

# Cambodia

Expansion of DOTS to local health-care centres in Cambodia has improved access to high-quality TB care, as reflected by the increasing numbers of TB patients notified and treated each year, with consistently high treatment success. The NTP plans to strengthen laboratory services to meet the growing needs of the programme. Providing better care for TB patients with HIV will require improved coordination with the national AIDS control programme, and additional funding in 2006.

## KEY INDICATORS

**Population** (thousands)<sup>a</sup> 13 798

**TB burden (2004 estimates)<sup>b</sup>**

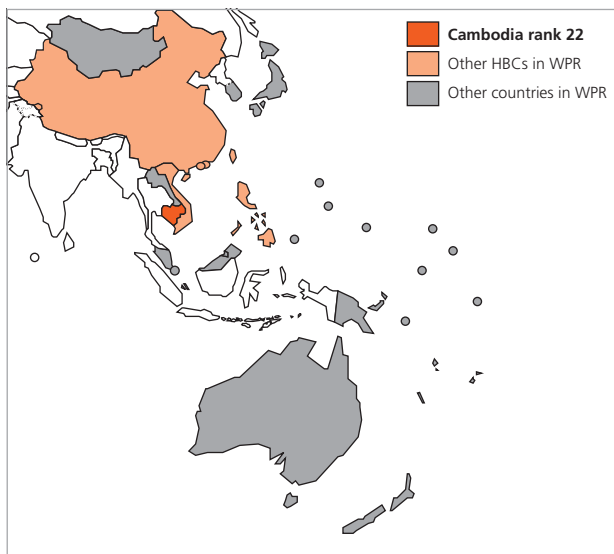
Incidence (all cases/100 000 pop/yr)	510
Trend in incidence rate (%/yr) <sup>c</sup>	<b>-1.0</b>
Incidence (ss+/100 000 pop/yr)	226
Prevalence (all cases/100 000 pop) <sup>c</sup>	<b>709</b>
Mortality (deaths/100 000 pop/yr) <sup>c</sup>	<b>94</b>
Prevalence of HIV in adult TB patients (15–49yrs, %)	13
New TB cases multidrug-resistant (%) <sup>d</sup>	0.0
Previously treated TB cases multidrug-resistant (%) <sup>d</sup>	3.1

**Surveillance and DOTS implementation (2004)**

Notification rate (new and relapse/100 000 pop/yr)	223
Notification rate (new ss+/100 000 pop/yr)	138
Case detection rate (all cases, %)	44
Case detection rate (new ss+, %)	61
DOTS notification rate (new and relapse/100 000 pop/yr)	223
DOTS notification rate (new ss+/100 000 pop/yr)	138
DOTS case detection rate (new and relapse, %)	44
DOTS case detection rate (new ss+, %)	<b>61</b>
DOTS treatment success (2003 cohort, %)	<b>93</b>

**Budget and finance (2006)**

Government contribution to NTP budget (including loans, %)	10
Government contribution to total cost TB control (including loans, %)	32
Government health spending used for TB control (%)	12
NTP budget funded (%)	67



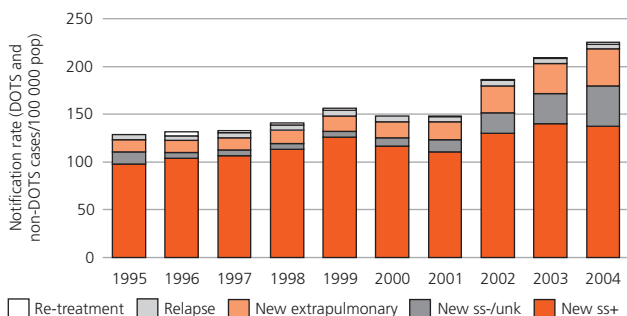
**WHO Western Pacific Region (WPR)**

Rank based on estimated number of incident cases (all forms) in 2004.

## SURVEILLANCE AND EPIDEMIOLOGY

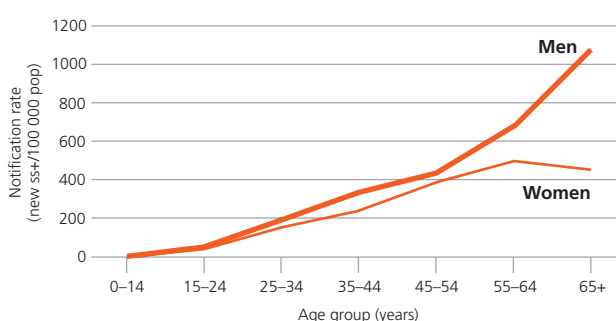
**Case notifications**

Case detection within DOTS areas increasing, particularly for cases other than new smear-positive



**Case notifications by age and sex,<sup>e</sup> 2004**

More male than female TB patients but difference less marked than in most countries; average ages in men and women similar



<sup>a</sup> World population prospects – the 2004 revision. New York, United Nations Population Division, 2005.

<sup>b</sup> Incidence, prevalence and mortality estimates include patients with HIV. Estimate of TB burden recently reassessed following national prevalence survey in 2002. Incidence assumed to be declining at 1% per yr as in other countries in WPR.

<sup>c</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 947/100 000 pop and mortality 115/100 000 pop/yr.

<sup>d</sup> MDR-TB figures shown in regular type are survey data from the database of the WHO/IUATLD Global Project on Anti-Tuberculosis Drug Resistance Surveillance. Figures in italics are estimates from the following source: Zignol M et al. Global incidence of multidrug-resistant tuberculosis [submitted for publication].

<sup>e</sup> Age and sex breakdown provided for all notified new smear-positive cases in 2004.

See Methods for further details,

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

## IMPLEMENTING THE STOP TB STRATEGY<sup>1</sup>

### Pursuing high-quality DOTS expansion and enhancement

#### Achievements

- Completed expansion of DOTS to 850 health centres and 39 health posts
- Trained all TB health-care workers in 6-month short course treatment regimen
- Improved awareness among general public of availability of services for TB diagnosis and treatment free-of-charge
- Improved mobilization of resources from stakeholders and implementation partners through the interagency coordination committee for TB control

#### Challenges

- Maintaining high-quality DOTS services in all health-care facilities
- Ensuring sufficient well-trained, motivated laboratory staff
- Overcoming decreased size of health-care workforce caused by imbalance between recruitment and attrition in the past 6 years
- Securing adequate funding for all aspects of DOTS, including laboratories and collaborative TB/HIV activities

#### Planned activities

- Strengthen technical capacity and improve quality of existing DOTS facilities including laboratories
- Carry out HR development plan to increase size and quality of workforce
- Strengthen supervision and monitoring through the introduction of "facilitative supervision"
- Develop a training curriculum for TB supervisors in collaboration with partners (TBCTA)

### Addressing TB/HIV, MDR-TB and other challenges

#### Achievements

- Established national TB/HIV coordination committee and collaborative TB/HIV framework
- Implemented TB/HIV joint action plan in pilot sites and began to scale up
- Conducted the second nationwide survey of HIV seroprevalence among TB patients in January 2005
- Endorsement by the MoH of the Joint Statement by the Directors of NTP and NAP to expedite collaborative TB-HIV collaborative
- Continued collaboration with the World Food Programme to provide food to TB patients
- Established links with UN agencies such as the International Organization for Migration

#### Challenges

- Further improving coordination between NTP and NAP
- Increasing human and financial resources in the NTP for collaborative TB/HIV activities
- Improving capacity for culture and DST
- Improving NTP technical capacity for MDR-TB management
- Addressing problem of cost of transport to health-care facilities; a barrier for poor patients in remote areas

#### Planned activities

- Expand collaborative TB/HIV activities and plan round 3 of HIV seroprevalence survey for 2007
- Introduce standardized monitoring and examination forms for TB/HIV
- Introduce DST in selected provinces and plan 2nd national DRS for 2006
- Seek solutions to problems of transport costs for patients
- Conduct operational research on TB and poverty and pilot pro-poor DOTS strategies in collaboration with NGOs

### Contributing to health system strengthening

#### Achievements

- Integrated all TB laboratories into general health-care system
- Fully incorporated TB drug management into general drug management system with collaboration between the central medical store, drug department and NTP
- Conducted clinical training on TB and DOTS for general staff in hospitals

#### Challenges

- Developing HR through improvements in recruitment, distribution and motivation, and capacity building
- Improving resource coordination including public and private sector and external and national resources

#### Planned activities

- Train staff through local and international courses

### Engaging all care providers

#### Achievements

- Piloted PPM-DOTS
- Established links with other government facilities, including the National Paediatric Hospital and those under the military, police and prisons
- Received approval of limited grant for PPM-DOTS from GFATM round 5

#### Challenges

- Expanding the role of the private sector in TB diagnosis and treatment; many TB patients first seek care in private sector

#### Planned activities

- Expand PPM-DOTS activities in collaboration with partners in selected areas
- Conduct active case-finding in high-prevalence groups (including prisoners)

### Empowering people with TB, and communities

#### Achievements

- Scaled up community-based DOTS projects to 243 sites in collaboration with NGOs
- Developed guidelines for implementation of community-based DOTS
- Increased activities aimed at raising awareness of TB in the community, including use of audio-visual material for ethnic minorities
- Provided training to over 11 000 village health support group members on TB, case-finding, DOT and defaulter tracing
- Prioritized ACSM activities in the NTP strategic plan

#### Challenges

- Lack of separate ACSM plan or strategy
- Insufficient technical capacity to develop IEC materials
- Inadequate financial resources for expansion of ACSM activities

#### Planned activities

- Expand community-based DOTS projects
- Conduct a survey to study factors causing delay in accessing services for TB diagnosis and treatment
- Develop a strategy and plan for ACSM

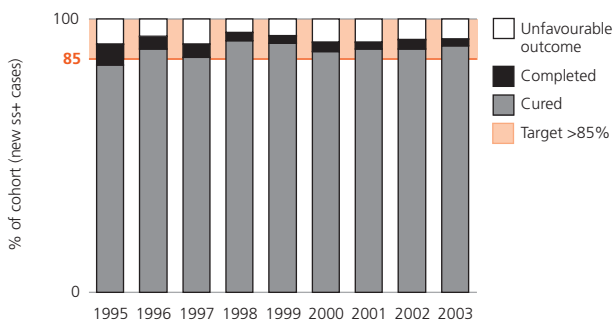
<sup>1</sup> Unless otherwise specified, achievements are for the period 1 July 2004 to 30 June 2005.

**MONITORING DOTS**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
DOTS coverage (%)	60	80	88	100	100	99	100	100	100	100
DOTS notification rate (new & relapse / 100 000 pop)	128	102	131	139	154	148	147	185	209	223
DOTS notification rate (new ss+ / 100 000 pop)	98	83	106	114	126	116	110	130	140	138
DOTS case detection rate (new & relapse, %)	23	18	24	26	29	28	28	36	40	44
DOTS case detection rate (new ss+, %)	40	34	44	48	53	50	48	57	61	61
DOTS case detection rate (new ss+) / coverage (%)	66	42	50	48	53	50	48	57	61	61
DOTS treatment success (new ss+, %)	91	94	91	95	93	91	92	92	93	—
DOTS retreatment success (ss+, %)	92	94	—	95	95	89	93	88	89	—

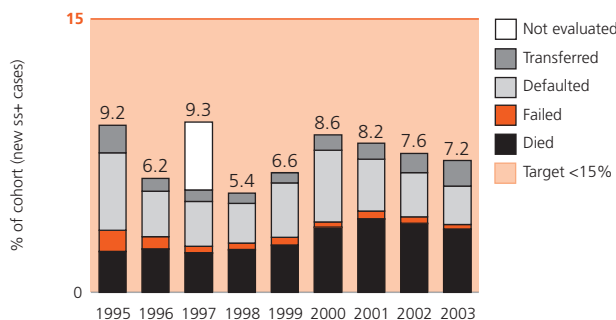
**Treatment success, DOTS**

Treatment success consistently high, even as cohort size increased to over 19 000 in 2003



**Unfavourable treatment outcomes, DOTS**

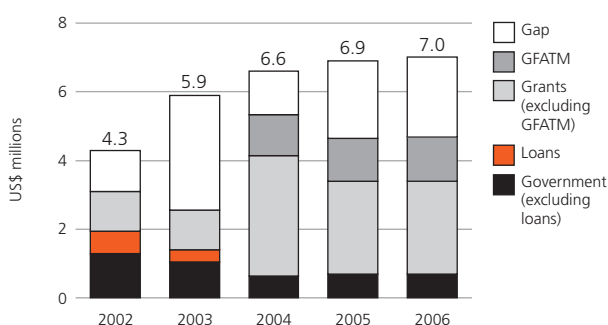
Outcomes provided for all registered cases, proportion of patients defaulting decreasing since year 2000



**BUDGET AND FINANCE**

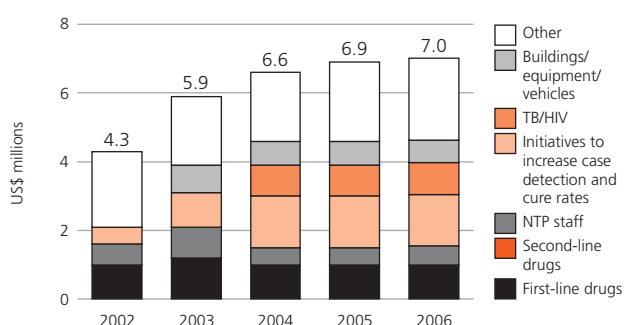
**NTP budget by source of funding**

Growing budget; funding gaps remain, including for TB/HIV



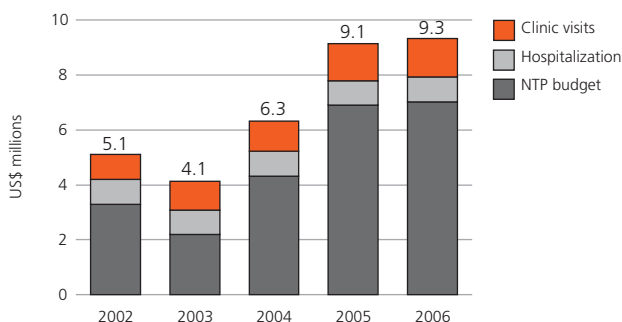
**NTP budget by line item**

Increased budget for initiatives to improve case detection and cure rates as well as for TB/HIV



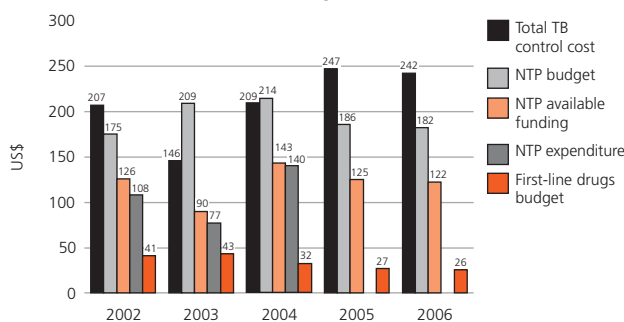
**Total TB control costs by line item<sup>a</sup>**

NTP budget accounts for biggest share of total TB control costs



**Per patient costs, budgets and expenditure<sup>b</sup>**

Big increase in expenditures in 2004 compared to 2002–2003 despite continued fall in cost of first-line drugs



<sup>a</sup> Total TB control costs for 2002–2004 are based on expenditure, whereas those for 2005–2006 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>b</sup> NTP available funding for 2004 is based on the amount of funding actually received, using retrospective data; available funding for 2002–2003 and 2005–2006 is based on prospectively reported budget data, and estimated as the total budget minus any reported funding gap.  
 pop indicates population; ss+, smear-positive; yr, year; — not available.