Bangladesh

Overview of TB control system

Health care infrastructure is improving in Bangladesh but there are still major constraints to effective TB control. The population of one upadzila (sub-district) is on average 270 000 and is served by 1 microscopy centre at the Upadzila Health Complex (UHC). This is about 3 times the 100 000 population recommended by WHO and the IUATLD for 1 microscopy centre in high-burden countries. Prisons and medical college hospitals have introduced DOTS, and NGOs are major contributors to the TB control effort, providing DOTS to 55% of the population (40% from BRAC and DFB alone).

Surveillance, planning, operations

Case notification rates have remained roughly stable for the past 4 years, and the estimated case detection rate by the DOTS programme was 32% in 2002. This is very low, given that DOTS population coverage was nominally 95%. In fact, the NTP believes that about half the population truly has access to the DOTS programme. Treatment success was close to the target level for the 2001 cohort (84%), but failed to reach it mainly because 7% of patients defaulted.

Since 2003 an international expert has been stationed in Bangladesh to assist the TB programme in planning and implementation. An external review of the programme was carried out in 2002 and formed the basis of the revised 5-year strategic plan. The review recommended changes in the previously inconsistent treatment regimens, and a revised protocol and 4-drug FDCs are now used throughout public health facilities, but not yet in all health facilities run by NGOs.

The implementation of DOTS in Dhaka and Chittagong cities is taking place through the city health services, and through a PPM partnership project being tested in Dhaka city that includes orientation to DOTS for private practitioners. Private chest physicians in part of Dhaka are now collaborating. A large portion of health services is delivered by private or informal practitioners, so implementation of DOTS within the private sector is paramount. However, in most urban areas there continues to be inadequate collaboration between the NTP, general hospitals, armed forces, academic institutions, private practitioners, and corporate health services, resulting in the uneven delivery of DOTS. The capacity of the central NTP level is insufficient to guide, coordinate, and train NGO staff, to revise NTP manuals, to intensify training of urban providers, and to procure and distribute drugs through the GDF.

Efforts to improve diagnosis and monitoring of treatment outcomes include retraining of laboratory staff, preparation of an EQA manual, replacement of old microscopes, strengthening of the national reference laboratory, and establishment of district quality assurance laboratories.

Plans to develop guidelines for management of MDR-TB are underway, as is development of a protocol for a TB prevalence survey. A drug resistance survey will take place as soon as the National Reference Laboratory has acquired adequate capacity. The HIV prevalence among TB patients has not yet been measured. There are currently no collaborative activities between the TB and HIV/AIDS control programmes. However, there are plans to establish an HIV surveillance system among TB patients, and to involve the NTP in the provision of ART by the end of 2004.

Partnerships

Partnerships between international agencies, NGOs operating in the country, and government are the key to success in Bangladesh. External

PROGRESS IN TB CONTROL IN BANGLADESH

Indicators

• Treatment success 2001 cohort	84%
• DOTS detection rate, 2002	32%
• NTP budget available, 2003	100%
• Government contribution to NTP budget, including loans, 2003	37%
• Government contribution to total TB control costs, including loans, 2003	62%
• Government health spending used for TB, 2003	2%

Constraints to achieving targets

- Inadequate training, supervision, and monitoring due to incomplete health sector reform
- Too few skilled managers
- Private sector and academic institutions not compliant with DOTS strategy
- Interrupted drug supply

Remedial actions needed

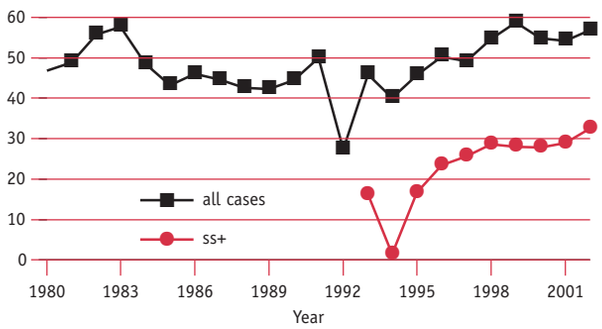
- Hire and train managerial staff
- Train and supervise staff to improve monitoring
- Improve collaboration with private and academic sectors through MoUs
- Develop an internal drug management plan in partnership with GDF and Stop TB to improve procurement, storage, and distribution

BANGLADESH

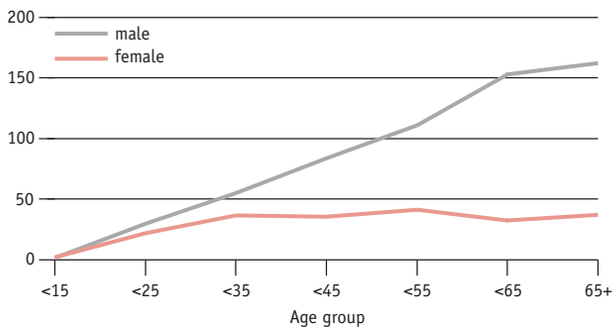
LATEST ESTIMATES[a]		TRENDS	1999	2000	2001	2002
Population	**143 808 546**	DOTS population coverage (%)	90	92	95	95
Global rank (by est. number of cases)	5	Notification rate (all cases/100 000 pop)	59	55	54	57
Incidence (all cases/100 000 pop)	221	Notification rate (new ss+/100 000 pop)	28	28	29	33
Incidence (new ss+/100 000 pop)	99	Detection of all cases (%)	25	24	24	26
Prevalence (ss+/100 000 pop)	188	Detection of new ss+ cases (%)	26	27	28	33
TB mortality per 10 000 pop	52	DOTS detection of new ss+ (%)	24	25	27	32
% of adult (15-49y) TB cases HIV+	0.1	DOTS detection of new ss+/coverage(%)	26	27	28	34
% of new cases multi-drug resistant	1.4	DOTS treatment success (new ss+, %)	81	83	84	—

Notification rate (per 100 000 pop)

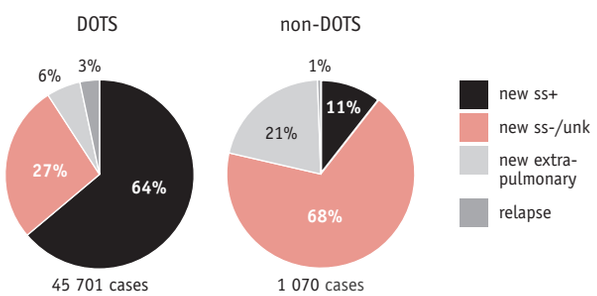
Notification (all cases) = 81 822 in 2002



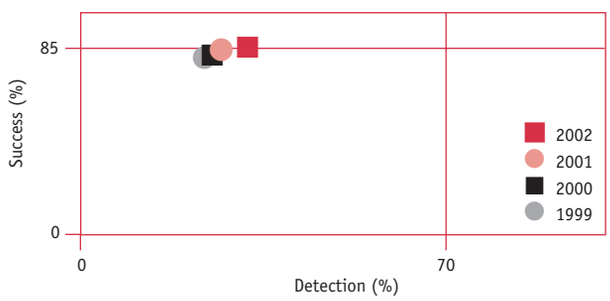
Notification rate by age and sex (new ss+)[b]



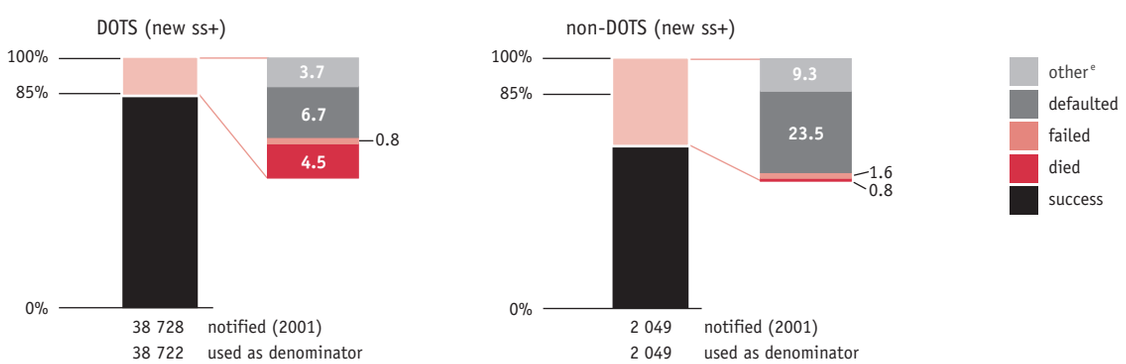
Case types notified[c]



DOTS progress towards targets[d]



Treatment outcomes[c]



Notes

ss+ Indicates smear-positive; ss-, smear-negative; pop, population; unk, unknown.

[a] See Methods for data sources.

[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 progress towards targets: DOTS detection rate for given year, DOTS success rate for cohort registered in previous year.

[e] "Other" includes transfer out and not evaluated, still on treatment, and other unknown.

Budget estimates, existing funding, and budget gaps for fiscal year 2003, US$ millions

	REQUIRED FUNDING	EXPECTED FUNDING				FUNDING GAP
		GOVERNMENT	LOANS	GRANTS	OTHER	
NTP budget [a]						
Drugs	2.8	1.1	—	0.6	1.1	—
Dedicated staff working exclusively for TB control	NA	NA	—	NA	2.1	—
New activities to raise case detection and cure rates	NA	NA	—	NA	2.0	—
Buildings, equipment, vehicles	NA	NA	—	NA	2.0	—
All other line items	NA	NA	—	NA	1.6	—
TOTAL NTP BUDGET	**16.9**	**6.2**	**—**	**1.9**	**8.8**	**—**
Costs not covered by NTP budget [b]						
Hospital stay	1.1	1.1	—	—	—	—
Clinic visits for DOT and monitoring	9.8	9.8	—	—	—	—
TOTAL COSTS NOT COVERED BY NTP BUDGET	**10.9**	**10.9**	**—**	**—**	**—**	**—**
TOTAL TB CONTROL COSTS	**27.8**	**17.1**	**—**	**1.9**	**8.8**	**—**

— Indicates zero; NA, not available

[a] Not all cells in the table can be filled because, among sources, only the GFATM provides a breakdown of funds for all line items

[b] WHO estimates, data not provided by the NTP

support for TB control has been provided by WHO, USAID, ADB, and the World Bank. The GDF provided drugs in 2002. A GFATM proposal was approved in 2003.

Budgets and expenditures

The NTP budget data included in the last two reports in this series indicated an annual requirement of around US$ 5–6 million. Data provided in the GFATM proposal show a higher figure of US$ 9.7 million for fiscal year 2002 (from 1 July).[1] Data on expenditures are incomplete, but suggest spending of around US$ 7 million in 2002.

The budget for 2003 is substantially (159%) higher than in previous years, at US$ 16.9 million (the total over the 5 years 2003 to 2007 is US$ 85.9 million). This much higher budget was developed in the context of an application to the GFATM, and is linked to an ambitious target of detecting 155 724 new cases in 2003, almost double the number of cases notified in 2002. There are large budget increases for strengthening and scaling up diagnostic services (e.g. through purchase of microscopes and recruitment of laboratory technicians), for the improvement of management and supervision (e.g. through recruitment of new supervisors, consultants, and community health workers), for provision of training, and to enhance monitoring and evaluation. Following approval of the GFATM application, the budget is fully funded, not just for 2003, but also for the 5-year period 2003 to 2007. In 2003, US$ 8.8 million – more than half the budget – will be provided by the GFATM, with the remaining funding coming from the government (US$ 6.2 million) and donors besides the GFATM (US$ 1.9 million). Whether the substantial increase in funds can be efficiently absorbed and translated into achievement of the case detection target remains to be seen.

If the case detection target is met, the costs associated with TB control that are not funded from the NTP budget will amount to an estimated US$ 10.9 million in 2003. Total TB control costs would be US$ 27.8 million per year, equivalent to US$ 171 per patient.

[1] The discrepancy appears to arise from the fact that the budget data included in the last two reports reflect government budgets only. The data in the GFATM proposal are more complete, including, for example, the funds required for NGO provision of services.