

## COUNTRY PROFILE

## South Africa

In 1996, South Africa established an NTP and adopted DOTS as its TB control strategy. Despite government commitment to making TB control a priority, and the implementation of the DOTS strategy in all provinces and almost all districts, it is not known with confidence how much TB there is in the country. Inadequate case reporting systems, a shortage of trained staff at the provincial level and problems associated with the laboratory network hinder effective TB surveillance. Recognizing these shortcomings, the NTP has recently taken a number of steps to remedy the situation, and better data can be expected in the future. However, treatment success rates remain low and many patients are lost to follow-up. A concerted effort will be needed if South Africa is to reach the target cure rates. TB/HIV coinfection is a significant public health problem and is being addressed through a national programme of collaborative TB/HIV activities. MDR-TB prevalence is estimated to be about 2% in new TB patients and 7% in re-treatment cases. Second-line

drug treatment is available in provincial MDR-TB units, though at high cost. A number of NGOs are involved in providing TB services and are also mobilizing support in the communities, but more needs to be done to encourage broader private sector participation.

**System of TB control**

South Africa's health system is decentralized. The National Department of Health provides general guidelines, but the implementation and delivery of services is the responsibility of the provincial authorities. The management structure and the implementation of TB control services vary considerably among provinces. The development of administrative districts, with health management structures in each province, is in progress and not yet complete. The basic unit for TB control and management is the individual primary care institution. Community health workers play an important role in patient care, but their involvement needs to be better organized and recorded.

The National Health Laboratory Service (NHLS) is the main provider of TB laboratory services in eight of the nine provinces in South Africa (all except KwaZulu-Natal) and is divided into central, coastal and northern regions. The laboratories of the NHLS are centralized, work under contract, and include primary health-care, regional, academic and referral laboratories. Communication between them is through a laboratory information system. Smear microscopy is performed in all laboratories; culture, identification and DST are performed in 11 referral laboratories throughout the country. In KwaZulu-Natal, 73 laboratories do smear microscopy, two have culture facilities and one referral laboratory carries out DST.

**Surveillance and monitoring**

The incidence of TB in South Africa is uncertain because of weaknesses in the reporting system. Furthermore, the rise in TB incidence caused by the spread of HIV cannot easily be distinguished from improvement in case detection. It is likely, however, that the actual incidence of TB is higher than the current WHO estimate because case detection in 2003 was reported to be 118%.<sup>1</sup>

The treatment success rate in the 2002 cohort was 68% and has been consistently low since recording began in 1996. In 2002–2003, 22% of new smear-positive patients were lost to follow-up, either through default or transfer, and 9% died. A further 14% completed treatment but without evidence of smear conversion. The outcome among re-treatment cases was substantially worse, with a treatment success rate of 53% and with 34% lost to follow-up. As noted in the 2004

**PROGRESS IN TB CONTROL IN SOUTH AFRICA****Indicators**

DOTS treatment success, 2002 cohort	68%
DOTS case detection rate, 2003	118% <sup>1</sup>
NTP budget available, 2004	NA
Government contribution to NTP budget, including loans, 2004	NA
Government contribution to total TB control costs, including loans, 2004	NA
Government health spending used for TB control, 2004	7%

**Major achievements**

- Implementation of the advocacy and social mobilization plan in five provinces (Eastern Cape, Western Cape, Gauteng, Limpopo and Free State)
- Implementation of a uniform, cohort-based reporting and recording system in all provinces
- Development of guidelines for care of HIV-infected TB patients, including access to ART

**Major planned activities**

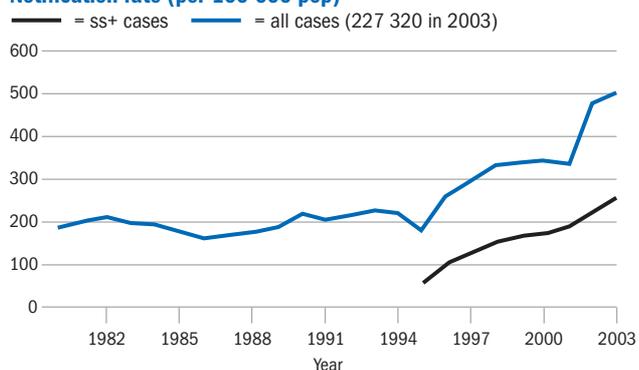
- Strengthen DOT in the provinces and improve quality of data collected
- Implement and strengthen collaborative TB/HIV activities in subdistricts
- Shorten delays in diagnosis by sputum smear microscopy
- Improve laboratory infrastructure and coverage of services in remote areas

NA indicates not available.

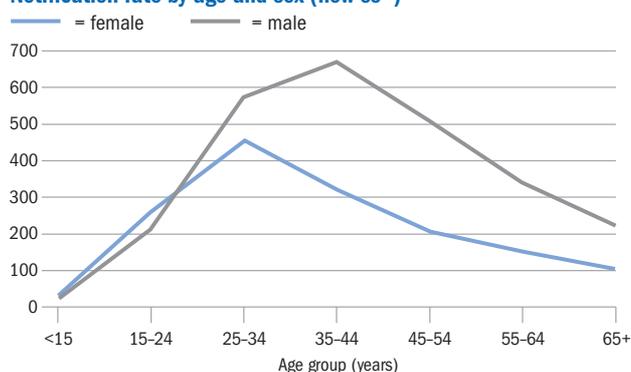
Note that the "case detection rate" can exceed 100% because this is calculated as the ratio of cases reported in a given year to the estimated incidence in that year. Because the numerator is derived from the pool of prevalent cases, a proportion of which has arisen in previous years, the ratio can exceed 100%.

LATEST ESTIMATES <sup>a</sup>		TRENDS	2000	2001	2002	2003
<b>Population</b>	<b>45 026 470</b>	DOTS coverage (%)	77	77	98	99.5
Global rank (by est. number of cases)	8	Notification rate (all cases/100 000 pop)	344	334	481	505
Incidence (all cases/100 000 pop/year)	536	Notification rate (new ss+/100 000 pop)	173	189	221	258
Incidence (new ss+/100 000 pop/year)	218	Detection of all cases (%)	74	68	94	94
Prevalence (all cases/100 000 pop)	458	Case detection rate (new ss+, %)	91	95	106	118
TB mortality (all cases/100 000 pop/year)	73	DOTS case detection rate (new ss+, %)	75	81	105	118
TB cases HIV+ (adults aged 15-49, %)	61	DOTS case detection rate (new ss+)/coverage (%)	97	105	107	119
New cases multidrug resistant (%)	1.6	DOTS treatment success (new ss+, %)	66	65	68	—

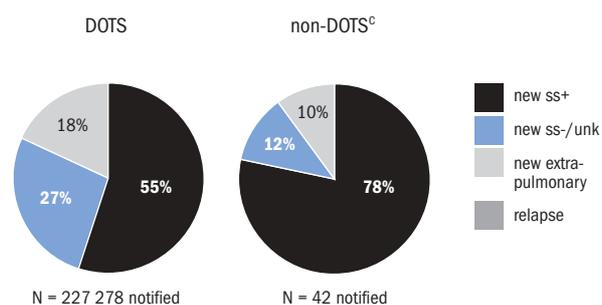
### Notification rate (per 100 000 pop)



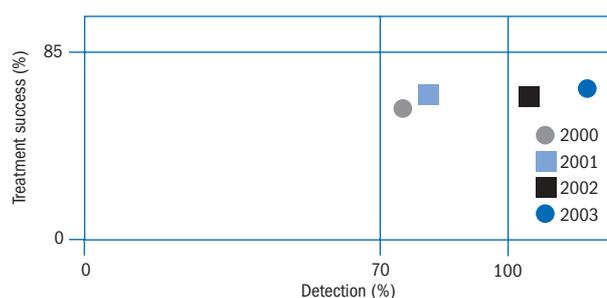
### Notification rate by age and sex (new ss+)<sup>b</sup>



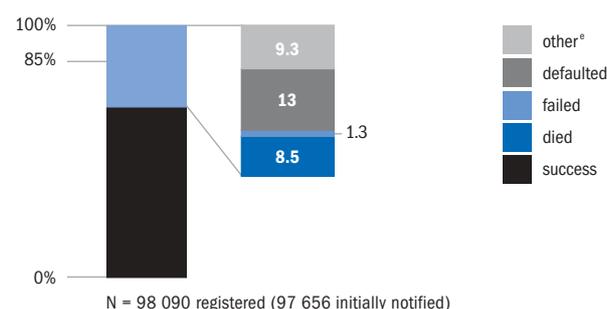
### Case types notified



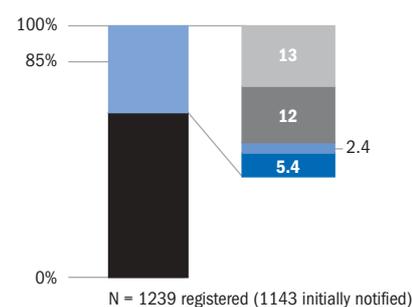
### DOTS progress towards targets<sup>d</sup>



### DOTS treatment outcomes (new ss+)



### Non-DOTS treatment outcomes (new ss+)



### Notes

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

Absence of a graph indicates that the data were not available or applicable.

<sup>a</sup> See Methods for data sources. Prevalence and mortality estimates include patients with HIV.

<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 case detection rate for given year, DOTS treatment success rate for cohort registered in previous year.

<sup>e</sup> "Other" includes transfer out and not evaluated, still on treatment, and other unknown.

WHO report, it remains unclear why so many patients are lost to follow-up, and efforts need to be made to promote better adherence and to achieve better treatment outcomes.

Because the surveillance and monitoring data are still weak, and the electronic TB register was introduced only at the end of 2003, it is difficult to assess the TB burden and trends and to evaluate the impact of the DOTS programme. A national disease prevalence survey would help to determine how much TB there is in South Africa and would provide a baseline against which to measure the future impact of DOTS and related control methods for HIV and AIDS.

### Improving programme performance

The current TB control plan, the "Medium Term Development Plan" (2002–2005), was developed and endorsed by the national government and by eight of the country's nine provinces. A 10-year review of the programme is scheduled in 2005, and a new five-year plan will be developed in line with the strategies developed by the Department of Health.

South Africa has overcome some of the important constraints to achieving the global targets identified in the last report. A uniform, cohort-based recording and reporting system has been set up in all provinces, and the establishment of the electronic TB register will allow tracking of patients between health facilities. While staffing shortages still pose a problem at the provincial level, there has been an increase in staff at the national level. To address the lack of capacity, a training manual has been developed for medical practitioners and training workshops are being held in all provinces. The WHO training manual for trainers of facility health-care workers is being adapted and training of trainers will be conducted in all provinces. A database of trained staff has been established. A national TB manual is being developed.

A national advocacy and social mobilization plan entitled "Stop TB – because you can" is being used to improve community awareness about TB through sustained and highly visible

campaigns. The plan has been used to advocate the need for more resources for TB control at all levels of the government and to bring together all partners involved in TB control. It is now implemented in five provinces (Eastern Cape, Western Cape, Gauteng, Limpopo and Free State).

New drug combinations, following the WHO-recommended treatment guidelines, were phased in during 2003 but this led to problems with drug supplies and to a shortage of first-line drugs. Furthermore, the sole supplier of streptomycin has stopped manufacturing the drug. While FDCs are now available in most districts, some districts have yet to train health staff in treatment regimens using FDCs.

Data collected from the most recent prevalence survey (2000–2002) estimated 7500 prevalent MDR-TB cases and about 450 new MDR-TB cases per year, corresponding to MDR-TB levels of 1.7% (new cases) and 6.6% (re-treatment cases). Treatment facilities for MDR-TB have been established in eight provinces. The Medical Research Council is currently developing a national policy on MDR-TB management. A standardized treatment regimen is provided to MDR-TB patients. The country is not planning to submit an application to the GLC as most second-line drugs are available in the country and many are locally produced.

### Diagnostic and laboratory services

Nearly all laboratories participate in a quarterly EQA programme run by the NHLS, but the current programme does not yet completely satisfy international guidelines. The delays in sputum smear diagnosis are still too long and reporting mechanisms are inadequate in some laboratories. The NHLS plans to establish a national TB reference laboratory and to introduce a pilot EQA study for sputum smear microscopy that will comply with international guidelines. Other priorities for the NHLS are to improve the laboratory infrastructure and the coverage of services in remote rural areas, as well as training and monitoring.

### TB/HIV coordination

South Africa had an estimated HIV prevalence of 22% among all adults at the end of 2003. A recent national survey estimated the HIV prevalence among TB patients to be 55% in 2002, close to the WHO estimate of 61% in 2003. There is a national TB/HIV coordinating body for collaborative activities, which have been implemented in 44 out of 174 subdistricts; it is planned to cover the entire country by 2007. TB/HIV provincial coordinators and national staff have been recruited and national guidelines for care of HIV-infected TB patients, including access to ART, have been developed. VCT is offered routinely to TB patients, but the acceptance rate remains low.

### Links with other health-care providers and the community

A few public and private hospitals as well as prison health services implement DOTS. Several large private corporations, in particular in the mining industry, provide DOTS through their corporate health facilities and contribute about 20% of all reported cases. Several NGOs are involved in the delivery of TB control services and many have recruited community health workers and volunteers as DOTS providers. As noted in last year's report, a PPM-DOTS plan is still needed and more private sector participation should be encouraged.

### Partnerships

South Africa has a country TB coordinating group that meets four times a year. Many partners and technical agencies support DOTS implementation and expansion, including CDC (surveillance and TB/HIV activities), DFID (district management and inpatient care of TB patients), IUATLD (laboratory support and programme management), KNCV (training and research) and WHO (training and TB/HIV activities). USAID is one of the main sources of funds and the GFATM has approved one grant to fund TB/HIV activities.

### Budgets and expenditures

As in previous years, South Africa did not submit financial information to

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WHO because the NTP does not have access to district and provincial financial data. South Africa was awarded one TB/HIV grant from the GFATM in round 2 for US\$ 8.4 million over two years; to date no funds have been disbursed. The Government of Belgium is also funding TB/HIV activities to the amount of US\$ 8.3 million over five years, of which US\$ 1.2 million has been disbursed. Estimates made in previous WHO reports suggest that the total annual cost of TB control in South Africa is about US\$ 300 million.