

# Viet Nam

## Overview of TB control system

Viet Nam's TB control programme is often cited by WHO as a model in terms of organizational infrastructure and programme results. The programme is fully integrated in the general health system at district and commune level. In remote areas where primary health care access is limited, the programme works through village health workers and links with commune health posts. Viet Nam is one of the best examples of the successful combination of DOTS, political commitment, adequate resources, and good strategic planning.

## Surveillance, planning, operations

Case notification rates (for smear-positive and all TB cases) have been more or less steady since 1998. Despite persistently high smear-positive case detection rates (estimated to be 82% in 2001), there is no evidence of a fall in TB incidence in the nationally aggregated data. However, the notification rates of smear-positive disease are higher among older men and women, implying that TB incidence has been higher in the past. Treatment success in the 2001 cohort was reported to be 93% (including 91% of patients cured). Viet Nam is still the only high-burden country to have met targets for both case detection (70%) and treatment success (85%); both indicators have exceeded target levels in each of the 6 most recent years of data.

A national disease prevalence survey was planned for 2002 with the intent to reassess TB burden in the country, to provide a baseline for measuring the impact of TB control, and to check on estimates of the case detection rate. However, the cost of

buying vehicles outfitted with X-ray equipment was higher than anticipated so this activity has been delayed until 2004.

Planning is conducted and coordinated mainly by the central level, although further efforts are being made to strengthen planning in the provinces. The central unit handles the procurement and distribution of all drug and laboratory supplies. All levels maintain buffer stocks and monitor and replenish stocks on a quarterly basis.

Health care workers at all levels, but especially those in the private sector, received TB training in an attempt to ensure the consistent delivery of DOTS. Staff supervision of TB activities was increased at all levels of the NTP, but particularly in districts, communes, and sub-communes, to reduce the high turnover of TB staff. In 2002 a total

quality management (TQM) training course was held in cooperation with CDC to strengthen management, supervision, and research capacity of the TB staff, and this approach to management was widely implemented in 2003. A 3-month training course was held to orient new provincial and district TB staff to the NTP, which has helped to solidify knowledge about TB control. Programme monitoring was strengthened through the introduction in some large provinces of new patient management software. A comprehensive review of all activities was carried out in 2003, and the workplan updated.

Laboratory technicians in provinces and districts attended a 3-week training course in 2002 on direct sputum microscopy, and on blinded quality controls. Nationwide implementation of new quality assurance guidelines began to improve accuracy

## PROGRESS IN TB CONTROL IN VIET NAM

### Indicators

• Treatment success 2001 cohort	93%
• DOTS detection rate, 2002	82%
• NTP budget available, 2003	100%
• Government contribution to NTP budget, including loans, 2003	75%
• Government contribution to total TB control costs, including loans, 2003	91%
• Government health spending used for TB, 2003	4%

### Challenges

- Too few qualified intermediate-level staff in some provinces
- Poor access to DOTS services in remote, mountainous, and border regions, and among the homeless, prisoners, and illegal residents
- Rapidly developing private sector service provision without adequate training in DOTS
- Unregulated drug market and use of non-standard anti-TB drugs
- Growing TB/HIV co-epidemic

### Remedial actions needed

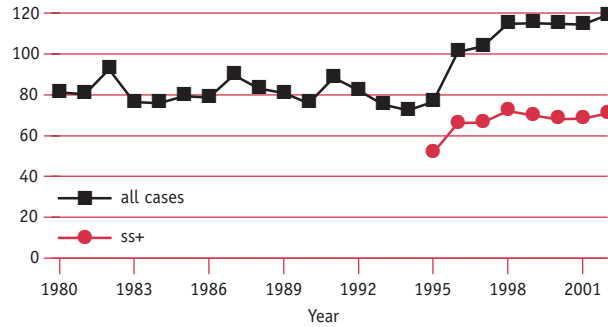
- Strengthen management capacity through training, operational research, and use of Total Quality Management practices
- Revise/develop HDRP to ensure sustainable core of health care staff at all levels
- Educate population through primary health care units and community outreach, involving the People's Committee and the Women's Union
- Train private providers and develop regulations to ensure adherence to DOTS
- Legislate drug inspection to ensure use of WHO-recommended drugs

# VIET NAM

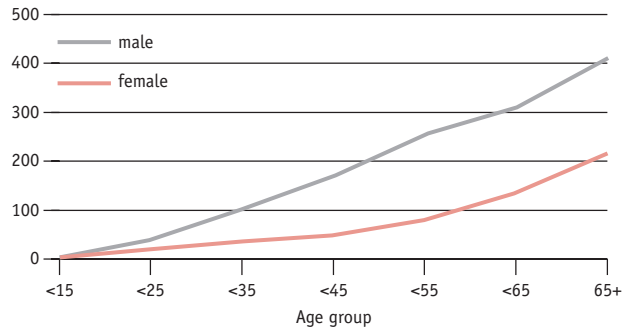
LATEST ESTIMATES <sup>a</sup>		TRENDS	1999	2000	2001	2002
<b>Population</b>	<b>80 278 208</b>	DOTS population coverage (%)	99	100	100	100
Global rank (by est. number of cases)	13	Notification rate (all cases/100 000 pop)	115	115	115	119
Incidence (all cases/100 000 pop)	192	Notification rate (new ss+/100 000 pop)	70	68	68	71
Incidence (new ss+/100 000 pop)	86	Detection of all cases (%)	61	60	60	62
Prevalence (ss+/100 000 pop)	102	Detection of new ss+ cases (%)	82	79	80	82
TB mortality per 100 000 pop	25	DOTS detection of new ss+ (%)	81	79	80	82
% of adult (15-49y) TB cases HIV+	1.8	DOTS detection of new ss+/coverage(%)	83	80	80	82
% of new cases multi-drug resistant	2.3	DOTS treatment success (new ss+, %)	92	92	93	—

## Notification rate (per 100 000 pop)

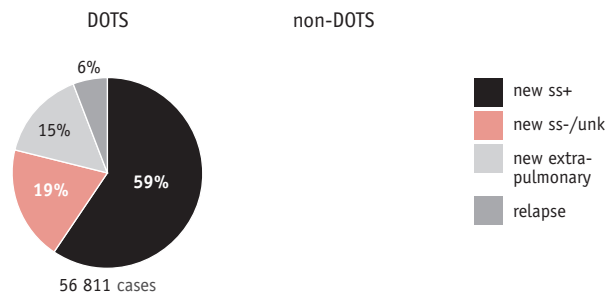
Notification (all cases) = 95 577 in 2002



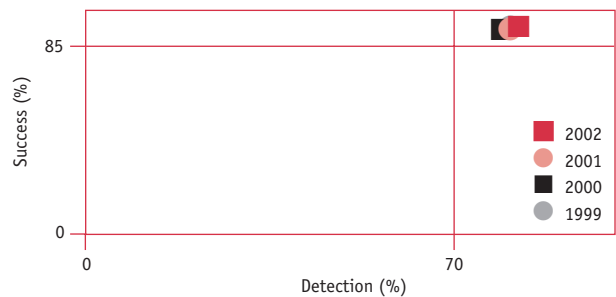
## Notification rate by age and sex (new ss+)<sup>b</sup>



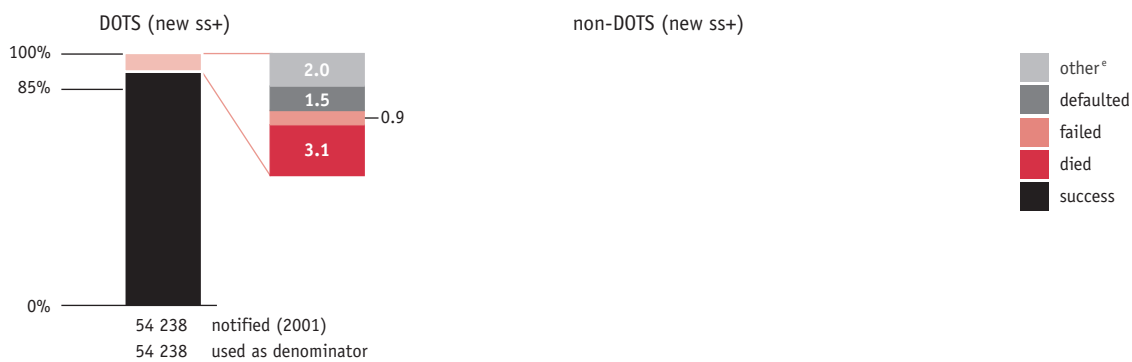
## Case types notified<sup>c</sup>



## DOTS progress towards targets<sup>d</sup>



## Treatment outcomes<sup>e</sup>



## Notes

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

<sup>a</sup> See Methods for data sources.

<sup>b</sup> The sum of cases notified by age and sex is less than the number of new smear-positive cases notified for some countries.

<sup>c</sup> Non-DOTS is blank for countries which are 100% DOTS, or where no non-DOTS data were reported.

<sup>d</sup> DOTS progress towards targets: DOTS detection rate for given year, DOTS success rate for cohort registered in previous year.

<sup>e</sup> "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	
<b>NTP budget</b>						
Drugs	2.2	—	2.2	—	—	—
Dedicated staff working exclusively for TB control	1.0	0.8	0.01	0.2	—	—
New activities to raise case detection and cure rates	1.2	0.5	0.2	0.5	—	—
Buildings, equipment, vehicles	1.1	0.1	0.3	0.7	—	—
All other line items	1.0	0.5	0.3	0.2	—	—
<b>TOTAL NTP BUDGET</b>	<b>6.5</b>	<b>1.9</b>	<b>3.0</b>	<b>1.6</b>	<b>—</b>	<b>—</b>
<b>Costs not covered by NTP budget <sup>a</sup></b>						
Hospital stay <sup>b</sup>	6.2	6.2	—	—	—	—
Clinic visits for DOT and monitoring	4.5	4.5	—	—	—	—
<b>TOTAL COSTS NOT COVERED BY NTP BUDGET</b>	<b>10.7</b>	<b>10.7</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>TOTAL TB CONTROL COSTS</b>	<b>17.2</b>	<b>12.6</b>	<b>3.0</b>	<b>1.6</b>	<b>—</b>	<b>—</b>

— Indicates zero; NA, not available

<sup>a</sup> WHO estimates, data not provided by the NTP

<sup>b</sup> Cost estimate based on 8500 dedicated TB beds at US\$ 2 per day

of sputum microscopy in 2003. Technical assistance from KNCV and WHO helped to evaluate the quality of TB diagnosis. Treatment was strengthened by offering DOTS in both hospital and ambulatory settings, by better supervision of treatment activities, and by guaranteeing drugs and laboratory materials.

Viet Nam's solid strategic planning for TB control, facilitated by the NICC, has helped turn the country into one of the success stories in global TB control. Nonetheless, further efforts are being made to improve access to TB treatment in the remote parts of the country. Continued implementation of PHC projects has ensured the provision of equipment, health education materials, transport for supervision, and staff training in these special areas. Additional strategies for expanding DOTS included the development of a TB curriculum for secondary schools, and a training course on NTP activities for the private sector.

There have been 2 surveys of drug resistance in Viet Nam, the first in 1996–7, and a second analysis, just completed, for which results are not

yet available. Currently, MDR-TB and chronic TB cases do not receive any special treatment, though a workshop is planned in 2004 to develop activities for the management of drug-resistant disease. There is HIV testing for TB patients; an estimated 1.8% of adult TB cases were infected with HIV in 2002. There are also TB/HIV coordinating bodies at national and provincial levels, and a plan to involve the NTP in ART after 2005.

Other challenges in Viet Nam are to modernize and rehabilitate the health infrastructure in all districts, to regulate the thriving private sector through the creation of PPM partnerships, and to control the quality of anti-TB drugs.

### Partnerships

Overall external technical collaboration is led by KNCV, WHO, and MCNV. CDC has a special interest in research and management training. Financial support from the Dutch government and a World Bank loan have helped to establish a model TB control programme. The GFATM funds approved in 2002 became available for implementation in the 4th quarter of 2003.

### Budgets and expenditures

NTP expenditure in fiscal year 2002 (from 1 January) was US\$ 4.2 million (equivalent to US\$ 43 per patient) and total TB control costs were around US\$ 14 million (US\$ 158 per patient). The NTP budget for the fiscal year 2003 was 56% higher, at US\$ 6.5 million (US\$ 65 per patient). This higher budget was to enable funding of a national prevalence survey as well as some expansion (around 10%) in the number of cases treated. The drug budget, at US\$ 2.2 million, was equivalent to US\$ 22 per patient. There was a budget of US\$ 0.8 million for dedicated staff, as well as US\$ 0.5 million for new activities to increase case detection and cure rates. Funding was mostly from the government (US\$ 4.9 million including loans), with the remainder provided by grants. There was no funding gap. If the projected 100 000 patients were treated in 2003, total TB control costs would have been around US\$ 17.2 million, or US\$ 172 per patient.