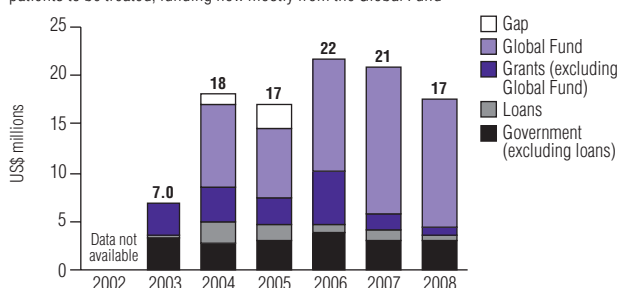
**Planned activities**

- Carry out national survey of prevalence of disease and of infections
- Initiate preparations for DRS

**FINANCING THE STOP TB STRATEGY**

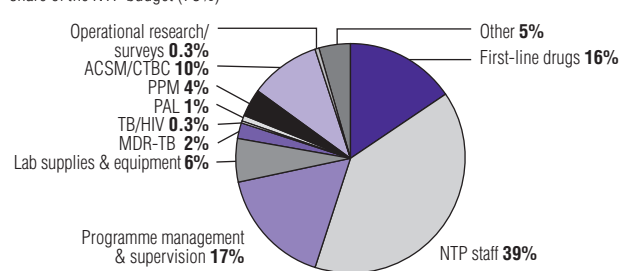
**NTP budget by source of funding**

Decreasing budget for TB control since 2006, despite increase in projected number of patients to be treated; funding now mostly from the Global Fund



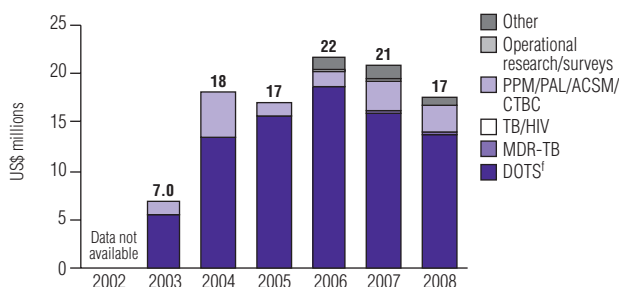
**NTP budget by line item, 2008**

DOTS expansion and enhancement (component 1 of Stop TB Strategy) accounts for largest share of the NTP budget (78%)



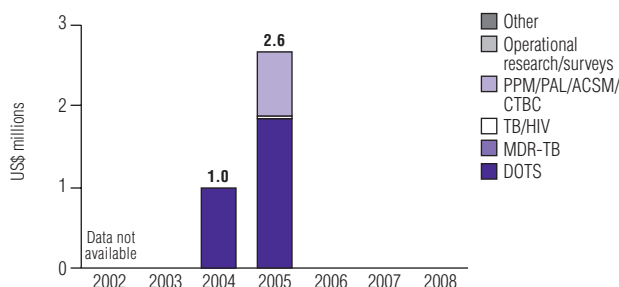
**NTP budget by line item**

Decreasing budget for DOTS, mainly due to reduced budget for routine programme management and supervision activities



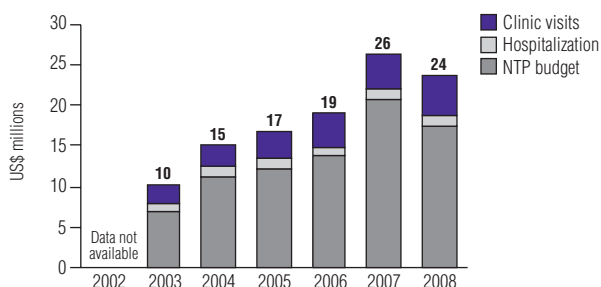
**NTP funding gap by line item**

Funding gaps reported only for 2004–2005, for DOTS and initiatives to increase case detection and treatment success; grants from Global Fund have been used to eliminate funding gaps



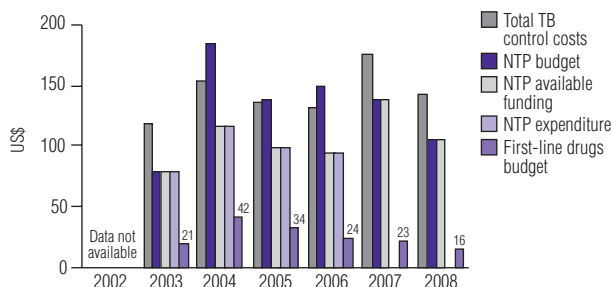
**Total TB control costs by line item<sup>4</sup>**

Hospitalization costs are for 696 dedicated TB beds, costs for clinic visits based on 27 visits per patient during treatment; NTP budget accounts for the largest share of TB control costs



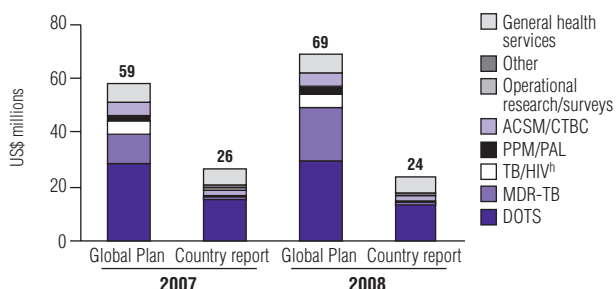
**Per patient costs, budgets and expenditures<sup>5</sup>**

Decreased budget and expenditure per patient as number of patients treated or projected to be treated increases and budgets/expenditures decrease



**Comparison of country report and Global Plan:<sup>9</sup> total TB control costs, 2007–2008**

Country report not in line with Global Plan: costs for DOTS component decreasing in country report; targets for MDR-TB patients to be treated in Global MDR/XDR Response Plan much higher than scaling-up planned by NTP



**NTP budget and funding gap by Stop TB Strategy component**

(US\$ millions)	2007		2008	
	BUDGET	GAP	BUDGET	GAP
DOTS expansion and enhancement	16	0	14	0
TB/HIV, MDR-TB and other challenges	0.3	0	0.4	0
Health system strengthening	0.2	0	0.2	0
Engage all care providers	0.9	0	0.6	0
People with TB, and communities	2.0	0	1.8	0
Research	0.2	0	0.1	0
Other	1.2	0	0.8	0

**Financial indicators for TB**

Government contribution to NTP budget (including loans)	21%	20%
Government contribution to total cost TB control (including loans)	38%	41%
NTP budget funded	100%	100%
<i>Per capita health financial indicators (US\$)</i>		
NTP budget per capita	0.1	0.1
Total costs for TB control per capita	0.2	0.2
Funding gap per capita	0	0
Government health expenditure per capita (2004)		3.8
Total health expenditure per capita (2004)		14

**SOURCES, METHODS AND ABBREVIATIONS**

<sup>a-h</sup> Please see footnotes page 169.

<sup>1</sup> Incidence, prevalence and mortality estimates include patients infected with HIV. Incidence estimated on basis of 40-year-old tuberculin survey and local prevalence surveys, and assumed to be declining at 1% per yr.

<sup>2</sup> 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 621/100 000 pop and mortality 74/100 000 pop/yr.

<sup>3</sup> 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, there should be at least one culture facility and one DST facility in each of the 6 divisions.

<sup>4</sup> Total TB control costs for 2002–2006 are based on expenditure, whereas 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.

<sup>5</sup> NTP available funding for 2004–2006 is based on the amount of funding actually received, using retrospective data; available funding for 2002–2003 and 2007–2008 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.