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COMMUNICABLE DISEASES
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Contents

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List of Abbreviations

AFB	Acid fast bacilli
AFRO	WHO African Regional Office
AMRO	WHO American Regional Office
CDR	Case detection rate (i.e. smear-positive case detection rate, whole country)
DDR	DOTS detection rate (i.e. smear-positive case detection rate under DOTS)
DOT	Directly observed treatment
DOTS	WHO TB control strategy
EMRO	WHO Eastern Mediterranean Regional Office
EURO	WHO European Regional Office
IEDC	Infectious and Endemic Disease Control Project (China)
IUATLD	International Union Against Tuberculosis and Lung Disease
NGO	Non-government organization
NTP	National Tuberculosis Control Programme
SCC	Standardized short-course chemotherapy
SEARO	WHO South-East Asia Regional Office
TB	Tuberculosis
TB80	The league of high-burden countries accounting for 80% of all new cases each year
TS	Treatment success (cured + completed) under DOTS
WPRO	Western Pacific Regional Office

Summary

Background and aims

This is the fifth annual report on global TB control, based on case notifications and treatment outcome data supplied by national control programmes to WHO. Six consecutive years of data were used to assess worldwide progress in TB control, focusing on 23 high-incidence countries that account for 80% of all new cases (the TB80 group). The main aim was to assess progress towards 2005 targets for case detection (70%) and treatment success (85%), and to begin to evaluate the epidemiological impact of diagnosing and curing larger numbers of patients. Analysis of progress from 1995 to 1999 included a revision of incidence estimates for all countries in these years, together with projections to 2005.

Methods

During 2000, a standard data collection form was sent to 211 countries via WHO Regional Offices. The form has three sections which request information about: policy and practice in TB control; the number and types of TB cases notified in 1999; and the outcomes of treatment and retreatment (DOTS areas only) for smear-positive or culture-positive (mainly Europe) cases registered in 1998.

Results

The main findings were:

1. There were an estimated 8.4 million new tuberculosis cases in 1999, up from 8.0 million in 1997; the rise is due largely to a 20% increase in incidence in African countries most affected by the epidemic of HIV/AIDS. If present trends continue, 10.2 million new cases are expected in 2005, and Africa will have more cases than any other WHO Region.
2. Following a decade of successful control, and the consequent reduction in incidence, Peru fell to bottom place in the league of high-burden countries in 1999. It was eliminated from TB80 during 2000.
3. The number of countries implementing the DOTS strategy (at least in part) increased by 8 during 1999, bringing the total to 127 (out of 211).
4. The fraction of the world's population that had access, in principle, to DOTS increased slightly from 43% in 1998 to 45% in 1999.
5. Roughly one quarter (23%) of estimated new smear-positive cases were reported to DOTS programmes in 1999, as compared with 22% in 1998; this is consistent with the average increment of about 120 000 cases in each year since 1994.
6. If this trend is maintained, the target of 70% case detection under DOTS will not be reached until 2013; to get to the target by 2005, DOTS programmes must collectively recruit at least 300 000 additional smear-positive cases each year.
7. There was an insignificant increase between 1998 and 1999 in the total number of smear-positive cases reported to WHO; about 1.4 million cases were reported in both years (41% of the estimated total).
8. Almost all (92%) of the progress in DOTS expansion, as judged by smear-positive case notifications, was made in just 5 countries; 65% of these additional cases were found in 2 countries, India and South Africa.

9. Treatment success of new smear-positive patients has remained high under DOTS, and exceeded 80% in the most recent cohort (1998).
10. Against expectation, the cure rate measured by sputum smear conversion in 12 European countries was not consistently higher than the cure rate measured by culture conversion; in order to explain this result, treatment outcomes must be examined for patients individually, rather than in aggregate.
11. In 1999, Peru and Viet Nam were still the only high-burden countries to have exceeded both WHO targets of 70% case detection and 85% treatment success. However, several other TB80 countries are within reach: they include Brazil, Cambodia, Kenya, the Philippines, South Africa and Tanzania.
12. A number of smaller countries appear to have declining TB incidence rates that are linked to high rates of case detection and cure; these include Cuba, Lebanon, the Maldives, Nicaragua, Oman and Uruguay.
13. During the preparation of this report, China announced preliminary results of a nationwide survey suggesting a comparatively large reduction in TB prevalence in 13 provinces that have participated in the IEDC TB control project since 1990.

Conclusion

Progress in global TB control has remained steady, but slow. Despite large numbers of patients recruited in India and South Africa during 1999, DOTS implementation overall was no faster than in previous years. DOTS programmes worldwide will have to increase the number of additional patients enrolled annually by a factor of 2.5 in order to meet 2005 targets. Following the impact of short-course chemotherapy in Peru (reduced incidence) and China (reduced prevalence), detailed epidemiological analyses are needed to find out whether other control programmes with high rates of case detection and cure have also succeeded in reducing TB burden.

Introduction

The goal of this report is to chart progress in TB control and, in particular, progress in implementing the WHO DOTS strategy.[1] The targets for global TB control ratified by the World Health Assembly are: (1) to treat successfully 85% of detected smear-positive TB cases, and (2) to detect 70% of all such cases. Since these targets were not reached by the end of year 2000 as originally planned, the target year has been re-set to 2005.[2]

Monitoring and evaluation are carried out through WHO's Global TB Monitoring and Surveillance Project, established in 1995. Last year we reported[3] that:

- 45% of all estimated tuberculosis cases, and 40% of smear-positive cases, were notified to WHO for 1998.
- By the end of 1998, 119 countries had adopted, and reported on, the WHO DOTS strategy for TB control; they included all high-burden countries (numbering 22 last year).
- 43% of the global population had access to DOTS.
- 22% of estimated smear-positive cases were reported under DOTS in 1998.
- Compared with 1997, an additional 220 000 smear-positive cases were reported by DOTS programmes in 1998.
- The average treatment success rate was 78% under DOTS programmes in 1997, and 82% in high-burden countries.
- The biggest improvements in case detection were made in China, South Africa, India, Bangladesh and the Philippines.
- Countries failing to make significant progress included Indonesia, Pakistan, Russia and Uganda.
- Peru and Viet Nam were the only two high-burden countries to have met the WHO targets for case detection and cure.

We concluded that progress in global tuberculosis control accelerated slightly between 1997 and 1998; DOTS programmes recruited more cases than in any previous year, whilst maintaining high treatment success rates. However, progress was slow with respect to global targets: the data suggested that DOTS programmes would have to enrol an additional 250 000 patients each year in order to meet targets by 2005. This was more than twice the average yearly increment between 1994 and 1998.

The present report is number five in the series. It presents data available at 22 January 2001 on case notifications for 1999, treatment results for patients registered in 1998, and the status of DOTS implementation by the end of 1999. This information is supplemented, where possible, with the latest data on progress made by countries during 2000. We compared the new figures with those in previous reports (data from 1994 onwards), paying special attention to progress in countries with the largest numbers of TB cases. The results imply that much more effort will be needed if DOTS programmes, collectively, are to reach global targets by 2005.

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[1] World Health Organization. *WHO Tuberculosis Programme: Framework for Effective Tuberculosis Control*. Geneva, Switzerland: World Health Organization 1994. WHO/TB/94.179.

[2] World Health Organization. Fifty-third World Health Assembly. Stop Tuberculosis Initiative, Report by the Director General. A53/5, 5 May 2000.

[3] World Health Organization. *Global Tuberculosis Control. WHO Report 2000*. WHO/CDS/TB/2000.275. See http://www.who.int/gtb/publications/globrep00/index.html.

The analysis in this year's report also includes new estimates of TB incidence in each country. The reasons for revising TB incidence rates are that case numbers have been rising sharply in African countries with the spread of HIV, and in Eastern Europe following the break-up of the former Soviet Union. There have also been some successes in TB control, which have probably reduced incidence, notably in Peru and China. The revised estimates change the denominators of case detection rates, and therefore influence our view of progress towards the 70% target. The technique we have used to estimate incidence for 1999 (the year to which all notifications in this report apply) also allows projections to 2005, assuming present trends continue. These forecasts include some sobering statistics for Africa.

Methods

WHO member states and other countries and territories voluntarily report communicable disease surveillance data to WHO. One distinctive feature of TB surveillance is the collection of data on treatment outcomes as well as disease incidence. Another is the stratification of data by type of control strategy (DOTS or non-DOTS). Together, these data are important in monitoring progress towards targets (85% treatment success, 70% case detection), and in assessing the epidemiological impact of DOTS.

Before setting out the details of methods used to collect the most recent set of data, we make four general remarks about the process. First, the questions posed on the WHO form for data collection assume that countries are able to provide precisely the information requested. We recognize, however, that some countries have slightly different definitions and procedures, and we encourage respondents to note such differences in their reports.

Second, WHO deals with national health authorities, some of whom supervise only public systems of TB control. In a number of countries, TB treatment is unregulated, case reporting by private practitioners to the local health authority is not mandatory, and legislation is not enforced, or not dictated by clear criteria and definitions. Under these circumstsances, the data collected by the national health authority, and reported in turn to WHO, will be incomplete and perhaps inaccurate.

Third, this report presents data with a significant time delay. Published in 2001, it contains data that were compiled mostly during 2000. The new data available are case notifications for 1999 (the most recent year of complete information), and treatment outcomes for patients registered in 1998. Treatment results always lag notifications by one year because the most important evaluations are made at the end of treatment, which usually lasts 6–9 months. (WHO recommends that data are compiled and analysed more often than once per year within countries, e.g. quarterly, but this is unnecessary for monitoring at the global level.)

Fourth, late reports or revisions of data for previous years are incorporated into WHO's databases, so that trend data presented in this report, and on the WHO Geneva web-site, can be as up-to-date as possible (Annex 8 contains the updated global profile for 1997/8). Except for countries in the European region, there has been no systematic attempt to revise earlier data. Because some countries update their information without notifying WHO, the numbers published in this report may not agree with other publications on TB surveillance.

Accepting only the inevitable imperfections, our goal is to present the best possible appraisal of global TB control as of January 2001.

Data collection

In August 2000, we asked the national health authorities in 211 countries and territories to complete a standard TB data collection form (Annex 1). The form has detailed instructions and definitions that follow WHO/IUATLD guidelines on TB recording and reporting. The form asks for:

- programme information in 1999, i.e. national policy and typical practice, population coverage of DOTS and other, non-DOTS strategies, and completeness of reporting;
- TB cases reported during 1999, divided into various types, and including a stratification of laboratory-confirmed pulmonary cases by age and sex;
- treatment outcomes for laboratory-confirmed pulmonary cases registered during 1998, plus outcomes for all re-treatment cases in DOTS areas.

The information about policy and practice concerns the country as a whole, whereas the

other sections ask for data from DOTS and non-DOTS areas separately. Treatment and retreatment outcomes are not expected from non-DOTS programmes, but the form allows respondents to supply the former if they can do so.

Distribution of the forms for data collection was via CD-ROM, and/or fax, airmail and electronic mail, depending on regional procedures and country preferences. A utility on the CD-ROM version allows respondents to enter data directly and return an electronic file to WHO; the data in this file can be uploaded automatically to a Microsoft Access database. Otherwise, manually completed forms were faxed or delivered to the WHO local or Regional Office. Regardless of the format or mode of data transfer, reporting to WHO requires each NTP manager to assemble data as per WHO instructions, from various sub-national (district, provincial) periodic reports (quarterly, semi-annually), or directly from individual case reports, using whatever technology is available. The WHO form, and the means provided for its transmission, are not intended to be tools for surveillance and monitoring within countries.[4]

Completed forms were first reviewed in the relevant WHO country and Regional Office, and then by the Communicable Diseases programme in Geneva. Inconsistencies in the data were followed up with NTP managers, or with other responsible persons in countries. Data were entered in computer files at WHO headquarters and regional levels, and analysed principally with Microsoft Access and Excel 97.

Surveillance in the European Region

In the WHO European Region, tuberculosis monitoring and surveillance are carried out jointly with EuroTB (Institut de Veille Sanitaire, Paris), the WHO Collaborating Centre for the surveillance of tuberculosis in Europe, with financial support from the European Commission. This year, for the first time, a joint WHO/EuroTB data collection form was sent to countries, designed to meet the overlapping objectives of both organizations, and to minimize double reporting by NTP managers. In addition to the information requested on the global form, the WHO/EuroTB form asks for definitions used and reporting requirements in each country, notifications by nationality, citizenship, age and sex, and notifications and treatment outcomes by sputum culture and smear examination (Annex 1).

In the European Region only, national respondents were invited to report to WHO directly via the regional web-site (http://cisid.who.dk/tb). This system provides messages to help check data on entry, and immediate feedback on the TB situation in neighbouring countries, using a menu for custom queries of the regional database.

The WHO/EuroTB collaboration brings several mutual benefits. First, data can be cross-checked more carefully by a larger number of staff. Second, EuroTB continues to compile and refine data throughout the year; this information is used to update the Geneva database, and can then be further disseminated via both EuroTB and WHO networks. Third, the extra information on the European form allows a fuller analysis of TB epidemiology in the region. For example, the present report contains a preliminary comparison of treatment outcomes by smear and culture conversion.

Categorization of countries

From the responses as a whole (but particularly the section on policy), we accepted or revised each country's own determination of its DOTS status. Countries were then further categorized qualitatively (or semi-quantitatively), as shown in Figure 1, using definitions in Table 1. A country was considered as implementing the DOTS strategy if by 31 December 1999 it had a national TB control policy based on WHO recommendations, complied with all technical elements of the DOTS strategy[5] (Table 2), and reported on notifications and treatment outcomes from DOTS areas.

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[4] WHO offers reference material about national recording and reporting systems, and prototype software designed for national or provincial TB managers to assemble, clean, and analyse their TB data. For further information, contact local or Regional WHO offices, or bleedd@who.int.

[5] WHO/IUATLD/KNCV. *Revised international definitions in tuberculosis control.* Geneva, Switzerland: World Health Organization 2000. Unpublished document.

Table 1. Categorization of countries

Category	Definition
0	Countries not reporting to WHO.
1	Countries **not** implementing the DOTS strategy and having an estimated incidence rate of 10 **or more** cases per 100 000 population.
2	Countries implementing the DOTS strategy in less than 10% of the total population (**pilot phase**).
3	Countries implementing the DOTS strategy in 10 to 90% of the total population (**expansion phase**).
4	Countries implementing the DOTS strategy in over 90% of the total population (**routine implementation**).
5	Countries **not** implementing the DOTS strategy but having an estimated incidence rate of **less** than 10 cases per 100 000 population (**low incidence**).

Table 2. Technical elements of the WHO TB control strategy (DOTS)

Microscopy	Case detection among symptomatic patients self-reporting to health services, using sputum smear microscopy*.
SCC/DOT	Standardized short-course chemotherapy using regimens of 6–8 months for at least all confirmed smear-positive cases. Good case management includes directly observed therapy (DOT) during the intensive phase for all new sputum positive cases, during the continuation phase of regimens containing rifampicin, and during the entirety of a retreatment regimen**.
Drug Supply	Establishment and maintenance of a system to supply all essential anti-tuberculosis drugs, and to ensure no interruption in their availability.
Recording and Reporting	Establishment and maintenance of a standardized recording and reporting system, allowing assessment of treatment results (see Table 5).

* Sputum culture can be used for diagnosis, but direct sputum smear microscopy should still be performed for all suspected cases.

** In countries that have consistently documented high treatment success rates, Directly Observed Therapy may be reserved for a subset of patients, as long as cohort analysis of treatment results is provided to document the outcome of all cases.

If DOTS was implemented only in some districts (or equivalent administrative units) on the initiative of local authorities, but endorsed by national authorities, the country was classified as DOTS. If a country reported that DOTS was newly implemented during 1999, so that the results of cohort analysis were not yet available, it was also classified as DOTS, provided 1999 case notifications from DOTS areas were available.

This system of categorization provides a first impression of each country's progress in TB control. However, WHO targets are expressed more stringently in terms of treatment success and the case detection rate. TB control should ensure high treatment success before expanding case finding. The reason is that a proportion of patients given less than a fully-curative course of treatment remain chronically infectious, and continue to spread TB. Thus DOTS programmes must be shown to achieve high cure rates in pilot projects before attempting country-wide coverage. Case detection and treatment success rates are defined and measured as follows.

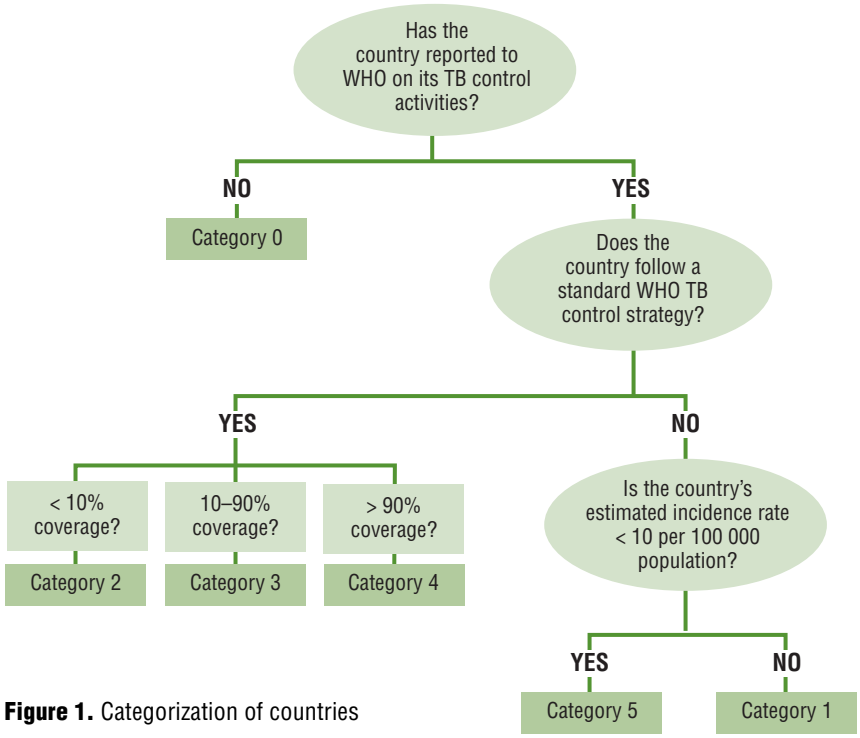


Figure 1. Categorization of countries

Case detection

We made separate assessments of TB control programmes in DOTS and non-DOTS areas. Case notifications distinguished between all types of TB and sputum smear-positive cases (or culture-positive cases, in some countries). Table 3 contains standard case definitions, including minor

Table 3. Definitions of tuberculosis cases

Case of tuberculosis	A patient in whom tuberculosis has been bacteriologically confirmed, or has been diagnosed by a clinician. Note: any person given treatment for tuberculosis should be recorded.
Definite case	Patient with positive culture for the *Mycobacterium tuberculosis* complex. In countries where culture is not routinely available a patient with 2 sputum smears positive for acid fast bacilli (AFB+) is also considered a definite case.
Smear-positive pulmonary case	At least two initial sputum smear examinations (direct smear microscopy) AFB+; or one sputum examination AFB+ and radiographic abnormalities consistent with active pulmonary tuberculosis as determined by the treating medical officer; or one sputum specimen AFB+ and culture positive for *M. tuberculosis*.
Smear-negative pulmonary case	Pulmonary tuberculosis not meeting the above criteria for smear-positive disease. Diagnostic criteria should include: at least 3 sputum smear examinations negative for AFB; and radiographic abnormalities consistent with active pulmonary TB; and no response to a course of broad-spectrum antibiotics; and decision by a clinician to treat the patient with a full course of anti-tuberculosis therapy; or positive culture but negative AFB sputum examinations.
Extrapulmonary case	Patient with tuberculosis of organs other than the lungs e.g. pleura, lymph nodes, abdomen, genito-urinary tract, skin, joints and bones, meninges. Diagnosis should be based on one culture-positive specimen, or histological or strong clinical evidence consistent with active extrapulmonary disease, followed by a decision by a clinician to treat with a full course of anti-tuberculosis chemotherapy. Note: a patient diagnosed with both pulmonary and extrapulmonary tuberculosis should be classified as a case of pulmonary tuberculosis.
New case	Patient who has never had treatment for tuberculosis, or who has taken anti-tuberculosis drugs for less than 1 month.
Relapse case	Patient previously declared cured but with a new episode of bacteriologically positive (sputum smear or culture) tuberculosis.
Retreatment case	Patient previously treated for tuberculosis whose treatment failed, who defaulted (treatment interrupted, see Table 5, 'Definitions of treatment outcomes'), or who relapsed.
Chronic case	Patient who is sputum positive at the end of a retreatment regimen.

revisions made during 2000.[6] As an indicator of each NTP's ability to detect and identify smear-positive cases we calculated the proportion of new sputum smear-positive cases out of all new pulmonary cases (expected value 55–70% in areas with low prevalence of HIV infection).

Case notifications represent only a fraction of the true number of cases arising in a country because of incomplete coverage by health services, inaccurate diagnosis, or deficient recording and reporting. The estimated smear-positive case detection rate is defined as:

$$\text{case detection rate (\%)} = \frac{\text{annual new smear-positive notifications (country)}}{\text{estimated annual new smear-positive incidence (country)}}$$

A stricter measure of case finding is the fraction of all incident smear-positive cases which are detected (and potentially treated) by DOTS programmes:

$$\text{DOTS detection rate (\%)} = \frac{\text{annual new smear-positive notifications (under DOTS)}}{\text{estimated annual new smear-positive incidence (country)}}$$

Case detection rate (CDR) and DOTS detection rate (DDR) are identical when a country reports only from DOTS areas. This should happen only when DOTS coverage is 100%.

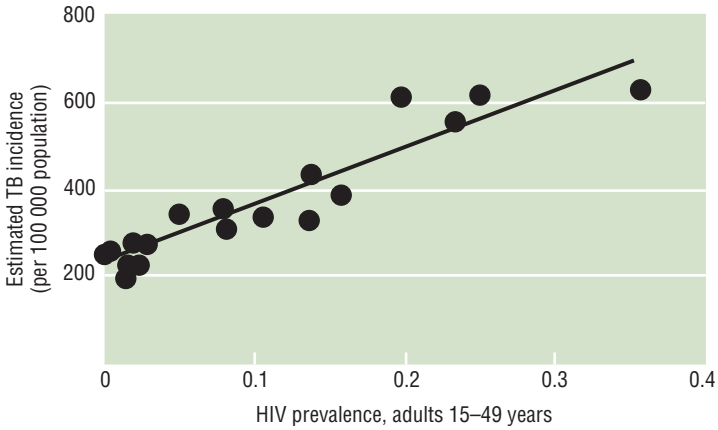
[6] WHO/IUATLD/KNCV. *Revised international definitions in tuberculosis control (2000)*. Unpublished document available from WHO Geneva.

Estimated TB incidence, 1995–2005

The denominators for 1999 case detection rates are 1999 estimates of the smear-positive incidence rate, obtained from a revision of published 1997 estimates.[7] The methods used to make the 1999 revision, and the results, will be described in full elsewhere. In brief:

1. For each of 19 African countries that report TB cases consistently and with clear trends, estimated incidence rates for 1997 have been adjusted according trends in the notification rate. This assumes that there has been no significant change in the proportion of cases detected. The resulting estimates for 1999 are closely correlated with the estimated prevalence of HIV in adults 15–49 years old (r^2 = 87%, Figure 2). The corresponding linear regression has been used as a calibration curve to estimate the TB incidence rate for 41 countries in the WHO African Region (including the original 19 countries, but excluding 5 groups of islands). This new method replaces the previous, less satisfactory approach of dividing case notification rates by the supposed proportion of cases detected, where the latter was typically based on few data for countries other than those represented in Figure 2.

Figure 2. Relationship between estimated incidence of TB (all forms) and HIV prevalence in adults for 18 African countries in 1999 (HIV data supplied by UNAIDS)



2. 113 countries outside the WHO African Region have also provided notification data with interpretable trends, and with no other evidence (e.g. from NTP activities) for any significant change in the case detection rate. We therefore assumed, as for the 19 African countries above, that trends in the notification rate represent trends in the incidence rate, and adjusted the estimated 1997 incidence rates accordingly. Some of these adjustments produced very small increases or decreases in the incidence rate but, for consistency, we applied the same technique to all countries that have decipherable trend data.
3. China carried out a country-wide disease prevalence survey during 2000, and the preliminary results (as of 22 January 2001) have been used to re-evaluate incidence for 1999.
4. For the remaining 56 countries, case notifications could not be used to assess trends in incidence, either because they were too inconsistent, or because independent information suggested that the case detection rate has changed through time (for better or worse). For these countries we applied the trend for one of eight groups of epidemiologically similar countries. The trend was the weighted case notification rate for the countries and groups shown in Figure 9 and Table 9. For example, the Philippines was aligned with non-industrialized Western Pacific countries (defined as Wpr B & D in World Health Report 2000[8]).
5. The information on trends obtained from the series of case notifications, both in and out of Africa, was used to back-calculate incidence to 1995, and to project forward to 2005. We computed incidence rates over this 10-year period for all countries, using the country trends for 133, and the regional trends for the other 78.
6. Finally, the numbers of new cases arising in all countries were calculated by multiplying estimated incidence rates by estimated population sizes.[9]

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[7] Dye C, Scheele S, Dolin P, Pathania V, Raviglione MC. Global burden of tuberculosis: estimated incidence, prevalence and mortality by country. *JAMA* 1999; 282: 677–686.

[8] World Health Organization. *Word Health Report 2000. Health Systems: Improving Performance*. Geneva: World Health Organization.

[9] UN Population Division, World Population Prospects, 1998 revision.

Treatment success and cure rate

To assess the quality of treatment programmes for new infectious cases, we first compared the number of new cases registered for treatment in 1998 (reported in 1999) with the number of cases notified as smear-positive in 1998 (reported in 1998). These numbers should be the same. Differences may arise because NTPs do not compile data at the end of each calendar year, because diagnoses are incorrect, because patients are lost between diagnosis and the start of treatment, or because records are lost. Second, we determined what fraction of registered cases was evaluated for outcome. All registered cases should be evaluated. Third, we compiled data on the six standard, mutually exclusive outcomes of treatment (Table 4). Treatment success is defined as the proportion of patients who were cured plus the proportion who completed treatment. These figures are reported as percentages of all registered cases, so that the six possible outcomes plus the fraction of cases not evaluated sum to 100%. Sometimes, countries state the number of patients registered for treatment, but give no outcomes. When this happens, we report no result, rather than zero treatment success (Table 14). In other instances, the number of registered cases is less than the sum of the six outcomes (i.e. the number evaluated), or is missing. In such instances we take the denominator for treatment success to be the number evaluated or the number of smear-positive cases notified in the previous year, whichever is greater. Although treatment outcomes are expressed as percentages, they are usually referred to as 'rates'.

Table 4. Definitions of treatment outcomes

Cured	Initially smear-positive patient who has a negative sputum smear in the last month of treatment, and on at least one previous occasion*.
Completed treatment	Patient who has completed treatment but does not meet the criteria for cure or failure.
Died	Patient who died during treatment, irrespective of cause.
Failed	Smear-positive patient who remained smear-positive, or became smear-positive again, at least 5 months after the start of treatment.
Interrupted treatment (defaulted)	Patient who did not collect drugs for 2 months or more at any time after registration.
Transferred out	Patient who was transferred to another reporting unit and for whom treatment results are not known.
Successfully treated	The sum of cases who were cured and who completed treatment (expressed as a percentage of the number registered in the cohort**).

* Some European countries define cure in terms of culture conversion, rather than sputum smear conversion[10]

** A cohort is a group of patients diagnosed and registered for treatment during a given time period, usually one quarter of a year.

Data describing the outcome of retreatment were collected only from DOTS areas because the definitions of failure and relapse require data on bacteriological conversion (Tables 3 and 4). We have not attempted to assess how many cases should have been registered on retreatment regimens, to compare with the number that were actually registered.

In addition, 1998 cohort data from a selection of European countries were used to compare cure (and treatment failure) judged by sputum smear or culture conversion. Cure by smear conversion from positive to negative was for all patients initially diagnosed with positive smears, including those that with positive cultures. Reciprocally, culture conversion was measured for all patients initially diagnosed with positive cultures, including those with positive smears. We looked for systematic differences in cure and failure rates measured by the two methods. Because data were not available for individual patients, we compared treatment results for groups of patients, across all countries.

[10] Veen J, Raviglione MC, Rieder HL, Migilori GB, Graf P, Grzemska M, Zalesky R. Standardized tuberculosis treatment outcome monitoring in Europe. *Eur Respir J* 1998; 12: 505–510.

Results

Global and regional progress in TB control

Countries reporting to WHO

By 22 January 2001, 171 (81%) of 211 countries reported case notifications for 1999 and/or treatment outcomes for patients registered in 1998, 18 fewer than last year. We received reports from all high-burden countries except Mozambique, all countries with more than 30 million people except Canada, and all other countries with more than 10 million people except Yemen, Madagascar and Niger (Tables 5a and 5b).

Table 5a. List of countries implementing DOTS, 1999

Category 2 (9 countries)

Brazil
Democratic People's Republic of Korea (the)
Lithuania
Pakistan
Papua New Guinea
Romania
Russian Federation (the)
Tajikistan
Uzbekistan

Category 3 (47 countries)

Afghanistan
Angola
Argentina
Armenia
Australia
Azerbaijan
Bangladesh
Cameroon
China
China, Hong Kong SAR
Colombia
Cook Islands
Costa Rica
Côte d'Ivoire
Democratic Republic of the Congo (the)
Dominican Republic (the)
Ecuador
Egypt
El Salvador
Eritrea
Ethiopia
Ghana
Guatemala
Haiti
Honduras
India
Indonesia
Iraq
Italy
Mali
Marshall Islands (the)
Mauritania
Mexico
Myanmar
Nepal
Nigeria
Panama
Philippines (the)
Poland
Saudi Arabia
Somalia
South Africa
Sudan (the)
Syrian Arab Republic (the)
Thailand
Vanuatu
Zimbabwe

Category 4 (71 countries)

American Samoa
Andorra
Bahamas (the)
Bahrain
Barbados
Benin
Bhutan
Bolivia
Bosnia and Herzegovina
Botswana
Burkina Faso
Burundi
Cambodia
Chad
Chile
Cuba
Cyprus
Czech Republic (the)
Djibouti
Fiji
French Polynesia
Georgia
Guinea
Hungary
Iran (Islamic Republic of)
Israel
Jamaica
Jordan
Kazakhstan
Kenya
Kiribati
Kyrgyzstan
Latvia
Lebanon
Libyan Arab Jamahiriya (the)
Malawi
Maldives
Malta
Mauritius
Monaco
Mongolia
Morocco
Namibia
Netherlands (the)
Nicaragua
Norway
Oman
Peru
Portugal
Puerto Rico
Qatar
Rwanda
Saint Kitts and Nevis
Saint Lucia
Samoa
San Marino
Senegal
Slovakia
Slovenia
Solomon Islands
Sri Lanka
Tonga
Trinidad and Tobago
Tunisia
Turks and Caicos Islands
Uganda
United Republic of Tanzania (the)
United States of America (the)
Uruguay
Venezuela
Viet Nam

Bold: countries which adopted DOTS in 1999

Italics: countries which moved one or more categories down since 1998 due to decrease in coverage

Underline: countries which moved one or more categories up since 1998

Table 5b. List of countries not implementing DOTS or not reporting to WHO, 1999

Category 0 (40 countries)

Anguilla
Belize
Bermuda
British Virgin Islands
Brunei Darussalam
Canada
Cape Verde
China, Macao SAR
Comoros (the)
Dominica
Equatorial Guinea
Gambia (the)
Grenada
Guam
Guinea-Bissau
Guyana
Kuwait
Lao People's Democratic Republic (the)
Lesotho
Liberia
Madagascar
Micronesia (Federated States of)
Mozambique
Nauru
Netherlands Antilles
New Caledonia
Niger (the)
Saint Vincent and the Grenadines
Seychelles
Sierra Leone
St. Helena
Swaziland
Togo
Tuvalu
United Arab Emirates (the)
United States Virgin Islands
Wallis and Futuna Islands
West Bank and Gaza
Yemen
Zambia

Category 1 (38 countries)

Albania
Algeria
Austria
Belarus
Belgium
Bulgaria
Central African Republic (the)
Croatia
Congo (the)
Denmark
Estonia
Finland
France
Gabon
Germany
Greece
Ireland
Japan
Luxembourg
Malaysia
Montserrat
Niue
Northern Mariana Islands (Commonwealth of)
Palau
Paraguay
Republic of Korea (the)
Republic of Moldova (the)
Sao Tome and Principe
Singapore
Spain
Suriname
The former Yugoslav Republic of Macedonia
Tokelau
Turkey
Turkmenistan
Ukraine
United Kingdom of Great Britain and Northern Ireland (the)
Yugoslavia

Category 5 (6 countries)

Antigua and Barbuda
Cayman Islands
Iceland
New Zealand
Sweden
Switzerland

Bold: countries which reported in 1998 and were classified as DOTS, but did not report in 1999

Italic: countries which reported in 1998 and were classified as non-DOTS, but which didn't report in 1999

Underline: countries which reported in 1999, and were classified as DOTS in 1998 but not in 1999

A growing number of European countries are submitting data via the CISID web-site, using either in English or Russian versions. Fourteen used CISID to provide data for this report: Estonia, Finland, Georgia, Germany, Iceland, Latvia, Macedonia, Netherlands, Norway, Portugal, Slovakia, Slovenia, Sweden and Turkmenistan. Fourteen countries in other regions used the CD-ROM to supply data electronically to WHO. A further nine countries used the CD-ROM for data entry, but supplied a printout of the form to WHO.

Categorization of countries, 1995–99

The number of countries implementing a strategy consistent with DOTS has continued to increase, reaching 127 (60%) in 1999, 8 more than in 1998 (Figure 3, Table 5a). Sixteen countries classified as DOTS based on 1998 data did not report 1999 data. Of the 211 countries and territories, 71 had implemented DOTS in over 90% of the country (category 4; Figures 4 and 5). Nine countries were in the DOTS pilot phase (category 2), and 47 were in the expansion phase (category 3). Since 1995, countries have been moving out of category 1 and into categories 2 to 4 (Figure 4).

By the end of 1999, 82% of the world's population was living in countries that had adopted DOTS (categories 2–4). Reported DOTS population coverage was greatest in the American (62%), Western Pacific (57%) and African Regions (55%) (Figure 6). Table 6 tabulates DOTS coverage for each high-burden country, and for the whole world, from 1995 to 1999.

Seventeen countries implemented DOTS for the first time in 1999 (Table 5a). Three had achieved limited coverage (< 10%, Category 2), DPR Korea, Lithuania and Tajikistan. Five achieved moderate coverage (10–90%, Category

Figure 3. Number of countries implementing DOTS, 1990–99

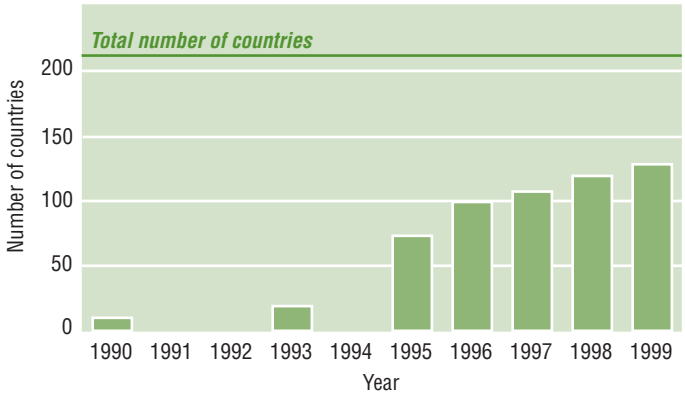


Figure 4. Changes in the categorization of countries, 1995–99, according to the scheme in Figure 1

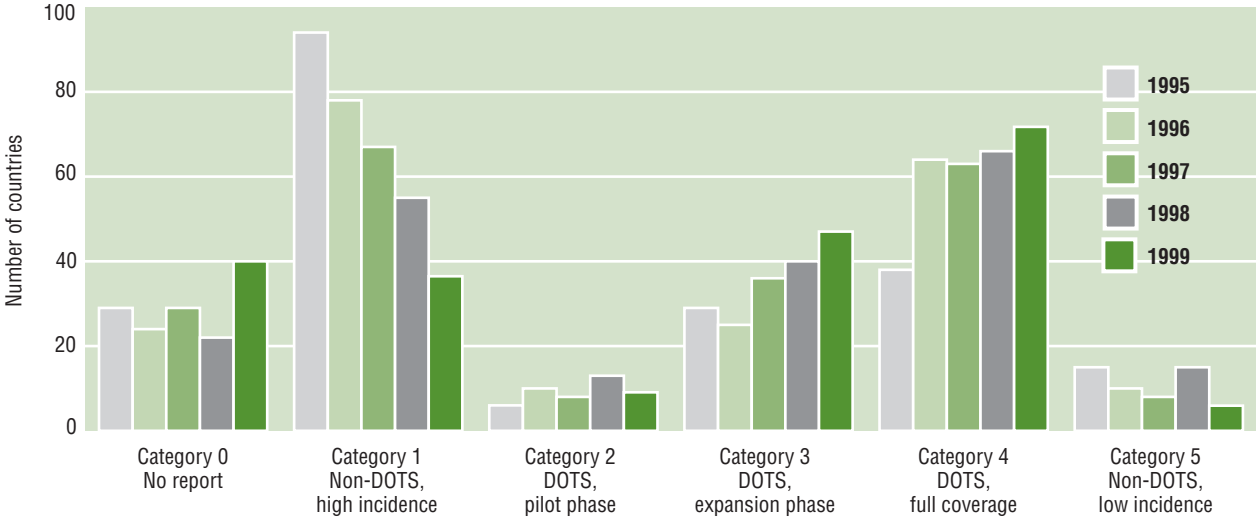


Figure 5. Proportions of countries with different levels of DOTS coverage, 1999

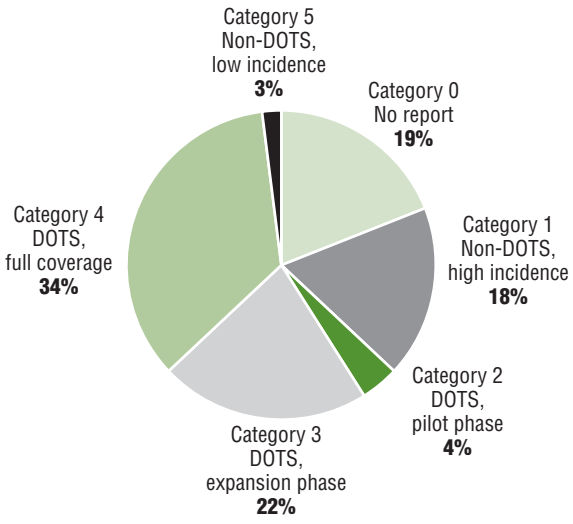


Figure 6. DOTS population coverage by WHO Region, 1999. Each bar shows the population of the region, and the shaded portion of the bar shows the population covered by DOTS. The number above each bar is the percent of the population covered. AFR: African region; EMR: Eastern Mediterranean Region; EUR: European Region; SEAR: South-East Asian Region; WPR: Western Pacific Region.

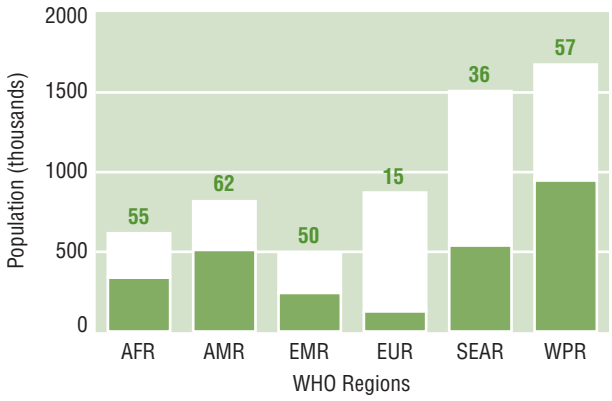


Table 6. Progress in DOTS implementation: 23 high-burden countries, 1995–99

		Percent of population covered by DOTS				
		1995	1996	1997	1998	1999
1	India	1.5	2.0	2.3	9.0	14
2	China	49	60	64	64	64
3	Indonesia	6.0	14	28	80	90
4	Nigeria	47	30	40	45	45
5	Bangladesh	41	65	80	90	90
6	Pakistan	2.0	8.0		8.0	8.0
7	Philippines	4.3	2.0	15	17	43
8	Ethiopia	39	39	48	64	63
9	South Africa			13	22	66
10	Russian Federation		2.3	2.3	5.0	5.0
11	DR Congo	47	51	60	60	62
12	Viet Nam	50	95	93	96	99
13	Kenya	15	100	100	100	100
14	Brazil		0.0	0.0	3.0	7.0
15	UR Tanzania	98	100	100	100	100
16	Thailand		1.1	4.0	32	59
17	Mozambique	97	100	84	95	
18	Myanmar		59	60	60	64
19	Uganda		0.0	100	100	100
20	Afghanistan			12	11	14
21	Zimbabwe		0.0	0.0	100	12
22	Cambodia	60	80	88	100	100
23	Peru	100	100	100	100	100
	23 high-burden countries	24	32	35	43	46
	Global	**22**	**32**	**35**	**43**	**45**

Zero indicates that a report was received, but the country had not implemented DOTS.
Blank indicates that no report was received.

3), including China Hong Kong SAR, Costa Rica, Mauritania and Saudi Arabia. The remaining nine reached high coverage (> 90%), including Libya and Tunisia. Among the four countries that moved up to category 3 in 1999 were Haiti, India and Poland. Bolivia, Iran and Kazakhstan were the biggest of six countries that reached full coverage (category 4). Sixteen countries that had implemented DOTS by 1998 failed to provide data for 1999, including Mozambique, Madagascar and Niger (Table 5b).

Case notifications, 1995–99

The 171 countries reporting to WHO notified a total of 3 689 822 cases (62 per 100 000 population), of which 1 485 783 (40%) were sputum smear-positive (Table 7). These totals are nearly the same as for 1998.

Among all cases reported for 1999, 1 679 086 (46%) originated in DOTS areas (Table 7), a 7% increase on 1998. Of the smear-positive cases, 868 374 (58%) were reported from DOTS areas, 4% higher than in 1998. The African (17%), South-East Asia (41%) and Western Pacific Regions (22%) together accounted for 80% of all notified cases and similar proportions of sputum smear-positive cases (Figure 7).

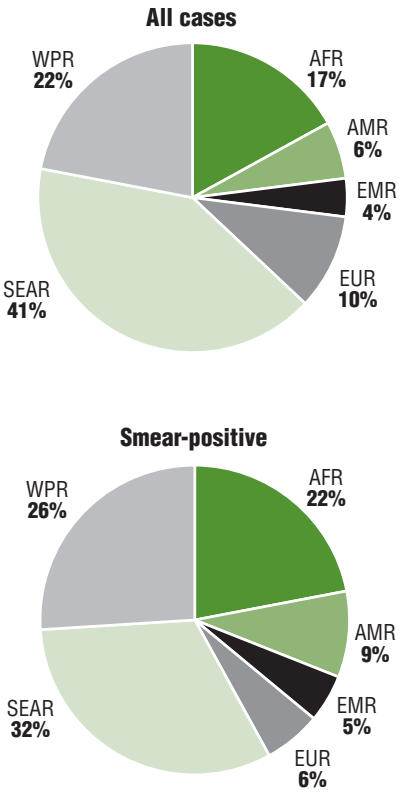


Figure 7. (left) Proportions of all notified cases, and smear-positive cases, by WHO Region, 1999. Abbreviations are as in Figure 6

Figure 8. (below) Global trend in the case notification rate, 1980–99

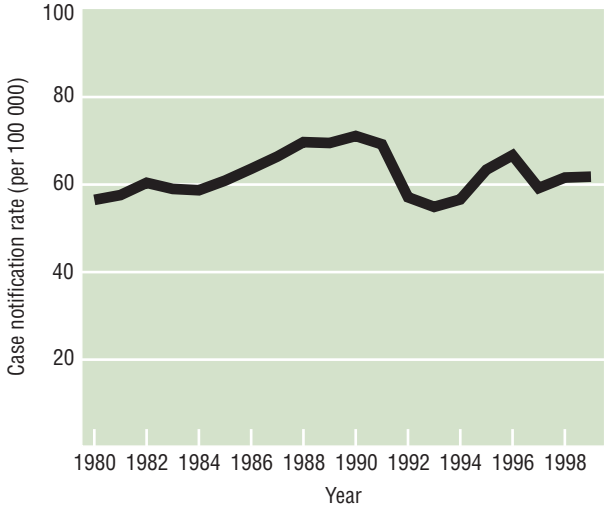


Table 7. Summary of notifications by WHO region, 1999

		% of pop*	Notifications		New ss+ notifs	% of new pulmonary
			Number	%		cases smear-positive
AFR	DOTS	55	571 158	89	278 725	63
	non-DOTS	33	73 814	11	42 535	77
	no report	12				
	Total		**644 972**		**321 260**	
AMR	DOTS	63	117 240	50	68 241	73
	non-DOTS	33	116 583	50	65 122	65
	no report	4.0				
	Total		**233 823**		**133 363**	
EMR	DOTS	50	88 881	57	43 906	74
	non-DOTS	45	67 756	43	23 229	41
	no report	4.7				
	Total		**156 637**		**67 135**	
EUR	DOTS	14	65 361	18	18 596	38
	non-DOTS	86	297 171	82	67 675	29
	no report	0.0				
	Total		**362 532**		**86 271**	
SEAR	DOTS	36	338 224	23	176 793	61
	non-DOTS	64	1 131 448	77	308 997	29
	no report	0.0				
	Total		**1 469 672**		**485 790**	
WPR	DOTS	57	498 222	61	282 113	62
	non-DOTS	43	323 955	39	109 851	38
	no report	0.4				
	Total		**822 177**		**391 964**	
Global	DOTS	45	1 679 086	46	868 374	62
	non-DOTS	52	2 010 727	54	617 409	35
	no report	2.3				
	Total		**3 689 813**		**1 485 783**	

* Percent of population: the regional DOTS population includes only that portion of the population of DOTS countries that is covered by DOTS.

Table 8. Case notifications: 23 high-burden countries, 1999

		Number notified				% of new pulmonary cases smear-positive	
		All cases		Smear-positive			
	Country (ranked by burden)	DOTS	non-DOTS	DOTS	non-DOTS	DOTS	non-DOTS
1	India	120 279	1 102 848	53 034	296 736	55	29
2	China	346 200	113 969	188 525	23 901	57	22
3	Indonesia	69 064		49 172		74	
4	Nigeria	24 143		15 903		74	
5	Bangladesh	71 343	7 996	34 047	3 774	52	100
6	Pakistan	4 671	16 265	2 269	3 979	58	25
7	Philippines	31 825	113 982	20 477	52 896	67	51
8	Ethiopia	72 095		21 457		44	
9	South Africa	90 278	38 777	54 404	23 667	82	80
10	Russian Federation	3 820	130 540	1 274	20 470	39	18
11	DR Congo	59 531		34 923		81	
12	Viet Nam	88 426	453	53 561	244	75	70
13	Kenya	57 266		27 197		57	
14	Brazil	4 060	74 400	2 108	39 326	61	63
15	UR Tanzania	52 437		24 125		59	
16	Thailand	29 413		14 934		57	
17	Mozambique						
18	Myanmar	19 626		11 458		71	
19	Uganda	34 994		18 149		59	
20	Afghanistan	3 314		1 669		70	
21	Zimbabwe	50 138		14 414		34	
22	Cambodia	19 266		15 744		96	
23	Peru	40 345		24 511		82	
	total, high-burden countries	1 292 534	1 599 230	683 355	464 993	62	32
	Global total	**1 679 086**	**2 010 736**	**868 374**	**617 409**	**62**	**35**

* Expected percentage of new pulmonary cases which is smear positive is 55–70%

In DOTS areas, 52% of all new cases were smear-positive (45–60% expected), compared with 31% in other areas. Sixty-two percent of new pulmonary cases were sputum smear-positive in DOTS areas (55–70% expected), compared with 35% elsewhere (Tables 7 and 8).

Although the case notification rate has remained approximately stable since 1980 (Figure 8), the number of cases enrolled in DOTS programmes has increased linearly. The annual increments in smear-positive cases detected by DOTS programmes in the five years 1995 to 1999 were 140 453, 80 596, 190 309 and 98 442, averaging 127 450 extra cases each year. For all forms of TB, the average increment under DOTS has been 255 858 cases each year.

Table 9. Groups of countries used to estimate regional trends in incidence, and groups of countries where incidence was estimated using regional trends

Established Market Economies	Eastern Europe	Latin America	Eastern Mediterranean	Africa–low HIV§	Africa–high HIV§	South East Asia	Western Pacific
Trend estimated from	**Trend estimated from**	**Trend estimated from**	**Trend estimated from**	**Trend estimated from**	**Trend estimated from**	**Trend estimated from**	**Trend estimated from**
Australia	Albania	Anguilla**	Cyprus	Algeria	Botswana	Bhutan	American Samoa**§
Austria	Armenia	Antigua & Barbuda**	Jordan	Benin	Cent Afr Rep	India	Cambodia
Belgium	Belarus	Argentina	Lebanon	Comoros	Côte d'Ivoire	Maldives	China, Hong Kong SAR
Canada	Croatia	Bahamas*	Morocco	Guinea	DR Congo	Sri Lanka	China, Macao SAR
Czech Rep	Estonia	Barbados*	Oman	Madagascar	Kenya	**Trend applied to**	Cook Is**§
Denmark	Kazakhstan§	Bermuda**	Qatar	Mali	Lesotho	Bangladesh§§	Fiji**§
Finland	Kyrgyzstan§	Br Virgin Is**	Syria	Mauritania	Malawi	DPR Korea	French Polynesia**§
France	Latvia	Cayman Is**	Tunisia	Mauritius	Uganda	Indonesia	Guam*
Germany	Lithuania	Chile			UR Tanzania	Myanmar	Kiribati*
Greece	Poland	Cuba	**Trend applied to**	**Trend applied to**	Zambia	Nepal	Lao PDR
Iceland	Romania	Dominica**	Afghanistan	Angola	Zimbabwe	Thailand	Malaysia
Ireland§	Russia	Dominican Rep	Bahrain	Burkina Faso			Marshall Is*
Japan	Slovakia	Ecuador	Djibouti	Cameroon	**Trend applied to**		Micronesia*
Netherlands§	Slovenia	El Salvador	Egypt	Cape Verde	Burundi		N Mariana Is*
New Zealand	Tajikistan	Grenada**	Iran	Chad	Congo (the)		Nauru**§
Norway	Turkey	Guatemala	Iraq	Equatorial Guinea	Eritrea		New Caledonia*
Portugal	Turkmenistan	Guyana	Kuwait	Gabon	Ethiopia		Niue**§
Singapore	Ukraine	Honduras	Libya	Gambia (the)	Mozambique		Palau*
Spain	Uzbekistan	Jamaica	Pakistan	Ghana	Namibia		Rep Korea
Sweden	Yugoslavia	Mexico	Saudi Arabia	Guinea-Bissau	Rwanda		Samoa**§
Switzerland		Montserrat**	Somalia	Liberia	South Africa		Solomon Is*
United Kingdom§	**Trend applied to**	Nicaragua	Sudan§	Niger (the)	Swaziland		Tokelau**§
United States	Azerbaijan	Peru	United Arab Emirates	Nigeria			Tonga**§
	Bosnia & Herzegovina	Puerto Rico	West Bank & Gaza	Sao Tome & Principe			Tuvalu**§
Trend applied to	Bulgaria	St Kitts & Nevis**	Yemen	Senegal			Vanuatu*
Andorra	Georgia	St Lucia**		Seychelles			Viet Nam
Israel	Hungary§	St Vincent & Grenadines**		Sierra Leone			Wallis & Futuna Is**§
Italy	Rep Moldova§	Trinidad & Tobago*		Togo			
Luxembourg	TFYR Macedonia	Turks & Caicos Is**					**Trend applied to**
Malta		Uruguay					Brunei Darussalam
Monaco		Venezuela					China§§
San Marino							Mongolia
		Trend applied to					Papua New Guinea
		Belize					Philippines
		Bolivia					
		Brazil					
		Colombia					
		Costa Rica					
		Haiti					
		Panama					
		Paraguay					
		Suriname					
		US Virgin Is					

*/** To estimate trends, data were aggregated for two groups of islands (marked by * and **) in each of the Latin American and Western Pacific Regions

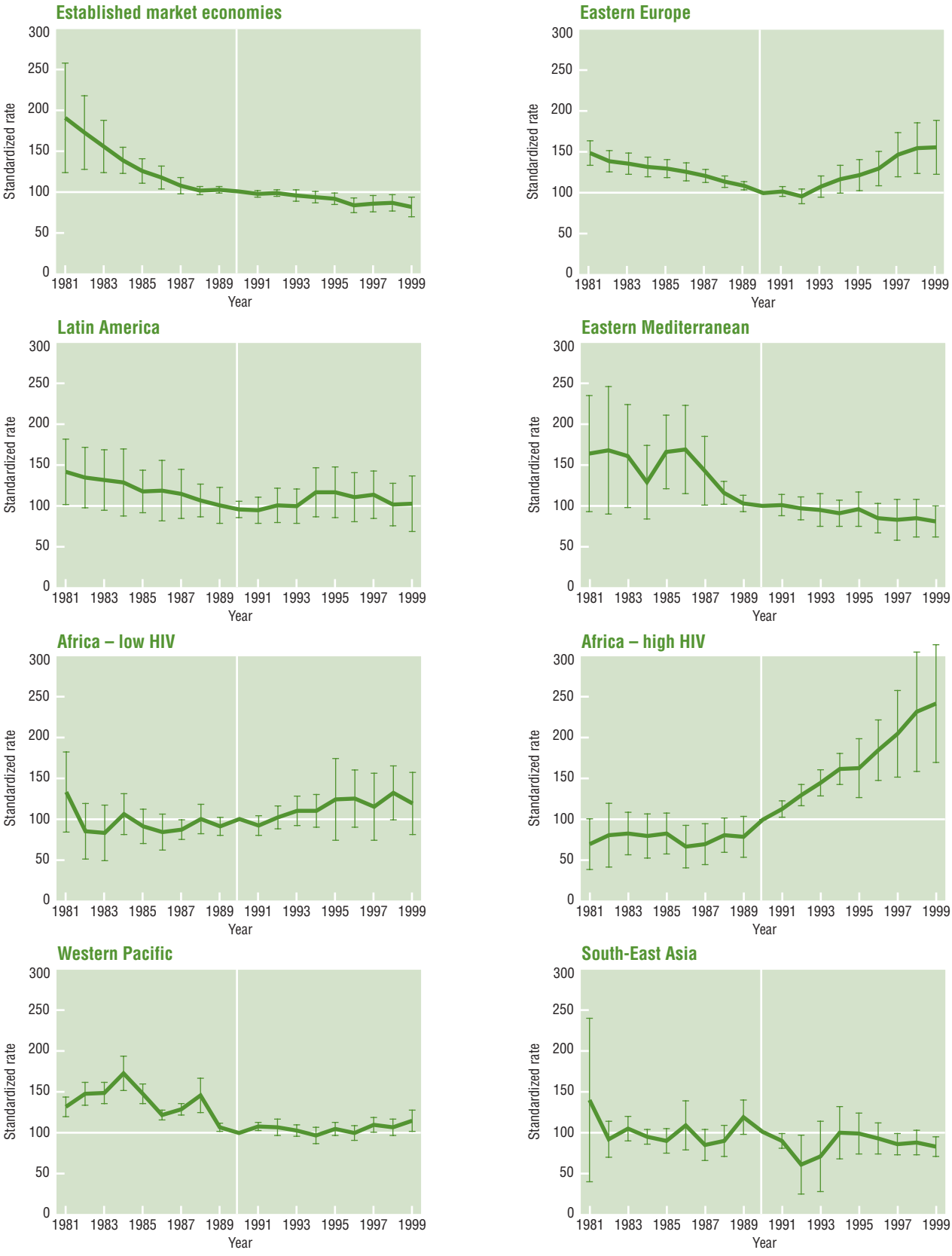
§ Countries, and groups of countries, for which estimates were derived from new information

§§ Trends based on prevalence surveys of infection and disease

Regional groupings correspond with those in WHR 2000[7]:

Established Market Economies = AMR A + EUR A + WPR A, Eastern Europe = EUR B + EUR C, Africa – low HIV = AFR D, Africa – high HIV = AFR E, Latin America = AMR B + AMR D, SEAR = WHO South East Asia Region, WPR = WHO Western Pacific Region.

Figure 9. Trends in case notification rates for selected countries in different regions, 1980–1999. To highlight trends in notifications within regions, the rates for all countries have been expressed relative to an arbitrary standard of 100 in 1990. Error bars are 95% CL on the standardized (unweighted) rates. Countries selected in each region are those for which case notifications were judged to represent trends in incidence over the period 1980–1999, as listed in table 9.



Estimated TB incidence, 1995–2005

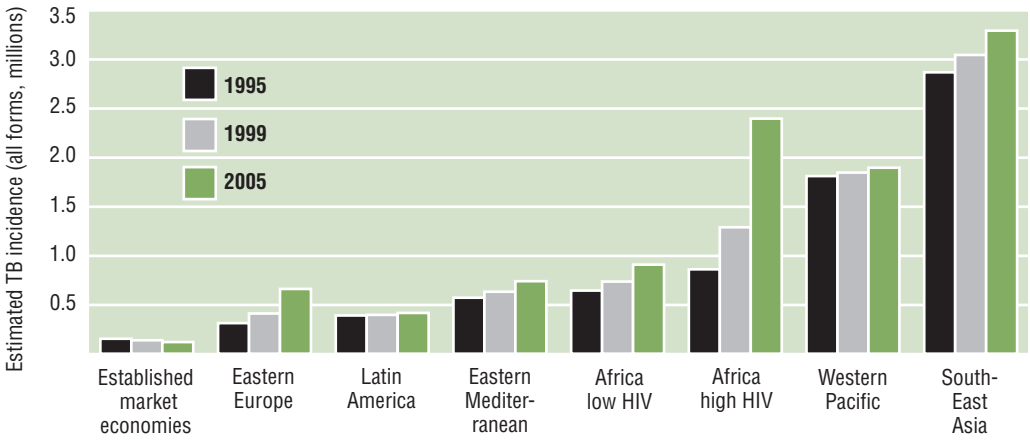
Figure 9 shows the series of case notifications that were used to judge trends in incidence, for the groups of epidemiologically similar countries listed in Table 9. Notification rates were standardized to 100 in 1990, in order to reveal trends more clearly by eliminating the absolute differences between countries in that year. Table 10 contains the estimated numbers of new cases (all forms and smear-positive) in 1999, globally and for the highest-burden countries. Twenty-three coun-

Table 10. Estimated incidence of TB: 23 high-burden countries, 1999

			Number Estimated					
			All cases		Smear-positive cases			Change
	Country (ranked by burden)	Population (1000s)	Thousands	Rate per 100 000 pop	Thousands	Rate per 100 000 pop	Cumulative incidence (%)	in rank 97 to 99*
1	India	998 056	1 847	185	827	83	22	0
2	China	1 266 838	1 300	103	584	46	37	0
3	Indonesia	209 255	590	282	265	127	44	0
4	Nigeria	108 945	327	301	142	130	48	2
5	Bangladesh	126 947	306	241	138	108	52	-1
6	Pakistan	152 331	269	177	121	79	55	-1
7	Philippines	74 454	234	314	105	141	58	0
8	Ethiopia	61 095	228	373	96	157	61	1
9	South Africa	39 900	197	495	80	201	63	-1
10	Russian Federation	147 196	181	123	81	55	65	1
11	DR Congo	50 335	151	301	65	130	67	1
12	Viet Nam	78 705	149	189	67	85	69	-2
13	Kenya	29 549	123	417	51	173	70	2
14	Brazil	167 988	118	70	53	31	72	-1
15	UR Tanzania	32 793	112	340	47	145	73	-1
16	Thailand	60 856	86	141	38	62	74	0
17	Mozambique	19 286	79	407	33	169	75	9
18	Myanmar	45 059	76	169	34	76	76	-1
19	Uganda	21 143	72	343	31	146	77	0
20	Afghanistan	21 923	71	325	32	146	77	-2
21	Zimbabwe	11 529	65	562	26	226	78	0
22	Cambodia	10 945	61	560	27	251	79	0
23	Peru	25 230	58	228	26	102	80	-3
	total, 23 high-burden countries	3 760 358	6 700	178	2 969	79	80	
	Global total	**5 975 045**	**8 417**	**141**	**3 724**	**62**	**100**	

* change in rank resulting from re-estimation of incidence. A positive value indicates that a country has moved up the table

Figure 10. Estimated numbers of TB cases in 1995 (black), 1999 (grey) and 2005 (green), by region. Regions are as defined in Figure 9



tries accounted for 80% of all new cases, henceforth referred to as TB80. The global total rose to 8.42 million in 1999, up from 7.96 million[11] in 1997 (or 7.98 million from back-calculation). Nigeria, Ethiopia, Kenya, DR Congo and Russia are now ranked higher in TB80 than in 1997. Mozambique has joined the league of high-burden countries. Peru has dropped to 23rd and final place in 1999, and was relegated from TB80 during 2000.

The total numbers of cases are predicted to increase in all regions up to 2005, except in the established market economies (decline 2–3%/year, Figure 10). The rate of increase is 3%/year on average, but much higher in those African countries most affected by HIV (10%/year), and in Eastern Europe (8%/year). If present trends continue, we expect 10.2 million new cases in 2005, and more cases in the WHO African Region (3.4 million) than in any other, including South East Asia (3.2 million).

Case detection rate, 1995–99

The 3 689 813 cases of tuberculosis (all forms) notified in 1999 represent 44% of the 8.42 million estimated cases; the total of 1 485 783 new smear-positives is 40% of 3.72 million estimated cases (Tables 6, 8, 11). Twenty percent of all estimated cases, and 23% of estimated smear-positive cases, were detected under DOTS. The detection rate of smear-positive cases within DOTS programmes has been rising faster than the overall smear-positive detection rate (Figure 11, Table 11). Case detection rates in 1999 were lowest in the Eastern Mediterranean Region and highest in Europe and the Americas (Figure 12).

Table 11. Detection of new smear-positive cases: 23 high-burden countries, 1995–99

		DOTS Programmes					Whole country				
Country (ranked by burden)		1995	1996	1997	1998	1999	1995	1996	1997	1998	1999
1	India	0.3	0.8	1.0	1.5	6.4	33	36	34	35	42
2	China	16	24	25	33	32	23	29	32	37	36
3	Indonesia	1.4	4.6	7.5	12	19	12	*	*	*	*
4	Nigeria	8.1	13	8.7	10	12	*	*	*	*	*
5	Bangladesh	6.8	15	19	24	25	15	22	24	28	28
6	Pakistan	0.9	1.6	—	3.5	1.9	2.3	*	—	13	5.2
7	Philippines	0.9	0.5	3.2	10	20	98	88	83	70	70
8	Ethiopia	0.4	19	20	22	22	*	22	*	*	*
9	South Africa	—	—	6.2	22	68	2.5	61	82	112	97
10	Russian Federation	—	0.4	0.9	0.9	1.6	62	65	60	56	27
11	DR Congo	44	50	47	57	53	47	*	*	*	*
12	Viet Nam	30	59	77	81	80	60	77	83	83	80
13	Kenya	58	58	54	57	53	*	*	*	*	*
14	Brazil	—	—	—	4.1	4.0	79	80	80	72	79
15	UR Tanzania	61	60	56	55	51	*	*	*	*	*
16	Thailand	—	0.3	5.0	21	40	55	46	35	*	*
17	Mozambique	49	44	42	41	—	*	*	*	*	—
18	Myanmar	—	26	27	30	33	26	29	29	*	*
19	Uganda	—	—	63	63	59	57	59	*	*	*
20	Afghanistan	—	—	2.0	5.8	5.2	—	—	*	*	*
21	Zimbabwe	—	—	—	60	55	45	57	64	*	*
22	Cambodia	48	40	50	53	57	*	50	*	*	*
23	Peru	99	88	95	101	95	*	*	*	*	*
	all high-burden countries	9.3	13	15	20	23	31	35	35	38	39
	Global	**11**	**14**	**16**	**21**	**23**	**35**	**38**	**38**	**40**	**40**

— not available; * no additional data beyond DOTS report

[11] WHO/IUATLD/KNCV. *Revised international definitions in tuberculosis control (2000)*. Unpublished document available from WHO Geneva.

Figure 11. Global case detection rate (grey bars) and DOTS detection rate (green bars), 1995–99

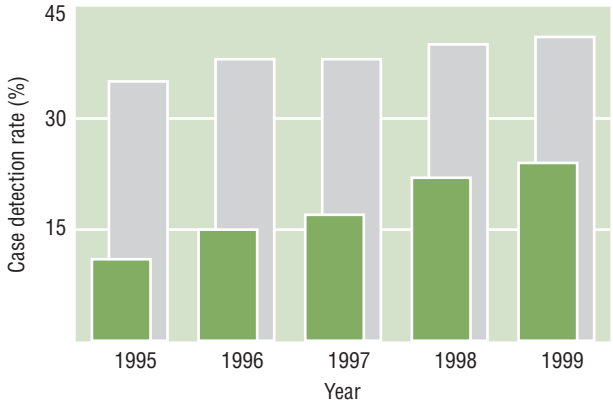
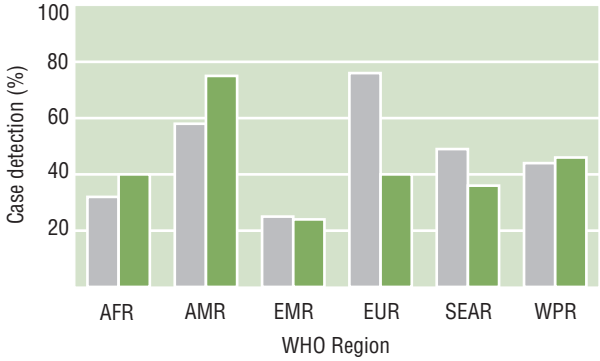


Figure 12. Detection rates of smear-positive (green bars) and all TB cases (grey bars) by WHO Region, 1999. Abbreviations are as in Figure 6.



Treatment results, 1994–98 cohorts

The number of new sputum smear-positive cases notified under DOTS in 1998 was 769 932, including late reports (Table 12a). According to 1999 reports, approximately the same number of cases (725 275) were registered for treatment in 1998 (Annex 6 lists notified and registered cases for 1998 by country). The discrepancy is due mostly to inconsistencies in reports from Brazil, Pakistan and Uganda (registered many fewer than notified), and Afghanistan and South Africa (many more registered than notified). Of the registered cases, 95% were evaluated for treatment outcome (Tables 12a and 13). Seventy-three percent of the registered cases were cured and a further 8% completed treatment (no laboratory confirmation of cure) giving, for the first time,

Table 12a. Treatment outcomes for smear-positive cases: 23 high-burden countries: DOTS strategy, 1998 cohort*

					Treatment outcomes (%)*								
	Country (ranked by burden)	Notified	Registered*	Regst'd (%)	Cured	Completed treatment*	Died	Failed	Defaulted	Trans-ferred	Not eval'd	Treatment success* (%)	%est* cases successfully treated under DOTS
1	India	12 421	12 418	100	83	1.2	4.4	2.7	7.5	1.0	0.3	84	9.3
2	China	191 290	190 016	99	97		1.2	0.8	0.6	0.3	0.5	97@	34
3	Indonesia	32 280	40 166	124	49	8.5	1.6	0.9	1.8	0.5	38	58	8.7
4	Nigeria	13 161	13 161	100	59	14	6.4	2.6	14	2.8	1.7	73	6.8
5	Bangladesh	33 220	33 506	101	76	4.3	5.1	0.9	9.1	3.0	1.9	80	21
6	Pakistan	4 145	1 918	46	53	13	4.5	0.9	25	3.2	0.0	66	5.6
7	Philippines	10 292	8 976	87	78	6.6	2.9	2.6	6.9	3.2	0.0	84	14
8	Ethiopia	18 864	14 836	79	54	20	6.3	1.0	13	4.3	1.2	74	11
9	South Africa	16 246	34 432	212	68	6.6	5.6	1.7	6.8	12	0	74	33
10	Russian Federation	683	745	109	61	6.4	7.9	8.3	6.7	3.6	5.7	68	0.6
11	DR Congo	33 419	33 442	100	58	12	5.3	1.0	9.4	8.4	6	70	36
12	Viet Nam	53 147	52 799	99	90	2.7	2.8	1.2	1.9	1.5	0.0	93@	75
13	Kenya	24 029	21 885	91	63	14	5.3	0.4	11	6.7	0.0	77	33
14	Brazil	2 221	82	3.7	78	13	2.4			6.1	0.0	91@	23
15	UR Tanzania	23 726	23 726	100	70	5.9					24	76	40
16	Thailand	7 962	7 962	100	61	6.2	7.6	1.5	9.5	2.4	11	68	14
17	Mozambique	12 116											
18	Myanmar	10 089	10 313	102	74	8.5	4.7	1.0	10	1.9	0.0	82	25
19	Uganda	18 222	13 236	73	31	31	8.1	0.4	19	4.7	5	62	27
20	Afghanistan	1 833	2 913	159	27	6.8	1.7	0.8	5.8	1.4	57	33	3.0
21	Zimbabwe	14 492	12 748	88	50	19	10	0.3	8.3	12	0	70	34
22	Cambodia	13 865	13 290	96	92	3.0	2.3	0.4	2.2	0.5	0.0	95@	46
23	Peru	27 707	26 137	159	92		2.2	1.4	3.2	0.7	0.0	92@	94
	all high-burden countries	575 430	568 707	99	78	5.5	3.2	1.0	4.6	2.7	4.9	84	16
	Global (DOTS)	**769 932**	**725 275**	**94**	**73**	**7.6**	**3.8**	**1.2**	**6.0**	**3.2**	**4.9**	**81**	**16**

* Cohort: cases diagnosed during 1998 and treated/followed-up through 1999. See table 4 and accompanying text for definitions of treatment outcomes.
@=treatment success > 85%.

an overall treatment success rate over 80% in DOTS areas. Eighty-five percent of evaluated cases, and 16% of all estimated smear-positive cases, were treated successfully under DOTS.

As usual, the discrepancy between cases notified and registered is bigger in non-DOTS areas (Table 12b). The most striking examples are Russia and the Philippines. The deviation for South Africa could be explained in terms of DOTS/non-DOTS misclassification (see above). In the non-DOTS areas that presented results, treatment success was low (37%), and the cure rate very low (15%). This poor performance is explained primarily by the low evaluation rate (50%), and

Table 12b. Treatment outcomes for smear-positive cases: 23 high-burden countries: non-DOTS strategy, 1998 cohort*

Country (ranked by burden)	Notified	Registered	Regst'd (%)	Treatment outcomes (%)*							Treatment success* (%)
				Cured	Completed treatment*	Died	Failed	Defaulted	Trans-ferred	Not eval'd	
1 India	271 645	271 645	100	1.9	22	0.1	0.1	2	0.2	73	24
2 China	23 172	20 080	87	85		1.8	6.5	4.5	1.7	1.0	85@
3 Indonesia											
4 Nigeria											
5 Bangladesh	4 517	4 523	100	50	7.3	0.5	0.3	28	8.4	5.8	57
6 Pakistan	10 829	27 470	254	20		0.3		56	0.6	24	20
7 Philippines	61 371	11 707	19	38	23	1.3	0.8	3.4	1.9	32	60
8 Ethiopia											
9 South Africa	66 047	2 657	4	30	17	5.1	0.9	13	34	0.0	47
10 Russian Federation	41 536										
11 DR Congo											
12 Viet Nam	1 726	1 752	102	75	10	3.9	2.3	6.4	2.2	0.0	85@
13 Kenya											
14 Brazil	36 588	29 996	82	10	30	2.4	0.3	6.3	3.7	48	40
15 UR Tanzania		1 450		66	6	11	1.5	7.3	5.9	1.9	73
16 Thailand											
17 Mozambique											
18 Myanmar											
19 Uganda											
20 Afghanistan											
21 Zimbabwe											
22 Cambodia											
23 Peru											
all high-burden countries	517 431	371 280	72	11	20	0.5	0.5	6.9	1.0	60	31
Global (non-DOTS)	**670 235**	**461 299**	**69**	**16**	**22**	**1.1**	**1.7**	**7.7**	**1.7**	**50**	**37**

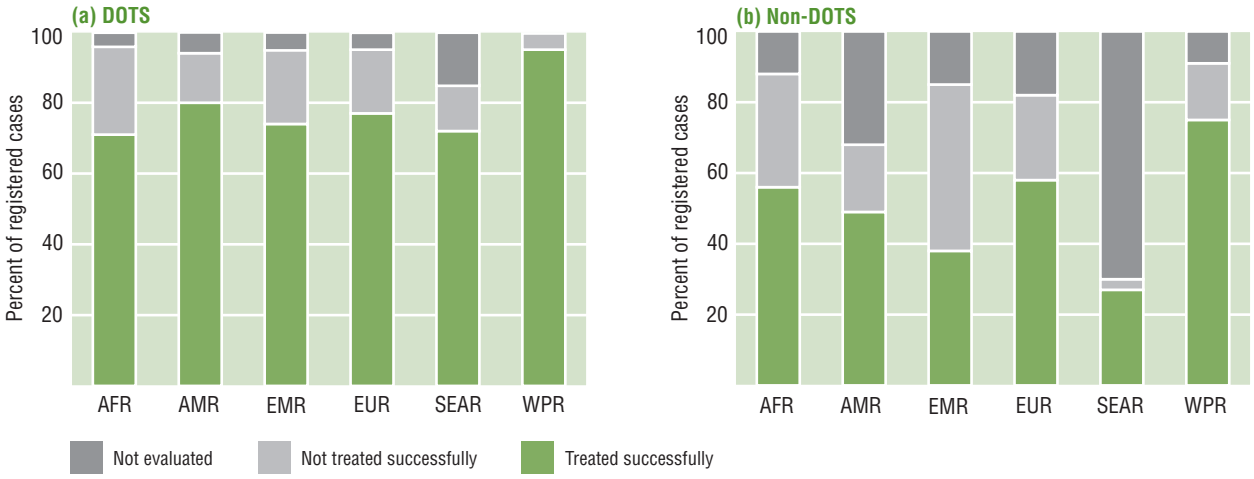
* see notes for table 12a

Table 13. Treatment outcomes for smear-positive cases, by WHO Region and strategy, 1998 cohort*

WHO region/strategy		Notified	Registered	Regst'd (%)	Treatment outcomes (%)*							Treatment success* (%)	% est* cases successfully treated under DOTS
					Cured	Completed treatment*	Died	Failed	Defaulted	Trans-ferred	Not eval'd		
AFR	DOTS	253 162	227 207	90	57	13	6.0	1.1	11	6.9	5.1	70	18
	non-DOTS	86 181	8 401	10	48	8.1	5.2	2.6	10	14	13	56	
AMR	DOTS	70 271	63 173	90	66	15	4.4	1.0	6.0	2.6	5.6	80	28
	non-DOTS	65 007	46 979	72	25	24	3.3	0.5	11	4.2	33	49	
EMR	DOTS	41 298	39 311	95	64	10	3.5	2.1	10	5.2	4.9	74	10
	non-DOTS	33 584	44 009	131	32	5.6	1.1	2.0	41	2.6	15	38	
EUR	DOTS	18 957	12 487	66	62	15	5.8	4.5	4.9	3.2	4.4	77	4.5
	non-DOTS	92 414	34 730	38	12	46	2.7	12	6.0	4.0	17	58	
SEAR	DOTS	103 498	114 355	110	66	6.0	3.9	1.2	6.4	1.7	15	72	6.1
	non-DOTS	284 450	284 667	100	4.6	22	0.2	0.2	2.6	0.4	70	27	
WPR	DOTS	282 746	268 742	95	94	1.1	1.6	0.9	1.2	0.7	0.4	95@	30
	non-DOTS	108 599	42 513	39	58	17	3.0	4.9	5.1	2.6	9.4	75	
Global	DOTS	769 932	722 275	94	73	7.6	3.8	1.2	6.0	3.2	4.5	81	16
	non-DOTS	670 235	461 299	69	16	22	1.1	1.7	7.7	1.7	50	37	

* see notes for table 12a. Est: estimated cases (as opposed to notified or registered)

Figure 13. Treatment success in (a) DOTS and (b) non-DOTS areas, by WHO Region, 1998 cohort. Abbreviations are as in Figure 6.



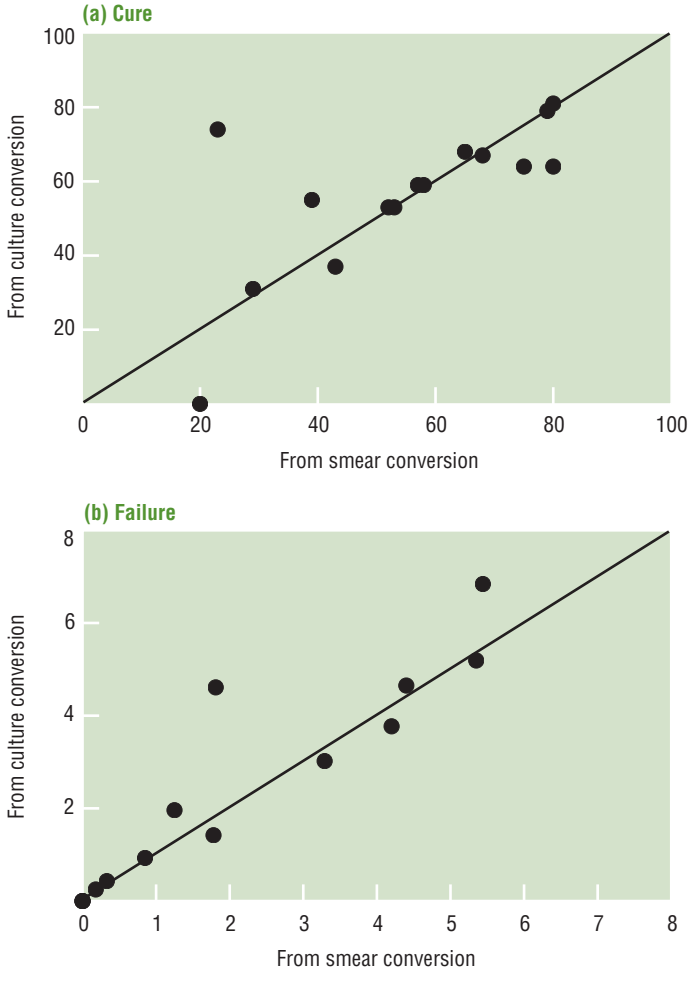
secondarily by treatment interruption (8%). Looking at evaluated patients only, 74% were successfully treated outside DOTS programmes.

By WHO region, the documented treatment success rates under DOTS varied from 70% in Africa to 95% in the Western Pacific Region (Figure 13, Table 13). Fatal outcomes were most common in Africa (6%) and Europe (6%), where cases are more frequent among HIV-infected individuals and the elderly, respectively. Treatment interruption (default) was most frequent in the African (11%) and Eastern Mediterranean Regions (10%).

Comparing treatment results for four consecutive cohorts (1995–98) shows that the overall success rates have remained approximately stable at 77–81% under DOTS, and 54–64% worldwide (Table 14).

In DOTS areas, 99 775 cases were registered for retreatment in 1998, more than twice as many as in the previous year. The reason for the difference is that China reported data for 1998, but not for 1997. The latest data show that 78% of patients on retreatment regimens were cured, and 6% completed. Chinese data strongly influence the high overall retreatment success rate of 84% (Table 15, Annex 2). Cohort data from Pakistan were incomplete, leaving in doubt the reported 92% cure rate.

Figure 14. Comparisons of (a) cure and (b) failure rates, judged by sputum smear versus culture conversion, in 16 European countries



Treatment outcomes measured by smear and culture conversion

Sixteen European countries provided treatment outcomes judged both by sputum smear and culture conversion. Although culture is generally a more sensitive method for detecting bacilli (so smears can be negative while cultures are positive), cure measured by smear conversion was not consistently higher than cure measured by culture conversion (Figure 14a). Nor was failure different by the two methods (Figure 14b).

Table 14. Treatment success for smear-positive cases: 23 high-burden countries, 1994–98 cohorts

Country (ranked by burden)	DOTS programmes					Whole country				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
1 India	83	79	79	82	84	83	25	21	18	27
2 China	94	96	96	96	97	91	93	94	95	95
3 Indonesia	94	91	81	54	58	94	*	*	*	*
4 Nigeria	65	49	32	73	73	*	*	*	*	*
5 Bangladesh	73	71	72	78	80	73	*	63	73	77
6 Pakistan	74	70	—	67	66	69	70	—	*	23
7 Philippines	80	—	82	83	84	88	60	35	78	71
8 Ethiopia	74	61	73	72	74	*	61	71	*	*
9 South Africa	—	—	69	73	74	78	58	61	68	72
10 Russian Federation	—	65	62	67	68	—	65	57	67	68
11 DR Congo	71	80	48	64	70	72	74	48	64	*
12 Viet Nam	91	91	90	85	93	*	89	89	85	92
13 Kenya	73	75	77	65	77	*	*	*	*	*
14 Brazil	—	—	—	—	91	70	17	20	27	40
15 UR Tanzania	80	73	76	77	76	*	73	*	*	*
16 Thailand	—	—	78	62	68	58	64	78	58	*
17 Mozambique	67	39	54	67	—	*	*	55	65	—
18 Myanmar	—	66	79	82	82	77	67	79	*	*
19 Uganda	—	—	33	40	62	—	44	*	*	*
20 Afghanistan	—	—	—	45	33	—	—	—	*	*
21 Zimbabwe	—	—	—	—	70	52	53	32	69	*
22 Cambodia	84	91	94	91	95	*	*	*	*	*
23 Peru	81	83	89	90	92	*	*	*	*	*
all high burden countries	86	83	79	82	84	83	54	51	57	63
Global	**77**	**79**	**77**	**80**	**81**	**75**	**57**	**54**	**60**	**64**

* see notes for table 12a. — not available; * no additional data beyond DOTS report

Table 15. Retreatment outcomes in DOTS programmes: 23 high-burden countries, 1998 cohort*

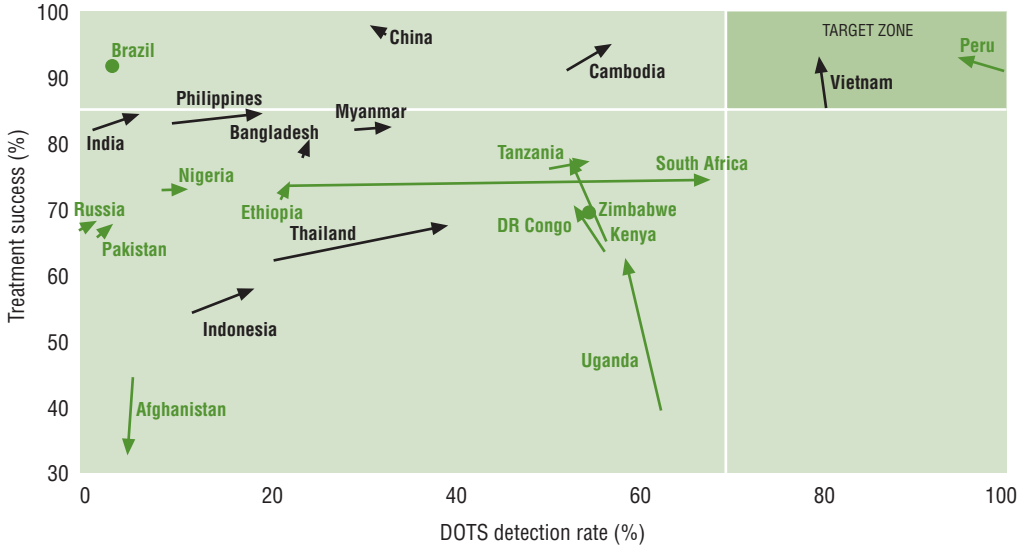
Country (ranked by burden)	Registered	Treatment outcomes (%)*							
		Cured	Completed treatment*	Died	Failed	Defaulted	Trans-ferred	Not eval'd	Treatment success (%)
1 India	5 782	59	13	6.5	5.5	14	1.7	0.1	72
2 China	49 378	95		1.7	1.7	0.8	0.2	0.3	95@
3 Indonesia	893	53	20	2.6	1.7	6	1.1	16	73
4 Nigeria									
5 Bangladesh	1 333	71	4.0	3.2	2	8.8	4.5	7	74
6 Pakistan	24	92	8.3					0.0	92@
7 Philippines	29	76	6.9	3.5	3.5	10		0.0	83
8 Ethiopia	758	46	14	8.4	2.8	7.4	3.3	18	60
9 South Africa	4 718	57	13	12	2.6	10	4.8	0.0	71
10 Russian Federation	246	38	11	17	20	7.7	4.5	1.6	49
11 DR Congo	5 820	25	6.3	8.1	3.1	8.6	11	38	31
12 Viet Nam	5 612	79	4.7	4.9	6.9	2.1	2.1	0.0	84
13 Kenya	1 541	55	9.3	6.8	0.8	10	4.2	14	64
14 Brazil									
15 UR Tanzania	1 450	66	6.3	11	1.5	7.3	5.9	2.0	73
16 Thailand	556	49	6.3	6.7	4.9	9.7	3.6	20	55
17 Mozambique									
18 Myanmar	2 052	66	10	6.2	2.7	12	3.2	0.0	76
19 Uganda	1 573	31	29	12	0.9	20	6.2	0.0	60
20 Afghanistan	40	70	7.5	7.5	7.5	5	2.5	0.0	78
21 Zimbabwe									
22 Cambodia	691	89	2.8	3.9	1.2	3.5		0.0	91@
23 Peru	5 267	83		4.2	3.7	8.5	0.8	0.0	83
all high burden countries	87 763	80	3.8	4.0	2.6	4.4	1.9	3.6	83
Global	**103 169**	**76**	**5.7**	**4.7**	**2.6**	**5.5**	**2.1**	**3.5**	**82**

* see notes for table 12a

Progress in TB control in 23 high-burden countries

Figure 15, and Tables 11 and 14, give an overview of progress towards meeting WHO targets for the countries listed in TB80 (except Mozambique which did not provide 1999 data). The immediate impression conveyed by Figure 15 is that the arrows depicting progress from 1998 to 1999 are short, with the exceptions of South Africa, Thailand and the Philippines. A more considered account of developments in these countries is given in the paragraphs that follow. These notes, which include some preliminary data for the year 2000, should be read in conjunction with the country profiles in Annex 3, and with the plans for expanding TB control in these countries.[12]

Figure 15. DOTS progress in high-burden countries, 1998–99. Treatment success refers to cohorts of patients registered in 1997 or 1998, and evaluated, respectively, by the end of 1998 or 1999. DOTS detection rate is the fraction of estimated cases notified under DOTS in 1998–99. Arrows mark progress in countries that supplied notification and cohort data for at least two years. Circles (Brazil and Zimbabwe) represent countries which have treatment outcomes are available for one year only. Countries should enter the graph at top left, and proceed rightwards to the target zone. Countries from AFR, AMR and EMR are shown in green, those from SEAR and WPR are shown in black.



1. India

India reported 41 000 additional smear-positive cases under DOTS in 1999, as compared with 1998, and an extra 66 000 smear-positive cases overall. In 1999 and 2000, population coverage increased rapidly so that by the end of the year 2000, more than 300 million people had access to DOTS. During 2000, more than 220 000 patients were treated under DOTS, including nearly 100 000 new smear positive cases, i.e. 12% of the estimated total for the country and approximately 60% of those in DOTS areas. India now has the second largest DOTS programme in the world (behind China) and is placing more than 25 000 patients on DOTS treatment every month. Coverage is expected to exceed 500 million people by the end of 2002. The programme has consistently reported treatment success around 80%. The success rate of 84% for the 1998 cohort is close to the WHO target, and would have been higher but for the 7% default rate. Although India has made much progress in the past 2–3 years, two thirds of the population still did not have access to DOTS as of late 2000.

2. China

The existing DOTS programme includes both the Infectious and Endemic Disease Control (IEDC) and Ministry of Health Projects, covering 50% and 14% of the population, respectively. More

[12] World Health Organization. *Progress Towards Global DOTS Coverage: Status of High-burden Countries*. Unpublished WHO document.

than 1 in 3 infectious TB cases are currently treated under DOTS and the reported treatment success rate has remained over 90% (though China does not separate patients known to be cured from those that merely completed treatment). The impact of this programme can be judged, in part, from the results of a national disease prevalence survey carried out during 2000. Preliminary analysis of the survey data suggests that the prevalence of smear-positive disease was 122/100 000 population, a decrease of 21% since 1990. More critically, prevalence was only 90/100 000 in the 13 provinces participating in the IEDC project. The reduction in these provinces between 1990 and 2000 was 37%, as compared with 3.2% elsewhere in China. The national death rate from TB was 9.8/100 000, a reduction of 53% since 1989. Applied to IEDC provinces, this result suggests that about 56 000 deaths were averted in the year 2000, towards the upper end of the range proposed on the basis of treatment-retreatment (capture-recapture) modelling.[13] Set against this good news is the fact that DOTS coverage has not improved since 1997; consequently, the number of cases enrolled in 1999 was about the same as in 1998. The major challenge now is to secure political commitment and financial resources to maintain and expand the DOTS programme. In this regard, there are two significant developments. First, the State Council of China held a high-level advocacy meeting with national and provincial leaders in December 2000 to push for increased commitment from all levels of government. Second, a group of international partners, including the World Bank and the Department for International Development (UK), is working to provide new funds for TB control in China.

3. Indonesia

Political commitment for TB control is strong under GERDUNAS TB—a nationwide effort to mobilize a diversity of forces against tuberculosis. The country extended DOTS to an additional 50 districts during 1999 and reported that 90% of the population now live in areas where DOTS is implemented. However, the extra 17 000 smear-positive cases reported under DOTS in 1999 brings the case detection rate up to only 19%. Case detection needs to be increased by involving all health facilities in DOTS areas. Treatment success among evaluated cases in the 1998 cohort was 92%, but the absence of reported outcomes for 38% of registered smear-positive cases leaves the overall success at just 58%. Over 40 000 cases were registered for treatment under DOTS in 1998, whereas only 32 000 were notified that year. Major efforts are said to be under way to build capacity at various levels to improve the quality of TB control services. A wide range of improvements is evidently needed because the data submitted to WHO indicate low coverage, doubtful treatment outcomes and inconsistent reporting.

4. Nigeria

DOTS population coverage did not increase between 1998 and 1999, though case detection rose from 10% to 12%. A comparison of the last two cohorts shows that treatment success did not change between 1997 and 1998 (73%). Results in 1998 would have been better, but some states recorded high rates of death (probably due to HIV) and defaulting (others have maintained high cure rates above 80%). The low level of accessibility to effective TB care is expected to improve soon because more resources are available from internal and external sources to expand DOTS coverage from 20 to all 36 states, and to the federal capital. The results, in terms of improved rates of case detection and cure, are awaited.

5. Bangladesh

In 1999, DOTS expanded in Chittagong metropolitan area, and nationwide coverage reached 90%. NGOs are responsible for 40% of DOTS coverage, including both rural and urban areas, and government is responsible for the other 60%. The two parts of the DOTS programme together detected 25% of estimated smear-positive cases. The big difference between population coverage and case detection persists because many patients continue to seek treatment from

[13] Dye C, Zhao F, Scheele S, Williams BG. Evaluating the impact of tuberculosis control: number of deaths prevented by short-course chemotherapy in China. *Int J Epidem* 2000; 29: 558–564.

non-DOTS facilities, including medical college hospitals and private practitioners. The treatment success rate of new smear-positive cases was 80% in the 1998 cohort, an increase on previous years. By contrast, treatment success outside DOTS areas was only 57%, with 28% of patients defaulting. Among cases seeking retreatment under DOTS, the percentage which were cured or completed treatment jumped from 58% in 1997 to 74% in 1998, mainly because a greater proportion of cases was evaluated. Since July 1998, the management of supplies, and recording, reporting and training have been unified following a reform of the health sector. This may have an impact on the future performance of the DOTS programme.

6. Pakistan

According to 1999 data, Pakistan still had only 8% DOTS coverage with no apparent expansion on the previous year. Case reports have fluctuated over the past three years, and so consequently has the case detection rate. Of the cases notified in 1998, only half were registered for treatment. Treatment success among cases registered has been more stable, and the 66% reported for the 1998 cohort is consistent with earlier years. The main reasons for this poor and erratic performance up to 1999 were weak leadership of the NTP, and a budget that was far too small. During 2000, Pakistan took decisive action, with the result that federal and provincial ministries now have substantially increased funds for TB control. With these extra funds they have been able to establish a team of TB experts which operates nationally and provincially, and to ensure a regular supply of anti-TB drugs. All provinces have now begun to implement DOTS and coverage was 14% at the end of 2000. Further expansion is expected to take place in 2001. Pakistan appears, finally, to have launched a credible, national TB control programme.

7. Philippines

DOTS has expanded rapidly in the Philippines, reaching 43% population coverage in 1999 compared with 17% in 1998. By the end of 1999, the WHO strategy was operational in 28 provinces. Twenty percent of all estimated smear-positive cases were notified to the DOTS programme in 1999, double the proportion in 1998. The extra 10 000 smear-positive cases reported under DOTS in 1999 were added at the expense of more than 8000 fewer cases reported from non-DOTS area. Thus, the net gain in smear-positive cases reported in 1999 was approximately 2000 cases. Treatment success in the 1998 cohort was close to the WHO target of 85%; defaulting (7%) was the main obstacle to better cure. Outside the DOTS cohort, treatment success was only 60% because a large fraction of cases was not evaluated. The burden of TB in the Philippines was accurately measured by a prevalence survey carried out in 1997; the high estimate of case detection overall (70%) is probably accurate and, with impressive outcomes of treatment, suggests that rapid progress could be made towards WHO targets.

8. Ethiopia

Only 45% of Ethiopians have access to (live within 10km of) general health services. Thus, it will be hard to provide DOTS to more than half the population if the service is confined to health facilities. Although we report here that DOTS coverage was 63% in 1999 (based on geographical Zones), a more precise analysis[14] suggests that 825 out of 2563 (32%) health facilities were using DOTS towards the end of 2000. True access appears to be closer to 32% than to 63% because less than one quarter of estimated smear-positive cases were notified to DOTS programmes in 1999. Although a growing fraction of patients is diagnosed as smear-positive, the fraction in 1999 (30%) was still lower than expected (55–70%), even allowing for a higher proportion of HIV-infected, smear-negative cases. By contrast, the proportion of patients diagnosed with extrapulmonary TB (31%) was far higher than expected. The treatment success of new smear-positive cases was 74% in the 1998 cohort, kept low by the 13% default rate (one recent study found more than a quarter of "defaulters" to be unreported deaths). To expand DOTS in a country with such

[14] Tuberculosis and Leprosy Control Programme Ethiopia. Concise Introduction and Performance in 1992 EC (July 1999–June 2000). Disease Prevention and Control Department, Ministry of Health, Ethiopia.

low access to general health services is a major challenge. Success will depend, among other things, on identifying ways to provide DOT outside health facilities, and on improving collaboration between organizations concerned with the control of TB and HIV/AIDS.

9. South Africa

DOTS coverage was extended to two thirds of the country by the end of 1999, and the proportion of smear-positive cases detected under DOTS reached 76%. The country reported 38 000 more smear-positive cases under DOTS in 1999 than in 1998, the second biggest increment after India. Although estimated incidence for 1999 (492/100 000) was higher than for 1997 (438/100 000), it may still be too low because the proportion of smear-positive cases detected nationally exceeded 100%. Treatment success has remained stable at 74%, mainly because 12% of cases were not evaluated. The number of cases registered for treatment under DOTS (reported to WHO in 1999) was twice as big as the number notified (reported in 1998), a conspicuous anomaly. The likely explanation is that half of these patients were diagnosed and began treatment in non-DOTS areas that were later re-classified as DOTS. Notwithstanding these uncertainties over case detection and treatment success, South Africa is in a position to meet WHO targets of 70% case detection and 85% treatment success within the next 1–2 years.

10. Russian Federation

By the end of 1999 DOTS coverage was still low at 5%, unchanged from 1998. Two territories implemented DOTS during 1998, Leningrad and Murmansk, but the enrolment of patients began in the third quarter of the year, so treatment results are not yet available. Approximately 2% of estimated smear-positive cases were reported from areas classified as DOTS in 1999. Outside DOTS areas, the number of smear-positive cases fell by 21 000 between 1998 and 1999, because no distinction was made in previous years between diagnoses made by culture and smear. Treatment success in the 1998 cohort was 68%, due to persistently high rates of death (8%) and defaulting (7%). During 1999 and 2000, projects began in Achangelsk, Orel, Novgorod, Karelia, Vladimir and Altaj. Negotiations with the World Bank on a loan to reinvigorate TB control nationally were advanced and the loan project should start in 2001. The loan is intended to provide a basic (DOTS-type) package of TB control measures to 55% of the civilian population and 45% of the prison population over the next 5 years. The project will address the problem of diagnosing and treating drug-resistant cases through pilot projects in selected civilian and prison populations. The Russian Ministry of Health is working closely with WHO on a revision and update of the Russian TB control strategy, to be completed by the beginning of 2002.

11. Democratic Republic of the Congo

DOTS coverage and the case detection rate have remained steady since our records began in 1995. As in 1998, coverage (62%) was reported to be about the same as the DOTS detection rate (53%). Population coverage is commonly much higher than the detection rate; little extra information was provided from DR Congo in 1999 to explain the similarity. The possibilities are that the incidence rate has been underestimated, that notification rate is exaggerated (e.g. because cases from non-DOTS areas are included), or that DOTS areas of the country suffer relatively high incidence rates. Treatment success climbed to 70%, but 9% of patients defaulted and 6% were not evaluated.

12. Viet Nam

Beginning in 1995 Viet Nam rapidly expanded the availability of DOTS, and has maintained coverage since 1996. Over 98% of the population had access to DOTS in 1999. Treatment success rates have consistently been over 85%, and reached 93% in the 1998 cohort. The estimated proportion of all incident smear-positive cases successfully treated was outstandingly high at 75%. Viet Nam has fallen two places in the league of high-burden countries, not because there is any evidence (yet) that incidence has declined, but rather because the numbers of cases have prob-

ably increased in Russia and DR Congo. In 1999, and in 1998, Vietnam was one of only two countries in TB80 to have met WHO targets of 70% case detection and 85% cure (Peru is the other).

13. Kenya

Kenya has reported 100% DOTS coverage since 1996. Although our best estimate of incidence suggests that the smear-positive detection rate is low (53%), we cannot rule out the possibility that the true incidence was lower than 157/100 000 in 1999. Treatment success has recovered to 77%, after last year's fall to 65% (due probably to aberrant reporting, rather than a lower cure rate). By solving the problem of defaulting (11%), Kenya should be able to reach 85% cure, despite high rates of HIV infection.

14. Brazil

In 1997, plans were made to start DOTS in four western states of Central West Brazil, and implementation began in 1998. In the same year the Brazilian National Health Board declared tuberculosis a priority problem. However, only 7% of the population had access to DOTS in 1999, and these areas detected 4% of smear-positive cases. Treatment success was 91% in the 1998 cohort, but only 82 patients were registered. This is far lower than the number originally notified because, during 1998, Brazil erroneously reported all patients from the Central West region as living in DOTS areas. At the national level, an improvement in the surveillance system is urgently needed so as to be able to record, for example, the number of health units using DOTS, and the number using smear microscopy for diagnosis. The most important administrative change during 1999 was the incorporation of the NTP into the Department of Basic Health Care (which includes the rapidly expanding Family Health and Community Health Workers Programmes). This is expected to facilitate access to TB diagnosis and supervised treatment. Brazil already notifies an estimated 79% of smear-positive cases in total, mostly under non-DOTS schemes. Having found the cases, there is great potential for the rapid provision of high-quality treatment and reporting under DOTS, and for meeting WHO targets by 2005 in accordance with national plans.

15. Tanzania

With regard to TB control, Tanzania closely resembles Kenya. DOTS is available country-wide, smear-positive case detection rate is stable at about 60%, and treatment success exceeds 70%. While progress in DOTS implementation remains static, the case notification rate continues to climb, though the growth rate has been slower in Tanzania (7%/year) than in Kenya (17%/year). This is consistent with the fact that HIV infection has spread more quickly in Kenya (prevalence HIV infection 14% in 15–49 year olds, 1999) than in Tanzania (prevalence 7%).

16. Thailand

Thailand continued its rapid expansion of the DOTS strategy to cover 59% of all districts by the end of 1999, up from 32% a year earlier. The 1998 cohort was the first in which treatment outcomes for a significant number of cases could be evaluated. While the success rate improved to 68% from only 62% in the previous year, these results still fall significantly short of WHO target levels. Missing outcome results for registered cases continued to be a problem, although the percentage of patients for which no results were available significantly decreased (11%, down from 19% in 1997). A higher death rate (8%) reflects the further expansion of the DOTS strategy to areas with a high HIV burden, where large numbers of fatalities among treated patients are observed. While treatment failures continue to occur only sporadically, the rise of treatment defaults to 10% is worrying. The NTP continues its intensive training and supervision efforts. Two areas getting special attention now are the quality of patient supervision, and of the reporting system. It is anticipated that outcomes will improve in existing DOTS areas after the initial phase of rapid programme expansion.

17. Mozambique

Mozambique has been added to the list of high-burden countries following revision of incidence estimates: 8% HIV prevalence among adults suggests an overall TB incidence of about 400/100 000 in 1999. In 1998, 41% of all estimated smear-positive cases were reported to WHO, DOTS coverage was estimated at 95%, and the treatment success under DOTS was 67% for the 1997 cohort. However, no further data were provided to WHO before 22 January 2001, so we can make no assessment of progress in TB control during 1999.

18. Myanmar

DOTS coverage in Myanmar increased from 64% in 1999 to 80% during 2000, and the emphasis given to training and supervision of staff has resulted in a programme of high quality. Case detection and treatment success rates show a steady increase to 33% and 82% respectively over data for 1998, with reports being received from all treatment units in the country. Of the 18% of patients not successfully treated, about half were defaulters. Continuity of funding, particularly for drugs, is vital to sustain and expand DOTS in this country.

19. Uganda

The combined TB and Leprosy programme (NTLP) achieved national coverage in 1995. Uganda officially reached 100% DOTS coverage in 1997, and has detected about 60% of estimated smear-positive cases annually since then. Treatment success for patients registered in 1998 was 62%; this significant improvement on previous years was made by increasing the proportion of cases evaluated from 65% to over 90%. However, there is a significant discrepancy between the number of cases notified in 1998 (18 222) and those registered for treatment in the 1998 cohort (13 236). This remains to be explained. Moreover, a 62% treatment success is still very low: the cohort data show that it could be increased by improving the evaluation rate still further, and by cutting the enormous default rate (19% in 1998). To these ends, the NTLP carried out, with WHO's assistance, a pilot study of community-based TB care in Kiboga district, starting in 1998. Rather than insisting that all patients be hospitalised for the intensive phase, patients were given the option of hospitalisation or ambulatory treatment (at a health centre or in the community under the observation of a volunteer). The cost per cure was reduced by 63%. Using village volunteers has improved access to treatment, lowered costs incurred by patients and providers, improved cure rates and lowered the frequency of treatment interruptions. As a result, community-based TB care has been adopted as policy by the Ministry of Health, and incorporated in the 2000–2006 Health Sector Strategic Plan.

20. Afghanistan

TB control activities have been seriously impeded by the breakdown of the government's administrative, technical and financial capacity, and by the security risk in some areas. The DOTS strategy was adopted in 1997 as national TB control policy in Afghanistan and, according to local sources, 30% of the population had access to DOTS services in 1999. WHO is assisting the MOPH with provision of DOTS to 14% of the population through 27 facilities in 6 regions. NGOs provide diagnostic and treatment services to the remainder of the population so far served. The National TB Institute provides, with the further help of NGOs, services to part of the population of Kabul only. In the absence of a coherent national TB programme, WHO supports the country by providing anti-TB drugs, training and guidelines, and assists with surveillance. During 1999, 5% of estimated smear-positive cases were reported to WHO-supported DOTS areas. The treatment success rate was only 33%, because 57% of registered cases were not evaluated. Anti-TB drugs are available in the private sector, even without prescription, threatening the development of drug resistance. At present there is no mechanism or forum for coordinating programme activities, or for planning at the national level. It is qualitatively clear that present control efforts are addressing just a small fraction of the country's TB burden, and this conclusion is reinforced by the few statistics that we have from Afghanistan.

21. Zimbabwe

Zimbabwe reported that DOTS was implemented in just 5 districts in 1998, and that plans existed to reach all districts by 2002. Implausibly, the reported DOTS coverage dropped to 12% in 1999 (from 100% in 1998) whilst 55% of all estimated smear-positives were notified under DOTS. As of 22 January 2001, no information had been provided to WHO to account for these inconsistencies. Treatment success was 70% in the 1998 cohort; this is low because of the high rates of death (10%, probably linked to HIV) and treatment interruption (8%). Zimbabwe's performance is thus mixed: capricious reporting to WHO casts doubt on the reportedly high rates of case detection under DOTS.

22. Cambodia

Reported DOTS population coverage rose from 88% in 1997 to 100% in 1998 and 1999. Fifty-seven percent of all smear-positive cases were notified under DOTS, a small increase on 1998. The measured treatment success was very high (95%). The prevalence of HIV infection is the highest in the Region (4% among 15–49 age group population, or 200 000 cases in 1999), and 20% of TB patients are expected to be HIV positive in year 2000. With some extra effort devoted to case finding (and perhaps to refining the present estimate of incidence), Cambodia should be able reach the WHO target of 70% case detection by 2005.

23. Peru

In 1999, Peru occupied the last place in TB80. If calculated trends in incidence have been obeyed, it fell to 26th place during 2000, and has been eliminated from the league of high-burden countries. Ten years of intensive control effort have been accompanied by an estimated 50% reduction in incidence. A recent analysis found that at least 3.6% of the 7.5% annual decline in the incidence rate of pulmonary TB can be attributed to the improved programme of short-course chemotherapy launched in 1990.[15] This elevated rate of decline implies that at least 16% of cases (78 000) and 70% of deaths (77 000) were averted between 1991 and 1999. As the case load falls, the distribution of TB is becoming more heterogeneous. Pockets of relatively high incidence requiring special attention exist in urban areas, especially Lima Callao. Going beyond DOTS, the NTP is now investigating, for example, the benefits of contact tracing, and of different approaches to the management of drug resistance, including studies of standardized and individualized regimens for MDR-TB.

Progress in TB control in all DOTS countries

116 DOTS countries provided data on treatment success and case detection (Figure 16); in 43 (37%), DOTS detection and treatment success rates exceeded 50% and 70%, respectively (Figure 17). These countries appear to have reached or are close to reaching WHO targets, but together accounted for only 12% of all estimated TB cases in 1999. Besides Viet Nam and Peru, the countries that appear to have met WHO targets are Cuba, the Maldives, Jamaica, Oman and Tunisia.

Of 82 countries that provided data from two consecutive cohorts, 52 (63%) showed higher treatment success rates during 1997–98; 32 (39%) improved DOTS detection by more than 1% while maintaining treatment success above 70%. Annex 7 tabulates case detection and treatment success rates by country for 1995 to 1998.

Several countries with high case detection and cure rates (that appear in Figure 17) have reported declining case notification rates in recent years. Examples of the annual rates of reduction (excluding industrialized countries) are: Cuba 8%, Lebanon 7%, the Maldives 13%, Nicaragua 4%, Oman 13%, and Uruguay 3%. Surprisingly, some other countries with high rates of case detection, including Morocco, have not reported significant reductions in incidence.

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[15] Suarez P, Watt CJ, Alarcon E, Portocarrero J, Zavala D, Canales R, Luelmo F, Espinal MA & Dye C. *The dynamics of tuberculosis in response to 10 years of intensive control effort in Peru*. Submitted for publication.

Figure 16. DOTS status in 1999. Estimated DOTS detection rate in 1999 and treatment success for the 1998 cohort in 116 countries reporting to WHO. The remaining DOTS countries have adopted the strategy too recently to provide data on treatment outcomes.

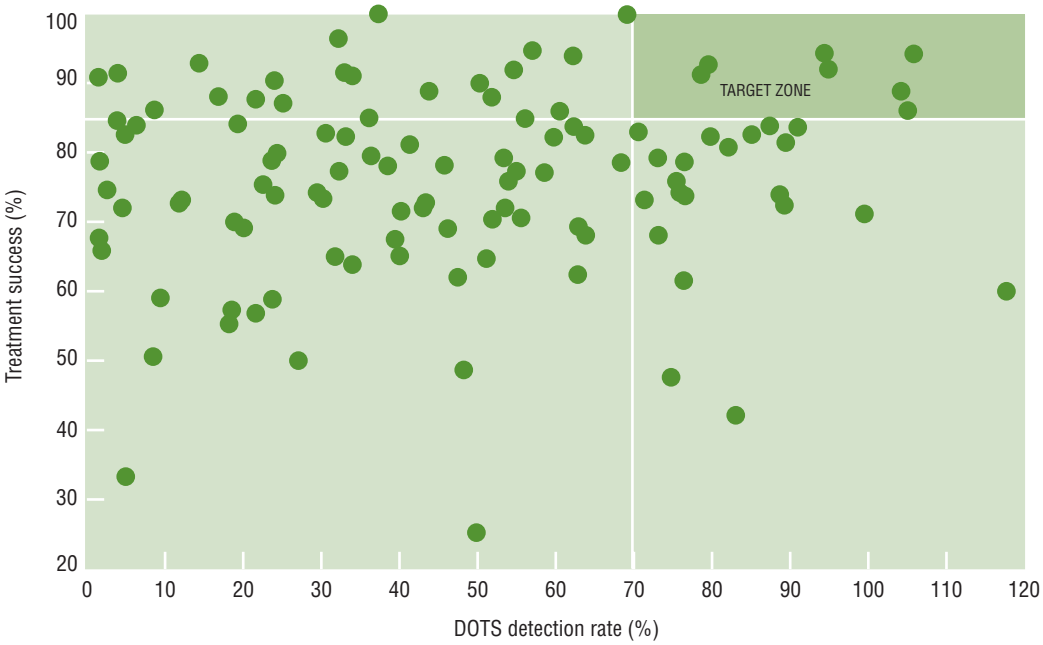
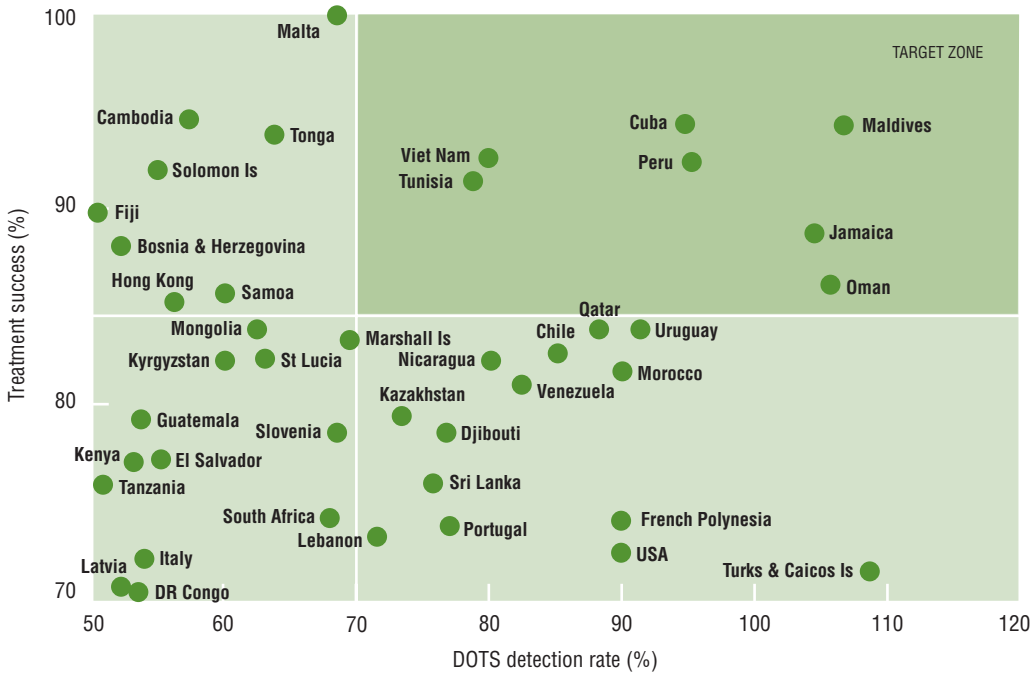


Figure 17. Magnified view of Figure 16, showing 43 countries that reported treatment success rates over 70% and estimated DOTS detection rates over 50%



Discussion

Estimated TB incidence, 1995–2005

There are at least three reasons to be cautious when using the incidence estimates and case detection rates presented in this report. First, it is crucial to remember that these estimates are subject to significant error. For high-burden countries, the difference between lower and upper estimates of incidence is typically twofold.[16] Second, the league table (TB80) based on numbers of cases is just one among several that could be constructed. For example, a ranking of incidence rates per capita might be of greater value in highlighting the impact of HIV/AIDS on TB in Africa. Third, the incidence estimates for many countries have been revised according to trends in notifications, assuming that the case detection rate has not changed. That these countries have made no progress in proportion of all TB cases detected is a premise of the analysis, not a result.

Mindful of these caveats, we estimate that there were 8.42 million new cases in 1999, of which 3.67 million were smear-positive. This is a larger total than previously forecast by mathematical modelling.[17] The revision made two important changes to TB80, the league of highest-burden countries: four African countries were ranked higher than before (Nigeria, Ethiopia, DR Congo and Kenya), and Mozambique joined TB80 ranked 17th (up 9 places). Peru fell to 23rd and last place in 1999, and was eliminated from TB80 in 2000.

From trends in notifications, we have re-estimated incidence rates from 1995–99, and projected forward to 2005. These calculations suggest that the annual rate of increase in TB incidence is 3% globally, 7% in Eastern Europe, and over 10% in the African countries that are most affected by HIV/AIDS. If these trends continue, Africa will have more cases (3.4 million) than any other WHO region by 2005. Only in industrialized countries is the number of cases expected to fall between now and 2005 (at 2–3%/year), though the rate per capita should fall slowly (< 2%/year) in the American, Eastern Mediterranean, South East Asia and Western Pacific Regions.

The projection for Africa, and probably for the world as a whole (10.2 million cases in 2005), should be viewed as the worst scenario. These forecasts assume that the present rate of increase will persist until 2005. There are two reasons to hope that this will not happen. First, HIV prevalence is falling in Uganda and, perhaps, no longer increasing exponentially in other countries such as Zambia and South Africa.[18,19] Even without any control measures, the HIV epidemic is expected to peak and decline, though the size of the peak and the timing of the decline are still matters of conjecture. Second, we can expect improvements in TB control as a result of the wider implementation of DOTS.

Global and regional progress in TB control

Between 1998 and 1999, growth in the number countries using DOTS, and in DOTS population coverage was slow. More critical indicators of progress are the numbers of smear-positive cases enrolled in, and successfully treated by, DOTS programmes. This report shows, yet again, that DOTS programmes can achieve consistently high treatment success rates (77–81% in the five

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[16] WHO/IUATLD/KNCV. *Revised international definitions in tuberculosis control (2000)*. Unpublished document available from WHO Geneva.

[17] Dye C, Garnett GP, Sleeman K, Williams BG. Prospects for worldwide tuberculosis control under the WHO DOTS strategy. *Lancet* 1998; 352: 1886–1891.

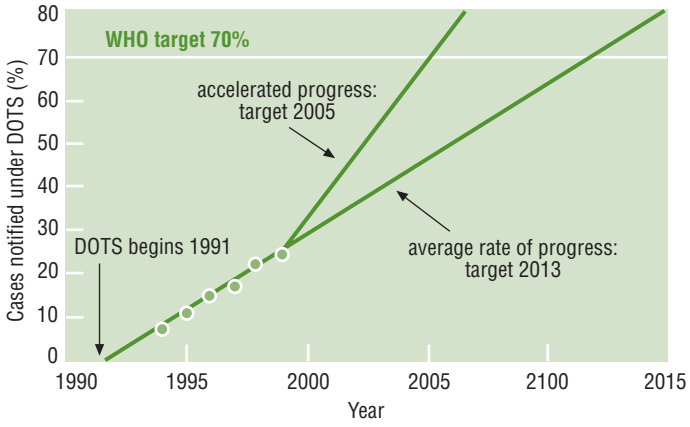
[18] UNAIDS. *Report on the Global HIV/AIDS Epidemic*, June 2000. Geneva: UNAIDS.

[19] Williams BG, Gouws E. *The epidemiology of HIV in South Africa*. Submitted for publication.

cohorts, 1994–98). Thus, the central challenge is to enrol a much larger proportion of TB patients in programmes that guarantee high-quality treatment.

The revised estimates of TB incidence 1995–99 can be used, together with case notifications under DOTS, to judge progress towards the global target of 70% case detection. During 1999, the rate of progress was about the same as in previous years: DOTS programmes continue to add approximately 120 000 new smear-positive cases each year, at which rate 70% case detection will be reached in 2013 (Figure 18). To reach the 70% target by 2005, DOTS programmes around the world must recruit at least 300 000 additional smear-positive cases each year. The number to be enrolled will obviously be greater if incidence (the denominator) continues to increase. Assuming present incidence estimates are roughly correct, new cases recruited under DOTS must include many that are not yet notified, because the overall case detection rate was only 40% in 1999.

Figure 18. Progress towards the 70% case detection target. Points mark the number of smear-positive cases notified under DOTS 1994–1999, expressed as a percentage of all estimated cases for each year. The solid line through these points indicates the current average annual increment of about 120 000 new cases, which intersects the target in year 2013; the steeper line represents a higher annual increment of approximately 300 000 cases, and reaches the 70% target by 2005.



WHO has advocated, as part of the DOTS strategy, sputum smear microscopy for diagnosis and for demonstrating cure. However many countries, notably in Europe, also use bacteriological culture. Against simple expectation, data from 14 European countries presented in this report did not show that cure rates measured by smear conversion were consistently higher than measured by culture conversion. The expected difference between the two methods might be masked if cases diagnosed as culture-positive but smear-negative have lighter bacterial loads and are easier to cure. Consistent with this is the observation that, in this set of data, the ratio % culture conversion / % smear conversion tends to be higher when the fraction smear-positive/culture-positive at diagnosis is lower. But this proposition needs to be explored further by examining the treatment outcomes for individual patients who were diagnosed as smear-positive or culture-positive.

Progress in TB control in 23 high-burden countries

Based on 1999 estimates of case detection, and treatment outcomes for the 1998 cohort, we have reclassified progress in the countries listed in TB80 (Table 16). All 23 countries have either improved (5) or maintained their positions (18). The top performing countries (treatment success ≥70%, DOTS detection rate ≥50%) included four from Africa, two from Asia, and one from Latin America.

Viet Nam and Peru are still the only high-burden countries to have exceeded WHO targets. Peru was on the point of relegation from TB80 in 1999 and, in our estimation, departed during 2000. This is reward, in part, for 10 years of intensive TB control, which has ensured consistently high rates of case detection and cure.

South Africa is one of four countries lying close to the target zone (Figure 15): significant progress was made in 1999, and the NTP as a whole (DOTS plus non-DOTS areas) apparently detected a high proportion of all new smear-posi-

Table 16. Progress in DOTS implementation: 23 high-burden countries, 1998–99

	DOTS			
		High treatment success (> 70%)		
Non-DOTS or incomplete data	Low treatment success (< 70%)	Low case detection* (< 10%)	Intermediate case detection (10-49%)	High case detection (≥ 50%)
Mozambique	Afghanistan	**Brazil**	Bangladesh	Cambodia
	Indonesia	India	China	**DR Congo**
	Pakistan		Ethiopia	**Kenya**
	Russian Federation		Myanmar	Peru
	Thailand		Nigeria	**South Africa**
	Uganda		Philippines	UR Tanzania
	Zimbabwe			Viet Nam

* DOTS detection rate: patients found and treated through DOTS programmes
Underline bold: countries which moved one or more categories up since 1998

tive cases. Cambodia, Kenya and Tanzania are near neighbours in Figure 15, but little progress was made in these countries during 1999.

Countries in the second group in Table 16 have high treatment success rates (> 70%) with intermediate rates of case detection (DDR 10–49%). The Philippines was the most progressive member of this group during 1999, doubling the number of smear-positive cases reported under DOTS. With a smear-positive case detection rate of 70% overall, and a treatment success under DOTS of 84%, the Philippines should be able to reach WHO targets well before 2005. Reports of a relatively large reduction in prevalence in the IEDC provinces of China, if confirmed, will surely provide a compelling argument for extending DOTS nationwide.

During 1999, India enrolled more than 40 000 additional smear-positive cases under DOTS, a bigger increment than any other country. The enormity of the TB control problem means that India remains in group three in Table 16, with high treatment success but low case detection nationally. During 2000, the DOTS detection rate in India is expected to climb above 10%. To reach 70% case detection, the programme will ultimately have to diagnose and report cases that are not yet notified: although India counted more smear-positives cases from both DOTS and non-DOTS areas during 1999, the combined total was still only 42% of all estimated cases.

India is accompanied in the third group by Brazil, which reported treatment outcomes for the first time. Although the number of cases detected and registered for treatment under DOTS accounts for a small fraction of all incident cases in Brazil, 79% of smear-positive cases were reported nationwide. For this reason Brazil, like the Philippines and South Africa, has the potential to advance rapidly towards WHO targets, and to provide the evidence from cohort data that it has done so.

According to the 1998 cohort data, seven of the high-burden countries had low treatment success rates (< 70%), and fall into the fourth group in Table 16. Thailand, Uganda and Zimbabwe cured 60–70% of patients. Russia has a comprehensive system of case finding, but diagnosis by smear-microscopy is not always accurate, and cure rates are routinely low. The fifth group in Table 16 is occupied by Mozambique, the only high-burden country not to have provided data for this report. Mozambique reported as a DOTS country with 95% coverage in 1998, and it remains unclear why no data were provided for 1999.

Following the success in Peru (diminished incidence), and now apparently in China (diminished prevalence), we should anticipate significant reductions (locally, at least) in TB burden in several other countries before 2005. A major challenge for TB control programmes now is to demonstrate, first, that incidence and prevalence are in decline and, second, that these declines can be attributed to specific control measures. The falling case notification rates in Cuba, Lebanon, the Maldives, Nicaragua, Oman and Uruguay probably do represent real reductions in TB incidence. Detailed epidemiological investigations in these countries may succeed in linking reduced incidence to the reportedly high case detection and cure rates. It will be equally important to explain why incidence is declining very slowly in countries like Morocco, which also find and cure a high proportion of patients. Whatever the results of such investigations, the fact that questions about TB in these countries emerge so clearly is testimony to the value of high-quality surveillance data.

ANNEX 1

Forms for data collection

Standard and European forms

WHO TB data collection form

for notifications in 1999, and treatment outcomes of cases registered in 1998

1. Identification

Country:

Date of report:

National TB control programme manager (or person filling out this form):

A Name:

B Title:

C Address:

D Telephone:

E Fax:

F Email:

Remarks (any supplemental information you wish to provide about the data in the pages to follow):

This report should cover national data over a one year period: policy, practice and reporting for 1999, and treatment outcomes for cases registered in 1998. If any data you provide are based on less than one year, or less than national scope, please note this in "Remarks". Also, please note if you use a reporting calendar different from January 1 - December 31.

WHO TB data collection form

for notifications in 1999, and treatment outcomes of cases registered in 1998

2. Policies/strategic components of TB control implemented in 1999 (check the appropriate box for each question)

A Sputum microscopy routinely used to diagnose suspected pulmonary cases?

- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

B Standardized short-course chemotherapy (less than 9 months) used to treat all sputum smear positive cases?

- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

C Direct observation of treatment used routinely -- at least during the initial phase (2-3 months) of treatment?

- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

D Monitoring of treatment outcomes by cohort?

- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

E A system of TB drug forecasting, financing and procurement?

- ☐ no
- ☐ yes
- ☐ don't know
- ☐ not applicable (decentralized)

STANDARDIZED SHORT COURSE CHEMOTHERAPY: standard regimens of 6-8 months, for at least all confirmed smear positive cases. (Consult WHO publications for more information).

TREATMENT DIRECTLY OBSERVED: a supervisor observes the patient swallowing the tablets. The supervisor may be a health worker or a trained and supervised community member. Observation includes at least the intensive phase for all new sputum positive cases.

COHORT ANALYSIS: analysis on a group of cases selected by time of registration (falling within a given time period of registration), not time of outcome.

WHO TB data collection form

for notifications in 1999, and treatment outcomes of cases registered in 1998

3. Coverage of strategies and completeness of reporting in 1999 (all fields require absolute numbers except where indicated as %)

If you answered "yes, everywhere" or "yes" to all questions 2.A-2.E, you should complete only the 'WHO strategy' column on this page and the following pages.
If you answered "no" to any questions 2.A-2.E, you probably should complete only the 'Other strategies' column.
With any other combination of responses to questions 2.A-2.E, you would be expected to complete both 'WHO strategy' and 'Other strategies' columns.

'WHO STRATEGY' = the strategy for TB control recommended by WHO, comprising: 1) Government commitment to sustained TB control activities; 2) Case detection by sputum smear microscopy among symptomatic patients self-reporting to health services; 3) Standard short-course chemotherapy using regimens of six to eight months, for at least all confirmed smear positive cases, with directly observed therapy (DOT) for at least the initial two months; 4) A regular, uninterrupted supply of all essential anti-TB drugs; 5) A standardised recording and reporting system that allows assessment of treatment results for each patient and of the TB control programme performance overall.

		WHO strategy	Other Strategies
A	How many administrative/operational units were there in 1999? Include in 'WHO strategy' new units following WHO strategy during at least one reporting period of 1999.		
B	What percentage of the country's population was living in geographic areas served by 'WHO strategy' units?	%	
C	How many times were these administrative/operational units supposed to report to the next (supervisory) level in 1999?		
D	How many units did NOT report to the next (supervisory) level at all in 1999?		
E	What percentage of the country's population is covered by units that did NOT report at all in 1999?	%	%

ADMINISTRATIVE/OPERATIONAL UNIT = a treatment/diagnostic centre where a TB register is kept, or an administrative area in which the treatment of all TB patients is monitored by a designated health official.

TO REPORT = to send, on a regular basis, a standard form showing aggregated data on cases registered (even if zero), treatment outcomes, and other programmatic information. If you receive only individual case reports on an ad hoc basis, then the answer to question 3.C is "0", and questions 3.D-3.E do not apply.

WHO TB data collection form

for notifications in 1999, and treatment outcomes of cases registered in 1998

4. Notifications for 1999 (absolute numbers)

	WHO strategy	Other strategies
New cases		
A - new pulmonary, smear-positive		
B - new pulmonary, smear-negative		
C - new pulmonary, smear not done / unknown		
D - new extra-pulmonary		
Relapses		
E - relapse pulmonary, smear-positive		
Total notifications		
Re-treatment not included in notifications to WHO		
F - pulmonary smear-positive re-treatment after failure		
G - other re-treatment cases (not included in 4.E-4.F)		

TOTAL NOTIFICATIONS: sum of 4.A-4.E. If you wish to include additional cases under notifications to WHO, you may note these in 'Remarks'.

CASE = active TB disease diagnosed by laboratory tests (two sputum smears or culture positive) or by a physician on the basis of laboratory, clinical-radiological and other evidence with decision to treat with anti-TB drugs.

NEW = a case in a patient who has never had treatment for TB, or has taken anti-tuberculous drugs for less than four weeks.

PULMONARY = TB involving lung tissue/parenchyma (ICD10 A15.0-A15.3, A16.0-A16.2, A19 [miliary]).

SMEAR POSITIVE = TB in a patient with (1) at least two initial sputum smear examinations (direct smear microscopy) positive for Acid-Fast Bacilli (AFB), or (2) one sputum examination positive for AFB and radiographic abnormalities consistent with active pulmonary tuberculosis as determined by the treating physician, or (3) one sputum smear positive for AFB and at least one sputum culture positive for M. tuberculosis.

SMEAR NEGATIVE = TB in a patient with symptoms suggestive of tuberculosis having all of the following: (1) Sputum specimens negative for AFB; (2) Radiographic abnormalities consistent with pulmonary tuberculosis and a lack of clinical response to one week of brad-spectrum antibiotic; (3) Decision by a physician to treat with a full curative course of anti-tuberculous chemotherapy. Additionally sputum culture (if available) may be positive for M. tuberculosis.

SMEAR NOT DONE = (same as in definition of smear negative, but with no sputum smear(s) obtained/examined.)

EXTRA-PULMONARY: TB involving organs other than the lungs. Diagnosis should be based on positive culture, or histological or strong clinical evidence consistent with active extra-pulmonary tuberculosis, plus a decision by a physician to treat with a full course of anti-tuberculous therapy. NOTE: Any patient diagnosed with both pulmonary and extra-pulmonary tuberculosis should be classified as pulmonary.

RELAPSE = TB in a patient who was previously declared cured of any form of TB by a physician, and has become smear- or culture-positive. ("Declared cured" equivalent to treatment success.) SMEAR-POSITIVE RELAPSE = relapse on the basis of a positive smear result specifically.

SMEAR-POSITIVE RE-TREATMENT AFTER FAILURE = TB in a patient who remained (or became) smear-positive by the time when his previous treatment regimen was terminated.

OTHER RE-TREATMENT = e.g., re-treatment after default, culture-positive smear-negative retreatment after failure.

5. Notifications for 1999, continued.

Age and sex of new pulmonary smear-positive cases (absolute numbers).

		0-14	15-24	25-34	35-44	45-54	55-64	65+
WHO strategy	Male							
	Female							
Other Strategies	Male							
	Female							

If these numbers are based on less than a year's worth of data, please note this in 'Remarks'.

WHO TB data collection form

for notifications in 1999, and treatment outcomes of cases registered in 1998

6. Treatment outcomes for NEW smear-positive cases registered in 1998 (absolute numbers)

		WHO strategy	Other strategies
A	Registered		
B	- Cured		
C	- Completed		
D	- Died		
E	- Failed		
F	- Defaulted		
G	- Transferred		

7. RE-treatment outcomes for all cases re-registered in 1998

		Who strategy
A	Registered	
B	- Cured	
C	- Completed	
D	- Died	
E	- Failed	
F	- Defaulted	
G	- Transferred	

If these numbers are based on less than a year's worth of data, please note this in 'Remarks'.

REGISTERED (NEW) = The number of new smear-positive cases ultimately registered to receive treatment during the year, regardless of the regimen on which they were ultimately placed. This number should be very close to the the number of new smear-positive cases notified the year before. Valid exclusions include only change in diagnosis (not TB disease) or change in classification (not smear positive). Do NOT exclude cases placed on long-course treatment regimens for whatever reason (even though some of these may not yet have a treatment outcome).

REGISTERED (RETREATMENT) = The number of ALL types of retreatment cases ultimately registered to receive re-treatment during the year.

CURED = smear negative at, or one month prior to, the completion of treatment and on at least one previous occasion.

COMPLETED = treatment completed but without proof of cure.

DIED = died of any cause during the course of treatment.

FAILED = smear positive at five months of later during treatment.

DEFAULTED = continous treatment interruption of two months or more.

TRANSFERRED = transferred to another reporting unit AND treatment outcome unknown.

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for tuberculosis notifications in 1999, and treatment outcomes of cases registered in 1998

1. Identification

Country:

Date of report:

National TB control programme manager (or person in charge of surveillance):

A Name:

B Title:

C Address:

D Telephone:

E Fax:

F Email:

Remarks (any supplemental information you wish to provide about the data in the pages to follow):

This report should cover national data over a one year period: policy, practice and reporting for 1999, and treatment outcomes for cases registered in 1998. If any data you provide are based on less than one year, or less than national scope, please note this in "Remarks". Also, please note if you use a reporting calendar that is different from the Gregorian calendar (January 1 - December 31).

EuroTB

WHO/EuroTB data collection form

for tuberculosis notifications in 1999, and treatment outcomes of cases registered in 1998

2.1. Policies/strategic components of TB control implemented in 1999 (check the appropriate box for each question)

A Sputum microscopy routinely used to diagnose suspected pulmonary cases?
- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

B Culture examination routinely used to confirm the diagnosis of TB?
- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

C Standardized short-course chemotherapy (less than 9 months) used to treat all sputum smear- and culture-positive cases?
- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

D Direct observation of treatment used routinely -- at least during the initial phase (2-3 months) of treatment?
- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

E Monitoring of treatment outcomes by cohort?
- ☐ no
- ☐ yes, everywhere
- ☐ yes, in SOME units/areas
- ☐ don't know

F A system of TB drug forecasting, financing and procurement?
- ☐ no
- ☐ yes
- ☐ don't know
- ☐ not applicable (decentralized)

STANDARDIZED SHORT COURSE CHEMOTHERAPY: standard regimens of 6-8 months, for at least all confirmed sputum smear- and culture-positive cases. (Consult WHO publications for more information).

TREATMENT DIRECTLY OBSERVED: a supervisor observes the patient swallowing the tablets. The supervisor may be a health worker or a trained and supervised community member. Observation includes at least the intensive phase for all new sputum positive cases.

COHORT ANALYSIS: analysis on a group of cases selected by time of registration (falling within a given time period of registration), not time of outcome.

2.2. Definitions used in the reporting system in 1999 (check the appropriate box for each question)

A Which of the following are considered as definite TB cases?

- ☐ cases with positive culture for M. tuberculosis complex
- ☐ cases with a positive sputum for acid fast bacilli

B How do you define "geographic origin" in classifying TB cases?

- ☐ by birthplace (native- vs foreign-born)
- ☐ by citizenship/nationality (national vs foreign-born)

C How do you define "pulmonary" in classifying TB cases?

- ☐ lung parenchyma and tracheobronchial tree
- ☐ lung parenchyma and tracheobronchial tree PLUS pleura and intrathoracic lymph nodes

D Who is expected to report TB cases to the health authority in your country?

- ☐ physicians only
- ☐ laboratories only
- ☐ both physicians and laboratories

E Which population sub-groups are included in your TB reporting system?

Foreigners:			
- legal residents:	☐ no	☐ yes	☐ don't know
- asylum seekers:	☐ no	☐ yes	☐ don't know
- illegal immigrants:	☐ no	☐ yes	☐ don't know
Prisoners:	☐ no	☐ yes	☐ don't know
Military personnel:	☐ no	☐ yes	☐ don't know
Homeless people:	☐ no	☐ yes	☐ don't know
People with AIDS or HIV infection:	☐ no	☐ yes	☐ don't know
Institutionalised people:	☐ no	☐ yes	☐ don't know

F Will you supply individualized data to EuroTB later this year? ☐ no ☐ yes ☐ don't know

EuroTB

WHO/EuroTB data collection form

for tuberculosis notifications in 1999, and treatment outcomes of cases registered in 1998

3. Coverage of strategies and completeness of reporting in 1999 (all fields require absolute numbers except where indicated as %)

If you answered "yes, everywhere" to questions 2.1A, 2.1C-E, and "yes" to question 2.1F, you should complete only the 'WHO Strategy' column on this page and the following pages.
If you answered "no" to any of these same questions, then you probably should complete only the 'Other Strategies' column.
With any other combination of responses to questions 2.1A, 2.1C-F, you would be expected to complete both 'WHO Strategy' and 'Other Strategies' columns.

'WHO STRATEGY' = the strategy for TB control recommended by WHO, comprising: 1) Government commitment to sustained TB control activities; 2) Case detection by sputum smear microscopy among symptomatic patients self-reporting to health services; 3) Standard short-course chemotherapy using regimens of six to eight months, for at least all confirmed sputum smear- and culture-positive cases, with directly observed therapy (DOT) for at least the initial two months; 4) A regular, uninterrupted supply of all essential anti-TB drugs; 5) A standardised recording and reporting system that allows assessment of treatment results for each patient and of the TB control programme performance overall.

		WHO Strategy	Other Strategies
A	How many administrative/operational units were there in 1999? (Include in 'WHO Strategy' any new units following WHO strategy during at least one reporting period of 1999.)		
B	What percentage of the country's population was living in geographic areas served by 'WHO Strategy' units?	%	
C	How many times were these administrative/operational units supposed to report to the next (supervisory) level in 1999?		
D	How many units did NOT report to the next (supervisory) level at all in 1999?		
E	What percentage of the country's population is covered by units that did NOT report at all in 1999?	%	%

ADMINISTRATIVE/OPERATIONAL UNIT = a treatment/diagnostic centre where a TB register is kept, or an administrative area in which the treatment of all TB patients is monitored by a designated health official.

TO REPORT = to send, on a regular basis, a standard form showing aggregated data on cases registered (even if zero), treatment outcomes, and other programmatic information. If you receive only individual case reports on an ad hoc basis, then the answer to question 3.C is "0", and questions 3.D-3.E do not apply.

EuroTB

WHO/EuroTB data collection form

for tuberculosis notifications in 1999, and treatment outcomes of cases registered in 1998

4.1 Total TB cases in 1999:

4.2. Total cases in 1999 by age, sex, and other characterisitics:

		0-4	5-14	15-24	25-34	35-44	45-54	55-64	>64	Unknown	
A											
ALL CASES	Male										
	Female										
B											
National	Male										
	Female										
Foreign	Male										
	Female										
Unknown Geo. origin											
C											
Culture +	Male										
	Female										

TOTAL CASES: cases for which a diagnosis of TB was made and treatment was started in 1999 (or would have been started, e.g., for cases diagnosed after death).

EuroTB

WHO/EuroTB data collection form

for tuberculosis notifications in 1999, and treatment outcomes of cases registered in 1998

4.3. Total cases of TB in 1999 by strategy, culture results, and other characteristics:

(Bold lines represent cases counted as notifications to WHO.)

				WHO Strategy		Other Strategies	
				Culture+	Culture-/?/not done	Culture+	Culture-/?/not done
New	Pulmonary	A	- smear-positive				
		B	- smear-negative				
		C	- smear not done				
	Extra-Pulm.	D					
	Total New						
Recurrent	Pulmonary Smear Positive	E	- relapse				
		F	- retreatment after failure				
		G	- other retreatment cases				
	Pulmonary Smear negative, unknown, or not done	H	- relapse				
		I	- retreatment after failure				
		J	- other retreatment cases				
	Extra-Pulm.	K					
	Total Recurrent						

4.4. New Pulmonary Smear-positive cases in 1999, by age and sex:

		0-4	5-14	15-24	25-34	35-44	45-54	55-64	>64	Unknown	
WHO Strategy											
new pulmonary smear positive	Male										
	Female										
OTHER											
new pulmonary smear positive	Male										
	Female										

5.1. Treatment outcomes for all new pulmonary SMEAR-POSITIVE cases registered in 1998 (absolute numbers)

		WHO Strategy new smear-positive	Other Strategies new smear-positive
A	Registered		
B	- Cured (S-)		
C	- Completed		
D	- Died		
E	- Failed (S+)		
F	- Defaulted		
G	- Transferred		

5.2. Treatment outcomes for all new pulmonary CULTURE-POSITIVE cases registered in 1998

		WHO Strategy new culture-positive	Other Strategies new culture-positive
A	Registered		
B	- Cured (C-)		
C	- Completed		
D	- Died		
E	- Failed (C+)		
F	- Defaulted		
G	- Transferred		

EuroTB

WHO/EuroTB data collection form

for tuberculosis notifications in 1999, and treatment outcomes of cases registered in 1998

6.1. RE-treatment outcomes for all pulmonary SMEAR-POSITIVE re-treatment cases registered in 1998

		WHO Strategy re-treatment, smear-positive
A	Registered	
B	- Cured (S-)	
C	- Completed	
E	- Died	
D	- Failed (S+)	
F	- Defaulted	
G	- Transferred	

6.2. RE-treatment outcomes for all pulmonary CULTURE-POSITIVE re-treatment cases registered in 1998

		WHO Strategy re-treatment, culture-positive
A	Registered	
B	- Cured (C-)	
C	- Completed	
E	- Died	
D	- Failed (C+)	
F	- Defaulted	
G	- Transferred	

ANNEX 2

Global profile

Explanatory notes

GLOBAL PROFILE

The global profile consists of the following:

- Case finding (for the latest year)—an overview of notifications, estimated cases, and detection (notification/detection).
- Treatment outcomes (for the previous year's cohort)—both treatment and retreatment outcomes from DOTS programmes, and treatment outcomes (where available) from other (non-DOTS) programmes. See Table 4 for defintions of treatment outcomes.
- WHO TB control categories (current year)—The number of countries reporting to WHO by region, the number of countries in each WHO category (see Table 1), and the percentage of the regional population in each category.

Global profile: case notification and detection rates, 1999

		Population		All cases			New smear-positive cases (ss+)				
				Notified			Notified			Estimated	
		Number	%	Number	rate	%	Number	rate	% pulm cases ss+	Number	% of est detected
Region*		a	a/sum(a)	b	b/a	b/sum(b)	c	c/a	d	e	c/e
	DOTS	**338 336 587**	**55**	**571 158**	**169**	**89**	**278 725**	**82**	**63**		
	non-DOTS	204 626 322	33	73 814	36	11	42 535	21	77		
	No Report	73 478 207	12								
AFR		616 441 115	100	644 972	105	100	321 260	52		863 782	37
	DOTS	**512 667 929**	**63**	**117 240**	**23**	**50**	**68 241**	**13**	**73**		
	non-DOTS	272 073 898	33	116 583	43	50	65 122	24	65		
	No Report	32 626 249	4								
AMR		817 368 076	100	233 823	29	100	133 363	16		178 822	75
	DOTS	**242 800 853**	**50**	**88 881**	**37**	**57**	**43 906**	**18**	**74**		
	non-DOTS	220 682 599	45	67 756	31	43	23 229	11	41		
	No Report	22 859 662	5								
EMR		486 343 114	100	156 637	32	100	67 135	14		277 397	24
	DOTS	**125 427 935**	**14**	**65 361**	**52**	**18**	**18 596**	**15**	**38**		
	non-DOTS	746 416 977	86	297 171	40	82	67 675	9	29		
	No Report										
EUR		871 844 912	100	362 532	42	100	86 271	10		213 017	41
	DOTS	**541 096 741**	**36**	**338 224**	**63**	**23**	**176 793**	**33**	**61**		
	non-DOTS	967 145 386	64	1 131 448	117	77	308 997	32	29		
	No Report										
SEAR		1 508 242 126	100	1 469 672	97	100	485 790	32		1 348 194	36
	DOTS	**948 989 927**	**57**	**498 222**	**53**	**61**	**282 113**	**30**	**62**		
	non-DOTS	719 202 389	43	323 955	45	39	109 851	15	38		
	No Report	6 613 496	0.4								
WPR		1 674 805 812	100	822 177	49	100	391 964	23		842 956	47
	DOTS	**2 709 319 972**	**45**	**1 679 086**	**62**	**46**	**868 374**	**32**	**62**		
	non-DOTS	3 130 147 571	52	2 010 727	64	54	617 409	20	35		
	No Report	135 577 614	2								
Global		5 975 045 157	100	3 689 813	62	100	1 485 783	25		3 724 168	40

* WHO Regions (see Regional profiles for countries/territories in each region): AFR - Africa, AMR - the Americas, EMR - the Eastern Mediterranean, EUR - Europe, SEAR - South-East Asia, WPR - the Western Pacific

Note: late updates from Europe added 20 DOTS and 1 151 non-DOTS notifications (all cases). These are included in the Regional profile for Europe, but not in the table above, nor in totals in the body of the report.

Global profile, cont'd: treatment success for the 1998 cohort

Region*		New smear-positive cases									Re-treatment cases								
		Registered	% cured	% compl-eted	% died	% failed	% default	% trans-ferred	% not eval	% succ-ess	Registered	% cured	% compl-eted	% died	% failed	% default	% trans-ferred	% not eval	% succ-ess
AFR	DOTS	227 207	57	13	6.0	1.1	11	6.9	5.1	70	18 508	42	12	9.8	2.4	12	6.8	15	54
	non-DOTS	8 401	48	8.1	5.2	2.6	9.9	14	13	56									
AMR	DOTS	63 173	65	15	4.4	1.0	6.0	2.6	5.6	80	6 302	79	3	4.6	3.5	8.9	1.6	0.3	81
	non-DOTS	46 979	25	24	3.3	0.5	11	4.2	33	49									
EMR	DOTS	39 311	64	10	3.5	2.1	10	5.2	4.9	74	1 577	47	15	9.4	6.1	17	4.6	0.6	62
	non-DOTS	44 009	32	5.6	1.1	2.0	41	2.6	15	38									
EUR	DOTS	12 487	62	15	5.8	4.5	4.9	3.2	4.4	77	6 940	57	19	8.5	2.7	5.6	2.1	4.2	77
	non-DOTS	34 730	12	46	2.7	12	6.0	4.0	17	58									
SEAR	DOTS	114 355	66	6.0	3.9	1.2	6.4	1.7	15	72	12 261	61	11	5.8	4.2	12	2.2	2.9	72
	non-DOTS	284 667	4.6	22	0.2	0.2	2.6	0.4	70	27									
WPR	DOTS	268 742	94	1.1	1.6	0.9	1.2	0.7	0.4	95	56 131	93	0.6	2.1	2.2	1.0	0.4	0.3	94
	non-DOTS	42 513	58	17	3.0	4.9	5.1	2.6	9.4	75									
Global	**DOTS**	**725 275**	**73**	**7.6**	**3.8**	**1.2**	**6.0**	**3.2**	**4.9**	**81**	**101 719**	**76**	**5.7**	**4.6**	**2.7**	**5.4**	**2.1**	**3.5**	**82**
	non-DOTS	**461 299**	**16**	**22**	**1.1**	**1.7**	**7.7**	**1.7**	**50**	**37**									

* WHO Regions (see Regional profiles for countries/territories in each region): AFR - Africa, AMR - the Americas, EMR - the Eastern Mediterranean, EUR - Europe, SEAR - South-East Asia, WPR - the Western Pacific

Global profile, cont'd: WHO TB control categories, 1999

	Number		Number of countries in each category						% regional population in each category**					
Region*	Countries	Reports	0	1	2	3	4	5	0	1	2	3	4	5
AFR	47	31	16	5	0	12	14	0	12	6.3	0.0	57	25	0.0
AMR	44	33	11	3	1	11	16	2	4.0	0.7	21	29	46	0.0
EMR	23	19	4	0	1	7	11	0	4.7	0.0	31	38	26	0.0
EUR	51	51	0	22	5	4	17	3	0.0	51	23	12	11	1.9
SEAR	10	10	0	0	1	6	3	0	0.0	0.0	1.6	97	1.4	0.0
WPR	36	27	9	8	1	7	10	1	0.4	12	0.3	82	5.6	0.2
Global	211	171	40	38	9	47	71	6	2.3	12	9.2	62	14	0.3

* WHO Regions (see Regional profiles for countries/territories in each region): AFR - Africa, AMR - the Americas, EMR - the Eastern Mediterranean, EUR - Europe, SEAR - South-East Asia, WPR - the Western Pacific

** Percent of regional population in each category: each country is assigned to only one of the above categories. This is in contrast to the case notification and dectection rates table (page 54), where the population of any country can be divided into DOTS and non-DOTS areas.

ANNEX 3

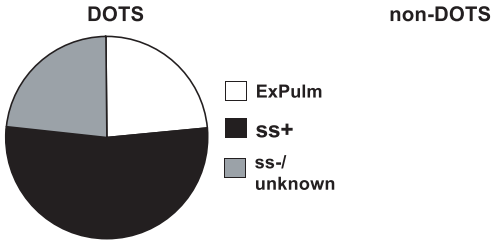
Profiles of high-burden countries

Afghanistan

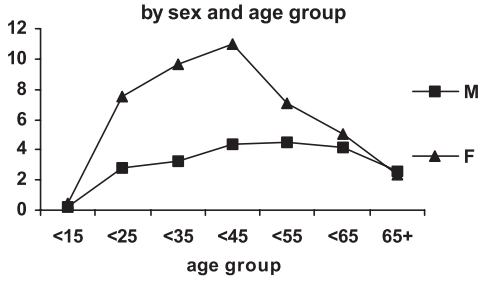
Latest Information:	1999
Population	21 923 463
Est. incidence (all cases/100 000 pop)	325
Global rank (by est. no. new cases)	20
Regional rank	2
TB cases that are HIV+ (%)	0.1
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1997)

Trends:	1997	1998	1999
DOTS population coverage (%)	12	11	14
Notification rate (all cases/100 000 pop)	6.2	14	15
Detection (new ss+ cases, %)	2.0	5.8	5.2
- DOTS detection (new ss+, %)	2.0	5.8	5.2
Treatment success (new ss+ cases, %)*		45	33
- DOTS treatment success (new ss+, %)*		45	33
Est. new ss+ treated successfully (%)*		3	3
Retreatment success (all cases DOTS %)*			78

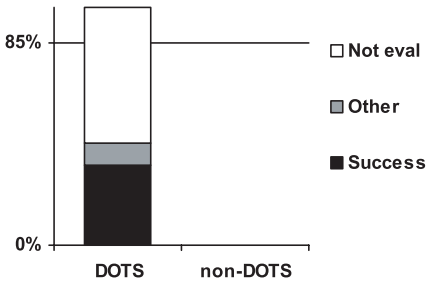
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

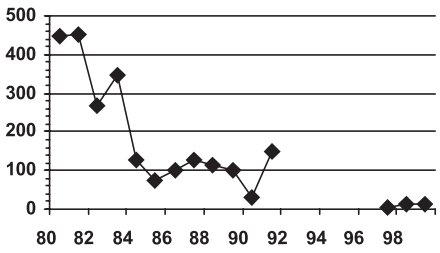


3 **Treatment outcomes (new ss+ cases)**

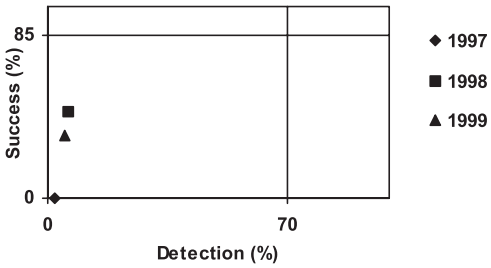


Number registered: 2913 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation has not continued to expand.

The % of DOTS new cases that are ss+ (53%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (70%) is within expected range.

The maximum ss+ notification rates are for 35-44 year-olds (females) and 45-54 year-olds (males). The maximum M:F rate ratio is 0.3 :1 among 25-34 year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

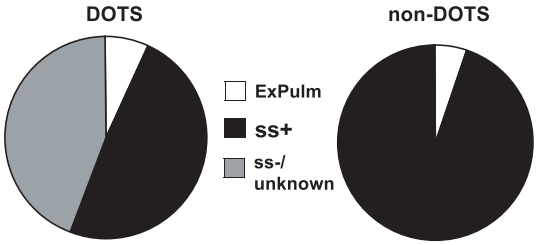
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Bangladesh

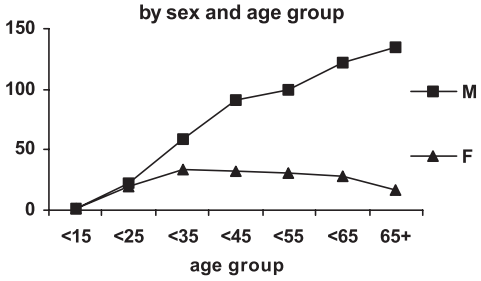
Latest Information:	1999
Population	126 947 104
Est. incidence (all cases/100 000 pop)	241
Global rank (by est. no. new cases)	5
Regional rank	3
TB cases that are HIV+ (%)	0.1
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1993)

Trends:	1997	1998	1999
DOTS population coverage (%)	80	90	90
Notification rate (all cases/100 000 pop)	52	58	63
Detection (new ss+ cases, %)	24	28	28
- DOTS detection (new ss+, %)	19	24	25
Treatment success (new ss+ cases, %)*	63	73	77
- DOTS treatment success (new ss+, %)*	72	78	80
Est. new ss+ treated successfully (%)*	14	18	21
Retreatment success (all cases DOTS %)*	57	58	74

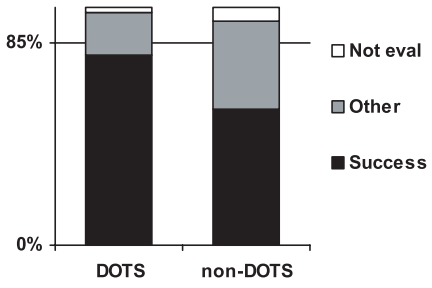
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

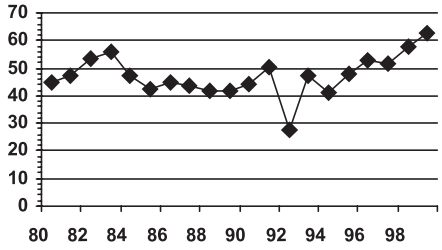


3 **Treatment outcomes (new ss+ cases)**

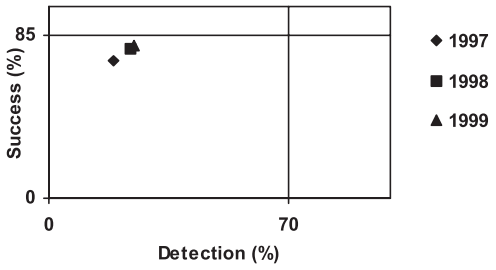


Number registered: 33506 DOTS, 4523 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is widespread.

The % of DOTS new cases that are ss+ (49%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (52%) is lower than expected.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 65+ year-olds (males). The maximum M:F rate ratio is 8.3 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

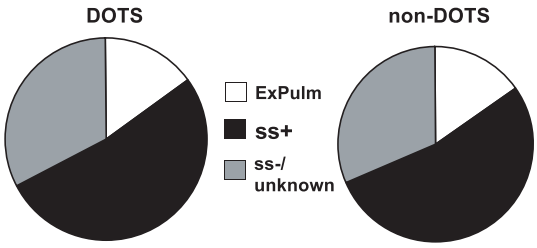
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Brazil

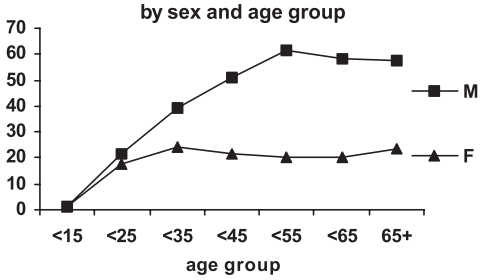
Latest Information:	1999
Population	167 987 960
Est. incidence (all cases/100 000 pop)	70
Global rank (by est. no. new cases)	14
Regional rank	1
TB cases that are HIV+ (%)	3.3
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1998)

Trends:	1997	1998	1999
DOTS population coverage (%)	0	3	7
Notification rate (all cases/100 000 pop)	51	51	47
Detection (new ss+ cases, %)	80	72	79
- DOTS detection (new ss+, %)		4.1	4.0
Treatment success (new ss+ cases, %)*	20	27	40
- DOTS treatment success (new ss+, %)*			91
Est. new ss+ treated successfully (%)*	17	22	23
Retreatment success (all cases DOTS %)*			

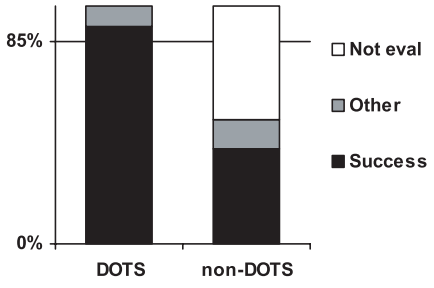
1 Case types notified (new)



2 New ss+ notification rate (per 100 000) by sex and age group

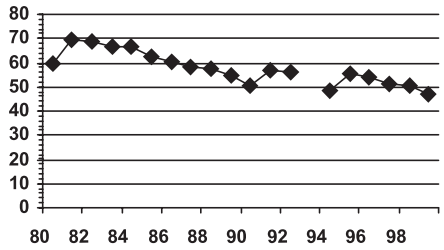


3 Treatment outcomes (new ss+ cases)

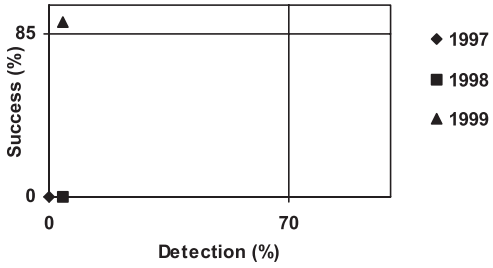


Number registered: 82 DOTS, 29996 non-DOTS

4 Notification rates (per 100 000 pop)



5 DOTS detection and success* rates



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation, however, is limited.

The % of DOTS new cases that are ss+ (52%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (61%) is within expected range.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 45-54 year-olds (males). The maximum M:F rate ratio is 3.0 :1 among 45-54 year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has been reached! (Fig 5)

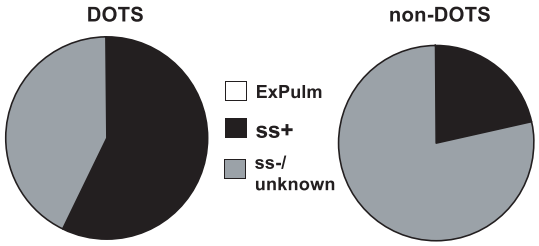
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

China

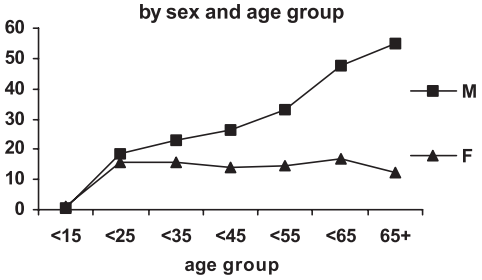
Latest Information:	1999
Population	1 266 838 226
Est. incidence (all cases/100 000 pop)	103
Global rank (by est. no. new cases)	2
Regional rank	1
TB cases that are HIV+ (%)	0.4
Multi-drug resistance (new cases, %)	1.4-10.8 (5 provinces)
DOTS status (year adopted)	DOTS (1991)

Trends:	1997	1998	1999
DOTS population coverage (%)	64	64	64
Notification rate (all cases/100 000 pop)	34	36	36
Detection (new ss+ cases, %)	32	37	36
- DOTS detection (new ss+, %)	25	33	32
Treatment success (new ss+ cases, %)*	94	95	95
- DOTS treatment success (new ss+, %)*	96	96	97
Est. new ss+ treated successfully (%)*	28	31	34
Retreatment success (all cases DOTS %)*	94		95

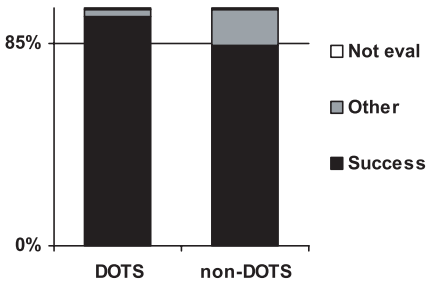
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

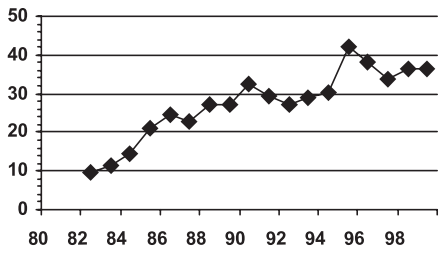


3 **Treatment outcomes (new ss+ cases)**

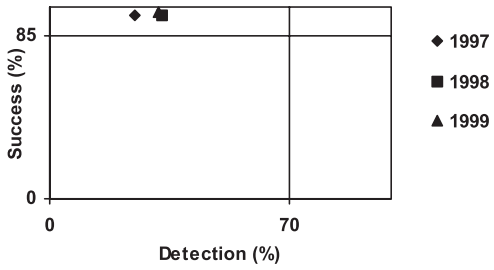


Number registered: 190016 DOTS, 20080 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation has not continued to expand.

The % of DOTS new cases that are ss+ (57%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (57%) is within expected range.

The maximum ss+ notification rates are for 55-64 year-olds (females) and 65+ year-olds (males). The maximum M:F rate ratio is 4.4 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has been reached! (Fig 3, 5)

The case detection target (70%) has not yet been reached (Fig 5).

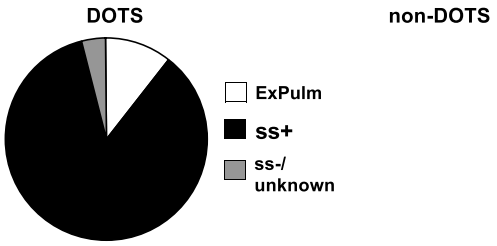
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Cambodia

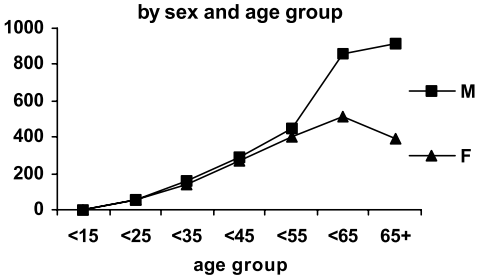
Latest Information:	1999
Population	10 945 289
Est. incidence (all cases/100 000 pop)	560
Global rank (by est. no. new cases)	22
Regional rank	4
TB cases that are HIV+ (%)	20
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1994)

Trends:	1997	1998	1999
DOTS population coverage (%)	88	100	100
Notification rate (all cases/100 000 pop)	149	158	176
Detection (new ss+ cases, %)	50	53	57
- DOTS detection (new ss+, %)	50	53	57
Treatment success (new ss+ cases, %)*	94	91	95
- DOTS treatment success (new ss+, %)*	94	91	95
Est. new ss+ treated successfully (%)*	34	42	46
Retreatment success (all cases DOTS %)*	89	90	91

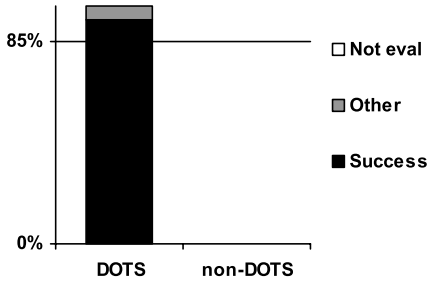
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

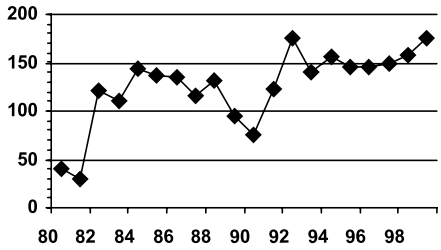


3 **Treatment outcomes (new ss+ cases)**

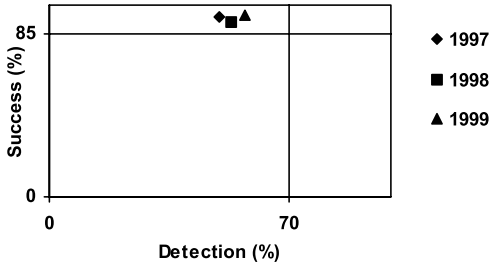


Number registered: 13290 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is widespread.

The % of DOTS new cases that are ss+ (85%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (96%) is higher than expected.

The maximum ss+ notification rates are for 55-64 year-olds (females) and 65+ year-olds (males). The maximum M:F rate ratio is 2.4 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has been reached! (Fig 3, 5)

The case detection target (70%) has not yet been reached (Fig 5).

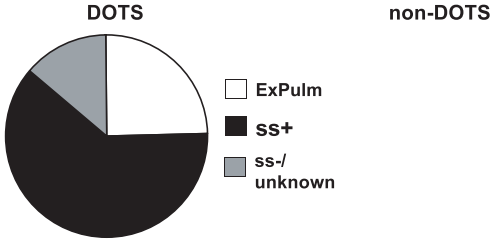
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Democratic Republic of the Congo (the)

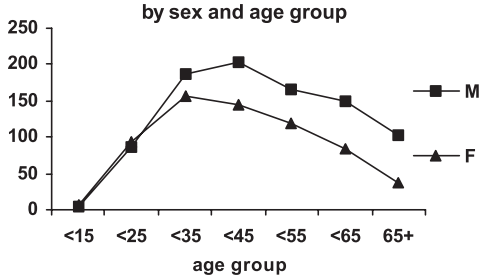
Latest Information:	1999
Population	50 335 347
Est. incidence (all cases/100 000 pop)	301
Global rank (by est. no. new cases)	11
Regional rank	4
TB cases that are HIV+ (%)	24
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1995)

Trends:	1997	1998	1999
DOTS population coverage (%)	60	60	62
Notification rate (all cases/100 000 pop)	95	120	118
Detection (new ss+ cases, %)	47	57	53
- DOTS detection (new ss+, %)	47	57	53
Treatment success (new ss+ cases, %)*	48	64	70
- DOTS treatment success (new ss+, %)*	48	64	70
Est. new ss+ treated successfully (%)*	22	28	36
Retreatment success (all cases DOTS %)*	33	46	31

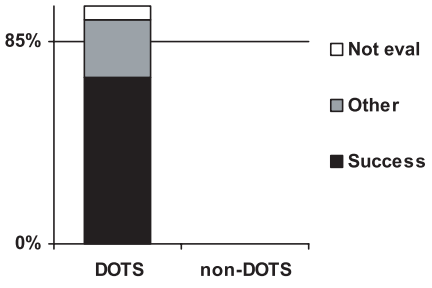
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

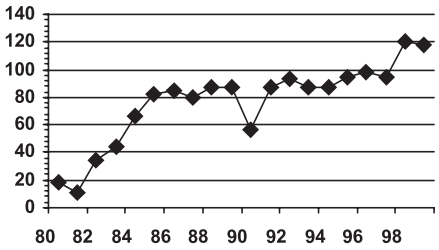


3 **Treatment outcomes (new ss+ cases)**

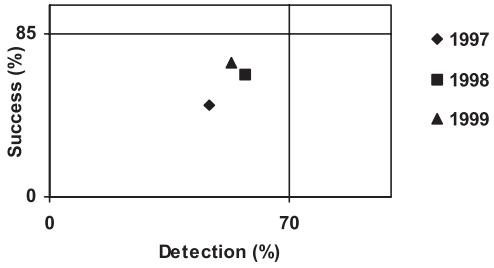


Number registered: 33442 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation has not continued to expand.

The % of DOTS new cases that are ss+ (61%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (81%) is higher than expected.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 35-44 year-olds (males). The maximum M:F rate ratio is 2.8 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

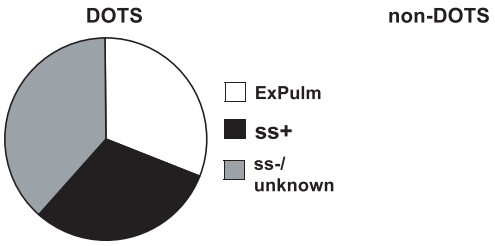
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Ethiopia

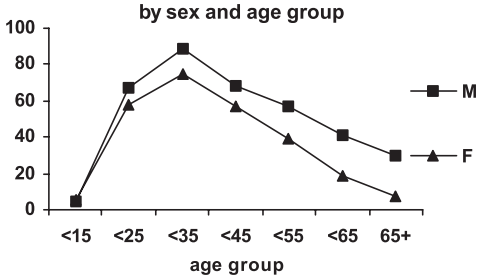
Latest Information:	1999
Population	61 094 519
Est. incidence (all cases/100 000 pop)	373
Global rank (by est. no. new cases)	8
Regional rank	2
TB cases that are HIV+ (%)	42
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1992)

Trends:	1997	1998	1999
DOTS population coverage (%)	48	64	63
Notification rate (all cases/100 000 pop)	102	117	118
Detection (new ss+ cases, %)	20	22	22
- DOTS detection (new ss+, %)	20	22	22
Treatment success (new ss+ cases, %)*	71	72	74
- DOTS treatment success (new ss+, %)*	73	72	74
Est. new ss+ treated successfully (%)*	10	10	11
Retreatment success (all cases DOTS %)*	71	69	60

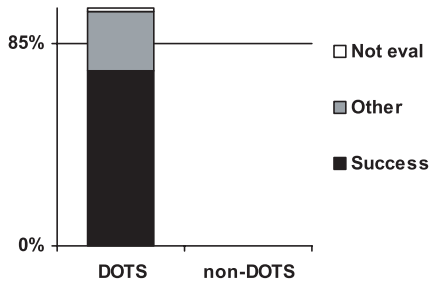
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

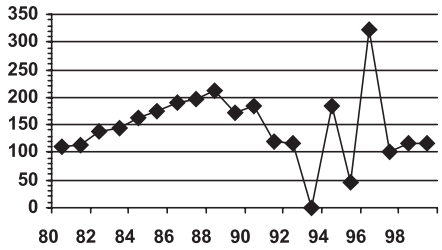


3 **Treatment outcomes (new ss+ cases)**

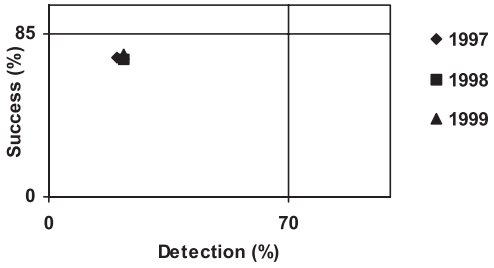


Number registered: 14836 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation has not continued to expand.

The % of DOTS new cases that are ss+ (30%) is lower than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (44%) is lower than expected.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 25-34 year-olds (males). The maximum M:F rate ratio is 4.2 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

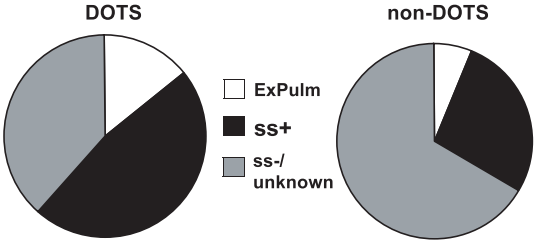
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

India

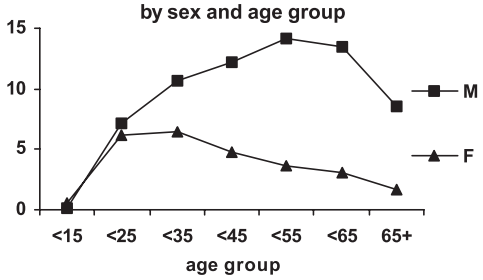
Latest Information:	1999
Population	998 055 828
Est. incidence (all cases/100 000 pop)	185
Global rank (by est. no. new cases)	1
Regional rank	1
TB cases that are HIV+ (%)	4.0
Multi-drug resistance (new cases, %)	3.4 (Tamil Nadu State)
DOTS status (year adopted)	DOTS (1993)

Trends:	1997	1998	1999
DOTS population coverage (%)	2	9	14
Notification rate (all cases/100 000 pop)	118	115	123
Detection (new ss+ cases, %)	34	35	42
- DOTS detection (new ss+, %)	1.0	1.5	6.4
Treatment success (new ss+ cases, %)*	21	18	27
- DOTS treatment success (new ss+, %)*	79	82	84
Est. new ss+ treated successfully (%)*	8	7	9
Retreatment success (all cases DOTS %)*	67	65	72

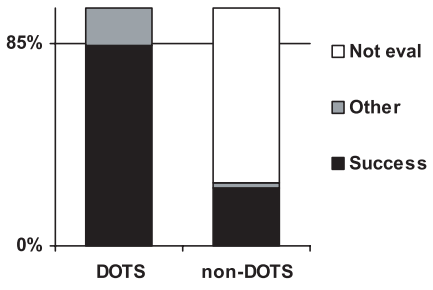
1 Case types notified (new)



2 New ss+ notification rate (per 100 000) by sex and age group

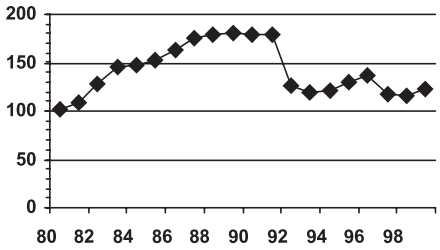


3 Treatment outcomes (new ss+ cases)

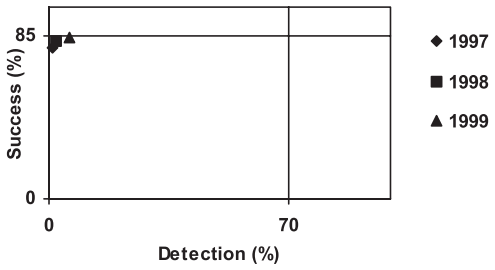


Number registered: 12418 DOTS, 271645 non-DOTS

4 Notification rates (per 100 000 pop)



5 DOTS detection and success* rates



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is expanding rapidly.

The % of DOTS new cases that are ss+ (47%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (55%) is within expected range.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 45-54 year-olds (males). The maximum M:F rate ratio is 5.0 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

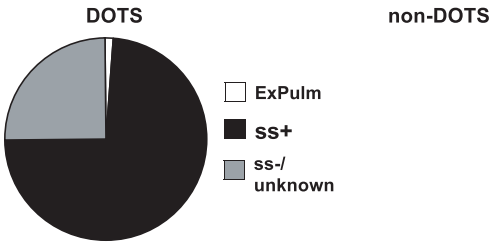
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Indonesia

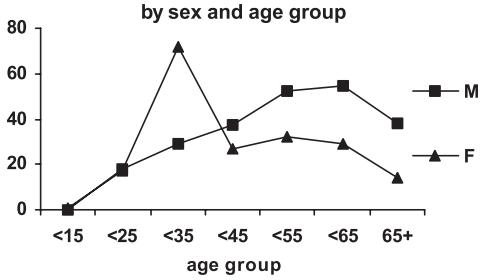
Latest Information:	1999
Population	209 254 737
Est. incidence (all cases/100 000 pop)	282
Global rank (by est. no. new cases)	3
Regional rank	2
TB cases that are HIV+ (%)	0.3
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1995)

Trends:	1997	1998	1999
DOTS population coverage (%)	28	80	90
Notification rate (all cases/100 000 pop)	11	20	33
Detection (new ss+ cases, %)	7.5	12	19
- DOTS detection (new ss+, %)	7.5	12	19
Treatment success (new ss+ cases, %)*	81	54	58
- DOTS treatment success (new ss+, %)*	81	54	58
Est. new ss+ treated successfully (%)*	4	4	9
Retreatment success (all cases DOTS %)*			73

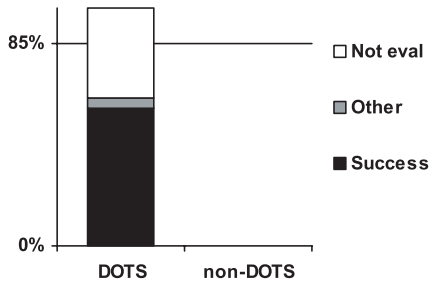
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

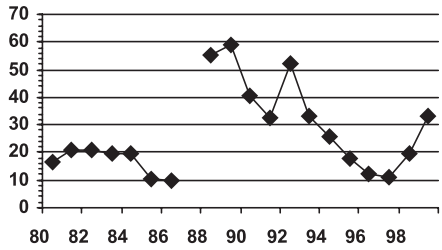


3 **Treatment outcomes (new ss+ cases)**

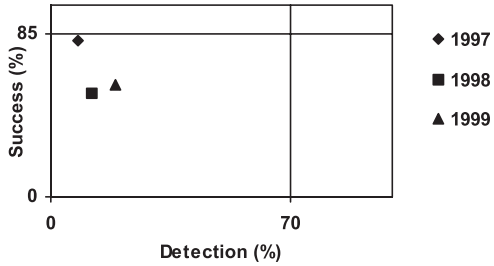


Number registered: 40166 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is widespread.

The % of DOTS new cases that are ss+ (73%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (74%) is higher than expected.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 55-64 year-olds (males). The maximum M:F rate ratio is 2.7 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

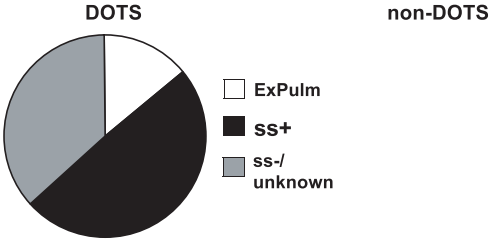
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Kenya

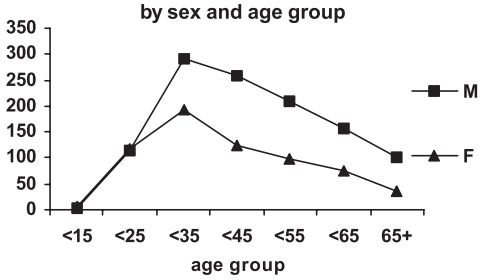
Latest Information:	1999
Population	29 549 205
Est. incidence (all cases/100 000 pop)	417
Global rank (by est. no. new cases)	13
Regional rank	5
TB cases that are HIV+ (%)	49
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1993)

Trends:	1997	1998	1999
DOTS population coverage (%)	100	100	100
Notification rate (all cases/100 000 pop)	140	169	194
Detection (new ss+ cases, %)	54	57	53
- DOTS detection (new ss+, %)	54	57	53
Treatment success (new ss+ cases, %)*	77	65	77
- DOTS treatment success (new ss+, %)*	77	65	77
Est. new ss+ treated successfully (%)*	28	29	33
Retreatment success (all cases DOTS %)*	59	55	64

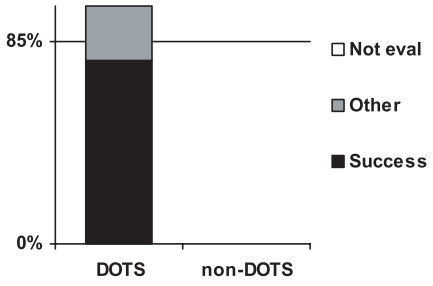
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

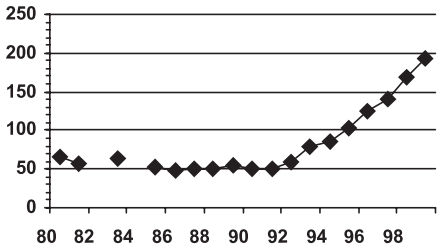


3 **Treatment outcomes (new ss+ cases)**

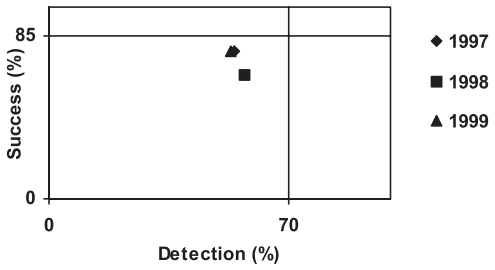


Number registered: 21885 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is widespread.

The % of DOTS new cases that are ss+ (49%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (57%) is within expected range.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 25-34 year-olds (males). The maximum M:F rate ratio is 2.7 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

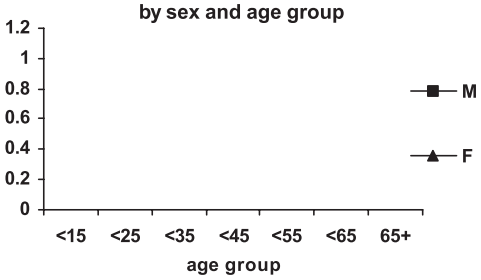
Mozambique

Latest Information:	1999
Population	19 285 779
Est. incidence (all cases/100 000 pop)	407
Global rank (by est. no. new cases)	17
Regional rank	7
TB cases that are HIV+ (%)	48
Multi-drug resistance (new cases, %)	3.5
DOTS status (year adopted)	(1985)

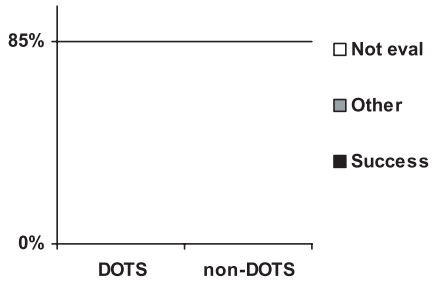
Trends:	1997	1998	1999
DOTS population coverage (%)	84	95	
Notification rate (all cases/100 000 pop)	102	104	
Detection (new ss+ cases, %)	42	41	
- DOTS detection (new ss+, %)	42	41	
Treatment success (new ss+ cases, %)*	55	65	
- DOTS treatment success (new ss+, %)*	54	67	
Est. new ss+ treated successfully (%)*	27	25	
Retreatment success (all cases DOTS %)*	70	64	

1 **Case types notified (new)**

2 **New ss+ notification rate (per 100 000) by sex and age group**

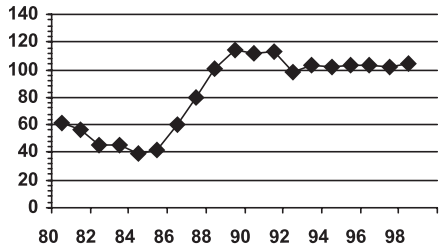


3 **Treatment outcomes (new ss+ cases)**

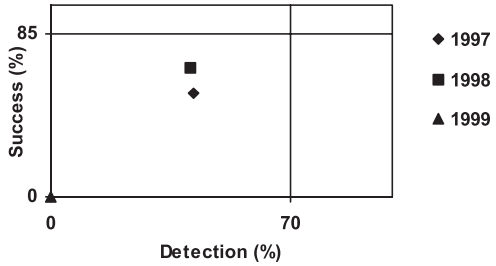


Number registered: DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is NOT consistent with DOTS strategy.

The % of DOTS new cases that are ss+ (29%) is lower than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (34%) is lower than expected.

Age/sex incidence rates are not available for the most recent year of reporting (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

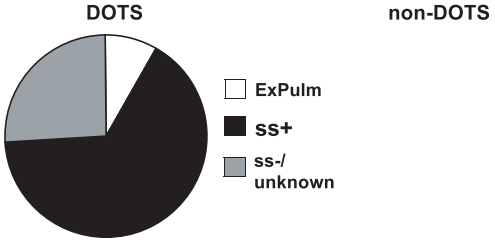
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Myanmar

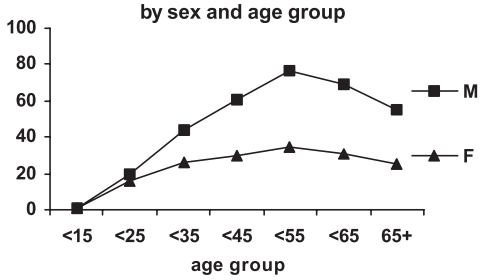
Latest Information:	1999
Population	45 059 198
Est. incidence (all cases/100 000 pop)	169
Global rank (by est. no. new cases)	18
Regional rank	5
TB cases that are HIV+ (%)	11
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1995)

Trends:	1997	1998	1999
DOTS population coverage (%)	60	60	64
Notification rate (all cases/100 000 pop)	39	33	44
Detection (new ss+ cases, %)	29	30	33
- DOTS detection (new ss+, %)	27	30	33
Treatment success (new ss+ cases, %)*	79	82	82
- DOTS treatment success (new ss+, %)*	79	82	82
Est. new ss+ treated successfully (%)*	23	22	25
Retreatment success (all cases DOTS %)*	78	74	76

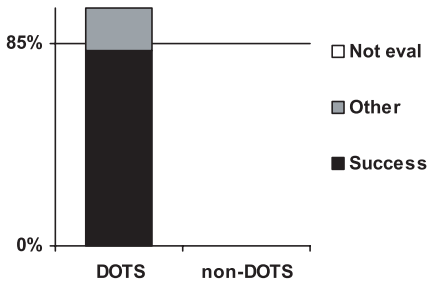
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

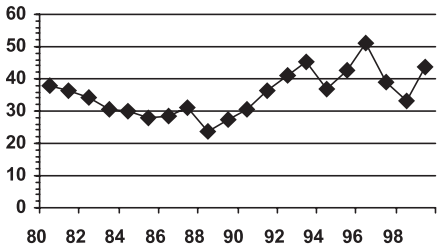


3 **Treatment outcomes (new ss+ cases)**

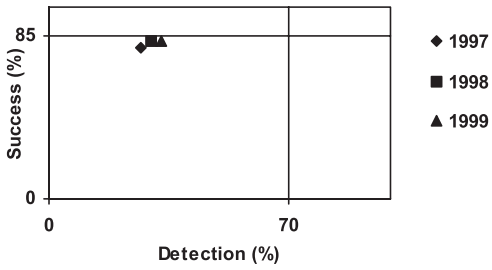


Number registered: 10313 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation has not continued to expand.

The % of DOTS new cases that are ss+ (65%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (71%) is higher than expected.

The maximum ss+ notification rates are for 45-54 year-olds (females) and 45-54 year-olds (males). The maximum M:F rate ratio is 2.2 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

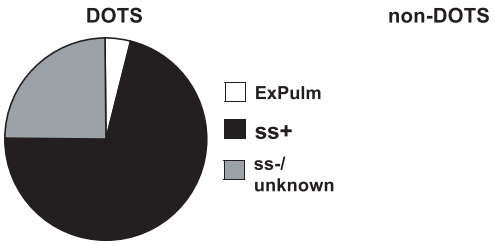
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Nigeria

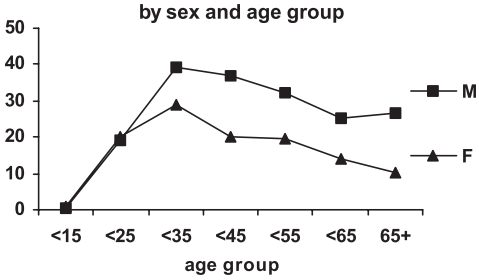
Latest Information:	1999
Population	108 945 056
Est. incidence (all cases/100 000 pop)	301
Global rank (by est. no. new cases)	4
Regional rank	1
TB cases that are HIV+ (%)	24
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1993)

Trends:	1997	1998	1999
DOTS population coverage (%)	40	45	45
Notification rate (all cases/100 000 pop)	16	19	22
Detection (new ss+ cases, %)	8.7	9.7	11
- DOTS detection (new ss+, %)	8.7	9.7	11
Treatment success (new ss+ cases, %)*	32	73	73
- DOTS treatment success (new ss+, %)*	32	73	73
Est. new ss+ treated successfully (%)*	6	6	7
Retreatment success (all cases DOTS %)*	71		78

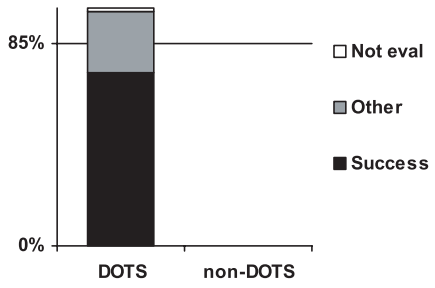
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

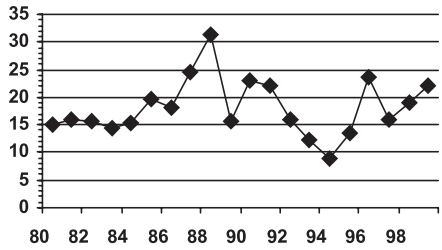


3 **Treatment outcomes (new ss+ cases)**

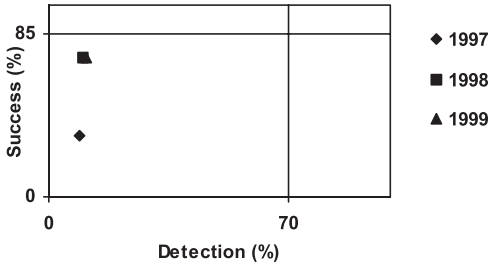


Number registered: 13161 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation has not continued to expand.

The % of DOTS new cases that are ss+ (68%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (74%) is higher than expected.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 25-34 year-olds (males). The maximum M:F rate ratio is 2.6 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

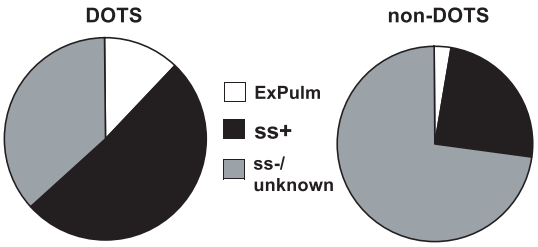
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Pakistan

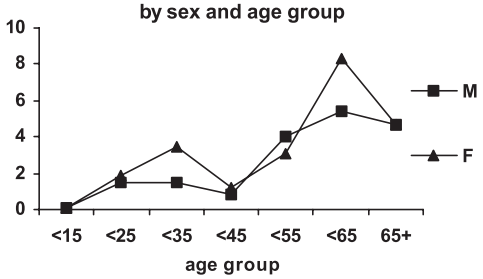
Latest Information:	1999
Population	152 330 653
Est. incidence (all cases/100 000 pop)	177
Global rank (by est. no. new cases)	6
Regional rank	1
TB cases that are HIV+ (%)	0.6
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1995)

Trends:	1997	1998	1999
DOTS population coverage (%)		8	8
Notification rate (all cases/100 000 pop)		61	14
Detection (new ss+ cases, %)		13	5.2
- DOTS detection (new ss+, %)		3.5	1.9
Treatment success (new ss+ cases, %)*		67	23
- DOTS treatment success (new ss+, %)*		67	66
Est. new ss+ treated successfully (%)*		2	6
Retreatment success (all cases DOTS %)*		57	92

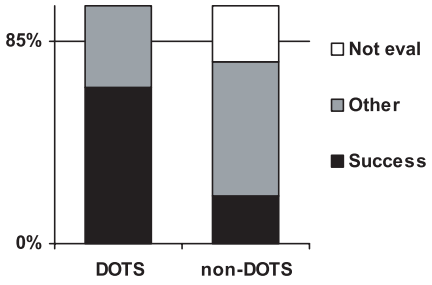
1 Case types notified (new)



2 New ss+ notification rate (per 100 000) by sex and age group

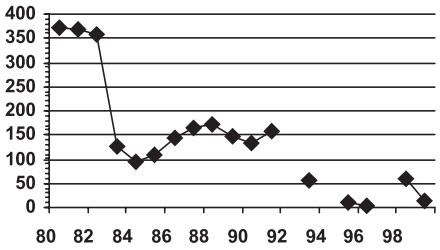


3 Treatment outcomes (new ss+ cases)

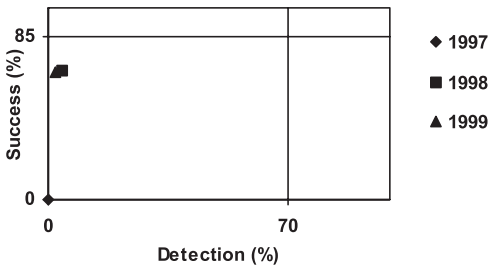


Number registered: 1918 DOTS, 27470 non-DOTS

4 Notification rates (per 100 000 pop)



5 DOTS detection and success* rates



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation, however, is limited.

The % of DOTS new cases that are ss+ (51%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (58%) is within expected range.

The maximum ss+ notification rates are for 55-64 year-olds (females) and 55-64 year-olds (males). The maximum M:F rate ratio is 0.4 :1 among 25-34 year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

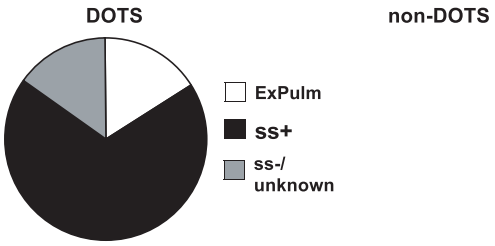
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Peru

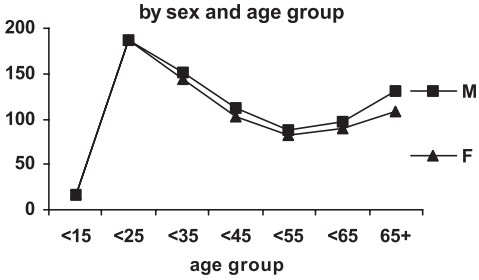
Latest Information:	1999
Population	25 229 501
Est. incidence (all cases/100 000 pop)	228
Global rank (by est. no. new cases)	23
Regional rank	2
TB cases that are HIV+ (%)	2.1
Multi-drug resistance (new cases, %)	3.0
DOTS status (year adopted)	DOTS (1991)

Trends:	1997	1998	1999
DOTS population coverage (%)	100	100	100
Notification rate (all cases/100 000 pop)	173	176	160
Detection (new ss+ cases, %)	95	101	95
- DOTS detection (new ss+, %)	95	101	95
Treatment success (new ss+ cases, %)*	89	90	92
- DOTS treatment success (new ss+, %)*	89	90	92
Est. new ss+ treated successfully (%)*	72	80	94
Retreatment success (all cases DOTS %)*	74		83

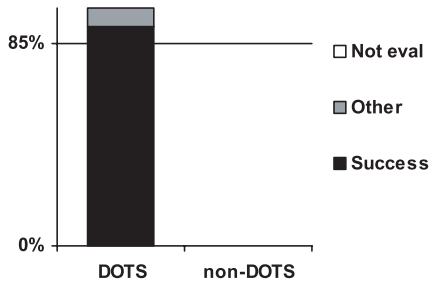
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

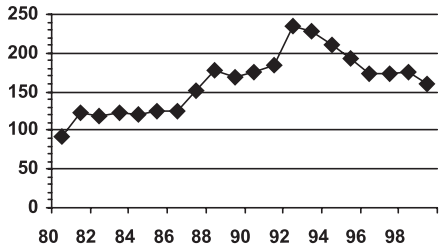


3 **Treatment outcomes (new ss+ cases)**

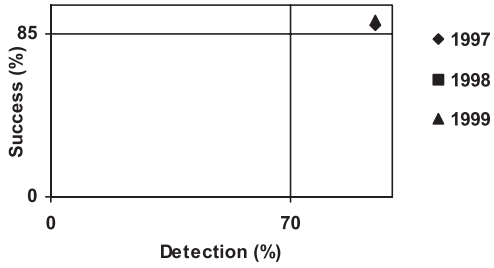


Number registered: 26137 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is widespread.

The % of DOTS new cases that are ss+ (69%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (82%) is higher than expected.

The maximum ss+ notification rates are for 15-24 year-olds (females) and 15-24 year-olds (males). The maximum M:F rate ratio is 1.2 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has been reached! (Fig 3, 5)

The case detection target (70%) has been reached! (Fig 5)

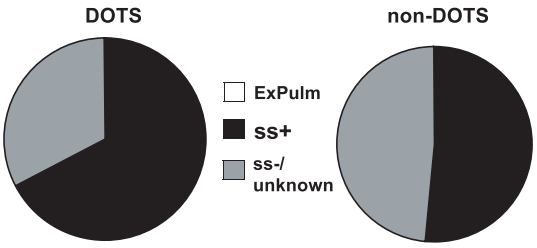
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Philippines (the)

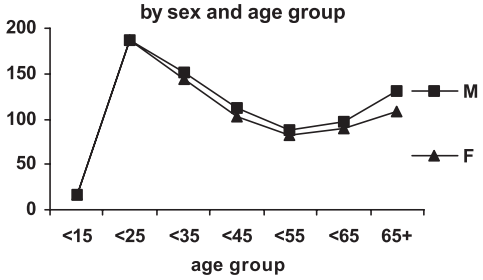
Latest Information:	1999
Population	74 454 194
Est. incidence (all cases/100 000 pop)	314
Global rank (by est. no. new cases)	7
Regional rank	2
TB cases that are HIV+ (%)	0.4
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1994)

Trends:	1997	1998	1999
DOTS population coverage (%)	15	17	43
Notification rate (all cases/100 000 pop)	292	219	196
Detection (new ss+ cases, %)	83	70	70
- DOTS detection (new ss+, %)	3.2	10	20
Treatment success (new ss+ cases, %)*	35	78	71
- DOTS treatment success (new ss+, %)*	82	83	84
Est. new ss+ treated successfully (%)*	44	21	14
Retreatment success (all cases DOTS %)*	66	26	83

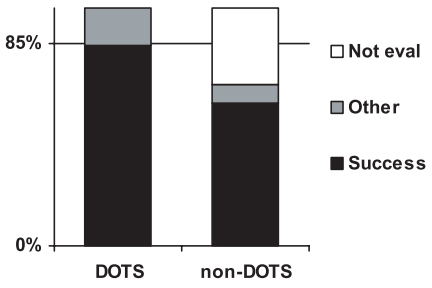
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

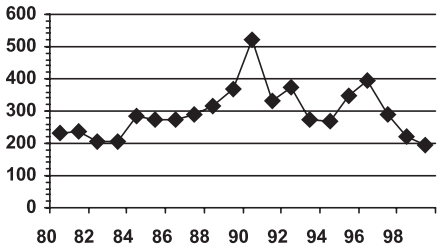


3 **Treatment outcomes (new ss+ cases)**

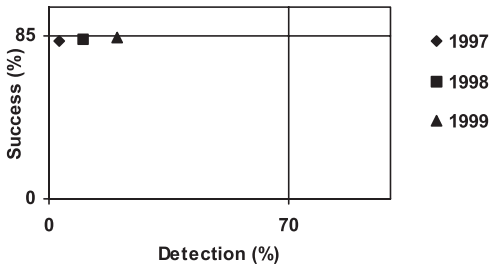


Number registered: 8976 DOTS, 11707 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is expanding rapidly.

The % of DOTS new cases that are ss+ (67%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (67%) is within expected range.

The maximum ss+ notification rates are for 15-24 year-olds (females) and 15-24 year-olds (males). The maximum M:F rate ratio is 1.2 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has been reached but not maintained (Fig 5).

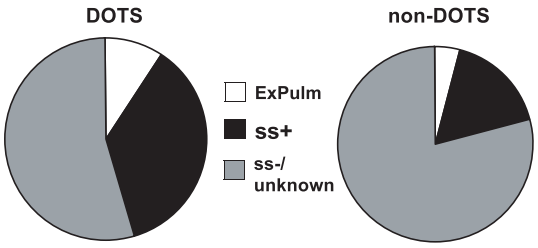
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Russian Federation (the)

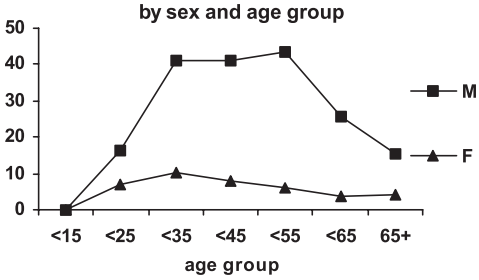
Latest Information:	1999
Population	147 195 504
Est. incidence (all cases/100 000 pop)	123
Global rank (by est. no. new cases)	10
Regional rank	1
TB cases that are HIV+ (%)	1.0
Multi-drug resistance (new cases, %)	6.5-9.0 (2 oblasts)
DOTS status (year adopted)	DOTS (1996)

Trends:	1997	1998	1999
DOTS population coverage (%)	2	5	5
Notification rate (all cases/100 000 pop)	81	75	91
Detection (new ss+ cases, %)	60	56	27
- DOTS detection (new ss+, %)	0.9	0.9	1.6
Treatment success (new ss+ cases, %)*	57	67	68
- DOTS treatment success (new ss+, %)*	62	67	68
Est. new ss+ treated successfully (%)*	35	1	1
Retreatment success (all cases DOTS %)*	64		49

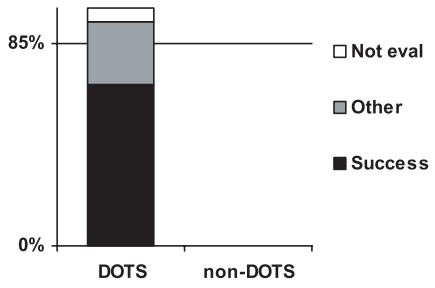
1 Case types notified (new)



2 New ss+ notification rate (per 100 000) by sex and age group

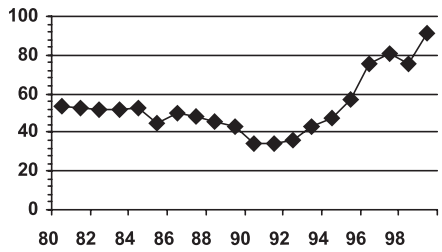


3 Treatment outcomes (new ss+ cases)

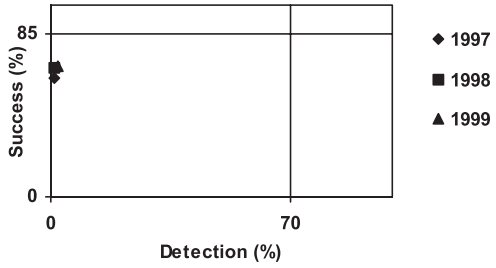


Number registered: 745 DOTS, 0 non-DOTS

4 Notification rates (per 100 000 pop)



5 DOTS detection and success* rates



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation, however, is limited.

The % of DOTS new cases that are ss+ (36%) is lower than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (39%) is lower than expected.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 45-54 year-olds (males). The maximum M:F rate ratio is 7.4 :1 among 45-54 year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

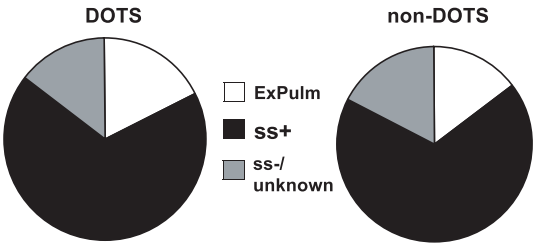
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

South Africa

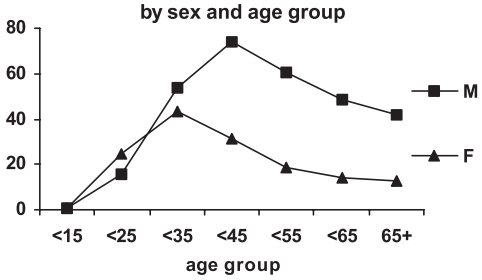
Latest Information:	1999
Population	39 900 258
Est. incidence (all cases/100 000 pop)	495
Global rank (by est. no. new cases)	9
Regional rank	3
TB cases that are HIV+ (%)	60
Multi-drug resistance (new cases, %)	1.5 (Mpumalanga)
DOTS status (year adopted)	DOTS (1997)

Trends:	1997	1998	1999
DOTS population coverage (%)	13	22	66
Notification rate (all cases/100 000 pop)	271	326	323
Detection (new ss+ cases, %)	82	112	97
- DOTS detection (new ss+, %)	6.2	22	68
Treatment success (new ss+ cases, %)*	61	68	72
- DOTS treatment success (new ss+, %)*	69	73	74
Est. new ss+ treated successfully (%)*	41	51	33
Retreatment success (all cases DOTS %)*	67	68	71

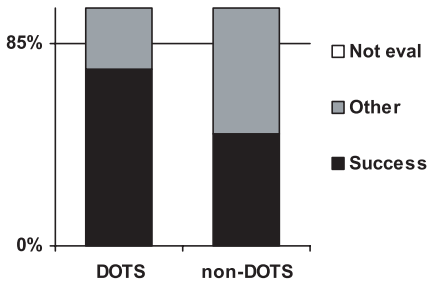
1 Case types notified (new)



2 New ss+ notification rate (per 100 000) by sex and age group

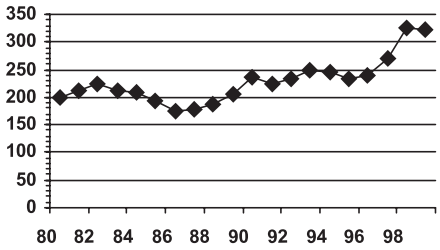


3 Treatment outcomes (new ss+ cases)

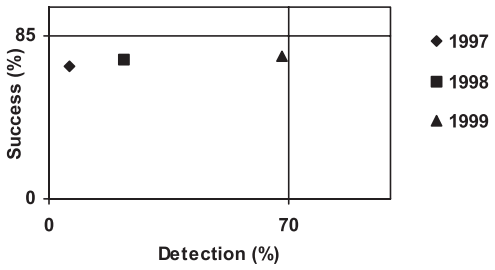


Number registered: 34432 DOTS, 2657 non-DOTS

4 Notification rates (per 100 000 pop)



5 DOTS detection and success* rates



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is expanding rapidly.

The % of DOTS new cases that are ss+ (67%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (82%) is higher than expected.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 35-44 year-olds (males). The maximum M:F rate ratio is 3.4 :1 among 55-64 year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has been reached! (Fig 5)

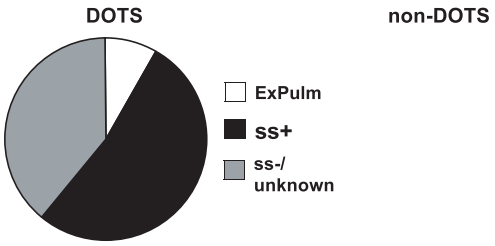
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Thailand

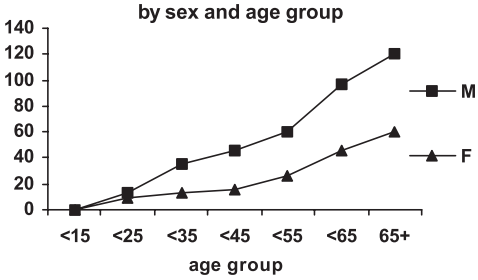
Latest Information:	1999
Population	60 856 253
Est. incidence (all cases/100 000 pop)	141
Global rank (by est. no. new cases)	16
Regional rank	4
TB cases that are HIV+ (%)	12
Multi-drug resistance (new cases, %)	2.1
DOTS status (year adopted)	DOTS (1996)

Trends:	1997	1998	1999
DOTS population coverage (%)	4	32	59
Notification rate (all cases/100 000 pop)	51	26	48
Detection (new ss+ cases, %)	35	21	40
- DOTS detection (new ss+, %)	5.0	21	40
Treatment success (new ss+ cases, %)*	78	58	68
- DOTS treatment success (new ss+, %)*	78	62	68
Est. new ss+ treated successfully (%)*	0	6	14
Retreatment success (all cases DOTS %)*	57	55	55

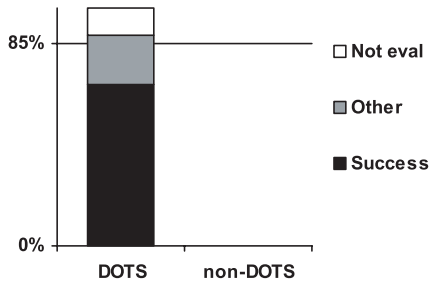
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

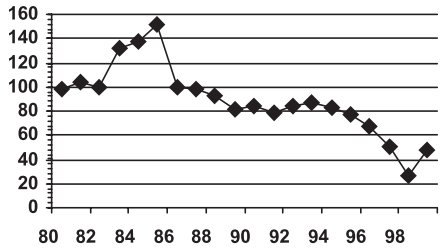


3 **Treatment outcomes (new ss+ cases)**

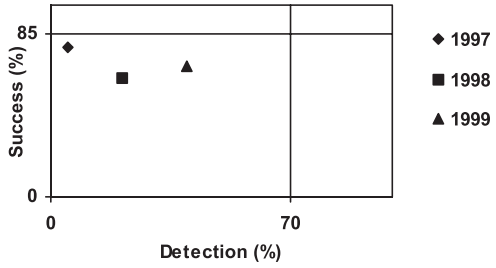


Number registered: 7962 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is expanding rapidly.

The % of DOTS new cases that are ss+ (53%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (57%) is within expected range.

The maximum ss+ notification rates are for 65+ year-olds (females) and 65+ year-olds (males). The maximum M:F rate ratio is 3.0 :1 among 35-44 year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

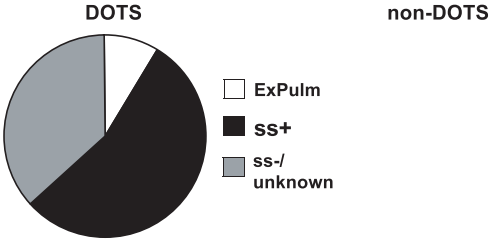
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Uganda

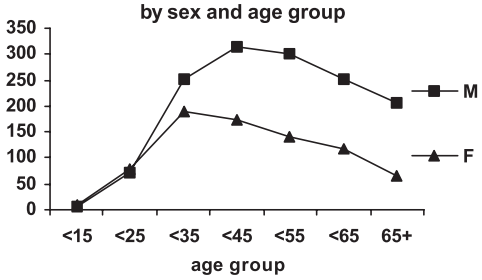
Latest Information:	1999
Population	21 143 118
Est. incidence (all cases/100 000 pop)	343
Global rank (by est. no. new cases)	19
Regional rank	8
TB cases that are HIV+ (%)	35
Multi-drug resistance (new cases, %)	0.5
DOTS status (year adopted)	DOTS (1993)

Trends:	1997	1998	1999
DOTS population coverage (%)	100	100	100
Notification rate (all cases/100 000 pop)	139	142	165
Detection (new ss+ cases, %)	63	63	59
- DOTS detection (new ss+, %)	63	63	59
Treatment success (new ss+ cases, %)*	33	40	62
- DOTS treatment success (new ss+, %)*	33	40	62
Est. new ss+ treated successfully (%)*	19	24	27
Retreatment success (all cases DOTS %)*	32	58	60

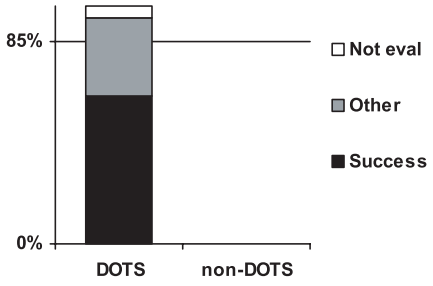
1 Case types notified (new)



2 New ss+ notification rate (per 100 000) by sex and age group

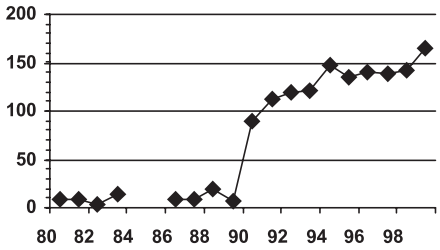


3 Treatment outcomes (new ss+ cases)

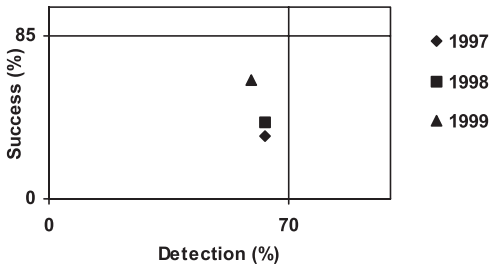


Number registered: 13236 DOTS, 0 non-DOTS

4 Notification rates (per 100 000 pop)



5 DOTS detection and success* rates



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is widespread.

The % of DOTS new cases that are ss+ (54%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (59%) is within expected range.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 35-44 year-olds (males). The maximum M:F rate ratio is 3.1 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

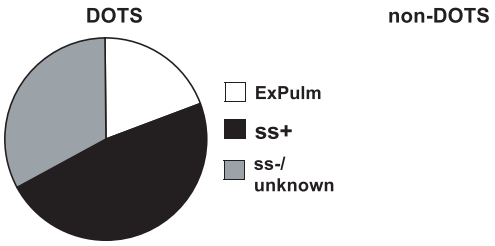
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

United Republic of Tanzania (the)

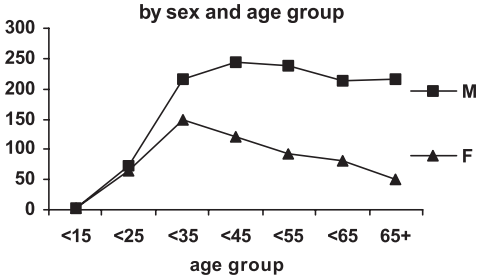
Latest Information:	1999
Population	32 792 556
Est. incidence (all cases/100 000 pop)	340
Global rank (by est. no. new cases)	15
Regional rank	6
TB cases that are HIV+ (%)	35
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1984)

Trends:	1997	1998	1999
DOTS population coverage (%)	100	100	100
Notification rate (all cases/100 000 pop)	148	160	160
Detection (new ss+ cases, %)	56	55	51
- DOTS detection (new ss+, %)	56	55	51
Treatment success (new ss+ cases, %)*	76	77	76
- DOTS treatment success (new ss+, %)*	76	77	76
Est. new ss+ treated successfully (%)*	42	39	38
Retreatment success (all cases DOTS %)*	75	75	73

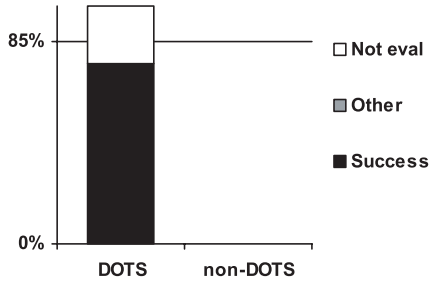
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

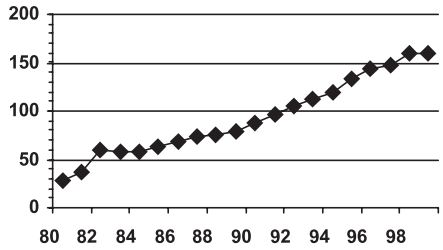


3 **Treatment outcomes (new ss+ cases)**

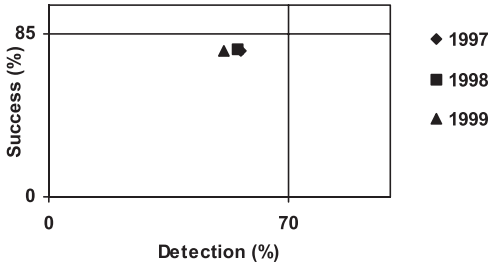


Number registered: 23726 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is widespread.

The % of DOTS new cases that are ss+ (48%) is within expected range (Fig 1). The % of DOTS new pulmonary cases that are ss+ (59%) is within expected range.

The maximum ss+ notification rates are for 25-34 year-olds (females) and 35-44 year-olds (males). The maximum M:F rate ratio is 4.4 :1 among 65+ year-olds (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

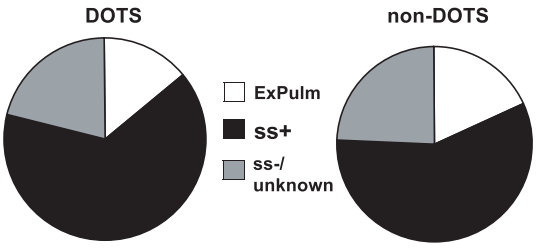
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Viet Nam

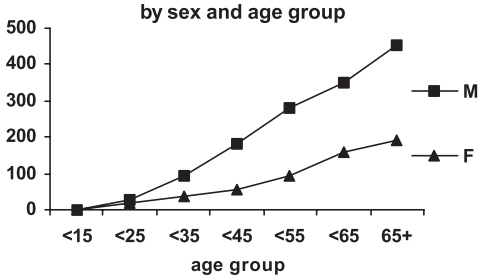
Latest Information:	1999
Population	78 705 124
Est. incidence (all cases/100 000 pop)	189
Global rank (by est. no. new cases)	12
Regional rank	3
TB cases that are HIV+ (%)	1.4
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1986)

Trends:	1997	1998	1999
DOTS population coverage (%)	93	96	99
Notification rate (all cases/100 000 pop)	111	113	113
Detection (new ss+ cases, %)	83	83	80
- DOTS detection (new ss+, %)	77	81	80
Treatment success (new ss+ cases, %)*	89	85	92
- DOTS treatment success (new ss+, %)*	90	85	93
Est. new ss+ treated successfully (%)*	66	69	75
Retreatment success (all cases DOTS %)*	84	80	84

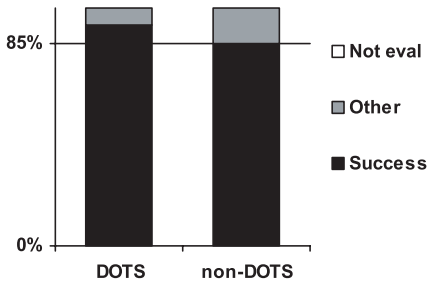
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

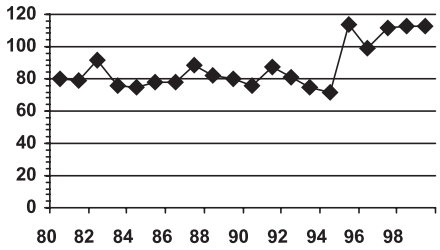


3 **Treatment outcomes (new ss+ cases)**

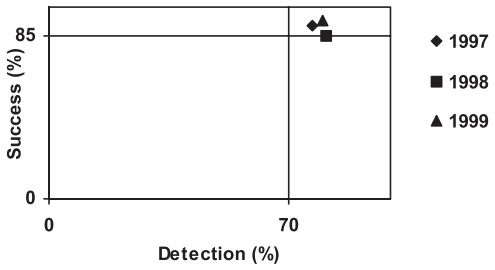


Number registered: 52799 DOTS, 1752 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation is widespread.

The % of DOTS new cases that are ss+ (65%) is higher than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (75%) is higher than expected.

The maximum ss+ notification rates are for 65+ year-olds (females) and 65+ year-olds (males). The maximum M:F rate ratio is 3.2 :1 among 35-44 year-olds (Fig 2).

The treatment success target (85%) has been reached! (Fig 3, 5)

The case detection target (70%) has been reached! (Fig 5)

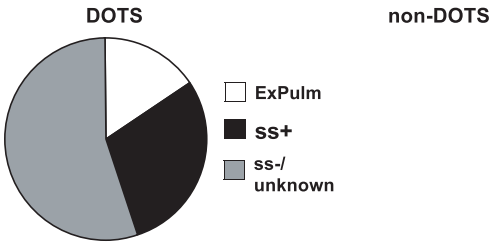
** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

Zimbabwe

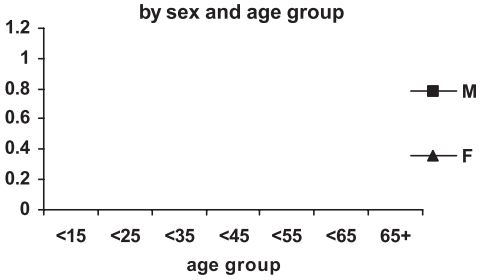
Latest Information:	1999
Population	11 529 116
Est. incidence (all cases/100 000 pop)	562
Global rank (by est. no. new cases)	21
Regional rank	9
TB cases that are HIV+ (%)	67
Multi-drug resistance (new cases, %)	no data
DOTS status (year adopted)	DOTS (1994)

Trends:	1997	1998	1999
DOTS population coverage (%)	0	100	12
Notification rate (all cases/100 000 pop)	390	414	435
Detection (new ss+ cases, %)	64	60	55
- DOTS detection (new ss+, %)		60	55
Treatment success (new ss+ cases, %)*	32	69	70
- DOTS treatment success (new ss+, %)*			70
Est. new ss+ treated successfully (%)*	17	35	34
Retreatment success (all cases DOTS %)*			

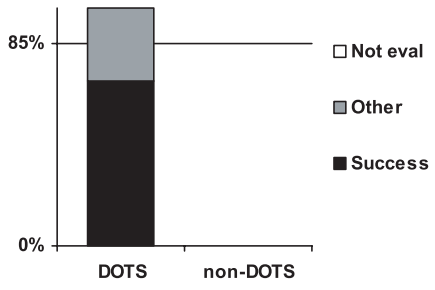
1 **Case types notified (new)**



2 **New ss+ notification rate (per 100 000) by sex and age group**

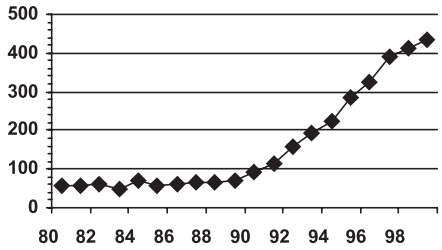


3 **Treatment outcomes (new ss+ cases)**

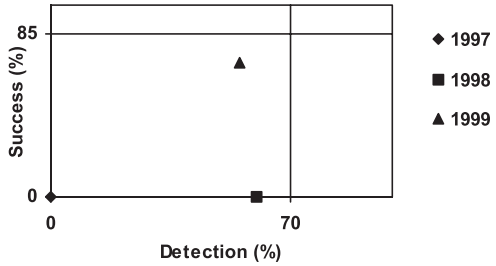


Number registered: 12748 DOTS, 0 non-DOTS

4 **Notification rates (per 100 000 pop)**



5 **DOTS detection and success* rates**



Observations:

The National TB control policy is consistent with the DOTS strategy. Implementation has not continued to expand.

The % of DOTS new cases that are ss+ (29%) is lower than expected (Fig 1). The % of DOTS new pulmonary cases that are ss+ (34%) is lower than expected.

Age/sex incidence rates are not available for the most recent year of reporting (Fig 2).

The treatment success target (85%) has not yet been reached (Fig 3, 5).

The case detection target (70%) has not yet been reached (Fig 5).

** treatment results are shown by year reported, but they refer to the cohort of patients registered for treatment in the previous year.*

ANNEX 4

Regional profiles

Africa
The Americas
Eastern Mediterranean
Europe
South-East Asia
Western Pacific

Explanatory notes

REGIONAL PROFILES

Regional profiles present country-specific data by region. Each regional profile consists of:

- A summary of TB control policies.
- The latest year's notification, detection, and coverage data—for the whole country, and for DOTS and other (non-DOTS) programmes.
- Treatment outcomes for the previous year's cohort—both treatment and retreatment outcomes from DOTS programmes, and treatment outcomes (where available) from other programmes.
- New smear-positive notification rates by age and sex for the whole country.
- New smear-positive notifications (numbers) by age and sex—from DOTS and from other programmes.
- Notification (all cases) rates and numbers, since 1980.
- Notification (new smear-positive cases) rates and numbers, over the last 5 years.
- Country notes: remarks from respondents that may help to explain data in selected countries' reports.

Notation for 1st table

a	The population of the country/territory.
b	The total number of tuberculosis cases notified to WHO.
b/a	The case notification rate (per 100 000 population).
c	The number of new smear-positive cases notified to WHO.
c/a	The new smear-positive case notification rate (per 100 000 population).
d	The estimated number of new sputum smear-positive cases.
c/d	The proportion of estimated new smear-positive that are notified.
e	The TB control category (WHO classification based on control strategy and estimated incidence of TB. See Table 1 for definitions).
f	The percent of the population living in geographic areas serviced by health facilities implementing TB control practices consistent with WHO recommendations (DOTS strategy).
g	Notification (all cases) from DOTS programmes.
g/(f*a)	The case notification rate (all cases, per 100 000 population) from DOTS programmes.
h	The number of new smear-positive cases notified by DOTS programmes.
h/(f*a)	The new smear-positive case notification rate (per 100 000 population) from DOTS programmes.
i	The proportion of all new pulmonary cases that are smear-positive.
j–m	As for f–i, above, but for other (non-DOTS) programmes.

Notation for 2nd table

a	The number of new smear-positive cases registered for treatment under DOTS in the previous year.
b	The proportion of registered new smear-positive cases that were not evaluated.
c–h	The proportion of registered new smear-positive cases with treatment outcomes as defined in Table 4 (cured, completed, died, failed, defaulted or transferred).
c+d	Treatment success (see Table 4).
i–p	See (a–h) of 2nd table, above. These outcomes are for DOTS retreatment cases (as defined in Table 3) in the previous year.
q–x	See (a–h) of 2nd table, above. These outcomes are for new smear-positive cases registered in other (non-DOTS) programmes in the previous year.

AFRICA

Africa: Summary of TB control policies

Country	Microscopy (a)	SCC (b)	DOT (c)	Outcome monitoring (d)	Drug supply (e)	Category as of 31/12/99*	DOTS newly implemented in 1999
Algeria						1	
Angola						3	
Benin						4	
Botswana						4	
Burkina Faso						4	
Burundi						4	
Cameroon						3	
Cape Verde						0	
Central African Republic (the)						1	
Chad						4	
Comoros (the)						0	
Congo (the)						1	
Côte d'Ivoire						3	
Democratic Republic of the Congo (the)						3	
Equatorial Guinea						0	
Eritrea						3	
Ethiopia						3	
Gabon						1	
Gambia (the)						0	
Ghana						3	
Guinea						4	
Guinea-Bissau						0	
Kenya						4	
Lesotho						0	
Liberia						0	
Madagascar						0	
Malawi						4	
Mali						3	
Mauritania						3	x
Mauritius						4	
Mozambique						0	
Namibia						4	
Niger (the)						0	
Nigeria						3	
Rwanda						4	
Sao Tome and Principe						1	
Senegal						4	
Seychelles						0	
Sierra Leone						0	
South Africa						3	
St. Helena						0	
Swaziland						0	
Togo						0	
Uganda						4	
United Republic of Tanzania (the)						4	
Zambia						0	
Zimbabwe						3	

Microscopy (a)	Use of smear microscopy for diagnosis
SCC (b)	Short course chemotherapy
DOT (c)	Directly observed therapy
Outcome monitoring (d)	Monitoring of treatment outcomes by cohort analysis
Drug supply (e)	A system of TB drug forecasting, financing, and procurement
*	See table 1 for definition of categories

dark green	implemented in all units/areas
light green	implemented in some units/areas
grey	not implemented
white	unknown or not applicable (decentralized drug supply system)

Regional Profile for Africa: notification, detection and DOTS coverage, 1999

Country/Territory	Country information								WHO TB control strategy (DOTS)						Other Strategy (non-DOTS)					
	Pop	Notifications				Est	CDR	DOTS	%	Notifications				% of	%	Notifications				% of
		all cases		New ss+				cate-	of	all cases		New ss+		pulm	of	all cases		New ss+		pulm
	thousands	number	rate	number	rate	new ss+	%	gory	pop	number	rate	number	rate	cases ss+	pop	number	rate	number	rate	cases ss+
	a	b	b/a	c	c/a	d	c/d	e	f	g	g/f*a	h	h/f*a	l	j	k	k/j*a	l	l/j*a	m
Algeria	30 774	14 788	48	6 974	23	6 290	111	1	0						100	14 788	48	6 974	23	83
Angola	12 479	16 098	129	9 242	74	14 850	62	3	36	16 098	46	9 242	206	69	64					
Benin	5 937	2 751	46	2 192	37	6 971	31	4	100	2 751	46	2 192	37	95	0					
Botswana	1 597	8 195	513	2 855	179	4 419	65	4	100	8 195	513	2 855	179	42	0					
Burkina Faso	11 616	2 134	18	1 411	12	15 878	9	4	100	2 134	18	1 411	12	88	0					
Burundi	6 565	6 365	97	2 924	45	10 505	28	4	100	6 365	97	2 924	45	59	0					
Cameroon	14 693	7 660	52	5 832	40	20 997	28	3	36	2 818	7	2 003	38	81	64	4 842	52	3 829	41	85
Cape Verde	418					317		0												
Central African Rep	3 550	5 003	141	2 725	77	6 107	45	1	0						100	5 003	141	2 725	77	68
Chad	7 458	4 710	63	2 920	39	8 844	33	4	100	4 710	63	2 920	39	77	0					
Comoros	676					193		0												
Congo	2 864	5 023	175	2 222	78	3 911	57	1	0						100	5 023	175	2 222	78	59
Côte d'Ivoire	14 526	15 056	104	10 047	69	22 854	44	3	10	15 056	10	10 047	692	86	90					
DR Congo	50 335	59 531	118	34 923	69	65 445	53	3	62	59 531	73	34 923	112	81	38					
Equatorial Guinea	442					477		0												
Eritrea	3 719	6 037	162	527	14	4 443	12	3	60	6 037	97	527	24	10	40					
Ethiopia	61 095	72 095	118	21 457	35	95 726	22	3	63	72 095	74	21 457	56	44	37					
Gabon	1 197	1 598	134	916	77	1 504	61	1	0						100	1 598	134	916	77	65
Gambia	1 268					1 458		0												
Ghana	19 678	10 352	53	6 823	35	24 199	28	3	70	8 326	30	5 605	41	76	30	2 026	34	1 218	21	65
Guinea	7 360	5 050	69	3 562	48	8 317	43	4	100	5 050	69	3 562	48	89	0					
Guinea-Bissau	1 187					1 397		0												
Kenya	29 549	57 266	194	27 197	92	50 992	53	4	100	57 266	194	27 197	92	57	0					
Lesotho	2 108					4 604		0												
Liberia	2 930					3 490		0												
Madagascar	15 497					16 465		0												
Malawi	10 640	24 384	229	8 130	76	19 388	42	4	100	24 384	229	8 130	76	45	0					
Mali	10 960	4 473	41	2 690	25	12 645	21	3	86	3 998	31	2 368	25	76	14	475	31	322	21	80
Mauritania	2 598	3 649	140	2 051	79	2 808	73	3	50	2 464	47	1 389	107	77	50	1 185	91	662	51	73
Mauritius	1 150	174	15	119	10	348	34	4	100	174	15	119	10	79	0					
Mozambique	19 286					32 610		0												
Namibia	1 695	7 951	469	3 550	210	3 377	105	4	100	7 951	469	3 550	210	59	0					
Niger	10 400					11 659		0												
Nigeria	108 945	24 143	22	15 903	15	141 651	11	3	45	24 143	10	15 903	32	74	55					
Rwanda	7 235	6 483	90	4 298	59	11 539	37	4	100	6 483	90	4 298	59	83	0					
Sao Tome & Principe	144	97	67			81		1	0						100	97	67			
Senegal	9 240	7 282	79	5 011	54	10 545	48	4	100	7 282	79	5 011	54	81	0					
Seychelles	77					14		0												
Sierra Leone	4 717					5 661		0												
South Africa	39 900	129 055	323	78 071	196	80 274	97	3	66	90 278	149	54 404	207	82	34	38 777	286	23 667	174	80
St. Helena	6					0		0												
Swaziland	980					2 219		0												
Togo	4 512					6 068		0												
Uganda	21 143	34 994	166	18 149	86	30 769	59	4	100	34 994	166	18 149	86	59	0					
UR Tanzania	32 793	52 437	160	24 125	74	47 405	51	4	100	52 437	160	24 125	74	59	0					
Zambia	8 976					18 061		0												
Zimbabwe	11 529	50 138	435	14 414	125	26 007	55	3	12	50 138	50	14 414	1078	34	88					

Regional Profile for Africa, cont'd: treatment outcomes for cases registered in 1998 - WHO TB control strategy (DOTS) and other (non-DOTS) control strategies

Country/Territory	New smear-positive cases - DOTS									Retreatment cases - DOTS									New smear-positive cases - non-DOTS								
	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success
	a	c	d	e	f	g	h	b	c+d	i	k	l	m	n	o	p	j	k+l	q	s	t	u	v	w	x	r	s+t
Algeria																			2 490	70		3	6	4	6	11	70
Angola	2626	41	27	4	3	24	1	0	68																		
Benin	1950	57	20	5	2	15	2	0	77	198	49	22	5	2	22	1	0	71									
Botswana	3921	19	29	5	1	21	26	0	47	286	26	38	9	1	16	10	0	63									
Burkina Faso	1331	51	8	13	2	15	7	4	59	32	78	9	13	0	0		0	88									
Burundi	2733	29	45	4	0	22	1	0	74	363	34	34	7	2	22	1	0	68									
Cameroon	971	70	5	10	3	12	1	0	75	123	65	2	8	3	15	6	0	67									
Cape Verde																											
Central African Rep																											
Chad	2433	35	29	5	3	23	5	0	64																		
Comoros																											
Congo																											
Côte d'Ivoire	9569	55	7	0	2	18	13	5	62	551	46	9	8	6	24	7	0	55									
DR Congo	33442	58	12	5	1	9	8	6	70	5 820	25	6	8	3	9	11	38	31									
Equatorial Guinea																											
Eritrea	272	69	4	11	4	9	2	0	73	80	75	6	3	3	6	8	0	81									
Ethiopia	14836	54	20	6	1	13	4	1	74	758	46	14	8	3	7	3	18	60									
Gabon																			577	44	6		0	13	3	34	50
Gambia																											
Ghana	6061	52	7	9	2	19	5	5	59										1 227	20	8	5	2	17	1	45	28
Guinea	3362	62	11	7	1	9	9	1	73	146	53	6	8	4	14	15	0	60									
Guinea-Bissau																											
Kenya	21885	63	14	5	0	11	7	0	77	1 541	55	9	7	1	10	4	14	64									
Lesotho																											
Liberia																											
Madagascar																											
Malawi	8824	66	3	22	1	4	4	0	69	609	63	2	27	1	3	4	0	65									
Mali	1381	48	22	4	1	21	4	0	70	88	55	10	8	0	19	6	2	65									
Mauritania																											
Mauritius	105	86	6	2	1	6		0	91	4	50	25		25			0	75									
Mozambique																											
Namibia	3592	45	16	5	2	15	6	12	60	659	34	19	10	3	13	6	16	53									
Niger																											
Nigeria	13161	59	14	6	3	14	3	2	73	1 464	66	12	7	4	8	2	1	78									
Rwanda	5156	56	16	9	1	5	7	7	72	332	53	11	11	2	7	8	9	64									
Sao Tome & Principe																											
Senegal	5454	42	7	3	1	23	4	21	48	627	50	6	4	2	36	3	0	56									
Seychelles																											
Sierra Leone																											
South Africa	34432	68	7	6	2	7	12	0	74	4 718	57	13	12	3	10	5	0	71	2 657	30	17	5	1	13	34	0	47
St. Helena																											
Swaziland																											
Togo																											
Uganda	13236	31	31	8	0	19	5	5	62	1 573	31	29	12	1	20	6	0	60									
UR Tanzania	23726	70	6					24	76	1 450	66	6	11	2	7	6	2	73									
Zambia																											
Zimbabwe	12748	50	19	10	0	8	12	0	70																		

Regional profile for Africa, cont'd: age and sex distribution of smear-positive cases in DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Algeria																					
Angola	391	1 134	1 237	973	518	314	234	459	1 197	1 157	743	474	217	194	850	2 331	2 394	1 716	992	531	428
Benin	14	250	444	293	207	124	85	28	207	254	153	74	39	30	42	457	698	446	281	163	115
Botswana	18	177	526	492	274	139	93	46	274	434	225	90	30	37	64	451	960	717	364	169	130
Burkina Faso	13	85	247	216	118	83	56	8	67	141	92	63	39	20	21	152	388	308	181	122	76
Burundi	64	349	566	492	281	102	57	66	291	253	236	109	30	28	130	640	819	728	390	132	85
Cameroon	11	256	503	318	142	82	32	20	206	219	138	44	26	6	31	462	722	456	186	108	38
Cape Verde																					
Central African Republic																					
Chad	20	172	414	957	477	42	4	13	28	230	458	78	16	11	33	200	644	1 415	555	58	15
Comoros																					
Congo																					
Côte d'Ivoire	98	1 069	1 794	1 240	629	378	251	132	1 022	1 137	644	260	186	112	230	2 091	2 931	1 884	889	564	363
DR Congo	474	4 061	5 886	4 191	2 250	1 279	626	708	4 472	4 991	3 117	1 725	836	305	1 182	8 533	10 877	7 308	3 975	2 115	931
Equatorial Guinea																					
Eritrea	3	55	75	49	51	30	17	3	65	94	34	30	17	7	6	120	169	83	81	47	24
Ethiopia	692	3 916	3 673	1 925	1 045	471	230	798	3 310	2 949	1 539	713	225	69	1 490	7 226	6 622	3 464	1 758	696	299
Gabon																					
Gambia																					
Ghana	54	487	927	830	622	316	319	64	416	623	403	252	151	141	118	903	1 550	1 233	874	467	460
Guinea	30	434	736	519	294	173	104	44	345	395	259	110	78	41	74	779	1 131	778	404	251	145
Guinea-Bissau																					
Kenya	237	3 835	6 078	3 349	1 545	645	405	373	3 850	3 997	1 596	760	348	179	610	7 685	10 075	4 945	2 305	993	584
Lesotho																					
Liberia																					
Madagascar																					
Malawi	43	588	1 475	1 083	588	239	126	80	1 052	1 487	777	376	154	62	123	1 640	2 962	1 860	964	393	188
Mali	16	204	431	392	250	189	119	21	146	205	149	106	83	57	37	350	636	541	356	272	176
Mauritania	9	198	314	201	134	85	67	5	114	89	89	62	29	14	14	312	403	290	196	114	81
Mauritius	0	7	20	15	13	12	12	0	13	7	7	8	2	3	0	20	27	22	21	14	15
Mozambique																					
Namibia	20	231	847	582	248	123	106	27	318	512	232	107	72	34	47	549	1 359	814	355	195	140
Niger																					
Nigeria	156	2 075	3 011	1 783	1 027	551	394	252	2 205	2 248	1 015	666	332	188	408	4 280	5 259	2 798	1 693	883	582
Rwanda	93	245	530	424	224	70	31	59	189	262	166	49	31	5	152	434	792	590	273	101	36
Sao Tome and Principe																					
Senegal	50	721	1 070	749	424	233	185	58	441	434	298	184	106	58	108	1 162	1 504	1 047	608	339	243
Seychelles																					
Sierra Leone																					
South Africa	36	520	1 401	1 564	802	368	175	59	814	1 139	659	251	125	87	95	1 334	2 540	2 223	1 053	493	262
St. Helena																					
Swaziland																					
Togo																					
Uganda	310	1 510	3 475	2 526	1 354	613	413	434	1 654	2 591	1 415	680	331	162	744	3 164	6 066	3 941	2 034	944	575
UR Tanzania	170	2 422	4 887	3 401	2 068	1 160	823	230	2 160	3 469	1 724	876	501	232	400	4 582	8 356	5 125	2 944	1 661	1 055
Zambia																					
Zimbabwe																					
Regional total	**3 022**	**25 001**	**40 567**	**28 564**	**15 585**	**7 821**	**4 964**	**3 987**	**24 856**	**29 317**	**16 168**	**8 147**	**4 004**	**2 082**	**7 009**	**49 857**	**69 884**	**44 732**	**23 732**	**11 825**	**7 046**

Regional profile for Africa, cont'd: age and sex distribution of smear-positive cases in non-DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Algeria	40	1 193	1 344	556	706	263	315	92	884	621	281	221	243	329	132	2 077	1 965	837	927	506	644
Angola																					
Benin																					
Botswana																					
Burkina Faso																					
Burundi																					
Cameroon	38	346	1 092	418	291	84	27	27	300	564	367	191	69	15	65	646	1 656	785	482	153	42
Cape Verde																					
Central African Rep	28	224	529	367	123	67	65	72	376	498	196	86	52	42	100	600	1 027	563	209	119	107
Chad																					
Comoros																					
Congo	17	272	407	229	99	39	27	25	297	348	143	83	24	22	42	569	755	372	182	63	49
Côte d'Ivoire																					
DR Congo																					
Equatorial Guinea																					
Eritrea																					
Ethiopia																					
Gabon	14	98	158	129	76	43	32	15	97	110	67	32	30	14	29	195	268	196	108	73	46
Gambia																					
Ghana	10	99	205	178	145	73	70	16	75	130	89	50	41	39	26	174	335	267	195	114	109
Guinea																					
Guinea-Bissau																					
Kenya																					
Lesotho																					
Liberia																					
Madagascar																					
Malawi																					
Mali	3	31	44	37	65	27	10	0	34	21	22	14	13	1	3	65	65	59	79	40	11
Mauritania	6	92	136	61	43	28	25	2	43	29	21	14	14	6	8	135	165	82	57	42	31
Mauritius																					
Mozambique																					
Namibia																					
Niger																					
Nigeria																					
Rwanda																					
Sao Tome & Principe																					
Senegal																					
Seychelles																					
Sierra Leone																					
South Africa	16	104	296	270	164	66	46	16	158	245	120	63	34	23	32	262	541	390	227	100	69
St. Helena																					
Swaziland																					
Togo																					
Uganda																					
UR Tanzania																					
Zambia																					
Zimbabwe																					
Regional total	**172**	**2 459**	**4 211**	**2 245**	**1 712**	**690**	**617**	**265**	**2 264**	**2 566**	**1 306**	**754**	**520**	**491**	**437**	**4 723**	**6 777**	**3 551**	**2 466**	**1 210**	**1 108**

Regional profile for Africa, cont'd: smear-positive notification rates by age and sex, 1999

	MALE							FEMALE							ALL						
	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+
Algeria	0.7	35.8	53.9	31.9	66.0	45.2	59.4	1.6	27.5	25.8	16.5	21.5	38.2	53.4	1.2	31.7	40.1	24.3	44.2	41.5	56.1
Angola	13.2	97.0	162.0	186.3	146.7	137.6	146.7	15.5	101.5	147.3	135.7	125.3	85.2	97.8	14.3	99.3	154.6	160.4	135.6	110.0	119.6
Benin	1.0	42.5	121.1	116.1	124.9	136.7	101.8	2.0	34.7	65.9	50.6	42.6	38.7	35.3	1.5	38.6	92.8	80.4	82.8	85.1	68.2
Botswana	5.3	102.6	442.7	643.1	707.0	628.6	657.9	13.7	159.4	366.1	286.3	182.2	90.7	147.6	9.4	131.0	404.4	462.3	412.9	306.2	331.6
Burkina Faso	0.5	7.4	31.7	46.9	39.9	43.1	40.9	0.3	5.8	18.2	19.7	20.0	17.9	12.0	0.4	6.6	25.0	33.2	29.6	29.7	25.0
Burundi	4.2	55.4	131.6	158.0	173.0	126.8	84.5	4.3	45.5	57.2	71.9	56.0	25.9	26.0	4.3	50.4	93.9	113.8	109.2	67.3	48.5
Cameroon	0.8	20.5	81.0	56.9	49.3	27.8	12.2	0.7	17.3	39.3	37.9	25.2	14.5	3.6	0.7	18.9	60.1	47.3	36.9	20.8	7.5
Cape Verde																					
Central African Republic	3.7	65.0	233.1	227.5	115.6	93.8	110.7	9.5	104.7	203.8	111.4	70.9	60.7	52.9	6.6	85.3	217.9	167.0	91.8	75.8	77.4
Chad	1.2	25.0	86.4	286.5	217.4	28.7	3.6	0.8	4.0	47.4	133.1	33.3	9.7	7.8	1.0	14.4	66.8	208.7	122.4	18.6	5.9
Comoros																					
Congo	2.6	99.7	219.2	193.8	133.2	79.6	67.1	3.8	104.8	178.7	112.5	99.6	42.2	42.6	3.2	102.3	198.5	151.6	115.5	59.5	53.3
Côte d'Ivoire	3.1	69.3	177.8	183.4	138.5	124.3	115.9	4.2	66.7	118.5	104.8	66.6	70.8	54.7	3.6	68.0	148.9	146.0	105.3	99.5	86.2
DR Congo	3.9	86.3	187.6	202.3	166.4	148.9	103.5	5.9	94.5	156.2	145.8	118.4	83.2	37.5	4.9	90.4	171.8	173.6	141.5	113.5	65.6
Equatorial Guinea																					
Eritrea	0.4	15.5	29.3	28.1	44.0	40.9	35.9	0.4	18.3	36.4	19.0	24.7	21.3	11.9	0.4	16.9	32.9	23.5	34.1	30.7	22.5
Ethiopia	4.9	67.1	89.1	68.0	56.7	41.4	29.9	5.7	58.0	74.4	56.6	39.3	18.9	7.1	5.3	62.6	81.9	62.4	48.0	29.9	17.1
Gabon	5.8	96.7	208.3	218.2	157.4	122.2	100.8	6.3	95.2	143.0	110.9	63.4	76.2	36.6	6.1	95.9	175.4	164.0	109.4	97.9	65.8
Gambia																					
Ghana	0.7	15.1	42.4	54.2	62.8	51.3	69.4	0.9	12.7	27.9	25.8	23.6	23.3	27.0	0.8	13.9	35.1	39.8	42.8	36.8	46.4
Guinea	1.8	58.3	146.0	149.2	131.2	129.7	112.6	2.7	47.6	79.7	75.4	48.2	53.6	37.7	2.3	53.0	113.1	112.6	89.3	90.0	72.1
Guinea-Bissau																					
Kenya	3.6	114.8	290.4	258.6	208.9	157.6	100.8	5.8	117.2	193.4	123.1	97.9	76.0	37.1	4.7	116.0	242.2	190.8	152.0	114.5	66.1
Lesotho																					
Liberia																					
Madagascar																					
Malawi	1.7	55.7	215.3	251.3	218.2	140.7	101.1	3.2	101.1	210.5	168.1	120.9	75.7	39.2	2.4	78.2	212.9	208.3	166.1	105.3	66.5
Mali	0.4	10.5	35.4	51.1	57.1	56.5	36.8	0.4	8.0	16.8	19.4	19.2	21.0	12.5	0.4	9.2	26.1	34.8	37.0	37.1	23.0
Mauritania	1.3	56.1	128.2	108.4	108.7	120.5	126.3	0.6	30.6	33.3	43.3	44.8	41.2	20.7	1.0	43.4	80.5	75.0	76.1	78.7	66.1
Mauritius	0.0	6.5	20.6	15.9	20.9	36.7	40.0	0.0	12.4	7.6	7.7	12.6	5.4	7.3	0.0	9.4	14.3	11.8	16.7	20.0	21.1
Mozambique																					
Namibia	5.6	138.2	715.4	710.6	448.0	344.0	360.6	7.7	192.6	433.6	279.9	183.4	177.6	95.5	6.7	165.2	574.7	493.9	312.2	255.6	215.4
Niger																					
Nigeria	0.7	19.0	39.3	36.7	32.2	25.3	26.6	1.1	20.1	28.8	20.2	19.6	13.8	10.4	0.9	19.6	34.0	28.3	25.7	19.2	17.7
Rwanda	5.6	32.3	107.6	141.9	122.6	60.7	41.7	3.6	24.4	52.2	53.7	25.0	24.0	5.1	4.6	28.3	79.6	97.1	72.1	41.3	20.8
Sao Tome and Principe																					
Senegal	2.4	78.6	172.0	174.3	152.6	138.3	182.6	2.8	48.4	69.4	68.0	63.9	56.3	45.2	2.6	63.5	120.6	120.6	107.4	95.1	105.8
Seychelles																					
Sierra Leone																					
South Africa	0.4	8.0	26.8	37.1	30.2	24.2	20.8	0.5	12.3	21.6	15.9	9.3	7.2	6.2	0.5	10.2	24.2	26.5	19.5	14.8	11.7
St. Helena																					
Swaziland																					
Togo																					
Uganda	5.9	70.5	251.6	312.4	301.3	252.1	205.6	8.2	76.9	188.1	173.6	140.2	117.3	66.0	7.0	73.7	219.9	242.7	217.7	179.7	128.9
UR Tanzania	2.3	73.5	216.8	244.6	237.1	212.5	216.0	3.1	65.1	148.4	120.0	93.9	82.7	49.6	2.7	69.3	182.0	181.3	163.1	144.2	124.3
Zambia																					
Zimbabwe																					
Regional rate	**2.4**	**44.5**	**104.1**	**106.2**	**92.8**	**73.8**	**67.1**	**3.2**	**44.0**	**73.8**	**59.5**	**45.6**	**34.8**	**24.0**	**2.8**	**44.3**	**88.9**	**82.7**	**68.6**	**53.1**	**42.8**

Regional profile for Africa, cont'd: number of TB cases notified, 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Algeria	2 702		13 916	13 681	13 133	13 832	12 917	11 212	11 325	11 039	11 607	11 332	11 428	13 345	13 345	13 507		16 522	15 324	14 788
Angola	10 117	7 501	7 911	6 625	10 153	8 653	9 363	8 510	8 184	9 587	10 271	11 134	11 272	8 269	7 157	7 982	15 424	14 326	12 293	16 098
Benin	1 835	1 862	1 793	1 804	1 913	2 041	2 162	1 901	2 027	1 941	2 084	2 162	2 420	2 340	2 119	2 400	2 372	1 939	2 384	2 751
Botswana	2 662	2 605	2 705	2 883	3 101	2 706	2 627	3 173	2 740	2 532	2 938	3 274	4 179	4 654	4 756	5 655	6 636	6 919	4 764	8 195
Burkina Faso	2 577	2 391	2 265	3 061	877	4 547	1 018	1 407	949	1 616	1 497	1 488		1 443	861	2 572	1 814	1 643	2 074	2 134
Burundi	789	643	951	1 053	1 904	2 317	2 569	2 739	3 745	4 608	4 575	4 883	4 464	4 677	3 840	3 326	3 796	5 335	6 546	6 365
Cameroon	2 434	2 236	3 765	3 445	3 338	3 393	2 138	3 878	4 982	5 521	5 892	6 814	6 803	7 064	7 312	3 292	3 049	3 952	5 022	7 660
Cape Verde	516	344	393	230	285	259		285	276	210	221					303	179	196	205	
Central African Rep	651	758	1 475	1 686	468	520	779	499	814	64	2 124	2 045				3 339	3 623	4 459	4 875	5 003
Chad	220	286	127	1 977	1 430	1 486	1 285	1 086	2 977	2 572	2 591	2 912	2 684	2 871	3 303	3 186	1 936	2 180	2 784	4 710
Comoros									212	139	140	119	108	129	115	129	140		130	
Congo	742	1 214	3 716	4 156	2 776	2 648	3 120	3 473	3 878	4 363	591	618	1 179	1 976	2 992	3 615	4 469	3 417	3 863	5 023
Côte d'Ivoire	4 197	4 418	5 000	6 000	6 062	5 729	6 072	6 422	6 556	6 982	7 841	8 021	9 093	9 563	14 000	11 988	13 104	13 802	14 841	15 056
DR Congo	5 122	3 051	9 905	13 021	20 415	26 082	27 665	27 096	30 272	31 321	21 131	33 782	37 660	36 647	38 477	42 819	45 999	45 576	58 894	59 531
Equatorial Guinea					181	17	1	11	20	157	260	331	262	309	356	306	319	366	416	
Eritrea											3 699		4 386	11 664	15 505	21 453	5 220	8 321	7 789	6 037
Ethiopia	40 096	42 423	52 403	56 824	65 045	71 731	80 846	85 867	95 521	80 795	88 634	60 006	60 006	0	99 329	26 034	183 375	59 105	69 472	72 095
Gabon	865	796	761	752	654	855	769	864	721	912	917	906	926	972	1 034	1 115	951	1 434	1 380	1 598
Gambia	239	58														1 023	1 242	1 357	1 558	
Ghana	5 207	4 041	4 345	2 651	1 935	3 235	3 925	5 877	5 297	6 017	6 407	7 136	7 044	8 569	17 004	4 131	10 449	10 745	10 173	10 352
Guinea		1 884	1 469	832	1 203	1 317	1 128	1 214	1 740	1 869	1 988	2 267	2 941	3 167	3 300	3 465	4 286	4 326	4 783	5 050
Guinea-Bissau	645	465	205	376	368	530	1 310	752	778	1 362	1 163	1 246	1 059	1 558	1 647	1 748	1 728			
Kenya	11 049	10 027		11 966		10 460	10 022	10 515	10 957	12 592	11 788	12 320	14 599	20 451	22 930	28 142	34 980	39 738	48 936	57 266
Lesotho	4 082	3 830	4 932	3 443	2 923	2 927	21	225	2 346	2 463	2 525	2 994	3 327	3 384	4 334	4 846	4 361	5 481	6 002	
Liberia	774	1 002	835	885		425	232	384	894				1 948	1 766	1 764	1 393	840		1 753	
Madagascar	9 082	7 464	3 573	3 588	8 673	3 220	3 717	4 007	4 393	5 417	6 261	6 015	8 126	9 855	10 671	21 616	12 718		14 661	
Malawi	4 758	5 033	4 411	4 707	4 404	5 334	6 301	7 581	8 247	9 431	12 364	14 322	15 183	17 105	19 496	19 155	20 630	20 676	22 764	24 384
Mali	839	933	187	532	1 872	1 621	1 851	2 534	2 578	1 626	2 933	2 631	3 113	3 204	3 075	3 087	3 655	5 022	4 142	4 473
Mauritania	7 576	9 427	2 327	2 333	3 977	4 406	2 257	3 722	3 928	4 040	5 284	3 064	4 316	3 996		3 849		3 788		3 649
Mauritius	132	157	121	152	118	111	119	117	114	129	119	134	130	159	149	153			135	174
Mozambique	7 457	6 984	5 787	5 937	5 204	5 645	8 263	10 996	13 863	15 958	15 899	16 609	15 085	16 588	17 158	17 882	18 443	18 842	19 672	
Namibia						4 840	4 427	3 640	2 815	3 703	2 671	2 500	1 756	5 500		1 540	6 773	6 004	7 972	7 951
Niger	717	2 871	754	673	665	698	570	556	631	608	5 200			626	3 784	1 980		3 812	3 470	
Nigeria	9 877	10 838	10 949	10 212	11 439	14 937	14 071	19 723	25 700	13 342	20 122	19 626	14 802	11 601	8 449	13 423	24 065	16 660	20 249	24 143
Rwanda	1 495	1 386		1 364	1 419	1 327	2 460	3 287	4 145	4 741	6 387	3 200				3 054	3 535	4 710	6 112	6 483
Sao Tome & Principe	131	37	40	59	49	40	8	55	13		17	120								97
Senegal	2 014	2 573	1 612	2 417		1 065	927	6 145	5 611	5 965	4 977	6 781	7 408	6 841	6 913	7 561	8 525	8 232	8 475	7 282
Seychelles	16	0	16	16	10	10	24	14	10	6	41			5		9	15	20	11	
Sierra Leone	750	847	889	293	816	865	358	130	120		632	1 466	1 665	2 691	2 564	1 955	3 241	3 160	3 270	
South Africa	55 310	59 943	64 115	62 556	62 717	59 349	55 013	57 406	61 486	68 075	80 400	77 652	82 539	89 786	90 292	86 924	91 578	105 169	128 415	129 055
St. Helena																				
Swaziland		143	3 059	1 955				1 098	1 352	1 394		1 531		1 458		2 055	3 893			
Togo	208	126	204	174	343	745	596	1 184	1 071	940	1 324	1 243	1 223	1 005	1 137	3 031	1 654	0	1 212	
Uganda	1 058	1 170	497	2 029			1 392	1 464	3 066	1 045	14 740	19 016	20 662	21 579	26 994	25 476	27 356	27 725	29 228	34 994
UR Tanzania	5 103	6 964	11 748	11 783	12 092	13 698	15 452	16 920	18 206	19 262	22 249	25 210	28 462	31 460	34 799	39 847	44 416	46 433	51 231	52 437
Zambia	5 342	6 070	6 519	6 948	6 500	6 747	7 909	11 525	12 876	14 239	22 902	23 373	25 732	36 889	35 222	12 744	40 417			
Zimbabwe	4 057	4 051	4 577	3 881	5 694	4 759	5 233	5 848	6 002	6 822	9 132	11 710	16 237	20 125	23 959	30 831	35 735	43 762	47 277	50 138
Total	**213 443**	**218 852**	**240 257**	**258 960**	**264 156**	**295 127**	**300 917**	**335 342**	**373 438**	**365 405**	**424 538**	**411 993**	**434 227**	**425 291**	**550 142**	**493 941**	**696 941**	**565 154**	**654 557**	**644 972**
number reporting	40	41	39	41	37	41	41	43	44	41	43	40	37	41	37	45	41	38	41	31
percent reporting	85	87	83	87	79	87	87	91	94	87	91	85	79	87	79	96	87	81	87	66

Regional profile for Africa, cont'd: case notification rates (per 100 000 population), 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Algeria	14		70	66	62	63	57	49	48	45	47	44	44	50	49	48		56	51	48
Angola	144	104	107	87	130	108	114	101	94	107	111	117	114	81	68	73	136	122	102	129
Benin	53	52	49	48	49	51	52	45	46	43	45	45	49	46	41	45	43	34	41	46
Botswana	294	277	278	286	297	250	235	274	229	205	230	249	308	333	331	384	440	449	303	513
Burkina Faso	37	34	31	41	11	58	13	17	11	18	17	16		15	9	25	17	15	18	18
Burundi	19	15	22	24	41	49	53	55	73	87	84	87	78	79	64	54	61	84	101	97
Cameroon	28	25	41	37	34	34	21	37	46	50	51	58	56	57	57	25	23	28	35	52
Cape Verde	178	118	133	77	94	84		89	84	63	65					80	46	49	50	
Central African Rep	28	32	61	68	18	20	29	18	29	2	72	68				102	108	130	140	141
Chad	5	6	3	41	29	29	25	20	54	46	45	49	44	46	51	48	28	31	38	63
Comoros									43	27	27	22	19	23	20	21	23		20	
Congo	45	71	210	229	149	138	158	171	185	202	27	27	50	82	120	141	170	126	139	175
Côte d'Ivoire	51	52	57	65	64	58	59	61	60	62	67	67	73	75	106	89	95	98	104	104
DR Congo	19	11	34	44	67	82	85	80	87	87	57	87	93	87	88	94	98	95	120	118
Equatorial Guinea					62	6	0	3	6	46	74	92	71	82	92	77	78	87	97	
Eritrea											128		148	385	501	673	158	242	218	162
Ethiopia	110	114	138	146	163	174	191	196	212	173	184	121	118	0	184	47	323	102	117	118
Gabon	125	112	104	99	84	107	93	101	82	101	98	94	94	95	99	104	86	126	118	134
Gambia	37	9														92	108	114	127	
Ghana	48	36	38	22	16	25	29	43	37	41	42	46	44	52	99	23	58	58	53	53
Guinea		41	32	18	25	26	22	23	32	34	35	38	46	48	48	48	59	59	65	69
Guinea-Bissau	81	57	25	44	43	61	147	83	84	143	120	125	104	150	155	161	156			
Kenya	66	58		65		53	49	49	50	55	50	51	58	79	86	103	126	140	169	194
Lesotho	303	277	348	237	196	192	1	14	143	146	147	170	185	184	230	252	221	272	291	
Liberia	41	52	42	43		19	10	16	36				83	80	84	67	38		66	
Madagascar	102	82	38	37	88	32	36	38	40	48	54	50	65	77	80	157	90		97	
Malawi	77	79	68	70	64	74	83	94	96	105	132	151	159	179	203	198	210	205	220	229
Mali	12	13	3	7	24	21	23	31	30	19	33	29	34	34	32	31	36	48	39	41
Mauritania	489	593	143	139	231	250	124	200	205	205	261	147	202	181		165		154		140
Mauritius	14	16	12	15	12	11	12	11	11	12	11	13	12	15	14	14			12	15
Mozambique	62	56	45	45	39	42	61	80	101	115	112	113	99	104	103	103	103	102	104	
Namibia						411	366	293	220	282	198	180	123	376		100	428	370	480	469
Niger	13	50	13	11	10	11	8	8	9	8	67			7	43	22		39	34	
Nigeria	15	16	16	14	16	20	18	25	31	16	23	22	16	12	9	14	24	16	19	22
Rwanda	29	26		24	24	22	39	50	60	67	91	48				58	65	79	93	90
Sao Tome & Principe	140	38	41	58	47	38	7	50	12		14	99								67
Senegal	36	45	28	40		17	14	91	81	84	68	90	96	86	85	91	100	94	94	79
Seychelles	25	0	25	25	15	15	36	21	15	9	59			7		12	20	27	15	
Sierra Leone	23	26	26	9	23	24	10	4	3		16	36	41	66	62	47	76	72	72	
South Africa	201	213	223	213	209	193	175	179	188	204	236	224	233	249	245	232	240	271	326	323
St. Helena																				
Swaziland		25	515	319				159	191	191		197		177		236	433			
Togo	8	5	7	6	12	25	19	37	32	28	38	34	33	26	29	75	40	0	28	
Uganda	8	9	4	14			9	10	20	7	90	113	119	121	147	135	141	139	142	166
UR Tanzania	28	36	59	58	57	63	69	73	76	78	87	96	104	112	120	133	145	148	160	160
Zambia	93	103	108	113	104	105	121	172	187	202	316	315	338	473	440	156	482			
Zimbabwe	57	55	60	50	70	57	60	65	65	71	93	116	157	192	224	284	324	390	416	435
Total	**58**	**58**	**62**	**65**	**64**	**69**	**69**	**75**	**81**	**77**	**87**	**82**	**84**	**80**	**101**	**88**	**122**	**96**	**109**	**105**

Regional profile for Africa, cont'd: new smear-positive cases, 1993-99

	Number of cases							Rate (per 100 000 population)						
Country/territory	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Algeria		6 793	5 735		7 740	7 462	6 974		25	20		26	25	23
Angola	4 874	4 337	5 951	8 016	8 201	7 350	9 242	48	41	54	71	70	61	74
Benin	1 653	1 618	1 839	1 868	1 939	1 988	2 192	33	31	34	34	34	34	37
Botswana	1 508	1 668	1 903	2 393	2 442	2 826	2 855	108	116	129	159	159	180	179
Burkina Faso		561	1 028	1 381	1 126	1 331	1 411		6	10	13	10	12	12
Burundi	1 861	1 527	1 121	1 533	2 022	2 782	2 924	32	25	18	24	32	43	45
Cameroon	2 316	1 883	2 896	2 312	3 548	4 374	5 832	19	15	22	17	25	31	40
Cape Verde			111	117	103	104				29	30	26	25	
Central African Republic			1 794	1 992	2 267	2 637	2 725			55	59	66	76	77
Chad			2 002	870			2 920			30	13			39
Comoros			105	111		94				17	18		14	
Congo		1 691	2 013	2 505	1 984	2 044	2 222		68	79	95	73	73	78
Côte d'Ivoire	7 012		8 254	8 927	9 093	9 850	10 047	55		61	65	65	69	69
DR Congo	14 924		20 084	24 125	25 183	33 419	34 923	35		44	52	52	68	69
Equatorial Guinea			219	209	226	284				55	51	54	66	
Eritrea					109	223	527					3	6	14
Ethiopia		5 752	9 040	15 694	15 957	18 864	21 457		11	16	28	27	32	35
Gabon		395	486	263	577	889	916		38	45	24	51	76	77
Gambia			778	743	820	900				70	65	69	73	
Ghana		5 778	2 638	6 474	7 287	7 005	6 823		34	15	36	39	37	35
Guinea	2 082	2 158	2 263	2 844	2 981	3 362	3 562	31	31	32	39	41	46	48
Guinea-Bissau			956	922						88	83			
Kenya	10 149	11 324	13 934	16 978	19 040	24 029	27 197	39	43	51	61	67	83	92
Lesotho	1 405	1 330	1 361	1 788	2 398	2 476		76	71	71	91	119	120	
Liberia	1 547		1 154	668		1 190		70		55	30		45	
Madagascar	6 881	7 366	8 026	8 456		9 639		54	55	58	60		64	
Malawi		5 988	6 293	6 703	7 587	8 853	8 130		62	65	68	75	86	76
Mali		1 740	1 866	2 173	3 178	2 558	2 690		18	19	21	30	24	25
Mauritania			2 074		2 519		2 051			89		102		79
Mauritius			131			108	119			12			9	10
Mozambique	9 526	9 677	10 566	10 478	11 116	12 116		59	58	61	58	60	64	
Namibia			697	2 820	2 674	3 490	3 550			45	178	165	210	210
Niger	463	1 865	1 492		2 779	2 127		5	21	16		28	21	
Nigeria	1 723		9 476	15 704	11 235	13 161	15 903	2		10	15	11	12	15
Rwanda			1 840	2 034	2 820	4 417	4 298			35	37	47	67	59
Sao Tome and Principe														
Senegal		4 599	5 421	5 940	5 340	5 454	5 011		57	65	69	61	61	54
Seychelles	2		6	9	11	10		3		8	12	15	13	
Sierra Leone		1 408	1 454	2 234	2 296	2 262			34	35	52	52	50	
South Africa			1 408	37 178	55 000	82 293	78 071			4	98	142	209	196
St. Helena														
Swaziland			660	2 226						76	248			
Togo	545		887	913		932		14		22	22		21	
Uganda	11 949	14 763	13 678	15 175	17 268	18 222	18 149	67	80	72	78	86	89	86
UR Tanzania			19 955	21 472	22 010	23 726	24 125			67	70	70	74	74
Zambia		9 620	8 577	12 072					120	105	144			
Zimbabwe	5 331		8 965	11 965	14 512	14 492	14 414	51		82	108	129	127	125
Total	**85 751**	**103 841**	**191 137**	**260 285**	**275 388**	**339 343**	**321 260**	**16**	**19**	**34**	**45**	**47**	**56**	**52**

Notes

Burkina Faso Age/sex data from some units included all cases, rather than smear-positive cases only.

Chad Treatment outcomes were not reported from all DOTS units.

Côte d'Ivoire Age/sex data were incomplete.

Democratic Republic of the Congo (the) Retreatment success was 43% among registered relapses cases. For other retreatment cases, the number registered was not available; the success rate among those evaluated was 25%.

Gabon The number of patients who died was not provided.

Kenya Separate results were provided for 2 283 smear-positive nomadic patients treated under DOTS using a long-course regimen and evaluated at the end of a 4-month inpatient phase: 77% of these patients had converted to smear-negative at 4 months.

Rwanda Age/sex data were based on first semester 1999 only.

São Tome and Principe The standard WHO data collection form was not used.

Senegal Twenty-two percent of sub-national reports were not received.

South Africa Information system did not allow distinction between new and retreatment extrapulmonary cases. Age/sex data following WHO age categories were from 2 of 9 provinces.

Uganda Age/sex data excluded 623 new smear-positive notifications from reporting units where age/sex data were not provided.

Zimbabwe DOTS notification and outcome data combined cases receiving DOT and case receiving unobserved treatment regimens.

THE AMERICAS

The Americas: Summary of TB control policies

Country	Microscopy (a)	SCC (b)	DOT (c)	Outcome monitoring (d)	Drug supply (e)	Category as of 31/12/99*	DOTS newly implemented in 1999
Anguilla						0	
Antigua and Barbuda						5	
Argentina						3	
Bahamas (the)						4	x
Barbados						4	x
Belize						0	
Bermuda						0	
Bolivia						4	
Brazil						2	
British Virgin Islands						0	
Canada						0	
Cayman Islands						5	
Chile						4	
Colombia						3	
Costa Rica						3	x
Cuba						4	
Dominica						0	
Dominican Republic (the)						3	x
Ecuador						3	
El Salvador						3	
Grenada						0	
Guatemala						3	
Guyana						0	
Haiti						3	
Honduras						3	
Jamaica						4	
Mexico						3	
Montserrat						1	
Netherlands Antilles						0	
Nicaragua						4	
Panama						3	
Paraguay						1	
Peru						4	
Puerto Rico						4	
Saint Kitts and Nevis						4	
Saint Lucia						4	
Saint Vincent and the Grenadines						0	
Suriname						1	
Trinidad and Tobago						4	x
Turks and Caicos Islands						4	x
United States of America (the)						4	
United States Virgin Islands						0	
Uruguay						4	
Venezuela						4	

Microscopy (a)	Use of smear microscopy for diagnosis
SCC (b)	Short course chemotherapy
DOT (c)	Directly observed therapy
Outcome monitoring (d)	Monitoring of treatment outcomes by cohort analysis
Drug supply (e)	A system of TB drug forecasting, financing, and procurement
*	See table 1 for definition of categories

dark green	implemented in all units/areas
light green	implemented in some units/areas
grey	not implemented
white	unknown or not applicable (decentralized drug supply system)

Regional Profile for the Americas: notification, detection and DOTS coverage, 1999

Country/Territory	Country information								WHO TB control strategy (DOTS)						Other Strategy (non-DOTS)					
		Notifications								Notifications						Notifications				
	Pop	all cases		New ss+		Est	CDR	DOTS	% of	all cases		New ss+		% of pulm	% of	all cases		New ss+		% of pulm
	thousands	number	rate	number	rate	new ss+	%	cate-gory	pop	number	rate	number	rate	cases ss+	pop	number	rate	number	rate	cases ss+
	a	b	b/a	c	c/a	d	c/d	e	f	g	g/f*a	h	h/f*a	l	j	k	k/j*a	l	l/j*a	m
Anguilla	8					1		0												
Antigua and Barbuda	67	3	4	1	1	3	40	5	0						100	3	5	1	1	50
Argentina	36 577	11 200	31	4 830	13	9 021	54	3	80	3 780	8	1 653	6	53	20	7 420	101	3 177	43	52
Bahamas	301	76	25	35	12	81	43	4	100	76	25	35	12	52	0					
Barbados	269	3	1	2	1	18	11	4	100	3	1	2	1	67	0					
Belize	235					47		0												
Bermuda	64					2		0												
Bolivia	8 142	9 863	121	6 673	82	8 698	77	4	100	9 863	121	6 673	82	80	0					
Brazil	167 988	78 460	47	41 434	25	52 613	79	2	7	4 060	0	2 108	18	61	93	74 400	48	39 326	25	63
British Virgin Islands	21					2		0												
Canada	30 857					922		0												
Cayman Islands	37	2	5	2	5	1	216	5	0						100	2	5	2	5	100
Chile	15 019	3 429	23	1 497	10	1 757	85	4	100	3 429	23	1 497	10	61	0					
Colombia	41 564	10 999	26	8 329	20	9 547	87	3	30	3 628	3	2 842	23	84	70	7 371	25	5 487	19	82
Costa Rica	3 933	851	22	587	15	299	196	3	13	147	0	91	18	71	87	704	21	496	14	87
Cuba	11 160	1 177	11	720	6	760	95	4	100	1 177	11	720	6	75	0					
Dominica	71					6		0												
Dominican Republic	8 364	5 978	71	3 489	42	4 966	70	3	49	446	3	341	8	88	51	5 532	130	3 148	74	68
Ecuador	12 411	6 173	50	4 300	35	9 574	45	3	53	3 525	15	2 483	38	85	47	2 648	45	1 817	31	74
El Salvador	6 154	1 623	26	1 023	17	1 849	55	3	90	1 623	24	1 023	18	73	10					
Grenada	93					3		0												
Guatemala	11 090	3 046	27	2 264	20	4 216	54	3	70	3 046	19	2 264	29	87	30					
Guyana	855					380		0												
Haiti	8 087	9 124	113	6 828	84	12 257	56	3	42	3 857	20	2 933	86	90	58	5 267	112	3 895	83	82
Honduras	6 316	4 544	72	2 406	38	2 585	93	3	33	710	4	376	18	59	67	3 834	91	2 030	48	59
Jamaica	2 560	115	4	92	4	88	105	4	100	115	4	92	4	89	0					
Mexico	97 365	15 466	16	10 747	11	16 825	64	3	54	9 585	5	6 456	12	79	46	5 881	13	4 291	10	82
Montserrat	11	1	9	0	0	1		1	0						100	1	9	0	0	
Netherlands Antilles	215					0		0												
Nicaragua	4 938	2 558	52	1 564	32	1 950	80	4	100	2 558	52	1 564	32	72	0					
Panama	2 812	1 445	51	432	15	674	64	3	16	133	1	58	13	50	84	1 312	55	374	16	31
Paraguay	5 358	2 115	39	1 041	19	1 639	64	1	0						100	2 115	40	1 041	19	54
Peru	25 230	40 345	160	24 511	97	25 784	95	4	100	40 345	160	24 511	97	82	0					
Puerto Rico	3 839	200	5	107	3	146	74	4	100	200	5	107	3	60	0					
Saint Kitts and Nevis	39	3	8	1	3	2	42	4	100	3	8	1	3	50	0					
Saint Lucia	152	16	11	9	6	14	63	4	100	16	11	9	6	100	0					
St Vincent & Grenadines	113					18		0												
Suriname	415	93	22	37	9	142	26	1	0						100	93	22	37	9	46
Trinidad and Tobago	1 289	152	12	86	7	70	123	4	100	152	12	86	7	62	0					
Turks & Caicos Islands	16	17	105	2	12	2	109	4	100	17	105	2	12	13	0					
Uruguay	3 313	627	19	392	12	429	91	4	100	627	19	392	12	76	0					
US Virgin Islands	94					5		0												
USA	276 218	17 521	6	6 252	2	6 968	90	4	100	17 521	6	6 252	2	44	0					
Venezuela	23 706	6 598	28	3 670	15	4 457	82	4	100	6 598	28	3 670	15	70	0					

Regional Profile for the Americas, cont'd: treatment outcomes for cases registered in 1998 - WHO TB control strategy (DOTS) and other (non-DOTS) control strategies

Country/Territory	New smear-positive cases - DOTS									Retreatment cases - DOTS									New smear-positive cases - non-DOTS								
	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success
	a	c	d	e	f	g	h	b	c+d	i	k	l	m	n	o	p	j	k+l	q	s	t	u	v	w	x	r	s+t
Anguilla																											
Antigua and Barbuda																			4	50		25			25	0	50
Argentina	5 234	25	30	5	0	10	5	25	55																		
Bahamas	50	36	36	26		2		0	72																		
Barbados																											
Belize																											
Bermuda																											
Bolivia	6 750	56	6	4	1	10	3	21	62																		
Brazil	82	78	13	2			6	0	91										29 996	10	30	2	0	6	4	48	40
British Virgin Islands																											
Canada																											
Cayman Islands																			2	100						0	100
Chile	1 565		83	7	1	6	4	0	83	199	42	36	5	0	14	4	0	78									
Colombia	562	65	10	3	1	14	8	0	74																		
Costa Rica	0																										
Cuba	739	94	0	4	1	1	1	0	94	74	84		11	1	4		0	84									
Dominica																											
Dominican Republic																			2 194	30	11	3	2	13	2	40	41
Ecuador																											
El Salvador	940	74	4	6	1	9	6	1	77	125	54	4	6	5	21	8	2	58									
Grenada																											
Guatemala	2 300	69	11	5	1	10	4	0	79	201	47	14	6	3	6	15	8	61									
Guyana																											
Haiti	1 476	61	19	9	1	8	4	0	79	71	55	23	10	0	8	4	0	77	4 966	48	15	5	1	23	8	0	63
Honduras	56	93		4		4		0	93	8	88		0	0	13		0	88	1 794	67	12	7	0	11	3	0	79
Jamaica	80	50	39	5		6		0	89	10	40	50	0	10	0		0	90									
Mexico	4 941	71	7	6	2	10	5	0	78										6 532	66	7	4	1	16	5	0	73
Montserrat																			2		50	50				0	50
Netherlands Antilles																											
Nicaragua	1 653	69	13	4	2	9	3	0	82	284	70	11	4	3	10	3	0	81									
Panama	77	9	42	6		36	6	0	51	15	20	20	13	13	33		0	40	592	1	51	10	2	27	10	0	52
Paraguay																			850	27	29	3		22	1	17	56
Peru	26 137	92		2	1	3	1	0	92	5 267	83		4	4	9	1	0	83									
Puerto Rico	107		68	13		4		15	68																		
Saint Kitts and Nevis	4		25	25				50	25																		
Saint Lucia	17	82		12	6			0	82																		
St Vincent & Grenadines																											
Suriname																			46	22	41	4		26	7	0	63
Trinidad and Tobago	82	51	13	18	2	15		0	65	8	75		25	0	0		0	75	1		100					0	100
Turks & Caicos Islands	7		71		14	14		0	71																		
Uruguay	379	79	4	11	3	2	0	0	84	40	68	3	23	8	0		0	70									
US Virgin Islands																											
USA	6 630		72	10		2	3	12	72																		
Venezuela	3 305	81		5	0	10	4	0	81																		

Regional profile for the Americas, cont'd: age and sex distribution of smear-positive cases in DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+
Anguilla																					
Antigua and Barbuda																					
Argentina	30	168	187	149	159	131	130	37	172	151	100	72	61	85	67	340	338	249	231	192	215
Bahamas	1	0	10	8	6	0	0	0	1	3	4	2	0	0	1	1	13	12	8	0	0
Barbados																					
Belize																					
Bermuda																					
Bolivia	222	1 182	862	527	482	379	400	225	798	554	352	263	205	222	447	1 980	1 416	879	745	584	622
Brazil	17	211	283	284	224	168	133	22	177	218	135	79	63	75	39	388	501	419	303	231	208
British Virgin Islands																					
Canada																					
Cayman Islands																					
Chile	4	118	173	204	206	132	132	9	87	109	97	52	76	98	13	205	282	301	258	208	230
Colombia	95	503	470	635	600	131	408	0	0	0	0	0	0	0	95	503	470	635	600	131	408
Costa Rica	0	8	7	17	9	8	15	2	6	4	5	4	3	3	2	14	11	22	13	11	18
Cuba	1	55	163	97	68	72	100	2	15	37	27	20	28	35	3	70	200	124	88	100	135
Dominica																					
Dominican Republic	9	33	41	38	27	23	26	6	32	32	21	19	17	17	15	65	73	59	46	40	43
Ecuador																					
El Salvador	18	102	128	104	88	88	104	20	81	73	61	47	44	65	38	183	201	165	135	132	169
Grenada																					
Guatemala	34	216	248	235	171	141	158	24	229	230	194	174	121	89	58	445	478	429	345	262	247
Guyana																					
Haiti	98	362	480	290	150	88	67	112	393	396	260	131	66	40	210	755	876	550	281	154	107
Honduras	2	6	119	73	55	29	4	2	3	20	24	24	13	2	4	9	139	97	79	42	6
Jamaica	2	10	16	6	6	15	6	2	5	9	3	4	5	3	4	15	25	9	10	20	9
Mexico	78	667	764	699	604	493	593	83	487	507	392	367	346	376	161	1 154	1 271	1 091	971	839	969
Montserrat																					
Netherlands Antilles																					
Nicaragua	26	217	212	167	125	75	85	27	194	168	108	73	42	45	53	411	380	275	198	117	130
Panama	1	10	11	6	8	3	1	0	4	5	5	2	1	1	1	14	16	11	10	4	2
Paraguay																					
Peru	712	4 861	3 007	1 586	852	624	714	700	4 783	2 958	1 560	838	613	703	1 412	9 644	5 965	3 146	1 690	1 237	1 417
Puerto Rico	0	5	5	23	9	11	20	1	4	9	3	6	5	6	1	9	14	26	15	16	26
Saint Kitts and Nevis																					
Saint Lucia		1			3	3			1	1						2	1		3	3	
St Vincent & Grenadines																					
Suriname																					
Trinidad and Tobago	0	11	18	13	8	5	6	0	4	6	7	3	4	1	0	15	24	20	11	9	7
Turks & Caicos Islands																					
Uruguay	1	45	48	42	46	48	41	4	20	25	33	14	11	14	5	65	73	75	60	59	55
US Virgin Islands																					
USA	21	329	617	1 003	927	600	795	16	232	389	397	244	243	438	37	561	1 006	1 400	1 171	843	1 233
Venezuela	32	378	452	420	368	283	346	28	283	315	195	169	134	267	60	661	767	615	537	417	613
Regional total	**1 404**	**37 072**	**56 397**	**34 607**	**19 759**	**10 820**	**8 854**	**5 443**	**35 894**	**39 182**	**19 760**	**10 088**	**5 773**	**4 479**	**10 015**	**72 966**	**95 579**	**54 367**	**29 847**	**16 593**	**13 333**

Regional profile for the Americas, cont'd: age and sex distribution of smear-positive cases in non-DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Anguilla																					
Antigua & Barbuda																					
Argentina	60	322	359	286	305	253	250	71	330	291	192	138	116	164	131	652	650	478	443	369	414
Bahamas																					
Barbados																					
Belize																					
Bermuda																					
Bolivia																					
Brazil	284	3 451	5 118	5 543	4 406	2 466	1 988	350	2 732	3 232	2 486	1 582	979	1 031	634	6 183	8 350	8 029	5 988	3 445	3 019
British Virgin Is																					
Canada																					
Cayman Islands	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0
Chile																					
Colombia	175	1 227	1 003	1 161	900	219	802	0	0		0	0	0	0	175	1 227	1 003	1 161	900	219	802
Costa Rica	4	20	56	72	61	43	58	8	17	38	32	28	30	33	12	37	94	104	89	73	91
Cuba																					
Dominica																					
Dominican Rep	81	474	444	318	211	143	157	93	331	327	205	141	104	119	174	805	771	523	352	247	276
Ecuador																					
El Salvador																					
Grenada																					
Guatemala																					
Guyana																					
Haiti	188	450	579	382	198	98	78	173	526	522	354	181	96	70	361	976	1 101	736	379	194	148
Honduras	148	282	149	146	165	161	48	98	211	181	140	136	127	38	246	493	330	286	301	288	86
Jamaica																					
Mexico	65	346	377	394	418	387	535	68	286	288	249	298	246	334	133	632	665	643	716	633	869
Montserrat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Netherlands Antilles																					
Nicaragua																					
Panama	37	97	198	128	98	78	71	53	79	95	57	50	42	36	90	176	293	185	148	120	107
Paraguay	19	113	157	111	114	69	67	22	84	72	56	43	48	60	41	197	229	167	157	117	127
Peru																					
Puerto Rico																					
Saint Kitts and Nevis																					
Saint Lucia																					
St Vincent & Grenadines																					
Suriname																					
Trinidad and Tobago																					
Turks & Caicos Islands																					
Uruguay																					
US Virgin Islands																					
USA																					
Venezuela																					
Regional total	**1 061**	**9 329**	**12 835**	**15 435**	**19 108**	**5 829**	**4 671**	**1 233**	**6 921**	**7 906**	**10 309**	**9 245**	**2 932**	**2 376**	**2 496**	**16 250**	**20 741**	**25 744**	**28 353**	**8 761**	**7 047**

Regional profile for the Americas, cont'd: smear-positive notification rates by age and sex, 1999

	MALE							FEMALE							ALL						
	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+
Anguilla																					
Antigua and Barbuda																					
Argentina	0.9	7.3	10.6	9.9	12.6	14.3	13.1	1.1	7.7	8.6	6.5	5.4	5.9	6.0	1.0	7.5	9.6	8.2	8.9	9.8	8.9
Bahamas	2.1	0.0	39.0	36.7	47.8	0.0	0.0	0.0	3.8	11.5	17.1	14.5	0.0	0.0	1.1	1.9	25.1	26.5	30.4	0.0	0.0
Barbados																					
Belize																					
Bermuda																					
Bolivia	13.4	147.4	146.8	131.6	171.1	208.7	276.6	14.1	100.6	92.3	83.6	86.5	101.2	124.2	13.8	124.1	119.2	107.0	127.2	152.0	192.3
Brazil	0.6	10.9	19.5	25.4	30.8	29.1	28.7	0.8	8.7	12.2	11.0	10.3	10.2	11.6	0.7	9.8	15.8	18.0	20.2	19.0	19.1
British Virgin Islands																					
Canada																					
Cayman Islands																					
Chile	0.2	9.5	14.1	18.6	27.6	27.3	30.0	0.4	7.2	9.0	8.8	6.7	14.1	15.8	0.3	8.4	11.6	13.6	17.0	20.4	21.7
Colombia	1.9	21.5	21.6	34.2	44.5	18.5	70.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10.9	10.6	16.5	21.2	8.8	31.2
Costa Rica	0.3	3.6	9.9	16.6	20.7	25.2	39.7	0.8	3.2	6.9	7.0	9.6	16.0	17.1	0.5	3.4	8.4	11.8	15.2	20.6	27.7
Cuba	0.1	7.0	14.5	11.8	10.6	15.0	20.0	0.2	2.0	3.4	3.2	3.0	5.6	6.4	0.1	4.5	9.0	7.5	6.7	10.3	12.8
Dominica																					
Dominican Republic	3.2	31.1	33.6	32.2	34.5	39.3	50.9	3.6	23.1	25.8	21.2	24.4	29.4	36.2	3.4	27.2	29.8	26.8	29.6	34.4	43.4
Ecuador																					
El Salvador	1.6	15.2	27.7	37.1	42.0	62.6	79.0	1.8	12.3	14.6	18.5	20.2	28.1	38.1	1.7	13.7	20.9	27.0	30.5	44.4	55.9
Grenada																					
Guatemala	1.4	18.5	33.5	49.4	53.4	66.2	84.1	1.0	20.2	30.9	39.4	53.0	56.2	43.9	1.2	19.3	32.2	44.3	53.2	61.2	63.3
Guyana																					
Haiti	8.4	48.0	98.2	90.8	73.4	59.5	56.0	8.7	54.5	80.9	72.9	54.3	42.9	34.3	8.5	51.2	89.3	81.2	62.9	50.4	44.0
Honduras	5.5	21.8	28.9	35.8	59.8	81.1	26.3	3.8	16.7	22.0	26.8	42.8	56.9	17.4	4.7	19.3	25.5	31.3	51.2	68.7	21.5
Jamaica	0.5	4.0	7.5	3.9	6.3	23.1	7.4	0.5	2.1	4.1	1.8	4.1	7.5	3.1	0.5	3.1	5.8	2.8	5.2	15.2	5.0
Mexico	0.4	5.1	7.1	10.0	14.1	19.2	27.8	0.5	3.9	4.7	5.5	8.6	11.9	14.3	0.4	4.5	5.8	7.7	11.2	15.4	20.4
Montserrat																					
Netherlands Antilles																					
Nicaragua	2.4	41.5	62.6	75.1	90.3	91.3	125.5	2.6	37.1	47.2	45.5	50.0	48.1	53.1	2.5	39.3	54.7	59.8	69.6	69.1	85.2
Panama	4.2	20.2	43.8	37.2	42.6	50.1	48.3	6.1	16.1	21.2	17.1	21.2	27.1	23.4	5.1	18.2	32.6	27.1	32.0	38.7	35.5
Paraguay	1.7	21.4	39.5	35.9	59.8	63.7	86.7	2.1	16.4	18.6	18.7	23.4	42.8	55.3	1.9	18.9	29.2	27.4	42.0	53.1	68.4
Peru	16.4	186.6	151.6	111.8	87.6	96.8	130.8	16.6	186.1	143.2	102.7	82.1	89.6	108.7	16.5	186.4	147.3	107.1	84.8	93.0	118.8
Puerto Rico	0.0	1.5	1.7	9.9	4.5	7.6	11.7	0.2	1.2	3.0	1.1	2.5	2.9	2.7	0.1	1.4	2.4	5.2	3.4	5.0	6.6
Saint Kitts and Nevis																					
Saint Lucia																					
St Vincent & Grenadines																					
Suriname																					
Trinidad and Tobago	0.0	8.3	17.9	13.7	12.2	12.5	15.6	0.0	3.1	6.0	7.3	4.6	9.4	2.2	0.0	5.7	11.9	10.5	8.4	10.9	8.3
Turks & Caicos Islands																					
Uruguay	0.2	16.7	20.6	20.4	27.3	34.9	23.8	1.0	7.7	10.7	15.2	7.7	6.9	5.5	0.6	12.3	15.6	17.7	17.1	19.9	13.0
US Virgin Islands																					
USA	0.1	1.7	3.1	4.4	5.1	5.3	5.5	0.1	1.3	2.0	1.8	1.3	2.0	2.2	0.1	1.5	2.6	3.1	3.2	3.6	3.6
Venezuela	0.8	16.1	24.2	28.3	36.1	49.9	73.6	0.7	12.5	17.1	13.2	16.5	22.5	47.1	0.7	14.3	20.7	20.8	26.3	35.9	59.1
Regional rate	**1.4**	**15.5**	**18.7**	**19.7**	**22.1**	**21.8**	**24.1**	**1.4**	**12.2**	**12.4**	**9.8**	**9.1**	**10.4**	**9.7**	**1.4**	**13.9**	**15.5**	**14.7**	**15.4**	**15.8**	**15.9**

Regional profile for the Americas, cont'd: number of TB cases notified, 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Anguilla	0	0	4	0	0	1	0	0	0	0	0	0	0			2		0		
Antigua & Barbuda	8	3	0	1	3	2	7	0	3	3	1	0	6				5			3
Argentina	16 406	16 693	17 292	17 305	16 359	15 987	14 681	13 368	13 267	12 636	12 309	12 185	12 606	13 887	13 683	13 433	13 397	12 358	12 276	11 200
Bahamas	70	67	54	58	53	63	52	43	51	52	46	53	63	60	78	57	59	89	75	76
Barbados	64	3	30	17	14	12	7	3	4	5	5	5	6			20	3	6	7	3
Belize	21	33	44	140	35	25	23	41	28	30	57	89	65	80	59	61	53	89		
Bermuda	1	2	5	10	3	3	6	2	1	2	0	3	4			4				
Bolivia	4 412	5 072	4 777	5 178	4 131	7 679	6 837	8 960	10 664	12 563	11 166	11 223	9 520	8 614	9 431	14 422	10 194	9 853	10 132	9 863
Brazil	72 608	86 411	87 822	86 617	88 365	84 310	83 731	81 826	82 395	80 048	74 570	84 990	85 955		75 759	88 109	87 254	83 309	84 194	78 460
British Virgin Is																		3		
Canada	2 885	2 554	2 515	2 186	2 345	1 980	2 046	1 972	1 947	2 035	1 997	2 018	2 108	2 012	2 074	1 931	1 869	1 975		
Cayman Islands	0	2	0	1	1	4	1	0	0	2	2	3	3	2		3	0	0	3	2
Chile	8 523	7 337	6 941	6 989	6 561	6 644	6 854	6 280	6 324	6 728	6 151	5 498	5 304	4 598	4 138	4 150	4 038	3 879	3 668	3 429
Colombia	11 589	11 483	12 126	13 716	12 792	12 024	11 639	11 437	11 469	11 329	12 447	12 263	11 199	11 043	8 901	9 912	9 702	8 042	9 155	10 999
Costa Rica	396	521	459	479	393	376	418	434	442	311	230	201	118	313	325	321	162	633	694	851
Cuba	1 133	833	815	762	705	680	656	630	628	581	546	514	410	790	1 681	1 607	1 579	1 441	1 304	1 177
Dominica	20	26	18	16	5	8	35	27	7	13	6	14	13	7	12	8	10	6	5	
Dominican Republic	2 174	1 778	2 457	2 959	3 100	2 335	2 634	2 459	3 081	3 145	2 597	1 837	3 490	4 033	4 337	4 053	6 006	5 601	4 263	5 978
Ecuador	3 950	3 966	3 880	3 985	4 301	4 798	5 687	5 867	5 497	5 480	8 243	6 879	7 313	7 050	9 685	7 893	6 327	9 527	9 184	6 173
El Salvador	2 255	2 091	2 171	2 053	1 564	1 461	1 659	1 647	2 378	617	2 367	2 304	2 495	3 347	3 901	2 422	1 686	1 662	1 700	1 623
Grenada	17	1	1	6	4	2	1	2	0	4	0	1	3	0	3	2		4	2	
Guatemala	5 624	6 641	7 277	6 013	6 586	6 570	4 806	5 700	5 739	4 900	3 813	2 631	2 517	2 474	2 508	5 726	3 496	3 175	2 755	3 046
Guyana	124	117	135	149	165	215	190	117	150	120	168	134	182	91	266	296	314	407	318	
Haiti	8 306	6 550	3 337	6 839	5 803	4 959	8 583	8 514	8 054	8 100		10 237					6 632	10 116	9 857	9 124
Honduras	1 674	1 696	1 714	1 935	2 120	3 377	4 213	4 227	3 962	4 026	3 647	4 560	4 155	3 745	4 291	4 984	4 176	4 030	4 916	4 544
Jamaica	176	178	153	157	160	130	88	133	65	86	123	121	111	115	109	109	121	118	124	115
Mexico	31 247	32 572	24 853	22 795	14 531	15 017	13 180	14 631	15 371	15 489	14 437	15 216	14 446	15 145	16 353	11 329	10 852	23 575	17 170	15 466
Montserrat	1	0	0	1	7	9	5	13	6	5	1	1	0						3	1
Netherlands Antilles																				
Nicaragua	1 300	3 723	3 082	2 773	2 705	2 604	2 617	2 983	2 737	3 106	2 944	2 797	2 885	2 798	2 750	2 842	3 003	2 806	2 604	2 558
Panama	643	580	580	429	413	614	709	765	770	672	846	863	750	1 146	827	1 316	1 099	1 067	1 479	1 445
Paraguay	1 354	1 388	1 415	1 800	1 718	1 931	1 628	1 502	1 438	2 270	2 167	2 283	1 927	2 037	1 850	2 305	2 148	1 995	1 858	2 115
Peru	16 011	21 925	21 579	22 753	22 792	24 438	24 702	30 571	36 908	35 687	37 905	40 580	52 552	51 675	48 601	45 310	41 739	42 062	43 723	40 345
Puerto Rico	686	521	473	452	418	338	363	303	275	314	159	241		257	274	263	219	236	200	200
Saint Kitts & Nevis	7	4	6	2	3	0	0	0	0	0	0	1	4	6	2	4	3		5	3
Saint Lucia	41	39	37	48	55	21	34	25	32	28	13	25	26		24	12		15	21	16
St Vincent & Grenadines	78	11	14	4	23	14	9	3	6	3	2	1	4	13	0	24			5	
Suriname	78	81	56	78	76	50	60	77	77	70	82	47	58				53	71		93
Trinidad & Tobago	80	82	62	112	108	112	119	122	108	124	120	141	142	112	129	178	205	276	192	152
Turks & Caicos Islands	2	0	2	5	0	4	2	12			0	0	0							17
Uruguay	1 874	1 699	1 450	1 359	1 389	1 201	1 082	1 023	951	987	886	759	699	689	666	625	701	708	668	627
US Virgin Islands	0	1	1	2	3	1	1	2	6	4	4	4			10	4	8			
USA	27 749	27 373	25 520	23 846	22 255	22 201	22 768	22 517	22 436	23 495	25 701	26 283	26 673	25 287	24 361	22 860	21 337	17 314	18 199	17 521
Venezuela	4 233	4 093	4 159	4 266	4 737	4 822	4 974	4 954	4 557	4 524	5 457	5 216	5 444	5 169	4 877	5 554	5 576	5 984	6 273	6 598
Total	**227 820**	**248 150**	**237 316**	**238 296**	**226 801**	**227 022**	**227 107**	**233 192**	**241 834**	**239 594**	**231 215**	**252 221**	**253 256**	**166 595**	**241 965**	**252 151**	**244 026**	**252 432**	**247 032**	**233 823**
number reporting	44	44	44	44	44	44	44	44	43	43	43	44	41	33	35	39	37	38	36	35
percent reporting	96	96	96	96	96	96	96	96	93	93	93	96	89	72	76	85	80	83	78	76

Regional profile for the Americas, cont'd: case notification rates (per 100 000 population), 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Anguilla	0	0	60	0	0	15	0	0	0	0	0	0	0			26		0		
Antigua & Barbuda	13	5	0	2	5	3	11	0	5	5	2	0	9				8			5
Argentina	58	59	60	59	55	53	48	43	42	39	38	37	38	41	40	39	38	35	34	31
Bahamas	33	31	25	26	23	27	22	18	21	21	18	20	24	22	28	20	21	31	25	25
Barbados	26	1	12	7	6	5	3	1	2	2	2	2	2			8	1	2	3	1
Belize	14	22	29	89	22	15	14	24	16	16	30	46	33	40	28	29	24	40		
Bermuda	2	4	9	18	5	5	10	4	2	3	0	5	7			7				
Bolivia	82	93	86	91	72	130	114	146	170	196	170	167	138	122	130	195	134	127	127	121
Brazil	60	70	69	67	67	62	61	58	58	55	50	57	56		48	55	54	51	51	47
British Virgin Is																		15		
Canada	12	10	10	9	9	8	8	7	7	7	7	7	7	7	7	7	6	7		
Cayman Islands	0	11	0	5	5	19	5	0	0	8	8	11	11	7		9	0	0	8	5
Chile	77	65	60	60	55	55	56	50	50	52	47	41	39	33	30	29	28	27	25	23
Colombia	41	40	41	45	41	38	36	35	34	33	36	34	31	30	24	26	25	20	22	27
Costa Rica	17	22	19	19	15	14	15	16	15	11	8	6	4	9	9	9	4	17	18	22
Cuba	12	9	8	8	7	7	6	6	6	6	5	5	4	7	15	15	14	13	12	11
Dominica	27	35	25	22	7	11	49	38	10	18	8	20	18	10	17	11	14	9	7	
Dominican Rep	38	31	41	49	50	37	40	37	45	45	37	25	47	54	56	52	75	69	52	72
Ecuador	50	49	46	46	49	53	61	61	56	55	80	66	68	64	86	69	54	80	75	50
El Salvador	49	45	46	44	33	31	34	34	48	12	46	44	47	62	70	43	29	28	28	26
Grenada	19	1	1	7	5	2	1	2	0	4	0	1	3	0	3	2		4	2	
Guatemala	83	95	101	82	87	85	61	70	69	57	44	29	27	26	26	57	34	30	26	28
Guyana	16	15	17	19	21	27	24	15	19	15	21	17	23	11	32	36	38	48	37	
Haiti	152	118	59	117	97	81	137	132	122	120		145					86	129	124	113
Honduras	47	46	45	49	52	81	98	95	86	85	75	91	80	70	78	88	72	67	80	72
Jamaica	8	8	7	7	7	6	4	6	3	4	5	5	5	5	4	4	5	5	5	5
Mexico	46	47	35	32	20	20	17	19	19	19	17	18	17	17	18	12	12	25	18	16
Montserrat	9	0	0	9	62	80	45	117	54	46	9	9	0						28	9
Netherlands Antilles																				
Nicaragua	45	123	99	86	82	77	75	84	75	83	77	71	71	67	64	64	66	60	54	52
Panama	33	29	29	21	20	28	32	34	33	29	35	35	30	45	32	50	41	39	53	51
Paraguay	44	43	43	53	49	54	44	39	36	55	51	53	43	45	39	48	43	39	36	40
Peru	92	123	119	122	120	125	124	150	178	169	176	185	235	227	210	193	174	173	176	160
Puerto Rico	22	16	14	14	13	10	11	9	8	9	5	7		7	7	7	6	6	5	5
Saint Kitts & Nevis	16	9	14	5	7	0	0	0	0	0	0	2	10	15	5	10	8		13	8
Saint Lucia	36	33	31	40	45	17	27	20	25	21	10	18	19		17	8		10	14	11
St Vincent & Grenadines	80	11	14	4	23	14	9	3	6	3	2	1	4	12	0	22			4	
Suriname	22	23	15	21	20	13	15	20	19	18	20	12	14				13	17		22
Trinidad and Tobago	7	7	6	10	9	10	10	10	9	10	10	12	12	9	10	14	16	22	15	12
Turks & Caicos Islands	27	0	25	59	0	43	21	118			0	0	0							105
Uruguay	64	58	49	46	47	40	36	34	31	32	29	24	22	22	21	19	22	22	20	19
US Virgin Islands	0	1	1	2	3	1	1	2	6	4	4	4			10	4	8			
USA	12	12	11	10	9	9	9	9	9	9	10	10	10	10	9	9	8	6	7	6
Venezuela	28	26	26	26	28	28	28	27	25	24	28	26	27	25	23	25	25	26	27	28
Total	**37**	**40**	**37**	**37**	**35**	**34**	**33**	**34**	**35**	**34**	**32**	**34**	**34**	**22**	**32**	**32**	**31**	**31**	**31**	**29**

Regional profile for the Americas, cont'd: new smear-positive cases, 1993-99

	Number of cases							Rate (per 100 000 population)						
Country/territory	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Anguilla			0		0					0		0		
Antigua and Barbuda				2			1				3			1
Argentina	5 937	5 696	5 698	5 787	5 307	5 186	4 830	18	17	16	16	15	14	13
Bahamas	41	41	37	26	57	28	35	15	15	13	9	20	9	12
Barbados				3	5	4	2				1	2	1	1
Belize	50	36	22	20	48			25	17	10	9	21		
Bermuda			2							3				
Bolivia	6 833	6 905	7 010	6 949	6 458	6 750	6 673	97	95	95	92	83	85	82
Brazil		39 167	45 004	44 501	43 490	38 809	41 434		25	28	28	27	23	25
British Virgin Islands					0							0		
Canada	542			450				2			2			
Cayman Islands	2		0	0	0	2	2	7		0	0	0	6	5
Chile	2 629	1 951	1 624	1 480	1 524	1 576	1 497	19	14	11	10	10	11	10
Colombia	6 987	6 532	7 530	7 572	6 090	6 969	8 329	19	17	20	19	15	17	20
Costa Rica		230	219	122	578	562	587		7	6	3	15	15	15
Cuba	565	914	834	835	765	744	720	5	8	8	8	7	7	6
Dominica	6	8	5	7	5	5		8	11	7	10	7	7	
Dominican Republic	2 297	3 177	2 187	3 609	2 682	2 194	3 489	30	41	28	45	33	27	42
Ecuador	5 325	6 674	5 236	4 356	7 329	6 455	4 300	48	59	46	37	61	53	35
El Salvador	2 471	2 144		965	882	1 071	1 023	46	39		17	15	18	17
Grenada	0	3	2		2	2		0	3	2		2	2	
Guatemala	2 128	1 994	2 368	2 308	2 224	2 255	2 264	22	21	24	23	21	21	20
Guyana	51	61	85	71	105	85		6	7	10	8	12	10	
Haiti				3 524	5 497	6 442	6 828				46	70	81	84
Honduras	2 016	2 385	2 438	1 739	1 579	2 311	2 406	38	43	43	30	26	38	38
Jamaica	83	61	91	75	71	82	92	3	2	4	3	3	3	4
Mexico	8 164	9 726	9 220	8 495	15 440	11 473	10 747	9	11	10	9	16	12	11
Montserrat						0	0						0	0
Netherlands Antilles														
Nicaragua	1 714	1 615	1 568	1 722	1 670	1 648	1 564	41	38	35	38	36	34	32
Panama	1 046	748	1 066	904	592	1 393	432	41	29	41	34	22	50	15
Paraguay	985	873	748	894	895	850	1 041	21	19	15	18	18	16	19
Peru	35 646	33 925	32 096	26 800	27 498	27 707	24 511	157	147	136	112	113	112	97
Puerto Rico	117		126	110	126	105	107	3		3	3	3	3	3
Saint Kitts and Nevis	2	2	4	2		3	1	5	5	10	5		8	3
Saint Lucia		17			11	12	9		12			7	8	6
St Vincent & Grenadines	11	0	13			3		10	0	12			3	
Suriname				39	27		37				10	7		9
Trinidad and Tobago		55	76	59	52	98	86		4	6	5	4	8	7
Turks & Caicos Islands							2							12
Uruguay	388	381	349	426	423	374	392	12	12	11	13	13	11	12
US Virgin Islands			2	5						2	5			
USA	16 046	14 346	8 013	7 401	6 882	6 630	6 252	6	5	3	3	3	2	2
Venezuela	2 849	2 738	3 056	3 195	3 234	3 450	3 670	14	13	14	14	14	15	15
Total	**104 931**	**142 405**	**136 729**	**134 453**	**141 548**	**135 278**	**133 363**	**14**	**19**	**18**	**17**	**18**	**17**	**16**

Notes

Argentina Treatment outcomes reported under DOTS were, in fact, a combination of DOTS and non-DOTS treatment outcomes.

Chile Cases listed as "other retreatment" were cases given 2nd line drugs.

Colombia Information system did not allow distinction between relapses and retreatment cases. New smear-positive cases were notified by age but not by sex.

Panama Age/sex data were for all cases (not just smear-positive cases).

Puerto Rico Notifications included all cases with previous history of TB (not just relapses). Age/sex data were not available at national level.

Saint Kitts and Nevis Age/sex data were for all cases (not just smear-positives).

United States of America (the) Notifications excluded 10 cases with site of disease not stated or unknown. Information on relapses and other retreatment cases were not collected at national level.

EASTERN MEDITERRANEAN

The Eastern Mediterranean: Summary of TB control policies

Country	Microscopy (a)	SCC (b)	DOT (c)	Outcome monitoring (d)	Drug supply (e)	Category as of 31/12/99*	DOTS newly implemented in 1999
Afghanistan						3	
Bahrain						4	x
Cyprus						4	
Djibouti						4	
Egypt						3	
Iran (Islamic Republic of)						4	
Iraq						3	
Jordan						4	
Kuwait						0	
Lebanon						4	
Libyan Arab Jamahiriya (the)						4	x
Morocco						4	
Oman						4	
Pakistan						2	
Qatar						4	
Saudi Arabia						3	x
Somalia						3	
Sudan (the)						3	
Syrian Arab Republic (the)						3	
Tunisia						4	x
United Arab Emirates (the)						0	
West Bank and Gaza						0	

Microscopy (a)	Use of smear microscopy for diagnosis
SCC (b)	Short course chemotherapy
DOT (c)	Directly observed therapy
Outcome monitoring (d)	Monitoring of treatment outcomes by cohort analysis
Drug supply (e)	A system of TB drug forecasting, financing, and procurement
*	See table 1 for definition of categories
dark green	implemented in all units/areas
light green	implemented in some units/areas
grey	not implemented
white	unknown or not applicable (decentralized drug supply system)

Regional Profile for the Eastern Mediterranean: notification, detection and DOTS coverage, 1999

Country/Territory	Country information								WHO TB control strategy (DOTS)						Other Strategy (non-DOTS)					
		Notifications							%	Notifications				% of	%	Notifications				% of
	Pop	all cases		New ss+		Est	CDR	DOTS	of	all cases		New ss+		pulm	of	all cases		New ss+		pulm
	thousands	number	rate	number	rate	new ss+	%	cate-gory	pop	number	rate	number	rate	cases ss+	pop	number	rate	number	rate	cases ss·
	a	b	b/a	c	c/a	d	c/d	e	f	g	g/f*a	h	h/f*a	l	j	k	k/j*a	l	l/j*a	m
Afghanistan	21 923	3 314	15	1 669	8	32 064	5	3	14	3 314	2	1 669	56	70	87					
Bahrain	606	200	33	93	15	145	64	4	100	200	33	93	15	88	0					
Cyprus	778	39	5	20	3	24	85	4	100	39	5	20	3	83	0					
Djibouti	629	4 366	694	1 570	250	2 048	77	4	100	4 366	694	1 570	250	41	0					
Egypt	67 226	11 763	17	5 094	8	11 799	43	3	75	6 240	7	2 958	6	67	25	5 523	33	2 136	13	56
Iran	66 796	12 062	18	5 426	8	16 119	34	4	94	11 007	15	4 971	8	67	6	1 055	26	455	11	67
Iraq	22 450	31 899	142	10 711	48	15 760	68	3	37	2 002	3	803	10	57	63	29 897	211	9 908	70	43
Jordan	6 482	379	6	102	2	307	33	4	100	379	6	102	2	52	0					
Kuwait	1 897					265		0												
Lebanon	3 236	679	21	249	8	348	72	4	100	679	21	249	8	60	0					
Libyan Arab Jamahiriya	5 471	1 615	30	803	15	600	134	4	100	1 615	30	803	15	100	0					
Morocco	27 867	29 854	107	13 420	48	14 924	90	4	100	29 854	107	13 420	48	81	0					
Oman	2 460	255	10	120	5	114	106	4	100	255	10	120	5	74	0					
Pakistan	152 331	20 936	14	6 248	4	120 887	5	2	8	4 671	0	2 269	19	58	92	16 265	12	3 979	3	25
Qatar	589	259	44	57	10	65	88	4	100	259	44	57	10	35	0					
Saudi Arabia	20 899	3 507	17	1 786	9	4 255	42	3	48	1 678	4	931	9	77	52	1 829	17	855	8	70
Somalia	9 672	4 784	49	3 449	36	15 845	22	3	56	4 784	28	3 449	64	89	44					
Sudan	28 883	23 121	80	13 505	47	25 345	53	3	72	12 473	31	8 165	39	83	28	10 648	134	5 340	67	51
Syrian Arab Republic	15 725	5 447	35	1 578	10	6 029	26	3	78	2 908	14	1 022	8	67	22	2 539	73	556	16	34
Tunisia	9 460	2 158	23	1 235	13	1 570	79	4	100	2 158	23	1 235	13	93	0					
United Arab Emirates	2 398					225		0												
West Bank and Gaza	1 077					137		0												
Yemen	17 488					8 526		0												

Regional Profile for the Eastern Mediterranean, cont'd: treatment outcomes for cases registered in 1998 - WHO TB control strategy (DOTS) and other (non-DOTS) control strategies

Country/Territory	New smear-positive cases - DOTS									Retreatment cases - DOTS									New smear-positive cases - non-DOTS								
	Regist-ered	% cured	% compl-eted	% died	% failed	% default	% trans-ferred	% not eval	% success	Regist-ered	% cured	% compl-eted	% died	% failed	% default	% trans-ferred	% not eval	% success	Regist-ered	% cured	% compl-eted	% died	% failed	% default	% trans-ferred	% not eval	% success
	a	c	d	e	f	g	h	b	c+d	i	k	l	m	n	o	p	j	k+l	q	s	t	u	v	w	x	r	s+t
Afghanistan	2913	27	7	2	1	6	1	57	33	40	70	8	8	8	5	3	0	78									
Bahrain	99	11	2	3	1	1	74	8	13										0								
Cyprus	19	21	21	5		16	37	0	42																		
Djibouti	1 673	61	18	2	1	17	2	0	79																		
Egypt	1 181	77	10	3	2	4	3	0	87	251	54	8	9	12	12	5	0	63	3 291	66	16	3	3	9	3	0	81
Iran	3 105	75	7	6	2	3	6	1	83										2 144	70	11	5	2	4	5	2	81
Iraq	296	82	1	1	4	7	6	0	83										7 637	45	14		8	25	8	0	59
Jordan	110	92		3	3	2	1	0	92	2	50		0	0	50		0	50									
Kuwait																											
Lebanon	224	40	33	4	2	21		0	73																		
Libyan Arab Jamahiriya	699	67	2	2	1	30		0	68																		
Morocco	13 426	75	6	2	1	6	8	0	82																		
Oman	109	86		5	3	1	2	4	86	4	100		0	0	0		0	100									
Pakistan	1 918	53	13	5	1	25	3	0	66	24	92		8	0	0		0	92	27 470	20		0		56	1	24	20
Qatar	68	76	7	4		1	10	0	84																		
Saudi Arabia	463	46	11	5	0	7	7	23	57										1 202	52	11	4	1	6	7	19	64
Somalia	2 635	86	2	4	1	3	1	3	88	119	81	4	5	3	2	5	0	85									
Sudan	8 526	44	22	6	5	20	4	0	65	1 137	40	18	10	5	21	5	1	58	2 265	43	23	6	4	20	4	0	66
Syrian Arab Republic	748	83	6	3	3	5	2	0	88																		
Tunisia	1 099	90	2	2	1	3	3	0	91																		
United Arab Emirates																											
West Bank and Gaza																											
Yemen																											

Regional profile for the Eastern Mediterranean, cont'd: age and sex distribution of smear-positive cases in DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Afghanistan	8	55	55	47	34	21	8	25	139	160	110	50	25	8	33	194	215	157	84	46	16
Bahrain	0	12	19	14	13	5	3	0	6	11	6	0	1	3	0	18	30	20	13	6	6
Cyprus	5	1	6	2	2	10	0	4	1	2	3	1	2	0	9	2	8	5	3	12	0
Djibouti	25	348	371	159	87	67	22	20	158	168	84	38	20	3	45	506	539	243	125	87	25
Egypt	22	442	539	441	284	192	108	20	310	207	154	126	69	29	42	752	746	595	410	261	137
Iran	27	370	460	383	260	335	591	51	551	360	277	279	396	637	78	921	820	660	539	731	1228
Iraq	24	153	154	93	45	31	15	22	89	80	47	28	14	8	46	242	234	140	73	45	23
Jordan	0	16	19	16	10	8	2	0	8	7	2	2	7	5	0	24	26	18	12	15	7
Kuwait																					
Lebanon	3	27	44	35	17	17	11	1	33	26	17	6	9	3	4	60	70	52	23	26	14
Libyan Arab Jamahiriya	2	110	257	115	53	36	33	6	43	59	25	15	14	27	8	153	316	140	68	50	60
Morocco	78	2 296	2 696	1 641	815	559	562	156	1 654	1 143	691	446	351	332	234	3950	3839	2332	1261	910	894
Oman	2	10	6	10	4	6	10	3	14	2	5	1	4	8	5	24	8	15	5	10	18
Pakistan	49	229	178	65	211	162	113	33	259	373	97	146	243	114	82	488	551	162	357	405	227
Qatar	0	5	15	12	12	3	2	0	2	3	3	1	0	0	0	7	18	15	13	3	2
Saudi Arabia	2	88	168	123	80	49	63	23	107	93	55	33	32	36	25	195	261	178	113	81	99
Somalia	136	643	678	383	175	175	124	131	302	302	190	100	74	74	267	945	980	573	275	249	198
Sudan	513	618	1 012	821	669	490	413	495	602	593	720	523	364	332	1008	1220	1605	1541	1192	854	745
Syrian Arab Republic																					
Tunisia	18	137	221	181	106	88	129	15	80	76	62	40	29	53	33	217	297	243	146	117	182
United Arab Emirates																					
West Bank and Gaza																					
Yemen																					
Regional total	**914**	**5 560**	**6 898**	**4 541**	**2 877**	**2 254**	**2 209**	**1 005**	**4 358**	**3 665**	**2 548**	**1 835**	**1 654**	**1 672**	**1 919**	**9 918**	**10 563**	**7 089**	**4 712**	**3 908**	**3 881**

Regional profile for the Eastern Mediterranean, cont'd: age and sex distribution of smear-positive cases in non-DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Afghanistan																					
Bahrain	0	0	0	0	0	0	0	0	0	0	0		0		0	0	0	0	0	0	0
Cyprus																					
Djibouti																					
Egypt	9	266	350	250	174	96	62	37	175	140	94	67	43	7	46	441	490	344	241	139	69
Iran																					
Iraq	495	1 281	1 092	988	659	601	361	487	1 119	898	777	543	513	194	982	2400	1990	1765	1202	1114	555
Jordan																					
Kuwait																					
Lebanon																					
Libyan Arab Jamahiriya																					
Morocco																					
Oman	0	0	5	13	11	1	0	0	2	2	1	0	0	0	0	2	7	14	11	1	0
Pakistan																					
Qatar																					
Saudi Arabia	3	67	146	122	72	54	80	16	75	108	39	41	41	44	19	142	254	161	113	95	124
Somalia																					
Sudan	329	482	444	449	309	351	426	408	433	518	384	294	230	283	737	915	962	833	603	581	709
Syrian Arab Republic																					
Tunisia																					
United Arab Emirates																					
West Bank & Gaza																					
Yemen																					
Regional total	**836**	**2 096**	**2 037**	**1 822**	**1 225**	**1 103**	**929**	**948**	**1 804**	**1 666**	**1 295**	**945**	**827**	**528**	**1 784**	**3 900**	**3 703**	**3 117**	**2 170**	**1 930**	**1 457**

Regional profile for the Eastern Mediterranean, cont'd: smear-positive notification rates by age and sex, 1999

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Afghanistan	0.2	2.8	3.2	4.4	4.5	4.1	2.6	0.5	7.5	9.7	11.0	7.1	5.1	2.4	0.3	5.0	6.4	7.6	5.7	4.6	2.5
Bahrain	0.0	12.3	18.7	8.6	13.8	16.3	16.2	0.0	6.5	13.7	6.7	0.0	4.8	17.8	0.0	9.5	16.5	7.9	9.5	11.6	17.0
Cyprus	5.2	1.6	10.9	3.5	4.2	29.1	0.0	4.5	1.7	3.8	5.4	2.1	5.5	0.0	4.9	1.7	7.4	4.5	3.1	17.0	0.0
Djibouti	19.1	577.6	875.0	541.2	405.6	465.2	235.7	15.4	256.5	365.1	260.7	162.2	124.3	26.0	17.2	415.3	609.6	394.5	278.6	285.3	119.9
Egypt	0.1	5.1	8.7	8.2	8.3	9.5	7.1	0.2	3.7	3.6	3.1	3.4	3.4	1.2	0.2	4.5	6.2	5.7	5.8	6.3	3.8
Iran	0.2	4.9	9.1	10.9	12.3	24.8	40.4	0.4	7.6	7.2	7.9	12.9	29.7	44.7	0.3	6.2	8.2	9.4	12.6	27.2	42.5
Iraq	5.4	31.1	36.7	47.8	47.5	71.2	58.1	5.6	27.6	29.9	37.9	39.6	58.3	27.1	5.5	29.4	33.4	43.0	43.6	64.7	41.5
Jordan	0.0	2.3	3.3	5.3	5.9	6.5	2.2	0.0	1.2	1.4	0.7	1.2	5.8	5.2	0.0	1.8	2.4	3.1	3.5	6.1	3.8
Kuwait																					
Lebanon	0.6	9.0	14.7	20.9	15.8	22.8	12.9	0.2	11.1	8.8	7.8	4.7	10.2	3.0	0.4	10.0	11.7	13.5	9.8	16.0	7.5
Libyan Arab Jamahiriya	0.2	17.9	62.1	41.9	23.5	25.0	37.2	0.6	7.2	14.8	9.9	8.4	13.3	33.0	0.4	12.6	38.9	26.6	16.8	20.1	35.2
Morocco	1.7	75.5	113.6	96.9	79.9	96.6	100.6	3.5	56.4	49.8	39.7	42.3	48.1	50.9	2.5	66.1	82.2	67.9	60.7	69.5	73.8
Oman	0.2	2.1	3.3	8.2	6.0	6.5	16.5	0.3	3.5	1.4	3.1	0.8	4.5	13.1	0.2	2.8	2.4	6.1	4.2	5.6	14.8
Pakistan	0.1	1.5	1.5	0.8	4.0	5.4	4.7	0.1	1.9	3.5	1.2	3.1	8.3	4.7	0.1	1.7	2.5	1.0	3.6	6.8	4.7
Qatar	0.0	12.6	37.0	11.3	14.7	10.1	24.5	0.0	5.3	12.9	9.9	4.0	0.0	0.0	0.0	9.1	28.2	11.0	12.2	8.0	17.0
Saudi Arabia	0.1	3.8	10.9	6.9	6.4	10.5	23.7	0.5	4.7	8.4	5.9	6.6	10.2	13.6	0.3	4.2	9.7	6.6	6.4	10.4	18.7
Somalia	5.9	69.0	110.4	93.4	67.3	114.0	115.5	5.7	32.2	48.0	44.6	36.3	43.1	58.5	5.8	50.6	78.8	68.6	51.4	76.6	84.7
Sudan	7.2	18.6	34.7	42.4	49.4	66.3	95.0	7.9	17.5	27.1	36.5	38.9	43.4	65.4	7.6	18.0	30.9	39.5	44.0	54.4	79.7
Syrian Arab Republic																					
Tunisia	1.2	13.6	28.6	29.9	29.0	35.5	47.0	1.1	8.3	9.7	10.2	10.8	11.3	19.5	1.1	11.0	19.1	20.1	19.8	23.2	33.3
United Arab Emirates																					
West Bank and Gaza																					
Yemen																					
Regional rate	**1.5**	**12.7**	**19.9**	**18.5**	**18.5**	**26.7**	**31.3**	**1.7**	**10.8**	**12.7**	**12.4**	**13.6**	**19.5**	**20.0**	**1.6**	**11.8**	**16.4**	**15.6**	**16.2**	**23.1**	**25.4**

Regional profile for the Eastern Mediterranean, cont'd: number of TB cases notified, 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Afghanistan	71 685	71 554	41 752	52 502	18 784	10 742	14 351	18 091	16 051	14 386	4 332	23 067						1 290	3 084	3 314
Bahrain	219	262	156	232	208	194	156	120	142	122	117	142	140	114		115	156	154	213	200
Cyprus	69	69	86	73	39	61	48	35	39	23	29	43	39	37	37	36	24	47	47	39
Djibouti		2 265	671		1 489	2 262	1 864	1 978	2 030	2 040	2 100	2 900	2 884				3 071	3 727	3 715	4 366
Egypt	1 637	1 306	1 805	1 932	1 572	1 308	1 209	22 063	1 378	1 492	2 142	3 634	8 876	3 426	3 911	34 941	12 338	13 971	12 662	11 763
Iran	42 717	11 728	9 509	8 589	10 493	8 728	8 032	10 034	9 967	12 005	9 255	14 246	14 121	20 569	13 021	29 491	14 189	12 659	11 794	12 062
Iraq	11 809	10 614	7 741	6 970	6 807	6 485	6 846	6 517	6 504	8 032	14 684			18 553	19 733	26 950	29 196	26 607	30 324	31 899
Jordan	298	646	860	856	672	769	592	537	553	484	439	390	504	427	443	504	474	407	385	379
Kuwait	847	819	880	855	812	717	611	540	480	468	277	330	282	217	237	336	400	528	564	
Lebanon		67	75	284	410	1 943	2 257	2 478				884	884		940	983	836	701	730	679
Libya	718	481	512	610	357	325	276	331	416	265	442	239	1 164			1 440	1 282		1 575	1 615
Morocco	24 878	28 637	28 095	26 944	22 279	26 790	27 553	27 159	25 717	26 756	27 658	27 638	25 403	27 626	30 316	29 829	31 771	30 227	29 087	29 854
Oman	1 872	928	897	802	843	861	1 265	616	477	478	482	442	367	281	304	276	222	235	215	255
Pakistan	316 340	324 576	326 492	117 739	91 572	111 419	149 004	179 480	194 323	170 562	156 759	194 323		73 175		13 142	4 307		89 599	20 936
Qatar	257	213	172	206	203	250	220	248	223	191	184	195		200		304	257	212	253	259
Saudi Arabia	10 956	8 263	8 529	7 551	7 163	3 966	3 696	3 029	2 433	2 583	2 415	2 221	2 016					3 138	3 235	3 507
Somalia				2 838	2 719	2 722	3 079	7 322	2 728	1 323					2 023	2 883	3 251	4 116	4 071	4 784
Sudan	32 971	47 431				1 509	2 460	800	693	701	212	16 423	19 503	37 516	23 178	11 084	20 280	11 666	22 762	23 121
Syrian Arab Republic	1 689	1 908	1 838	1 867	2 111	2 163	3 942	4 290	4 952	5 504	6 018	5 651	5 437		5 127	4 404	5 200	4 951	5 342	5 447
Tunisia	2 504	2 316	2 554	3 062	2 501	2 510	2 487	2 272	2 309	2 403	2 054	2 064	2 164	2 565	2 376	2 383	2 387		2 211	2 158
United Arab Emirates	522	638	597	507	534	568	464	818	339	308	285	234	227				507		773	
West Bank and Gaza	191	139	136	136	123	113	63	82	85	145	64	89	97			77	40		18	
Yemen																14 428	14 364	12 013	12 383	
Total	**522 179**	**514 860**	**433 357**	**234 555**	**171 691**	**186 405**	**230 475**	**288 840**	**271 839**	**250 271**	**229 948**	**295 155**	**84 108**	**184 706**	**101 646**	**173 606**	**144 552**	**126 649**	**235 042**	**156 637**
number reporting	19	21	20	20	21	22	22	22	21	21	20	20	17	13	13	19	21	18	23	19
percent reporting	83	91	87	87	91	96	96	96	91	91	87	87	74	57	57	83	91	78	100	83

Regional profile for the Eastern Mediterranean, cont'd: case notification rates (per 100 000 population), 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Afghanistan	446	451	269	346	127	74	100	128	114	101	29	149						6	14	15
Bahrain	63	73	42	60	52	47	36	27	31	26	24	28	27	21		21	27	26	36	33
Cyprus	11	11	14	12	6	9	7	5	6	3	4	6	6	5	5	5	3	6	6	5
Djibouti		753	209		406	578	448	447	433	413	406	539	518				504	604	597	694
Egypt	4	3	4	4	3	3	2	42	3	3	4	6	15	6	6	56	19	22	19	18
Iran	109	29	22	20	23	18	16	20	19	22	16	25	24	34	21	47	22	20	18	18
Iraq	91	79	56	49	46	42	43	40	38	46	81			96	100	134	142	126	139	142
Jordan	10	21	26	23	17	19	14	12	13	11	10	8	10	8	8	9	8	7	6	6
Kuwait	62	57	59	55	50	42	34	28	23	22	13	16	14	12	14	20	24	31	31	
Lebanon		3	3	11	15	73	86	95				34	33		32	33	27	22	23	21
Libya	24	15	15	18	10	9	7	8	10	6	10	5	25			29	25		30	30
Morocco	128	145	139	130	105	124	125	120	112	114	116	114	103	110	119	115	120	112	106	107
Oman	166	78	72	62	62	60	85	39	29	28	27	24	19	14	15	13	10	10	9	10
Pakistan	371	369	358	125	94	110	142	166	174	148	132	159		57		10	3		61	14
Qatar	112	85	63	68	62	70	57	60	51	41	38	39		38		56	46	37	44	44
Saudi Arabia	114	81	79	67	60	31	28	22	17	17	15	13	12					16	16	17
Somalia				45	43	42	46	104	37	17					25	35	38	47	44	50
Sudan	177	247				7	11	4	3	3	1	67	78	147	89	42	75	42	81	80
Syrian Arab Republic	19	21	20	19	21	21	37	38	43	46	49	44	41		37	31	36	33	35	35
Tunisia	39	35	38	44	35	34	33	30	30	30	25	25	26	30	27	27	26		24	23
United Arab Emirates	51	57	48	38	37	37	28	48	19	17	15	12	11				22		33	
West Bank and Gaza	42	30	28	28	24	21	12	15	15	24	10	13	13			9	4		2	
Yemen																96	92	74	73	
Total	**181**	**173**	**141**	**74**	**53**	**56**	**67**	**81**	**74**	**66**	**59**	**74**	**21**	**44**	**24**	**39**	**32**	**27**	**50**	**32**

Regional profile for the Eastern Mediterranean, cont'd: new smear-positive cases, 1993-99

	Number of cases							Rate (per 100 000 population)						
Country/territory	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Afghanistan					618	1 833	1 669					3	9	8
Bahrain	82		16	121	110	110	93	15		3	21	19	19	15
Cyprus			12	3	19	6	20			2	0	2	1	3
Djibouti				1 796	1 905	1 697	1 570				294	309	273	250
Egypt		1 811	8 803	5 084	5 469	4 915	5 094		3	14	8	8	7	8
Iran		4 615	9 324	5 373	5 253	5 105	5 426		8	15	8	8	8	8
Iraq	5 240	5 781	11 553	10 240	8 001	8 850	10 711	27	29	57	50	38	41	48
Jordan	173	161	187	170	126	110	102	3	3	3	3	2	2	2
Kuwait	148	155	175	153	201	185		8	9	10	9	12	10	
Lebanon		148	197	198	206	245	249		5	7	6	7	8	8
Libyan Arab Jamahiriya				515			803				10			15
Morocco			14 171	14 278	14 134	13 426	13 420			55	54	53	49	48
Oman	123	135	135	108	120	109	120	6	6	6	5	5	5	5
Pakistan	11 020		2 578	1 849		14 974	6 248	9		2	1		10	4
Qatar			59	43	39	68	57			11	8	7	12	10
Saudi Arabia					1 568	1 644	1 786					8	8	9
Somalia		1 168	1 739	2 318	3 097	3 121	3 449		15	21	27	35	34	36
Sudan		3 728	6 280	8 978	6 095	10 791	13 505		14	24	33	22	38	47
Syrian Arab Republic			1 295	1 523	1 402	1 593	1 578			9	10	9	10	10
Tunisia	1 006	983	1 243	1 005		1 196	1 235	12	11	14	11		13	13
United Arab Emirates														
West Bank and Gaza			9	24		8				1	3		1	
Yemen			3 681	4 371	4 717	4 896				25	28	29	29	
Total	**17 792**	**18 685**	**61 457**	**58 150**	**53 080**	**74 882**	**67 135**	**4**	**4**	**14**	**13**	**11**	**16**	**14**

Notes

Afghanistan Age/sex data for 1999 new smear-positive cases were from 3rd and 4th quarter only.

Bahrain The 73 tranferred patients were non Bahraini and were transferred to their own countries to continue their treatment.

Libyan Arab Jamahiriya (the) Respondant noted that the high rate of treatment interruption was during the continuation phase, and was related to foreign patients leaving the country.

Saudi Arabia Age/sex data included all smear-positive cases (new and relapse).

EUROPE

Updated information will be available later in 2001 from:

WHO Collaborating Centre for the Surveillance of Tuberculosis in Europe, InVS
Hôpital National de Saint-Maurice
12 rue de Val d'Osne, 94410 Saint-Maurice, France

Europe: Summary of TB control policies

Country	Microscopy (a)	SCC (b)	DOT (c)	Outcome monitoring (d)	Drug supply (e)	Category as of 31/12/99*	DOTS newly implemented in 1999
Albania						1	
Andorra						4	
Armenia						3	
Austria						1	
Azerbaijan						3	
Belarus						1	
Belgium						1	
Bosnia and Herzegovina						4	
Bulgaria						1	
Croatia						1	
Czech Republic (the)						4	
Denmark						1	
Estonia						1	
Finland						1	
France						1	
Georgia						4	
Germany						1	
Greece						1	
Hungary						4	x
Iceland						5	
Ireland						1	
Israel						4	
Italy						3	
Kazakhstan						4	
Kyrgyzstan						4	
Latvia						4	
Lithuania						2	x
Luxembourg						1	
Malta						4	
Monaco						4	x
Netherlands (the)						4	
Norway						4	
Poland						3	
Portugal						4	
Republic of Moldova (the)						1	
Romania						2	
Russian Federation (the)						2	
San Marino						4	
Slovakia						4	
Slovenia						4	
Spain						1	
Sweden						5	
Switzerland						5	
Tajikistan						2	x
The former Yugoslav Republic of Macedonia						4	
Turkey						1	

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Microscopy (a)	Use of smear microscopy for diagnosis
SCC (b)	Short course chemotherapy
DOT (c)	Directly observed therapy
Outcome monitoring (d)	Monitoring of treatment outcomes by cohort analysis
Drug supply (e)	A system of TB drug forecasting, financing, and procurement
*	See table 1 for definition of categories
dark green	implemented in all units/areas
light green	implemented in some units/areas
grey	not implemented
white	unknown or not applicable (decentralized drug supply system)

European Region: Summary of TB control policies (continued)

Country	Microscopy (a)	SCC (b)	DOT (c)	Outcome monitoring (d)	Drug supply (e)	Category as of 31/12/99*	DOTS newly implemented in 1999
Turkmenistan						1	
Ukraine						1	
United Kingdom of Great Britain and Northern Ireland (the)						1	
Uzbekistan						2	
Yugoslavia						1	

Microscopy (a)	Use of smear microscopy for diagnosis
SCC (b)	Short course chemotherapy
DOT (c)	Directly observed therapy
Outcome monitoring (d)	Monitoring of treatment outcomes by cohort analysis
Drug supply (e)	A system of TB drug forecasting, financing, and procurement
*	See table 1 for definition of categories
dark green	implemented in all units/areas
light green	implemented in some units/areas
grey	not implemented
white	unknown or not applicable (decentralized drug supply system)

Regional Profile for Europe: notification, detection and DOTS coverage, 1999

Country/Territory	Country information								WHO TB control strategy (DOTS)						Other Strategy (non-DOTS)					
		Notifications								Notifications						Notifications				
	Pop	all cases		New ss+		Est	CDR	DOTS cate-	% of	all cases		New ss+		% of pulm	% of	all cases		New ss+		% of pulm
	thousands	number	rate	number	rate	new ss+	%	gory	pop	number	rate	number	rate	cases ss+	pop	number	rate	number	rate	cases ss+
	a	b	b/a	c	c/a	d	c/d	e	f	g	g/f*a	h	h/f*a	l	j	k	k/j*a	l	l/j*a	m
Albania	3 113	733	24	168	5	399	42	1	0						100	733	24	168	5	36
Andorra	75	9	12	3	4	8	37	4	100	9	12	3	4	50	0					
Armenia	3 525	1 488	42	576	16	917	63	3	80	1 035	23	381	14	49	20	453	64	195	28	50
Austria	8 177	1 085	13	323	4	580	56	1	0						100	1 085	13	323	4	37
Azerbaijan	7 697	4 654	60	763	10	2 145	36	3	12	404	1	188	20	55	88	4 250	63	575	8	14
Belarus	10 274	7 339	71	2 769	27	3 666	76	1	0						100	7 339	71	2 769	27	44
Belgium	10 152	1 124	11	403	4	673	60	1	0						100	1 124	11	403	4	49
Bosnia & Herzegovina	3 839	2 923	76	786	20	1 504	52	4	100	2 923	76	786	20	33	0					
Bulgaria	8 279	3 530	43	1 697	20	1 705	100	1	0						100	3 530	43	1 697	20	57
Croatia	4 477	1 765	39	748	17	1 219	61	1	0						100	1 765	39	748	17	53
Czech Republic	10 262	1 605	16	449	4	874	51	4	100	1 605	16	449	4	34	0					
Denmark	5 282	587	11	172	3	289	60	1	0						100	587	11	172	3	45
Estonia	1 412	732	52	274	19	386	71	1	0						100	732	52	274	19	47
Finland	5 165	565	11	179	3	264	68	1	0						100	565	11	179	3	47
France	58 886	6 052	10	2 325	4	4 229	55	1	0						100	6 052	10	2 325	4	54
Georgia	5 006	4 793	96	746	15	1 624	46	4	96	4 793	92	746	16	26	4					
Germany	82 178	9 974	12			4 779		1	0						100	9 974	12	0	0	
Greece	10 626	936	9	143	1	1 069	13	1	0						100	936	9	143	1	53
Hungary	10 076	3 532	35	660	7	1 812	36	4	100	3 532	35	660	7	22	0					
Iceland	279	10	4	2	1	5	44	5	0						100	10	4	2	1	33
Ireland	3 705	455	12	117	3	246	48	1	0						100	455	12	117	3	34
Israel	6 101	490	8	170	3	206	83	4	100	490	8	170	3	51	0					
Italy	57 343	4 429	8	1 277	2	2 363	54	3	21	4 429	2	1 277	11	59	79	0	0	0	0	
Kazakhstan	16 269	24 979	154	6 977	43	9 511	73	4	100	24 979	154	6 977	43	38	0					
Kyrgyzstan	4 669	6 376	137	1 642	35	2 731	60	4	100	6 376	137	1 642	35	28	0					
Latvia	2 389	1 891	79	588	25	1 126	52	4	100	1 891	79	588	25	37	0					
Lithuania	3 682	2 800	76	787	21	1 643	48	2	3	88	0	32	29	53	97	2 712	76	755	21	39
Luxembourg	426	37	9			30		1	0						100	37	9			
Malta	386	22	6	9	2	13	69	4	100	22	6	9	2	47	0					
Monaco	33	3	9	2	6	0		4	100						0	3		2		100
Netherlands	15 735	1 398	9	308	2	764	40	4	100	1 398	9	308	2	36	0					
Norway	4 442	213	5	21	0	104	20	4	100	213	5	21	0	17	0					
Poland	38 740	12 168	31	3 177	8	6 805	47	3	11	498	0	174	4	41	89	11 670	34	3 003	9	31
Portugal	9 873	4 599	47	1 801	18	2 342	77	4	100	4 599	47	1 801	18	56	0					
Republic of Moldova	4 380	2 711	62	609	14	2 559	24	1	0						100	2 711	62	609	14	25
Romania	22 402	26 107	117	10 317	46	13 090	79	2	4	1 141	0	518	58	65	96	24 966	116	9 799	46	52
Russian Federation	147 196	134 360	91	21 744	15	81 233	27	2	5	3 820	0	1 274	17	39	95	130 540	93	20 470	15	18
San Marino	26	0	0	0	0	1		4	100	0	0	0			0					
Slovakia	5 382	1 100	20	246	5	678	36	4	100	1 100	20	246	5	33	0					
Slovenia	1 989	423	21	165	8	241	68	4	100	423	21	165	8	51	0					
Spain	39 634	8 393	21			10 050		1	0						100	8 393	21			
Sweden	8 892	479	5	117	1	174	67	5	0						100	479	5	117	1	38
Switzerland	7 344	756	10	98	1	295	33	5	0						100	756	10	98	1	25
Tajikistan	6 104	2 553	42			2 877		2	3						97	2 553	43			
TFYR Macedonia	2 011	557	28	122	6	452	27	1	0						100	557	28	122	6	27
Turkey	65 546	22 088	34	4 124	6	11 106	37	1	0						100	22 088	34	4 124	6	28
Turkmenistan	4 384	4 092	93	964	22	1 778	54	1	0						100	4 092	93	964	22	25
Ukraine	50 658	32 879	65	10 412	21	16 696	62	1	0						100	32 879	65	10 412	21	41
United Kingdom	58 744	6 183	11	797	1	3 103	26	1	0						100	6 183	11	797	1	33
Uzbekistan	23 942	15 080	63	3 977	17	10 413	38	2	2	475	0	181	38	38	98	14 605	62	3 796	16	26
Yugoslavia	10 637	2 646	25	2 517	24	2 242	112	1	0						100	2 646	25	2 517	24	100

Regional Profile for Europe, cont'd: treatment outcomes for cases registered in 1998 - WHO TB control strategy (DOTS) and other (non-DOTS) control strategies

Country/Territory	New smear-positive cases - DOTS									Retreatment cases - DOTS									New smear-positive cases - non-DOTS								
	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success
	a	c	d	e	f	g	h	b	c+d	i	k	l	m	n	o	p	j	k+l	q	s	t	u	v	w	x	r	s+t
Albania																											
Andorra	2		100					0	100	1	0	0	0	0	0	0	100	0									
Armenia	387	78	3	3	8	6	1	0	81	85	53	5	6	15	19	2	0	58									
Austria																											
Azerbaijan	161	83	4	3	6	5		0	86	20	70	0	5	15	10	0	0	70	566	83		2	5	7	2	0	83
Belarus																											
Belgium																											
Bosnia & Herzegovina	640	75	13	3	1	2	1	5	88	120	56	16	3	5	5	3	13	72									
Bulgaria																											
Croatia																											
Czech Republic	548	53	12	16	0	6	0	13	65	14	64	7	29	0	0	0	0	71									
Denmark																											
Estonia										73	42	5	26	12	14	0	0	48	299	58	7	17	5	12		0	65
Finland																											
France																											
Georgia	534	52	26	0	6	12	4	0	78	381	34	10	21	15	16	4	0	44									
Germany																											
Greece																											
Hungary	662	23	57	7	2	11	1	0	80	114	34	32	15	2	12	4	0	67									
Iceland										1	0	100	0	0	0	0	0		2		100					0	100
Ireland										3	0	0	0	0	0	0	100										
Israel																											
Italy	353	52	20	5	1	9	13	0	72	85	35	19	16	6	13	11	0	54									
Kazakhstan	3 519	73	6	5	7	3	4	2	79	1 141	56	9	10	13	5	6	0	65									
Kyrgyzstan	830	80	2	3	7	3	4	0	82	51	86	0	4	6	2	2	0	86									
Latvia	619	65	5	11	2	9	2	5	71	224	37	1	14	4	19	3	23	38									
Lithuania	33	79		15		6		0	79	8	75	0	13	0	13	0	0	75	754	68	0	12	5	13	1	0	68
Luxembourg																											
Malta	6		100					0	100	0																	
Monaco																											
Netherlands	293	20	45	4		4	2	24	65																		
Norway	49	39	31	10		2		18	69	3	33	0	0	33	0	33	0	33									
Poland	122	61	14	10	7	7	2	0	75	28	68	4	11	4	14	0	0	71									
Portugal	1 948	43	30	5	3	3	4	11	74	302	36	25	12	6	5	6	11	61									
Republic of Moldova																											
Romania	500	80	5	5	4	4	2	1	85	356	46	3	6	14	16	3	13	49	10 421	29	11	3	4	5	1	46	40
Russian Federation	745	61	6	8	8	7	4	6	68	246	38	11	17	20	8	4	2	49									
San Marino	0									0																	
Slovakia	304	80	5	11	0	2		2	85	71	62	3	18	4	6	0	7	65									
Slovenia	158	57	22	15		4	3	0	78	34	47	18	15	0	18	3	0	65									
Spain																											
Sweden																											
Switzerland																											
Tajikistan										66	26	29	5	3	8	30	0	55	435	53	7	27	1	3	9	0	60
TFYR Macedonia																			179	44	32	4	2	12	1	5	77
Turkey																			22 509		66	2	16	6	5	5	66
Turkmenistan																											
Ukraine																											
United Kingdom																											
Uzbekistan	74	65	14	7	14	1		0	78																		
Yugoslavia																											

Regional profile for Europe, cont'd: age and sex distribution of smear-positive cases in DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+
Albania																					
Andorra	0	0	0	1	1	0	0	0	0	0	1	0	0	0	0	0	0	2	1	0	0
Armenia	3	105	49	73	51	29	4	4	15	12	18	5	9	4	7	120	61	91	56	38	8
Austria																					
Azerbaijan	0	95	27	24	21	3	0	0	3	3	3	6	3	0	0	98	30	27	27	6	0
Belarus																					
Belgium	2	18	40	49	46	38	83	4	20	38	19	22	8	16	6	38	78	68	68	46	99
Bosnia & Herzegovina	2	44	76	113	89	60	68	6	49	59	34	24	38	87	8	93	135	147	113	98	155
Bulgaria																					
Croatia																					
Czech Republic	2	13	27	62	98	45	75	1	5	14	18	15	3	71	3	18	41	80	113	48	146
Denmark																					
Estonia																					
Finland																					
France																					
Georgia	5	135	176	151	77	55	23	3	27	40	26	10	10	8	8	162	216	177	87	65	31
Germany																					
Greece																					
Hungary	2	16	48	155	183	74	47	4	17	19	37	19	7	32	6	33	67	192	202	81	79
Iceland																					
Ireland																					
Israel	2	13	22	22	16	10	27	3	4	15	7	2	5	22	5	17	37	29	18	15	49
Italy	7	78	155	137	114	104	247	8	49	63	63	35	32	141	15	127	218	200	149	136	388
Kazakhstan	34	778	1 217	1 026	560	368	165	60	822	872	452	226	171	136	94	1 600	2 089	1 478	786	539	301
Kyrgyzstan	5	216	388	244	142	73	49	8	137	199	75	40	31	35	13	353	587	319	182	104	84
Latvia	1	48	87	110	103	57	30	2	28	24	40	29	11	18	3	76	111	150	132	68	48
Lithuania	0	0	4	5	3	3	9	0	2	1	1	0	0	2	0	2	5	6	3	3	11
Luxembourg																					
Malta	0	0	1	0	0	5	3	0	0	0	0	0	0	0	0	0	1	0	0	5	3
Monaco																					
Netherlands	5	44	67	32	24	12	19	5	26	39	16	2	1	16	10	70	106	48	26	13	35
Norway	0	2	5	3	2	1	1	0	3	2	2	0	0	0	0	5	7	5	2	1	1
Poland	0	2	14	42	39	7	18	0	2	6	15	14	4	11	0	4	20	57	53	11	29
Portugal	13	113	288	378	232	146	189	9	98	134	86	30	28	57	22	211	422	464	262	174	246
Republic of Moldova																					
Romania	1	60	94	103	77	33	10	4	39	32	25	14	12	14	5	99	126	128	91	45	24
Russian Federation	0	82	149	199	180	75	31	0	38	49	36	33	7	22	0	120	198	235	213	82	53
San Marino	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Slovakia	1	2	19	42	51	19	29	0	8	10	7	7	8	43	1	10	29	49	58	27	72
Slovenia	0	3	21	40	27	11	15	0	0	5	6	5	6	20	0	3	26	46	32	17	35
Spain																					
Sweden																					
Switzerland																					
Tajikistan																					
TFYR Macedonia																					
Turkey																					
Turkmenistan																					
Ukraine	11	661	1 463	2 351	1 825	1 067	557	25	485	577	478	297	222	393	36	1 146	2 040	2 829	2 122	1 289	950
United Kingdom																					
Uzbekistan	4	10	25	50	7	3	3	1	8	20	40	5	3	2	5	18	45	90	12	6	5
Yugoslavia																					
Regional total	**100**	**2 538**	**4 462**	**5 412**	**3 968**	**2 298**	**1 702**	**147**	**1 885**	**2 233**	**1 505**	**840**	**619**	**1 150**	**247**	**4 423**	**6 695**	**6 917**	**4 808**	**2 917**	**2 852**

Regional profile for Europe, cont'd: age and sex distribution of smear-positive cases in non-DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Albania	0	13	23	25	19	15	15	0	5	13	11	5	8	16	0	18	36	36	24	23	31
Andorra																					
Armenia	1	46	39	42	25	8	16	2	7	3	2	1	0	3	3	53	42	44	26	8	19
Austria	0	13	40	54	52	37	49	0	10	16	18	6	2	26	0	23	56	72	58	39	75
Azerbaijan	0	1	19	193	163	46	0	0	1	14	70	52	16	0	0	2	33	263	215	62	0
Belarus																					
Belgium																					
Bosnia & Herzegovina																					
Bulgaria																					
Croatia	1	29	45	83	93	46	45	2	14	18	15	15	16	53	3	43	63	98	108	62	98
Czech Republic																					
Denmark	4	9	29	23	21	8	9	1	11	18	11	7	8	11	5	20	47	34	28	16	20
Estonia	0	14	35	72	55	19	17	0	8	9	20	16	2	7	0	22	44	92	71	21	24
Finland	0		4	13	26	20	53	0	2	6		11	5	39	0	2	10	13	37	25	92
France	13	147	267	310	276	157	318	25	110	145	120	80	60	284	38	257	412	430	356	217	602
Georgia																					
Germany	13	145	308	419	362	335	449	15	118	177	98	85	99	295	28	263	485	517	447	434	744
Greece	3	11	11	17	18	18	27	1	5	8	8	2	3	10	4	16	19	25	20	21	37
Hungary																					
Iceland	0			1				0		1					0		1	1			
Ireland	0	7	15	10	12	7	19	0	9	9	3	8	3	13	0	16	24	13	20	10	32
Israel																					
Italy																					
Kazakhstan																					
Kyrgyzstan																					
Latvia																					
Lithuania	0	42	86	148	19	88	58	0	30	47	54	25	20	38	0	72	133	202	44	108	96
Luxembourg																					
Malta																					
Monaco	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	1
Netherlands																					
Norway																					
Poland	0	82	205	639	615	298	288	10	93	107	163	115	77	311	10	175	312	802	730	375	599
Portugal																					
Republic of Moldova	1	89	123	144	84	29	14	3	31	32	27	19	7	6	4	120	155	171	103	36	20
Romania	33	782	1 430	1 940	1 576	885	462	44	693	677	471	304	186	303	77	1 475	2 107	2 411	1 880	1 071	765
Russian Federation	17	1 776	3 989	4 838	3 812	1 543	828	33	723	973	953	567	306	485	50	2 499	4 962	5 791	4 379	1 849	1 313
San Marino																					
Slovakia																					
Slovenia																					
Spain																					
Sweden	0	13	18	12	5	2	22	1	7	14	7	3	2	10	1	20	32	19	8	4	32
Switzerland	1	12	15	17	6	6	5	0	5	16	7	0	2	6	1	17	31	24	6	8	11
Tajikistan																					
TFYR Macedonia	1	11	10	19	27	15	5	1	7	9	5	1	10	1	2	18	19	24	28	25	6
Turkey																					
Turkmenistan	5	129	225	174	77	43	17	2	51	103	65	32	27	14	7	180	328	239	109	70	31
Ukraine																					
United Kingdom	8	68	93	68	53	51	126	6	55	80	60	29	30	69	14	123	173	128	82	81	195
Uzbekistan	0	419	901	469	255	143	97	10	338	627	299	181	133	122	10	757	1 528	768	436	276	219
Yugoslavia																					
Regional total	**101**	**3 858**	**7 930**	**9 730**	**7 652**	**3 819**	**2 939**	**156**	**2 333**	**3 122**	**2 487**	**1 564**	**1 022**	**2 123**	**257**	**6 191**	**11 052**	**12 217**	**9 216**	**4 841**	**5 062**

Regional profile for Europe, cont'd: smear-positive notification rates by age and sex, 1999

	MALE							FEMALE							ALL						
	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+
Albania	0.0	4.6	8.7	10.8	13.8	13.7	18.6	0.0	1.9	5.2	5.0	3.9	7.8	15.3	0.0	3.3	7.0	8.0	9.0	10.9	16.7
Andorra																					
Armenia	0.4	24.3	17.0	20.1	23.7	15.2	8.4	0.7	3.6	2.9	3.2	1.7	3.1	2.0	0.6	14.1	10.0	11.3	12.0	8.6	4.6
Austria	0.0	2.5	5.8	7.8	10.1	8.6	10.9	0.0	2.1	2.5	2.8	1.2	0.4	3.5	0.0	2.3	4.2	5.4	5.7	4.4	6.3
Azerbaijan	0.0	6.8	3.5	19.4	33.6	11.1	0.0	0.0	0.3	1.3	5.8	9.5	3.6	0.0	0.0	3.6	2.4	12.2	20.9	7.0	0.0
Belarus																					
Belgium	0.2	2.9	5.4	6.0	6.5	7.5	12.3	0.5	3.3	5.4	2.4	3.2	1.5	1.6	0.3	3.1	5.4	4.3	4.8	4.4	5.9
Bosnia & Herzegovina	0.5	14.9	24.0	33.0	36.7	35.9	45.3	1.7	17.6	19.4	10.1	9.7	19.5	40.4	1.1	16.2	21.7	21.6	23.1	27.1	42.4
Bulgaria																					
Croatia	0.3	9.0	14.7	24.9	29.3	19.0	18.5	0.5	4.5	6.0	4.5	4.7	5.9	13.1	0.4	6.8	10.4	14.7	16.9	12.1	15.2
Czech Republic	0.2	1.6	3.6	8.7	12.4	9.1	14.1	0.1	0.6	1.9	2.6	1.9	0.5	8.3	0.2	1.1	2.8	5.7	7.1	4.6	10.5
Denmark	0.8	2.9	7.2	5.8	5.3	2.7	2.7	0.2	3.7	4.7	2.9	1.8	2.7	2.3	0.5	3.3	6.0	4.4	3.6	2.7	2.5
Estonia	0.0	13.2	34.8	67.5	61.9	27.8	26.9	0.0	7.8	9.6	18.3	16.0	2.3	5.4	0.0	10.5	22.6	42.6	37.6	13.4	12.5
Finland	0.0		1.2	3.3	6.2	7.6	18.4	0.0	0.6	1.8		2.7	1.8	8.2	0.0	0.3	1.5	1.7	4.5	4.6	12.1
France	0.2	3.7	6.2	7.3	6.8	5.9	8.5	0.5	2.9	3.4	2.8	2.0	2.1	5.1	0.3	3.3	4.8	5.0	4.4	4.0	6.5
Georgia	0.9	35.0	49.4	41.7	30.3	24.6	9.8	0.5	7.2	11.5	6.5	3.5	3.6	2.1	0.7	21.3	30.7	23.3	16.1	13.1	5.0
Germany	0.2	3.1	4.8	6.1	6.9	6.2	9.0	0.2	2.7	2.9	1.5	1.7	1.8	3.6	0.2	2.9	3.9	3.9	4.3	4.0	5.6
Greece	0.4	1.4	1.4	2.3	2.7	3.1	3.3	0.1	0.7	1.0	1.1	0.3	0.5	1.0	0.2	1.1	1.2	1.7	1.5	1.7	2.0
Hungary	0.2	2.1	6.6	22.7	26.0	15.2	8.5	0.5	2.3	2.7	5.4	2.5	1.1	3.5	0.3	2.2	4.7	14.0	13.8	7.4	5.4
Iceland	0.0			4.7				0.0		4.8					0.0		2.4	2.4			
Ireland	0.0	2.1	5.5	4.0	5.3	4.4	10.6	0.0	2.8	3.3	1.2	3.6	1.9	5.4	0.0	2.4	4.4	2.5	4.4	3.2	7.6
Israel	0.2	2.4	4.9	5.7	4.8	5.2	10.7	0.4	0.8	3.4	1.8	0.6	2.3	6.4	0.3	1.6	4.2	3.7	2.7	3.7	8.2
Italy	0.2	2.3	3.4	3.1	3.0	3.2	5.9	0.2	1.5	1.4	1.5	0.9	0.9	2.3	0.2	1.9	2.4	2.3	1.9	2.0	3.8
Kazakhstan	1.5	53.3	100.1	83.5	72.8	69.4	43.1	2.7	57.2	75.3	35.7	26.8	26.0	18.2	2.1	55.2	88.0	59.2	48.8	45.3	26.6
Kyrgyzstan	0.6	49.0	113.2	82.7	87.7	66.9	47.9	1.0	31.4	58.8	24.2	22.8	24.6	20.1	0.8	40.3	86.1	52.8	54.0	44.2	30.4
Latvia	0.5	29.0	52.4	62.6	75.3	48.2	28.8	0.9	16.5	14.3	21.0	17.8	6.8	7.8	0.7	22.7	33.3	41.0	44.0	24.2	14.3
Lithuania	0.0	7.8	16.4	26.9	5.4	27.0	20.4	0.0	6.1	9.1	9.5	5.4	4.5	6.3	0.0	6.9	12.8	18.1	5.4	14.3	11.1
Luxembourg																					
Malta	0.0	0.0	3.8	0.0	0.0	29.2	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	13.8	6.7
Monaco																					
Netherlands	0.3	4.6	5.3	2.5	2.1	1.5	2.2	0.4	2.9	3.2	1.3	0.2	0.1	1.3	0.3	3.8	4.2	1.9	1.1	0.8	1.6
Norway	0.0	0.7	1.5	0.9	0.6	0.5	0.3	0.0	1.1	0.6	0.6	0.0	0.0	0.0	0.0	0.9	1.0	0.8	0.3	0.2	0.1
Poland	0.0	1.3	4.2	11.3	12.4	9.9	8.9	0.1	1.5	2.2	3.0	2.3	2.2	5.6	0.1	1.4	3.2	7.2	7.3	5.8	6.9
Portugal	1.6	15.1	36.9	55.8	38.9	30.1	30.4	1.1	13.6	17.3	12.1	4.6	5.0	6.2	1.3	14.3	27.1	33.5	21.1	16.6	16.0
Republic of Moldova	0.2	23.6	41.8	44.1	34.7	18.0	8.8	0.6	8.4	10.7	7.6	7.0	3.4	2.3	0.4	16.1	26.2	25.0	20.0	9.7	4.7
Romania	0.8	23.1	41.0	67.9	59.1	42.2	19.2	1.2	20.9	19.8	16.8	11.0	7.9	9.4	1.0	22.0	30.6	42.6	34.7	23.9	13.6
Russian Federation	0.1	8.2	20.6	20.7	21.8	12.8	7.6	0.1	3.4	5.2	3.9	2.9	1.8	2.0	0.1	5.8	12.9	12.2	11.8	6.5	3.8
San Marino																					
Slovakia	0.2	0.4	4.8	10.2	14.6	9.2	12.4	0.0	1.8	2.6	1.7	1.9	3.2	11.5	0.1	1.1	3.7	6.0	8.1	5.9	11.9
Slovenia	0.0	2.0	14.3	25.4	18.9	10.7	15.3	0.0	0.0	3.4	3.9	3.6	5.4	11.7	0.0	1.0	8.9	14.7	11.4	7.9	13.0
Spain																					
Sweden	0.0	2.5	2.9	2.0	0.8	0.4	3.3	0.1	1.4	2.4	1.2	0.5	0.4	1.1	0.1	2.0	2.6	1.6	0.6	0.4	2.1
Switzerland	0.2	2.8	2.6	2.7	1.2	1.6	1.1	0.0	1.2	2.9	1.2	0.0	0.5	0.9	0.1	2.0	2.7	2.0	0.6	1.0	1.0
Tajikistan																					
TFYR Macedonia	0.4	6.6	6.6	12.9	22.7	16.8	5.6	0.4	4.4	6.1	3.5	0.8	10.3	0.9	0.4	5.5	6.3	8.3	11.6	13.5	3.0
Turkey																					
Turkmenistan	0.6	30.4	66.8	65.6	56.7	49.8	23.6	0.2	12.2	31.0	23.0	21.9	28.3	12.4	0.4	21.3	49.0	43.6	38.6	38.5	16.7
Ukraine	0.2	17.6	42.2	63.0	61.6	40.9	23.8	0.6	13.3	16.7	12.2	8.8	6.5	8.3	0.4	15.5	29.5	37.0	33.5	21.4	13.4
United Kingdom	0.1	1.8	2.2	1.6	1.3	1.7	3.2	0.1	1.6	1.9	1.4	0.7	1.0	1.3	0.1	1.7	2.1	1.5	1.0	1.3	2.1
Uzbekistan	0.0	9.1	25.9	17.7	18.0	14.7	11.6	0.1	7.5	17.9	11.3	12.2	12.7	9.5	0.1	8.3	21.8	14.4	15.0	13.7	10.4
Yugoslavia																					
Regional rate	**0.2**	**8.8**	**17.4**	**20.2**	**19.3**	**13.6**	**9.8**	**0.3**	**6.0**	**7.7**	**5.3**	**3.8**	**3.1**	**4.1**	**0.3**	**7.4**	**12.6**	**12.7**	**11.3**	**8.0**	**6.2**

Regional profile for Europe, cont'd: number of TB cases notified, 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Albania	1 050	954	978	891	975	916	989	915	759	695	653	628			707	641	738	655	694	733
Andorra										12	23	24	21				17	19	8	9
Armenia	756	924	759	702	774	768	832	766	651	649	590	741	235	590	753	1 157	928	1 026	1 455	1 488
Austria	2 191	2 061	1 942	1 825	1 765	1 442	1 377	1 390	1 402	1 334	1 521	1 426	1 354	1 267	1 264	1 399	1 375	1 369	1 307	1 085
Azerbaijan	3 080	3 180	3 217	3 176	3 506	3 772	3 804	3 677	3 340	2 989	2 620	2 771	2 821	3 036	2 839	1 630	2 480	4 635	4 672	4 654
Belarus	5 954	6 198	5 468	5 509	5 065	4 873	4 128	3 911	3 769	3 708	3 039	3 745	2 414	4 134	4 348	4 854	5 598	5 985	6 150	7 339
Belgium	2 687	2 837	2 652	2 190	2 149	1 956	1 893	1 772	1 588	1 648	1 577	1 462	1 335	1 503	1 521	1 380	1 348	1 263	1 203	1 124
Bosnia & Herzegovina	4 421	4 376	4 678	4 468	4 691	4 666	4 605	4 522	4 093	4 176	4 073	3 546	600	680	1 595	2 132	2 220	2 869	2 711	2 923
Bulgaria	3 280	3 007	2 999	2 892	2 856	2 555	2 530	2 352	2 387	2 301	2 256	2 606	3 096	3 213	5 296	3 245	3 109	3 437	4 117	3 530
Croatia	3 999	4 021	3 718	3 632	3 612	3 605	3 355	3 326	2 973	2 861	2 576	2 158	2 189	2 279	2 217	2 114	2 174	2 054	2 118	1 765
Czech Republic	4 962	4 312	4 146	4 016	3 653	3 117	2 553	2 196	2 047	1 905	1 937	2 079	1 986	1 864	1 960	1 834	1 969	1 834	1 805	1 605
Denmark	430	394	378	348	302	312	299	322	304	328	350	334	359	411	495	448	484	554	529	587
Estonia	614	560	563	587	546	541	522	446	471	422	332	406	403	532	645	624	521	744	820	732
Finland	2 247	2 204	2 170	1 882	1 791	1 819	1 546	1 419	1 078	970	772	771	700	542	553	661	645	573	629	565
France	17 199	16 459	15 425	13 831	12 302	11 290	10 535	10 241	9 191	9 027	9 030	8 510	8 605	9 551	9 093	8 723	7 656	6 832		6 052
Georgia	2 098	2 124	2 168	1 881	1 855	1 822	1 833	1 810	1 598	1 609	1 537		2 130	3 741		1 625	3 522	8 446	6 302	4 793
Germany	29 991	27 083	25 397	22 977	20 243	20 074	17 906	17 102	16 282	15 385	14 653	13 474	14 113	14 161	12 982	12 198	11 814	11 163	10 440	9 974
Greece	5 412	7 334	5 193	3 880	1 956	1 556	1 566	1 193	907	1 068	877	762	920					767	1 152	936
Hungary	5 412	5 322	5 181	5 028	4 472	4 852	4 522	4 125	4 016	3 769	3 588	3 658	3 960	4 209	4 163	4 339	4 403	4 240	3 999	3 532
Iceland	25	23	25	24	26	13	13	12	16	18	18	15	16		18	12	11	10	17	10
Ireland	1 152	1 018	975	924	837	804	602	581	534	672	624	640	604				434	416	424	455
Israel	249	227	232	222	257	368	239	184	226	160	234	505	345				369	422	656	490
Italy	3 311	3 182	3 850	4 253	3 472	4 113	4 077	3 278	3 610	3 996	4 246	3 719	4 685	4 734	5 816	5 627	4 155	4 596	5 727	4 429
Kazakhstan	14 442	13 876	13 808	13 357	12 563	12 423	13 090	13 286	13 501	13 307	10 969	10 821	10 920	10 425	10 519	11 310	13 944	16 109	20 623	24 979
Kyrgyzstan	1 973	2 085	2 051	1 981	2 022	2 094	2 122	2 088	2 159	2 132	2 306	2 515	2 582	2 427	2 726	3 393	4 093	5 189	5 706	6 376
Latvia	1 194	1 140	1 077	1 072	1 054	1 223	982	948	938	857	906	943	955	994	1 131	1 541	1 761	2 003	2 182	1 891
Lithuania	1 636	1 599	1 495	1 477	1 420	1 453	1 412	1 372	1 339	1 381	1 471	1 556	1 598	1 895	2 135	2 362	2 608	2 926	3 016	2 800
Luxembourg	71	45	41	41	46	42	45	48	16	45	48	48	25				41	38	44	37
Malta	24	26	13	24	15	11	14	14	12	16	13	26	30	26	25	11	28	11	16	22
Monaco	1	0	0	0	0	1	2	2	1	1	1	0	1				0	0	0	3
Netherlands	1 701	1 734	1 514	1 423	1 400	1 362	1 238	1 227	1 341	1 317	1 369	1 345	1 465	1 587	1 811	1 619	1 678	1 486	1 341	1 398
Norway	499	461	448	396	373	374	343	307	294	255	285	290	288	256	242	236	217	205	244	213
Poland	25 807	24 087	23 685	23 411	22 527	21 650	20 603	19 757	18 537	16 185	16 136	16 496	16 551	16 828	16 653	15 958	15 358	13 967	13 302	12 168
Portugal	6 873	7 249	7 309	7 052	6 908	6 889	6 624	7 099	6 363	6 664	6 214	5 980	5 927	5 447	5 619	5 577	5 248	5 110	5 260	4 599
Rep of Moldova	2 781	2 852	3 197	2 858	2 554	2 732	3 022	2 810	2 510	2 281	1 728	1 910	1 835	2 426	2 626	2 925	2 922	2 908	2 625	2 711
Romania	13 553	13 602	13 588	13 570	12 952	12 677	12 860	13 361	14 137	14 676	16 256	15 482	18 097	20 349	21 422	23 271	24 189	23 903	25 758	26 107
Russian Federation	74 270	73 369	72 236	73 280	74 597	64 644	71 764	70 132	67 553	62 987	50 641	50 407	53 148	63 591	70 822	84 980	111 075	119 123	110 935	134 360
San Marino											1	1					0	1	0	0
Slovakia	2 465	2 304	2 263	2 252	2 152	1 989	2 022	1 830	1 651	1 501	1 448	1 620	1 733	1 799	1 760	1 540	1 503	1 298	1 282	1 100
Slovenia	1 085	939	982	925	896	923	816	792	760	768	722	583	640	646	526	525	563	481	449	423
Spain	4 853	5 552	7 961	8 987	10 078	10 749	13 755	9 468	8 497	8 058	7 600	9 007	9 703	9 441		8 764	8 331	9 347	8 927	8 393
Sweden	926	875	784	832	754	702	640	545	536	595	557	521	610	616	537	564	497	456	446	479
Switzerland	1 160	1 193	1 167	1 097	946	961	881	1 018	1 201	1 104	1 278	1 134	987	930	924	830	765	747	750	756
Tajikistan	2 647	2 631	2 628	2 509	2 427	2 485	2 610	2 727	2 474	2 621	2 460	2 116	1 671	652	892	2 029	1 647	2 143	2 448	2 553
TFYR Macedonia													1 602	1 712	728	786	724	693	620	557
Turkey	36 716	39 992	26 457	28 634	27 589	30 960	31 029	30 531	27 884	26 669	24 468	25 166	25 455			22 981	20 212	25 685	25 501	22 088
Turkmenistan	1 677	1 625	1 559	1 541	1 604	1 607	1 614	1 956	1 904	2 169	2 325	2 358	2 074	2 751		1 939	2 072	3 438	3 839	4 092
Ukraine	26 095	25 646	24 710	24 216	24 356	24 058	22 946	22 145	20 744	20 182	16 465	16 713	18 140	19 964	20 622	21 459	23 414	28 344	27 763	32 879
United Kingdom	10 488	9 290	8 436	7 814	7 026	6 666	6 841	5 732	5 793	6 059	5 908	6 088	6 411	6 481	6 196	6 176	6 238	6 355	6 176	6 183
Uzbekistan	9 163	9 682	8 697	8 817	8 544	8 717	9 427	9 794	10 134	10 632	9 414		9 370	9 774	14 890	9 866	11 919	13 352	14 558	15 080
Yugoslavia	6 232	6 381	6 274	6 443	6 454	6 246	6 126	6 042	5 583	5 045	4 194	4 502	3 771	3 843	3 606	2 798	4 017	4 062	3 028	2 646
Total	**348 852**	**346 035**	**324 494**	**319 147**	**308 362**	**298 872**	**302 554**	**290 571**	**277 104**	**267 209**	**242 309**	**231 608**	**248 480**	**241 307**	**242 677**	**288 083**	**321 034**	**353 289**	**343 774**	**373 703**
number reporting	48	48	48	48	48	48	48	48	48	49	50	48	49	41	40	44	50	51	50	51
percent reporting	94	94	94	94	94	94	94	94	94	96	98	94	96	80	78	86	98	100	98	100

Regional profile for Europe, cont'd: case notification rates (per 100 000 population), 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Albania	39	35	35	31	34	31	33	29	24	21	20	19			22	20	23	21	22	24
Andorra										24	45	45	37				25	27	11	12
Armenia	24	29	24	22	24	23	25	22	19	18	17	21	7	16	21	32	26	29	41	42
Austria	29	27	26	24	23	19	18	18	18	17	20	18	17	16	16	17	17	17	16	13
Azerbaijan	50	51	51	49	53	57	56	54	48	42	37	38	38	41	38	22	33	61	61	60
Belarus	62	64	56	56	51	49	41	39	37	36	30	36	23	40	42	47	54	58	60	71
Belgium	27	29	27	22	22	20	19	18	16	17	16	15	13	15	15	14	13	12	12	11
Bosnia & Herzegovina	113	111	117	111	115	113	110	106	94	96	95	85	15	18	45	62	65	82	74	76
Bulgaria	37	34	34	32	32	29	28	26	27	26	26	30	36	37	62	38	37	41	49	43
Croatia	91	91	84	82	81	81	75	74	66	63	57	48	49	51	49	47	48	46	47	39
Czech Republic	48	42	40	39	35	30	25	21	20	18	19	20	19	18	19	18	19	18	18	16
Denmark	8	8	7	7	6	6	6	6	6	6	7	6	7	8	10	9	9	11	10	11
Estonia	42	38	38	39	36	36	34	29	30	27	21	26	26	35	43	42	36	51	57	52
Finland	47	46	45	39	37	37	31	29	22	20	15	15	14	11	11	13	13	11	12	11
France	32	30	28	25	22	20	19	18	16	16	16	15	15	17	16	15	13	12		10
Georgia	41	42	42	36	35	34	34	34	29	30	28		39	70		31	68	165	125	96
Germany	38	35	33	30	26	26	23	22	21	19	18	17	18	18	16	15	14	14	13	12
Greece	56	75	53	39	20	16	16	12	9	11	9	7	9					7	11	9
Hungary	51	50	48	47	42	46	43	39	38	36	35	35	38	41	41	42	43	42	40	35
Iceland	11	10	11	10	11	5	5	5	6	7	7	6	6		7	4	4	4	6	4
Ireland	34	30	28	26	24	23	17	16	15	19	18	18	17				12	11	12	12
Israel	6	6	6	5	6	9	6	4	5	4	5	10	7				6	7	11	8
Italy	6	6	7	8	6	7	7	6	6	7	7	7	8	8	10	10	7	8	10	8
Kazakhstan	97	92	90	87	80	78	82	82	82	80	66	65	65	63	63	69	85	98	126	154
Kyrgyzstan	54	56	54	51	51	52	52	50	51	49	52	57	58	54	60	74	89	112	123	137
Latvia	47	45	42	42	41	47	38	36	35	32	34	35	36	38	44	61	70	81	90	79
Lithuania	48	46	43	42	40	41	39	38	36	37	39	41	43	51	57	63	70	79	82	76
Luxembourg	20	12	11	11	13	11	12	13	4	12	13	12	6				10	9	10	9
Malta	7	8	4	7	4	3	4	4	3	5	4	7	8	7	7	3	7	3	4	6
Monaco	4	0	0	0	0	4	7	7	3	3	3	0	3				0	0	0	9
Netherlands	12	12	11	10	10	9	8	8	9	9	9	9	10	10	12	10	11	10	9	9
Norway	12	11	11	10	9	9	8	7	7	6	7	7	7	6	6	5	5	5	6	5
Poland	73	67	65	64	61	58	55	52	49	43	42	43	43	44	43	41	40	36	34	31
Portugal	70	74	74	71	70	70	67	72	64	67	63	61	60	55	57	57	53	52	53	47
Republic of Moldova	69	70	78	69	61	65	71	66	58	52	40	44	42	55	60	67	67	66	60	62
Romania	61	61	61	60	57	56	56	58	61	63	70	67	78	89	94	102	107	106	115	117
Russian Federation	54	53	51	52	52	45	50	48	46	43	34	34	36	43	48	57	75	81	75	91
San Marino											4	4					0	4	0	0
Slovakia	50	46	45	44	42	39	39	35	32	29	28	31	33	34	33	29	28	24	24	20
Slovenia	59	51	53	50	48	49	43	42	40	40	38	30	33	33	27	26	28	24	23	21
Spain	13	15	21	24	26	28	36	24	22	21	19	23	25	24		22	21	24	23	21
Sweden	11	11	9	10	9	8	8	6	6	7	7	6	7	7	6	6	6	5	5	5
Switzerland	18	19	18	17	15	15	13	15	18	16	19	16	14	13	13	12	11	10	10	10
Tajikistan	67	65	63	58	55	54	55	56	49	51	46	39	30	12	16	35	28	36	41	42
TFYR Macedonia													83	88	37	40	37	35	31	28
Turkey	83	88	57	60	56	61	60	58	52	48	44	44	44			38	32	41	40	34
Turkmenistan	59	55	52	50	51	50	49	58	55	61	63	63	54	70		48	50	81	89	93
Ukraine	52	51	49	48	48	47	45	43	40	39	32	32	35	39	40	42	46	56	55	65
United Kingdom	19	16	15	14	12	12	12	10	10	11	10	11	11	11	11	11	11	11	11	11
Uzbekistan	57	59	52	51	48	48	51	51	52	53	46		44	45	67	44	52	58	62	63
Yugoslavia	65	66	65	66	66	63	62	61	56	50	41	44	37	37	34	26	38	38	28	25
Total	**44**	**43**	**40**	**39**	**38**	**36**	**37**	**35**	**33**	**32**	**29**	**27**	**29**	**28**	**28**	**33**	**37**	**41**	**40**	**43**

Regional profile for Europe, cont'd: new smear-positive cases, 1993-99

	Number of cases							Rate (per 100 000 population)						
Country/territory	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Albania		250	139	173	241	212	168		8	4	5	8	7	5
Andorra				8	17	1	3				12	24	1	4
Armenia		319	436	327	400	475	576		9	12	9	11	13	16
Austria			662	580	370		323			8	7	5		4
Azerbaijan	499	513	669	990	981	727	763	7	7	9	13	13	9	10
Belarus	1 493	1 775	1 845	2 117	2 273	5 047	2 769	14	17	18	20	22	49	27
Belgium	484	427	400	364	434	418	403	5	4	4	4	4	4	4
Bosnia & Herzegovina			865	927	803	640	786			25	27	23	17	20
Bulgaria		3 096	1 087	903	1 037	1 325	1 697		36	13	11	12	16	20
Croatia			1 204	1 228	1 073	1 129	748			27	27	24	25	17
Czech Republic	548	524	487	586	481	545	449	5	5	5	6	5	5	4
Denmark	243	120	128	97	114	132	172	5	2	2	2	2	3	3
Estonia	303	347	369	240	269	299	274	20	23	25	16	19	21	19
Finland			244	240	186	188	179			5	5	4	4	3
France	4 455	3 196	3 449	3 002	2 430		2 325	8	6	6	5	4		4
Georgia			221	482	595	547	746			4	9	12	11	15
Germany	4 730	4 177	3 852	3 689	3 346	3 124	0	6	5	5	5	4	4	0
Greece					285	313	143					3	3	1
Hungary	1 905	1 357	796	1 066	702	667	660	19	13	8	10	7	7	7
Iceland		6	2	1	4	2	2		2	1	0	1	1	1
Ireland				339	123	116	117				9	3	3	3
Israel				147	207	221	170				3	4	4	3
Italy		1 441	1 413	1 738	1 903	2 361	1 277		3	2	3	3	4	2
Kazakhstan			3 022	4 290	4 332	6 180	6 977			18	26	26	38	43
Kyrgyzstan		681	832	991	1 536	830	1 642		15	18	22	33	18	35
Latvia	470		504	575	634	668	588	18		20	23	26	28	25
Lithuania	688		979	1 121	1 200	787	787	18		26	30	32	21	21
Luxembourg				29	31	24					7	7	6	
Malta	13	6	5	5	3	6	9	4	2	1	1	1	2	2
Monaco				0	0		2				0	0		6
Netherlands	1 063		575	358	312	254	308	7		4	2	2	2	2
Norway		86	62	103	100	49	21		2	1	2	2	1	0
Poland	7 606	4 000	6 955	6 819	3 497	3 502	3 177	20	10	18	18	9	9	8
Portugal		2 072	2 019	1 938	1 628	2 016	1 801		21	20	20	17	20	18
Republic of Moldova	615	704	665	219	397	477	609	14	16	15	5	9	11	14
Romania	9 339	10 385	10 469	10 359	11 666	10 841	10 317	41	45	46	46	52	48	46
Russian Federation		30 389	37 512	42 534	42 094	42 219	21 744		20	25	29	29	29	15
San Marino				0	1	0	0				0	4	0	0
Slovakia	882	409	788	760	283	303	246	17	8	15	14	5	6	5
Slovenia	361	294	303	221	156	157	165	18	15	15	11	8	8	8
Spain			2 605	8 331	6 970	1 906	0			7	21	18	5	0
Sweden	312	106	102	90	94	97	117	4	1	1	1	1	1	1
Switzerland	528	507	185	172	144	165	98	8	7	3	2	2	2	1
Tajikistan			1 042	232	373	435				18	4	6	7	
TFYR Macedonia			319	209	192	179	122			16	11	10	9	6
Turkey			4 383	2 816	3 439	3 692	4 124			7	5	5	6	6
Turkmenistan	472		544	557	764	790	964	12		13	13	18	18	22
Ukraine	8 314	8 471	8 263	7 827	9 533	10 586	10 412	16	16	16	15	19	21	21
United Kingdom	283	270		4 147	844	1 342	797	0	0		7	1	2	1
Uzbekistan		7 487	2 735	3 350	3 388	3 504	3 977		34	12	15	15	15	17
Yugoslavia			1 497	1 783	1 702	1 873	2 517			14	17	16	18	24
Total	**45 606**	**83 415**	**104 633**	**119 080**	**113 587**	**111 371**	**86 271**	**5**	**10**	**12**	**14**	**13**	**13**	**10**

Notes

Belarus The number reported as "smear-positive" cases included culture-positive cases. Age groups were different from those in the WHO data collection form.

Belgium 1998 treatment outcome data were not yet available.

Bulgaria The number reported as "smear-positive" cases included culture-positive cases. The total number of cases included 288 retreatment cases.

Croatia New smear-positive cases included 273 cases that were bacteriologically positive but unknown by smear or culture.

Denmark The data included 63 cases from Greenland and 2 cases from Faeroe Islands.

France New cases included 129 cases with unknown site of disease.

Germany Notifications in this annex are not included in regional and global summaries elsewhere in the report. Notifications included retreatment cases.

Latvia Treatment outcome excluded patients in prisons. MDR TB patients were not included in the data for treatment outcomes.

Russian Federation (the) DOTS age/sex data not available from Arcangelsk region. All data from one DOTS oblast, Lenningrad, included in non-DOTS data.

Spain Notifications included respiratory cases and cases of TB meningitis only.

Switzerland The total number of cases included 177 cases with unknown site of disease.

The former Yugoslav Republic of Macedonia The number reported as "smear-positive" cases included culture-positive cases.

Turkey The number reported as "smear-positive" cases included culture-positive cases. Notifications included 3 336 cases with unknown site of disease.

United Kingdom of Great Britain and Northern Ireland (the) The number of smear-positive cases does not include cases from Scotland. The total number of notifications is for the UK as a whole, and includes all retreatment cases.

Yugoslavia Kosovo and Metohija are excluded from the data but internally displaced persons from Kosovo and Metohija and refugees from Croatia and Bosnia and Herzegovina are included.

SOUTH-EAST ASIA

South-East Asia: Summary of TB control policies

Country	Microscopy (a)	SCC (b)	DOT (c)	Outcome monitoring (d)	Drug supply (e)	Category as of 31/12/99*	DOTS newly implemented in 1999
Bangladesh						3	
Bhutan						4	
Democratic People's Republic of Korea (the)						2	x
India						3	
Indonesia						3	
Maldives						4	
Myanmar						3	
Nepal						3	
Sri Lanka						4	
Thailand						3	

Microscopy (a)	Use of smear microscopy for diagnosis
SCC (b)	Short course chemotherapy
DOT (c)	Directly observed therapy
Outcome monitoring (d)	Monitoring of treatment outcomes by cohort analysis
Drug supply (e)	A system of TB drug forecasting, financing, and procurement
*	See table 1 for definition of categories
dark green	implemented in all units/areas
light green	implemented in some units/areas
grey	not implemented
white	unknown or not applicable (decentralized drug supply system)

Regional Profile for South-East Asia: notification, detection and DOTS coverage, 1999

Country/Territory	Country information								WHO TB control strategy (DOTS)						Other Strategy (non-DOTS)					
	Pop	Notifications				Est	CDR	DOTS	%	Notifications				% of	%	Notifications				% of
		all cases		New ss+				cate-	of	all cases		New ss+		pulm	of	all cases		New ss+		pulm
	thousands	number	rate	number	rate	new ss+	%	gory	pop	number	rate	number	rate	cases ss+	pop	number	rate	number	rate	cases ss+
	a	b	b/a	c	c/a	d	c/d	e	f	g	g/f*a	h	h/f*a	l	j	k	k/j*a	l	l/j*a	m
Bangladesh	126 947	79 339	62	37 821	30	137 660	28	3	90	71 343	51	34 047	30	52	10	7 996	63	3 774	30	100
Bhutan	2 064	1 174	57	315	15	1 302	24	4	100	1 174	57	315	15	41	0					
DPR Korea	23 702	13 287	56	5 073	21	18 745	27	2	6	762	0	323	22	46	94	12 525	56	4 750	21	46
India	998 056	1 223 127	123	349 770	35	826 644	42	3	14	120 279	2	53 034	39	55	87	1 102 848	128	296 736	34	29
Indonesia	209 255	69 064	33	49 172	23	264 966	19	3	90	69 064	30	49 172	26	74	10					
Maldives	278	153	55	88	32	83	107	4	100	153	55	88	32	69	0					
Myanmar	45 059	19 626	44	11 458	25	34 259	33	3	64	19 626	28	11 458	40	71	36					
Nepal	23 385	27 356	117	13 410	57	21 927	61	3	75	19 277	62	9 673	55	65	25	8 079	138	3 737	64	58
Sri Lanka	18 639	7 133	38	3 749	20	4 955	76	4	95	7 133	36	3 749	21	67	5					
Thailand	60 856	29 413	48	14 934	25	37 655	40	3	59	29 413	29	14 934	42	57	41					

Regional Profile for South-East Asia, cont'd: treatment outcomes for cases registered in 1998 - WHO TB control strategy (DOTS) and other (non-DOTS) control strategies.

Country/Territory	New smear-positive cases - DOTS									Retreatment cases - DOTS									New smear-positive cases - non-DOTS								
	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success
	a	c	d	e	f	g	h	b	c+d	i	k	l	m	n	o	p	j	k+l	q	s	t	u	v	w	x	r	s+t
Bangladesh	33506	76	4	5	1	9	3	2	80	1 333	71	4	3	2	9	5	7	74	4 523	50	7	1	0	28	8	6	57
Bhutan	294	56	34					10	90																		
DPR Korea	323	87	3	1	3	2	4	0	91	72	76	8	4	6	1	4	0	85	2 350	66	16	2	8	2	6	0	82
India	12 418	83	1	4	3	7	1	0	84	5 782	59	13	6	5	14	2	0	72	271 645	2	22	0	0	2	0	73	24
Indonesia	40 166	49	9	2	1	2	1	38	58	893	53	20	3	2	6	1	16	73									
Maldives	88	94		3		1	1	0	94	4	50	25	0	0	25		0	75									
Myanmar	10 313	74	9	5	1	10	2	0	82	2 052	66	10	6	3	12	3	0	76									
Nepal	5 524	85	4	5	2	4	1	0	89	985	73	4	7	7	8	1	0	77	6 149	67	14	4	1	11	2	2	81
Sri Lanka	3 761	71	5	4	1	16	3	0	76	584	41	21	7	1	29	2	0	62									
Thailand	7 962	61	6	8	2	10	2	11	68	556	49	6	7	5	10	4	20	55									

Regional profile for South-East Asia, cont'd: age and sex distribution of smear-positive cases in DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Bangladesh	235	3 076	5 151	5 583	4 365	3 277	2 466	376	2 384	2 928	1 963	1 177	656	299	611	5 460	8 079	7 546	5 542	3 933	2 765
Bhutan	10	27	42	31	29	22	14	9	33	34	23	18	14	9	19	60	76	54	47	36	23
DPR Korea	3	38	56	52	38	20	5	2	18	24	37	18	8	4	5	56	80	89	56	28	9
India	327	7 058	8 856	7 900	6 172	3 864	1 982	785	5 497	4 848	2 773	1 504	898	436	1 112	12 555	13 704	10 673	7 676	4 762	2 418
Indonesia	106	3 741	5 277	4 999	4 401	3 267	1 697	140	3 595	12 859	3 624	2 812	1 909	745	246	7 336	18 136	8 623	7 213	5 176	2 442
Maldives	0	14	8	9	7	7	8	3	10	6	3	6	6	1	3	24	14	12	13	13	9
Myanmar	37	936	1 800	1 805	1 366	833	540	58	737	1 076	919	647	420	284	95	1 673	2 876	2 724	2 013	1 253	824
Nepal	106	1 411	1 277	1 249	1 113	806	548	147	914	822	540	387	212	141	253	2 325	2 099	1 789	1 500	1 018	689
Sri Lanka	8	255	406	621	646	440	325	10	264	231	168	148	126	101	18	519	637	789	794	566	426
Thailand	20	791	2 123	2 015	1 702	1 705	1 795	30	511	771	676	750	879	1 164	50	1 302	2 894	2 691	2 452	2 584	2 959
Regional total	**852**	**17 347**	**24 996**	**24 264**	**19 839**	**14 241**	**9 380**	**1 560**	**13 963**	**23 599**	**10 726**	**7 467**	**5 128**	**3 184**	**2 412**	**31 310**	**48 595**	**34 990**	**27 306**	**19 369**	**12 564**

Regional profile for South-East Asia, cont'd: age and sex distribution of smear-positive cases in non-DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
Bangladesh	24	428	626	560	383	291	235	29	369	348	217	138	56	34	53	797	974	777	521	347	269
Bhutan																					
DPR Korea	11	256	382	349	256	131	25	8	144	211	290	219	60	8	19	400	593	639	475	191	33
India																					
Indonesia																					
Maldives																					
Myanmar																					
Nepal	44	461	523	454	432	355	251	38	325	311	214	166	104	59	82	786	834	668	598	459	310
Sri Lanka																					
Thailand																					
Regional total	**79**	**1 145**	**1 531**	**1 363**	**1 071**	**777**	**511**	**75**	**838**	**870**	**721**	**523**	**220**	**101**	**154**	**1 983**	**2 401**	**2 084**	**1 594**	**997**	**612**

Regional profile for South-East Asia, cont'd: smear-positive notification rates by age and sex, 1999

	MALE							FEMALE							ALL						
	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+
Bangladesh	0.6	11.5	29.2	45.5	49.6	61.3	67.3	0.9	9.6	16.9	16.3	15.2	13.8	8.2	0.7	10.6	23.2	31.0	33.2	39.0	37.5
Bhutan	2.2	14.0	30.0	30.4	41.2	44.8	36.2	2.1	17.6	25.0	23.0	25.5	27.4	20.3	2.2	15.7	27.5	26.7	33.3	35.9	27.7
DPR Korea	0.2	8.1	8.5	10.9	12.7	10.6	3.6	0.2	4.6	4.7	9.2	11.2	4.7	0.7	0.2	6.4	6.6	10.1	12.0	7.6	1.7
India	0.2	7.2	10.7	12.2	14.1	13.5	8.5	0.5	6.1	6.5	4.7	3.6	3.1	1.7	0.3	6.7	8.7	8.6	9.0	8.2	4.9
Indonesia	0.3	17.6	29.0	37.7	52.6	54.8	38.5	0.4	17.4	71.5	26.8	31.9	29.1	14.2	0.4	17.5	50.1	32.2	42.0	41.3	25.3
Maldives	0.0	48.6	41.3	66.1	87.4	117.7	155.2	5.1	35.8	33.7	23.3	73.1	121.2	21.3	2.5	42.3	37.7	45.2	80.2	119.3	91.3
Myanmar	0.6	19.4	43.6	60.6	76.5	68.9	55.1	0.9	15.6	26.1	29.8	34.9	31.1	24.8	0.7	17.5	34.8	44.9	55.3	49.0	38.8
Nepal	1.5	39.1	58.0	76.4	94.6	107.1	95.8	2.0	27.9	34.1	31.2	33.0	30.1	23.9	1.7	33.7	45.6	52.9	63.5	69.2	59.9
Sri Lanka	0.3	13.6	27.2	50.5	70.4	75.9	56.0	0.4	14.6	15.1	12.3	14.6	19.9	15.9	0.4	14.1	21.0	30.4	41.2	46.7	35.0
Thailand	0.3	13.3	35.8	45.2	60.8	96.8	120.1	0.4	8.9	13.4	15.1	25.9	45.2	59.9	0.3	11.1	24.8	30.1	43.0	69.7	86.0
Regional rate	**0.3**	**10.8**	**18.8**	**24.1**	**29.3**	**32.3**	**27.1**	**0.6**	**9.3**	**18.5**	**11.4**	**11.7**	**11.2**	**8.0**	**0.5**	**10.1**	**18.7**	**17.9**	**20.7**	**21.7**	**17.0**

Regional profile for South-East Asia, cont'd: number of TB cases notified, 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Bangladesh	39 774	42 644	49 870	52 961	45 679	41 802	45 599	45 355	44 280	45 191	48 673	56 052	31 400	54 001	48 276	56 437	63 471	63 420	72 256	79 339
Bhutan	1 539	2 657	720	1 017	904	1 073	1 582	608	1 126	1 525	1 154	996	140	108	1 159	1 299	1 271	1 211	1 292	1 174
DPR Korea									0									11 050	1 152	13 286
India	705 600	769 540	923 095	1 075 098	1 109 310	1 168 804	1 279 536	1 403 122	1 457 288	1 510 500	1 519 182	1 555 353	1 121 120	1 081 279	1 114 374	1 219 923	1 300 935	1 135 983	1 130 038	1 223 127
Indonesia	25 235	32 461	33 000	31 809	32 432	17 681	16 750		97 505	105 516	74 470	60 808	98 458	62 966	49 647	35 529	24 647	22 184	40 497	69 064
Maldives	73	112	111	143	123	91	111	115	85	203	152	123	92	175	249	231	212	173	175	153
Myanmar	12 744	12 461	12 069	11 012	11 045	10 506	10 840	11 986	9 348	10 940	12 416	14 905	17 000	19 009	15 583	18 229	22 201	17 122	14 756	19 626
Nepal	1 020	337	1 459	700	190	52	252	1 012	1 603	11 003	10 142	8 983		13 161	15 572	19 804	22 970	24 158	24 135	27 356
Sri Lanka	6 212	6 288	7 334	6 666	6 376	5 889	6 596	6 411	6 092	6 429	6 666	6 174	6 802	6 809	6 132	5 956	5 439	6 528	7 024	7 133
Thailand	45 704	49 452	48 553	65 413	69 240	77 611	52 152	51 835	50 021	44 553	46 510	43 858	47 697	49 668	47 767	45 428	39 871	30 262	15 850	29 413
Total	**837 901**	**915 952**	**1 076 211**	**1 244 819**	**1 275 299**	**1 323 509**	**1 413 418**	**1 520 444**	**1 667 348**	**1 735 860**	**1 719 365**	**1 747 252**	**1 322 709**	**1 287 176**	**1 298 759**	**1 402 836**	**1 481 017**	**1 312 091**	**1 307 175**	**1 469 671**
number reporting	9	9	9	9	9	9	9	8	10	9	9	9	8	9	9	9	9	10	10	10
percent reporting	90	90	90	90	90	90	90	80	100	90	90	90	80	90	90	90	90	100	100	100

Regional profile for South-East Asia, cont'd: case notification rates (per 100 000 population), 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
Bangladesh	45	47	54	56	47	42	45	44	42	42	45	50	28	47	41	48	53	52	58	63
Bhutan	117	197	52	72	62	72	104	39	70	92	68	58	8	6	64	70	67	62	65	57
DPR Korea									0									48	5	56
India	102	109	128	146	148	152	163	175	178	181	179	179	127	120	122	131	137	118	115	123
Indonesia	17	21	21	20	20	11	10		55	59	41	33	52	33	26	18	12	11	20	33
Maldives	46	69	66	83	69	50	59	59	42	97	71	55	40	74	103	93	83	66	65	55
Myanmar	38	36	34	31	30	28	28	31	24	27	31	36	41	45	37	43	51	39	33	44
Nepal	7	2	10	5	1	0	2	6	9	60	54	47		65	75	93	105	108	106	117
Sri Lanka	42	42	48	43	40	37	41	39	37	38	39	36	39	39	35	33	30	36	38	38
Thailand	98	104	100	132	138	152	100	98	93	81	84	78	84	86	82	78	67	51	26	48
Total	**79**	**85**	**98**	**110**	**111**	**113**	**118**	**124**	**133**	**136**	**133**	**132**	**98**	**94**	**93**	**99**	**103**	**90**	**88**	**97**

Regional profile for South-East Asia, cont'd: new smear-positive cases, 1993-99

	Number of cases							Rate (per 100 000 population)						
Country/territory	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Bangladesh	18 993	1 710	20 524	29 674	33 117	37 737	37 821	17	1	17	25	27	30	30
Bhutan		352	367	308	284	270	315		19	20	16	15	13	15
DPR Korea					3 980	403	5 073					17	2	21
India	225 256	226 543	264 618	291 205	273 519	284 066	349 770	25	25	28	31	28	29	35
Indonesia	62 966	49 647	31 768	11 790	19 492	32 280	49 172	33	26	16	6	10	16	23
Maldives	126	125	114	106	94	88	88	54	52	46	41	36	32	32
Myanmar			8 681	9 716	9 695	10 089	11 458			20	22	22	23	25
Nepal	6 679	10 442	8 591	10 365	11 323	11 306	13 410	33	50	40	48	51	49	57
Sri Lanka	3 335	3 405	3 049	2 958	3 506	3 747	3 749	19	19	17	16	19	20	20
Thailand		20 260	20 273	16 997	13 214	7 962	14 934		35	35	29	22	13	25
Total	**317 355**	**312 484**	**357 985**	**373 119**	**368 224**	**387 948**	**485 790**	**23**	**22**	**25**	**26**	**25**	**26**	**32**

Notes

India The number of patients reported under "Other Strategies" includes patients from DOTS areas put on non-DOTS regimens (a practice now being discouraged).

Maldives The standard WHO data collection form was not used.

Nepal Data in this report were from July 1999 to June 2000 (the closet equivalent reporting period in Nepal's calendar).

WESTERN PACIFIC

The Western Pacific: Summary of TB control policies

Country	Microscopy (a)	SCC (b)	DOT (c)	Outcome monitoring (d)	Drug supply (e)	Category as of 31/12/99*	DOTS newly implemented in 1999
American Samoa						4	
Australia						3	
Brunei Darussalam						0	
Cambodia						4	
China						3	
China, Hong Kong SAR						3	
China, Macao SAR						0	
Cook Islands						3	
Fiji						4	
French Polynesia						4	
Guam						0	
Japan						1	
Kiribati						4	
Lao People's Democratic Republic (the)						0	
Malaysia						1	
Marshall Islands (the)						3	
Micronesia (Federated States of)						0	
Mongolia						4	
Nauru						0	
New Caledonia						0	
New Zealand						5	
Niue						1	
Northern Mariana Islands (Commonwealth of)						1	
Palau						1	
Papua New Guinea						2	
Philippines (the)						3	
Republic of Korea (the)						1	
Samoa						4	
Singapore						1	
Solomon Islands						4	
Tokelau						1	
Tonga						4	
Tuvalu						0	
Vanuatu						3	
Viet Nam						4	
Wallis and Futuna Islands						0	

Microscopy (a)	Use of smear microscopy for diagnosis
SCC (b)	Short course chemotherapy
DOT (c)	Directly observed therapy
Outcome monitoring (d)	Monitoring of treatment outcomes by cohort analysis
Drug supply (e)	A system of TB drug forecasting, financing, and procurement
*	See table 1 for definition of categories

dark green	implemented in all units/areas
light green	implemented in some units/areas
grey	not implemented
white	unknown or not applicable (decentralized drug supply system)

Regional Profile for the Western Pacific: notification, detection and DOTS coverage, 1999

Country/Territory	Country information								WHO TB control strategy (DOTS)						Other Strategy (non-DOTS)					
		Notifications								Notifications						Notifications				
	Pop	all cases		New ss+		Est	CDR	DOTS	%	all cases		New ss+		% of	%	all cases		New ss+		% of
	thousands	number	rate	number	rate	new ss+	%	cate-gory	of pop	number	rate	number	rate	pulm cases ss+	of pop	number	rate	number	rate	pulm cases ss·
	a	b	b/a	c	c/a	d	c/d	e	f	g	g/f*a	h	h/f*a	l	j	k	k/j*a	l	l/j*a	m
American Samoa	66	4	6	3	5	11	29	4	100	4	6	3	5	100	0					
Australia	18 705	1 073	6	285	2	671	43	3	37	511	1	152	2	45	63	562	5	133	1	41
Brunei Darussalam	322					83		0												
Cambodia	10 945	19 266	176	15 744	144	27 421	57	4	100	19 266	176	15 744	144	96	0					
China	1 266 838	460 169	36	212 426	17	584 491	36	3	64	346 200	17	188 525	23	57	36	113 969	25	23 901	5	22
China, Hong Kong SAR	6 801	7 673	113	1 566	23	2 786	56	3	85	6 417	80	1 566	27	32	15	1 256	123			
China, Macao SAR	467					461		0												
Cook Islands	19	3	15	0	0	3		3	70	3	11	0		0	30					
Fiji	806	192	24	65	8	129	50	4	100	192	24	65	8	43	0					
French Polynesia	231	93	40	33	14	37	90	4	100	93	40	33	14	52	0					
Guam	164					65		0												
Japan	126 505	40 800	32	12 909	10	16 253	79	1	0						100	40 800	32	12 909	10	40
Kiribati	82	253	308	59	72	32	182	4	93	253	286	59	77	44	7					
Lao PDR	5 297					4 079		0												
Malaysia	21 830	14 908	68	7 960	36	10 902	73	1	0						100	14 908	68	7 960	36	62
Marshall Islands	62	42	67	17	27	24	69	3	79	42	53	17	35	47	21					
Micronesia	116					46		0												
Mongolia	2 621	3 348	128	1 513	58	2 422	63	4	100	3 348	128	1 513	58	66	0					
Nauru	11					2		0												
New Caledonia	210					83		0												
New Zealand	3 828	451	12	69	2	96	72	5	0						100	451	12	69	2	31
Niue	2	2	105	1	52	0	327	1	0						100	2	105	1	52	50
Northern Mariana Is	74	66	89	15	20	29	52	1	0						100	66	89	15	20	25
Palau	19	32	169	20	105	7	268	1	0						100	32	169	20	105	65
Papua New Guinea	4 702	13 067	278	1 914	41	5 268	36	2	8	1 214	2	254	68	34	92	11 853	274	1 660	38	26
Philippines	74 454	145 807	196	73 373	99	105 132	70	3	43	31 825	18	20 477	64	67	57	113 982	269	52 896	125	51
Rep. Korea	46 480	23 936	51	9 559	21	14 433	66	1	0						100	23 936	52	9 559	21	45
Samoa	177	31	17	17	10	28	60	4	100	31	17	17	10	71	0					
Singapore	3 522	1 654	47	465	13	759	61	1	0						100	1 654	47	465	13	33
Solomon Islands	430	289	67	93	22	169	55	4	100	289	67	93	22	45	0					
Tokelau	1	0	0	0	0	0		1	0						100	0	0	0	0	
Tonga	98	22	22	10	10	16	64	4	98	22	22	10	10	59	2					
Tuvalu	11					2		0												
Vanuatu	186	117	63	43	23	73	59	3	45	86	21	24	29	42	55	31	30	19	19	61
Viet Nam	78 705	88 879	113	53 805	68	66 940	80	4	99	88 426	111	53 561	69	75	2	453	38	244	21	70
Wallis & Futuna Is	14					2		0												

Regional Profile for the Western Pacific, cont'd: treatment outcomes for cases registered in 1998 - WHO TB control strategy (DOTS) and other (non-DOTS) control strategies

Country/Territory	New smear-positive cases - DOTS									Retreatment cases - DOTS									New smear-positive cases - non-DOTS								
	Regist-ered	% cured	% compl-eted	% died	% failed	% default	% trans-ferred	% not eval	% success	Regist-ered	% cured	% compl-eted	% died	% failed	% default	% trans-ferred	% not eval	% success	Regist-ered	% cured	% compl-eted	% died	% failed	% default	% trans-ferred	% not eval	% success
	a	c	d	e	f	g	h	b	c+d	i	k	l	m	n	o	p	j	k+l	q	s	t	u	v	w	x	r	s+t
American Samoa	4	50					50	0	50	0																	
Australia	146	13	62	10	1	1	5	8	75	21	10	71	0	10	5	5	0	81	91	24	43	9		2	16	5	67
Brunei Darussalam																											
Cambodia	13 290	92	3	2	0	2	1	0	95	691	89	3	4	1	3		0	91									
China	190 016	97		1	1	1	0	1	97	49 378	95		2	2	1	0	0	95	20 080	85		2	6	5	2	1	85
China, Hong Kong SAR	1 566	78	7	4	2	4	5	0	85	241	66	14	6	1	9	4	0	80									
China, Macao SAR																											
Cook Islands																											
Fiji	79	82	8	1		9		0	90																		
French Polynesia	27	74		11	4	11		0	74	15	80		7	0	13		0	80									
Guam																											
Japan																			4 003	50	31	9	7	3		0	80
Kiribati	52	83		6	6	6		0	83																		
Lao PDR																											
Malaysia																											
Marshall Islands	12	83		8			8	0	83	2		100	0	0	0		0	100									
Micronesia																											
Mongolia	1 356	79	5	4	5	4	3	0	84	117	61	16	8	5	7	3	0	77									
Nauru																											
New Caledonia																											
New Zealand																											
Niue																											
Northern Mariana Is																			110		79	1			20	0	79
Palau																			22	55	45					0	100
Papua New Guinea	258	28	45	2	1	16	9	0	72	19	32	21	5	5	32	5	0	53	4 748		63	6	7	13	10	0	63
Philippines	8 976	78	7	3	3	7	3	0	84	29	76	7	3	3	10		0	83	11 707	38	23	1	1	3	2	32	60
Rep. Korea																											
Samoa	7		86		14			0	86																		
Singapore																											
Solomon Islands	138	83	9	4		1	3	0	92	6	83		17	0	0		0	83									
Tokelau																			0								
Tonga	16	94		6				0	94																		
Tuvalu																											
Vanuatu																											
Viet Nam	52 799	90	3	3	1	2	2	0	93	5 612	79	5	5	7	2	2	0	84	1 752	75	10	4	2	6	2	0	85
Wallis & Futuna Is																											

Regional profile for the Western Pacific, cont'd: age and sex distribution of smear-positive cases in DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
American Samoa																					
Australia	0							0							0						
Brunei Darussalam																					
Cambodia	41	525	1 389	1 734	1 645	1 578	1 089	51	445	1 229	1 861	1 857	1 448	852	92	970	2 618	3 595	3 502	3 026	1 941
China	1 053	16 937	26 050	22 190	21 642	19 217	18 879	1 278	13 725	16 704	10 850	8 628	6 315	4 969	2 331	30 662	42 754	33 040	30 270	25 532	23 848
China, Hong Kong SAR	3	76	104	139	149	200	371	7	73	94	62	43	37	162	10	149	198	201	192	237	533
China, Macao SAR																					
Cook Islands																					
Fiji	1	13	7	5	8	3	3	0	5	7	5	2	5	1	1	18	14	10	10	8	4
French Polynesia	0	2	2	2	1	2	4	4	2	2	4	2	3	3	4	4	4	6	3	5	7
Guam																					
Japan																					
Kiribati	2	6	4	2	4	4	3	1	9	9	6	2	3	4	3	15	13	8	6	7	7
Lao PDR																					
Malaysia																					
Marshall Islands	5	10	3	4	1	6	0	2	10	7	2	2	2	0	7	20	10	6	3	8	0
Micronesia																					
Mongolia	12	213	314	178	63	34	26	25	205	252	113	43	18	17	37	418	566	291	106	52	43
Nauru																					
New Caledonia																					
New Zealand																					
Niue																					
Northern Mariana Is																					
Palau																					
Papua New Guinea	1	33	25	9	8	3	0	0	32	20	13	6	0	1	1	65	45	22	14	3	1
Philippines																					
Rep. Korea																					
Samoa	0	1	2	0	1	1	4	0	3	2	1	0	0	2	0	4	4	1	1	1	6
Singapore																					
Solomon Islands																					
Tokelau																					
Tonga	0	1	0	0	1	3	2	0	1	0	0	0	2	0	0	2	0	0	1	5	2
Tuvalu																					
Vanuatu	0	0	4	1	2	0	0	0	2	10	4	1	0	0	0	2	14	5	3	0	0
Viet Nam	58	2 246	6 326	8 354	6 431	5 502	7 351	65	1 356	2 496	3 017	2 525	3 021	4 813	123	3 602	8 822	11 371	8 956	8 523	12 164
Wallis & Futuna Is																					
Regional total	**1 176**	**20 063**	**34 230**	**32 618**	**29 956**	**26 553**	**27 732**	**1 433**	**15 868**	**20 832**	**15 938**	**13 111**	**10 854**	**10 824**	**2 609**	**35 931**	**55 062**	**48 556**	**43 067**	**37 407**	**38 556**

Regional profile for the Western Pacific, cont'd: age and sex distribution of smear-positive cases in non-DOTS areas, 1999 (absolute numbers)

	MALE							FEMALE							ALL						
	0-14	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**	**0-14**	**15-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65+**
American Samoa																					
Australia	0	13	40	54	52	37	49	0	10	16	18	6	2	26	0	23	56	72	58	39	75
Brunei Darussalam																					
Cambodia																					
China	194	2 024	3 278	2 905	2 597	2 347	2 488	153	1 453	2 142	1 520	1 210	816	694	347	3 477	5 420	4 425	3 807	3 163	3 182
China, Hong Kong SAR	0	12	17	23	24	33	61	1	12	15	10	7	6	26	1	24	32	33	31	39	87
China, Macao SAR																					
Cook Islands																					
Fiji																					
French Polynesia																					
Guam																					
Japan	6	290	623	706	1 605	1 768	4 117	7	236	459	253	292	419	2 128	13	526	1 082	959	1 897	2 187	6 245
Kiribati																					
Lao PDR																					
Malaysia	27	692	1 147	1 152	977	902	880	32	513	558	422	351	286	268	59	1 205	1 705	1 574	1 328	1 188	1 148
Marshall Islands																					
Micronesia																					
Mongolia																					
Nauru																					
New Caledonia																					
New Zealand	1	10	8	4	3	8	15	1	6	7	2	3	0	1	2	16	15	6	6	8	16
Niue		1														1					
Northern Mariana Is																					
Palau	0	2	2	5	1	2	1	0	1	3	1	0	2	0	0	3	5	6	1	4	1
Papua New Guinea																					
Philippines																					
Rep. Korea	27	884	1 205	1 180	871	962	1 136	40	704	653	402	256	306	933	67	1 588	1 858	1 582	1 127	1 268	2 069
Samoa																					
Singapore	0	18	23	41	72	55	124	0	12	21	18	23	17	29	0	30	44	59	95	72	153
Solomon Islands																					
Tokelau	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tonga																					
Tuvalu																					
Vanuatu																					
Viet Nam		8	29	38	34	28	20	3	5	15	12	24	13	15	3	13	44	50	58	41	35
Wallis & Futuna Is																					
Regional total	**255**	**3 954**	**6 372**	**6 108**	**6 236**	**6 142**	**8 891**	**237**	**2 952**	**3 889**	**2 658**	**2 172**	**1 867**	**4 120**	**492**	**6 906**	**10 261**	**8 766**	**8 408**	**8 009**	**13 011**

Regional profile for the Western Pacific, cont'd: smear-positive notification rates by age and sex, 1999

	MALE							FEMALE							ALL						
	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+	0-14	15-24	25-34	35-44	45-54	55-64	65+
American Samoa																					
Australia	0.0	0.5	1.4	1.9	2.1	2.2	2.5	0.0	0.4	0.6	0.6	0.2	0.1	1.0	0.0	0.4	1.0	1.3	1.1	1.2	1.7
Brunei Darussalam																					
Cambodia	1.8	60.4	159.6	289.8	451.0	861.5	915.6	2.3	51.6	137.2	269.6	404.8	514.7	388.5	2.0	56.0	148.2	279.0	425.3	651.5	573.8
China	0.4	9.1	11.5	13.2	16.5	23.9	27.4	0.5	7.9	7.7	7.0	7.2	8.5	6.2	0.4	8.5	9.7	10.2	12.0	16.5	15.9
China, Hong Kong SAR	0.2	7.9	10.0	11.6	17.5	41.7	65.4	0.7	9.0	11.0	5.6	5.9	9.6	25.0	0.5	8.4	10.4	8.7	12.2	27.4	43.9
China, Macao SAR																					
Cook Islands																					
Fiji	0.8	14.5	11.9	9.6	22.1	12.4	17.5	0.0	6.0	12.5	9.7	5.6	20.3	5.3	0.4	10.4	12.2	9.6	13.9	16.4	11.1
French Polynesia	0.0	9.6	9.9	12.4	9.6	28.3	88.2	10.6	9.8	10.8	26.9	21.0	48.3	61.4	5.2	9.7	10.4	19.3	15.0	37.7	74.3
Guam																					
Japan	0.1	3.4	6.7	8.8	16.3	22.5	46.9	0.1	2.9	5.1	3.2	3.0	5.1	17.4	0.1	3.2	5.9	6.0	9.6	13.6	29.8
Kiribati																					
Lao PDR																					
Malaysia	0.7	32.8	68.8	79.0	98.6	157.5	215.3	0.9	25.4	33.6	29.4	36.6	50.5	56.2	0.8	29.2	51.2	54.4	68.1	104.3	129.6
Marshall Islands																					
Micronesia																					
Mongolia	2.5	76.4	140.8	111.4	81.9	61.4	57.7	5.5	74.8	114.1	69.5	54.9	32.1	29.2	4.0	75.6	127.5	90.3	68.3	46.7	41.6
Nauru																					
New Caledonia																					
New Zealand	0.2	3.6	2.9	1.4	1.2	5.0	7.8	0.2	2.3	2.4	0.7	1.2	0.0	0.4	0.2	3.0	2.6	1.0	1.2	2.5	3.6
Niue																					
Northern Mariana Is																					
Palau																					
Papua New Guinea	0.1	6.9	6.3	3.4	4.6	3.0	0.0	0.0	7.1	5.6	5.7	3.4	0.0	1.3	0.1	7.0	5.9	4.5	4.0	1.5	0.7
Philippines																					
Rep. Korea	0.5	21.8	27.3	29.0	34.1	53.0	100.5	0.8	18.5	15.5	10.1	10.2	15.8	49.7	0.7	20.2	21.5	19.7	22.3	33.7	68.8
Samoa	0.0	4.9	13.1	0.0	19.3	25.8	110.3	0.0	16.5	16.6	12.7	0.0	0.0	46.3	0.0	10.3	14.7	6.1	9.5	12.4	75.5
Singapore	0.0	7.9	7.6	11.6	29.1	44.9	111.2	0.0	5.6	6.9	5.1	9.5	13.7	21.5	0.0	6.8	7.2	8.4	19.4	29.3	62.0
Solomon Islands																					
Tokelau																					
Tonga																					
Tuvalu																					
Vanuatu	0.0	0.0	33.8	11.1	30.5	0.0	0.0	0.0	11.4	74.8	37.4	15.5	0.0	0.0	0.0	5.5	55.6	25.4	23.0	0.0	0.0
Viet Nam	0.2	13.7	46.5	91.6	140.3	176.4	225.8	0.3	8.7	19.2	28.9	45.9	79.2	96.8	0.2	11.2	33.1	58.2	88.7	123.0	147.9
Wallis & Futuna Is																					
Regional rate	**0.4**	**9.8**	**14.0**	**17.7**	**21.4**	**30.7**	**38.6**	**0.5**	**8.2**	**8.9**	**9.0**	**9.5**	**12.6**	**13.0**	**0.4**	**9.1**	**11.5**	**13.5**	**15.6**	**21.9**	**24.5**

Regional profile for the Western Pacific, cont'd: number of TB cases notified, 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
American Samoa	2	6	6	8	12	5	8	9	13	5	9	3	1				0	6		4
Australia	1 457	1 386	1 270	1 219	1 299	1 088	906	907	954	952	1 016	950	1 011	991	1 057	1 073		1 145	899	1 073
Brunei Darussalam	196	285	245	276	256	238	212	189	126	128	143		180					160		
Cambodia	2 576	1 980	8 158	7 572	10 241	10 145	10 325	9 106	10 691	7 906	6 501	10 903	16 148	13 270	15 172	14 603	14 857	15 629	16 946	19 266
China			98 654	117 557	151 564	226 899	265 095	251 600	304 639	310 607	375 481	345 000	320 426	344 218	363 804	515 764	469 358	418 904	457 349	460 169
China, Hong Kong SAR	8 065	7 729	7 527	7 301	7 843	7 545	7 432	7 269	7 021	6 704	6 510	6 283	6 545	6 537	6 319	6 212	6 501	7 072	7 673	7 673
China, Macao SAR	1 101	585	233	455	671	571	420	389	320	274	343	329	294	285		354	455	589	463	
Cook Islands	37	10	19	29	20	36	17	16	20	1	1	8	12				0	0	2	3
Fiji	210	180	163	185	165	230	199	173	162	218	226	247	240	183	280	203	200	171	166	192
French Polynesia	76	66	65	78	80	78	85	80	63	73	59	49	83				86	91	105	93
Guam	55	41	49	48	54	37	49	34	41	75			60							
Japan	70 916	65 867	63 940	62 021	61 521	58 567	56 690	56 496	54 357	53 112	51 821	50 612	48 956	48 461	44 425	43 078	42 122	42 190	44 016	40 800
Kiribati	146	187	193	127	111	103	129	110	208	121	68	91	100				327	32	276	253
Lao PDR	7 630		4 706	4 700	6 528	4 258	1 514	3 468	7 279	2 952	1 826	1 951	994	2 093	1 135	1 227	1 440	1 923	2 165	
Malaysia	11 218	10 970	11 944	11 634	10 577	10 569	10 735	11 068	10 944	10 686	11 702	11 059	11 420	12 285	11 708	11 988	12 902	13 539	14 115	14 908
Marshall Islands	6	7	12	15	12	15	37	32	11	7		26	52				56		49	42
Micronesia			67	73	75	66	60	98	77	68	367	350	111	151	173	115	94	108	138	
Mongolia	1 161	1 094	1 340	1 512	1 651	2 992	2 818	2 432	2 541	2 237	1 577	1 611	1 502	1 433	1 730	3 240	2 987	2 987	2 915	3 348
Nauru	0	2	8	0	0	0	8	6	8	0	7									
New Caledonia	108	128	120	171	144	104	98	74	111	128	143	140	140	149	132	120	205			
New Zealand	474	448	437	415	404	359	320	296	295	303	348	335	317	274	352	307	356	328	367	451
Niue	1	0	2	3	1	0	5	0	3		0		2	1	2	2	2	0	1	2
Northern Mariana Is		26	75	74	58	64	16	56	27	28	28		67		46	48	51	93	97	66
Palau	17	10	17	14	20	26	13	38	17	3		6	4	25	41	19	5	15		32
Papua New Guinea	2 525	2 508	2 742	2 955	3 505	3 453	2 877	2 251	4 261	3 396	2 497	3 401	2 540	7 451	5 335	8 041	5 097	7 977	11 291	13 067
Philippines	112 307	116 821	104 715	106 300	151 863	151 028	153 129	163 740	183 113	217 272	317 008	207 371	236 172	178 134	180 044	236 475	276 295	208 301	159 866	145 807
Rep. Korea	89 803	98 532	100 878	91 572	85 669	87 169	88 789	87 419	74 460	70 012	63 904	57 864	48 070	46 999	38 155	49 794	32 587	26 202	30 008	23 936
Samoa	59	49	43	41	37	43	65	29	29	37	44	44	26	49	45	51	37	32	22	31
Singapore	2 710	2 425	2 179	2 065	2 143	1 952	1 760	1 616	1 666	1 617	1 591	1 841	1 778	1 830	1 677	1 889	737	1 977	2 120	1 654
Solomon Islands	266	313	324	302	337	377	292	334	372	488	382	309	364	367	332	352	299	318	295	289
Tokelau	0	1	0	0	0	2	0	9	1	0	1	1	1		0	2	0			0
Tonga	64	49	45	50	54	49	35	24	14	36	23	20	29	33	23	20	22	21	30	22
Tuvalu	33	18	12	23	9	32	27	22	24	26	23	30	30	28	19	36			18	
Vanuatu	178	92	173	196	188	124	131	90	118	144	140	230	193	114	152	79	126	184	178	117
Viet Nam	43 062	43 506	51 206	43 185	43 875	46 941	47 557	55 505	52 463	52 270	50 203	59 784	56 594	52 994	51 763	83 608	74 711	84 964	87 449	88 879
Wallis & Futuna Is	23	24	5	17	14	14		34	1	30		22	4	11	11	6	8	14		
Total	**356 482**	**355 345**	**461 572**	**462 193**	**541 001**	**615 179**	**651 853**	**655 019**	**716 450**	**741 916**	**893 992**	**760 870**	**754 466**	**718 366**	**723 932**	**978 706**	**941 923**	**834 972**	**839 019**	**822 177**
number reporting	33	33	36	36	36	36	35	36	36	35	32	31	35	26	27	28	31	30	28	27
percent reporting	92	92	100	100	100	100	97	100	100	97	89	86	97	72	75	78	86	83	78	75

Regional profile for the Western Pacific, cont'd: case notification rates (per 100 000 population), 1980-99

Country/territory	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
American Samoa	6	18	17	22	32	13	20	21	30	11	19	6	2				0	10		6
Australia	10	9	9	8	8	7	6	6	6	6	6	6	6	6	6	6		6	5	6
Brunei Darussalam	102	143	120	131	118	107	92	80	52	51	56		66					52		
Cambodia	40	30	122	110	143	137	135	116	132	94	75	122	176	140	156	146	145	149	158	176
China			10	11	14	21	24	23	27	27	33	30	27	29	30	42	38	34	36	36
China, Hong Kong SAR	160	150	144	137	145	138	135	131	126	119	114	109	111	109	104	100	102	109	115	113
China, Macao SAR	437	226	87	162	229	187	132	117	93	76	92	86	74	70		82	103	131	101	
Cook Islands	207	57	110	171	119	215	100	93	113	6	6	43	64				0	0	10	16
Fiji	33	28	25	27	24	33	28	24	23	30	31	34	32	24	37	26	26	22	21	24
French Polynesia	50	42	41	47	47	45	48	44	34	38	30	25	41				39	41	46	40
Guam	52	38	44	42	46	31	40	27	32	57			43							
Japan	61	56	54	52	51	49	47	46	44	43	42	41	39	39	36	34	34	34	35	32
Kiribati	239	301	305	197	169	154	190	159	297	170	94	124	134				415	40	341	308
Lao PDR	238		141	138	187	119	41	91	186	73	44	46	23	46	24	26	29	38	42	
Malaysia	82	78	83	78	69	67	67	67	65	61	66	60	61	64	60	60	63	65	66	68
Marshall Islands	17	20	33	40	31	37	90	75	25	16		55	105				99		81	68
Micronesia			76	80	80	70	63	102	80	71	380	357	111	148	165	107	86	97	121	
Mongolia	70	64	76	84	89	157	143	120	121	104	71	71	65	61	72	132	120	118	113	128
Nauru	0	26	102	0	0	0	92	67	88	0	73									
New Caledonia	76	88	81	114	95	67	62	47	69	78	85	82	79	82	70	62	104			
New Zealand	15	14	14	13	13	11	10	9	9	9	10	10	9	8	10	8	10	9	10	12
Niue	29	0	66	106	38	0	207	0	128		0		91	46	95	97	99	0	51	105
Northern Mariana Is		157	462	456	339	333	70	203	81	73	65		133		82	82	82	141	139	89
Palau	139	80	133	107	149	190	93	266	117	20		39	25	153	244	110	28	83		169
Papua New Guinea	82	79	85	90	104	100	82	63	116	90	65	87	63	181	127	187	116	177	246	278
Philippines	232	236	206	204	284	276	274	287	315	366	522	334	371	273	270	346	395	292	219	196
Rep. Korea	236	255	257	230	213	214	215	210	177	165	149	134	110	107	86	111	72	57	65	52
Samoa	38	32	28	26	24	27	41	18	18	23	28	27	16	30	27	30	22	19	13	18
Singapore	112	99	87	80	81	72	64	57	58	55	53	60	57	57	51	57	22	58	61	47
Solomon Islands	117	133	133	120	129	140	104	115	124	157	119	93	106	103	91	93	76	79	71	67
Tokelau	0	63	0	0	0	120	0	543	61	0	62	63	64		0	133	0			0
Tonga	70	53	49	54	58	52	37	25	15	38	24	21	30	34	24	21	23	22	31	22
Tuvalu	430	231	153	294	115	405	337	269	286	301	259	328	319	289	191	352			162	
Vanuatu	152	77	140	155	146	94	97	65	83	99	94	150	123	71	92	47	73	104	98	63
Viet Nam	80	79	91	75	75	78	78	89	82	80	75	88	81	75	71	113	99	111	113	113
Wallis & Futuna Is	208	211	43	143	115	113		262	8	222		159	29	79	78	43	57	98		
Total	**27**	**27**	**34**	**34**	**39**	**44**	**46**	**45**	**49**	**50**	**59**	**49**	**48**	**46**	**45**	**61**	**58**	**51**	**51**	**49**

Regional profile for the Western Pacific, cont'd: new smear-positive cases, 1993-99

	Number of cases							Rate (per 100 000 population)						
Country/territory	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
American Samoa				0	6		3				0	10		5
Australia	557				226	203	285	3				1	1	2
Brunei Darussalam					0							0		
Cambodia		11 058	11 101	12 065	12 686	13 865	15 744		114	111	118	121	129	144
China	84 898	104 729	134 488	168 270	188 530	214 462	212 426	7	9	11	14	15	17	17
China, Hong Kong SAR	2 429			2 116	1 536		1 566	41			33	24		23
China, Macao SAR	108		141	204	304	226		26		33	46	68	49	
Cook Islands				0	0	1	0				0	0	5	0
Fiji	58	60	68	69	66	74	65	8	8	9	9	8	9	8
French Polynesia				37	41	34	33				17	18	15	14
Guam														
Japan	17 890	16 770	14 367	12 867	13 571	11 935	12 909	14	13	11	10	11	9	10
Kiribati				29	11	50	59				37	14	62	72
Lao PDR			726	886	1 234	1 508				15	18	25	29	
Malaysia	6 954	6 861	6 688	7 271	7 596	7 802	7 960	36	35	33	35	36	36	36
Marshall Islands				17		11	17				30		18	27
Micronesia			7	10	11	28				7	9	10	25	
Mongolia	86	145	622	1 171	1 171	1 356	1 513	4	6	25	47	46	53	58
Nauru														
New Caledonia		42	26	26					22	13	13			
New Zealand	91	61	47	76	57	81	69	3	2	1	2	2	2	2
Niue	0	0	1	1	0		1	0	0	49	50	0		52
Northern Mariana Is			14	26	21	26	15			24	42	32	37	20
Palau	8	11	9	4	7		20	49	65	52	23	39		105
Papua New Guinea			1 652	652	1 195	2 107	1 914			38	15	27	46	41
Philippines	92 279	87 401	94 768	86 695	83 353	71 663	73 373	142	131	139	124	117	98	99
Rep. Korea	16 630	13 266	11 754	11 420	9 957	10 359	9 559	38	30	26	25	22	22	21
Samoa	21	18	15	10	14	7	17	13	11	9	6	8	4	10
Singapore	513	861	455	208	432	480	465	16	26	14	6	13	14	13
Solomon Islands	155	114	109	90	113	140	93	44	31	29	23	28	34	22
Tokelau		0	1	0			0		0	67	0			0
Tonga	16	17	9	16	12	16	10	17	18	9	16	12	16	10
Tuvalu	2	1	6					21	10	59				
Vanuatu		62	30	50	66	38	43		38	18	29	37	21	23
Viet Nam			37 550	48 911	53 647	54 873	53 805			51	65	70	71	68
Wallis & Futuna Is			3	3	1					21	21	7		
Total	**222 695**	**241 477**	**314 657**	**353 200**	**375 864**	**391 345**	**391 964**	**14**	**15**	**20**	**22**	**23**	**24**	**23**

Notes

China The number of new extra-pulmonary TB cases was not reported. Treatment outcomes grouped completed with cured.

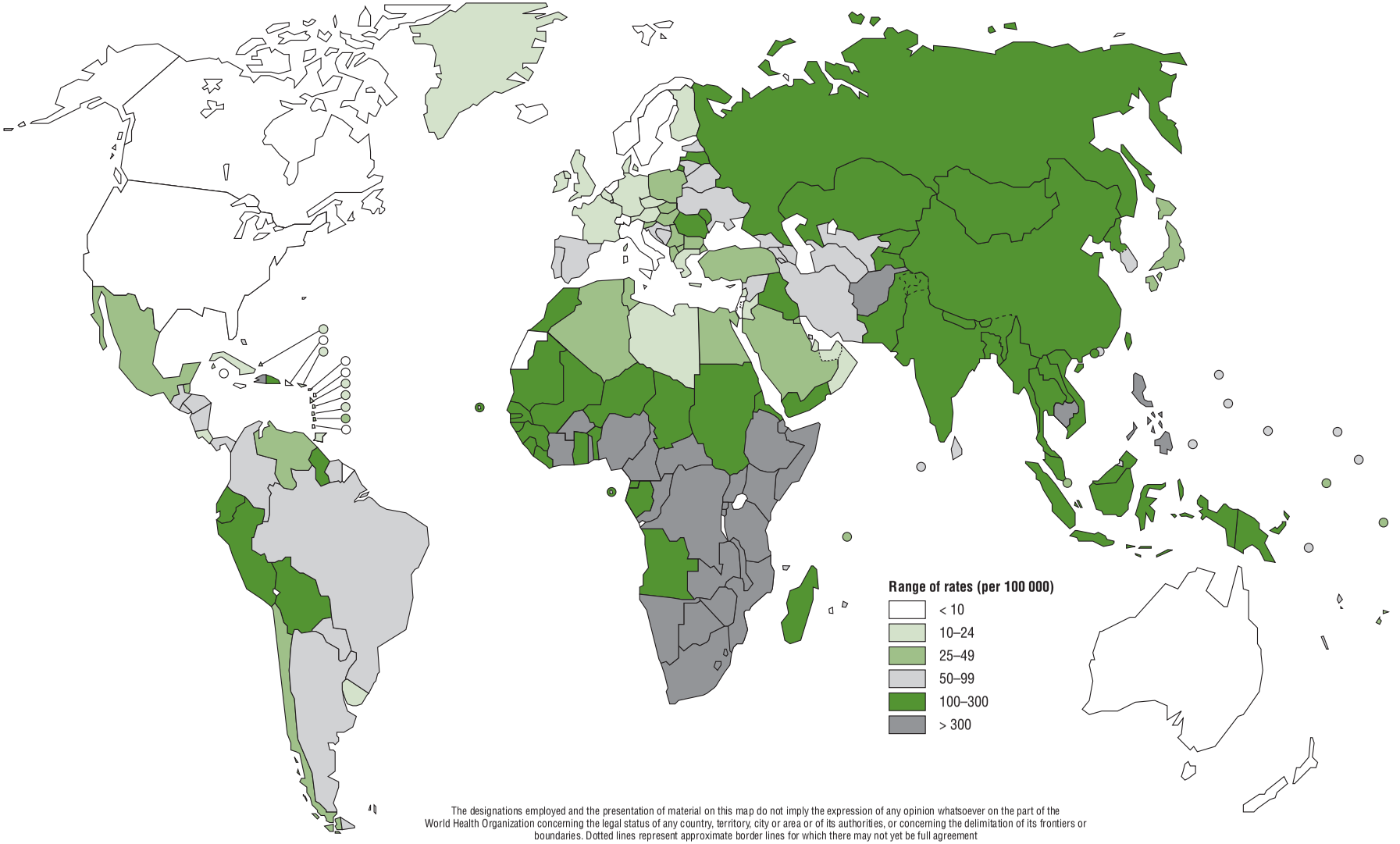
Malaysia No treatment outcomes were given for 1998. Outcomes for 1997 (not previously reported) were given as follows: 7 721 registered, 6 053 completed treatment, 492 died, 38 failed, 979 defaulted, 152 transferred.

ANNEX 5

World maps

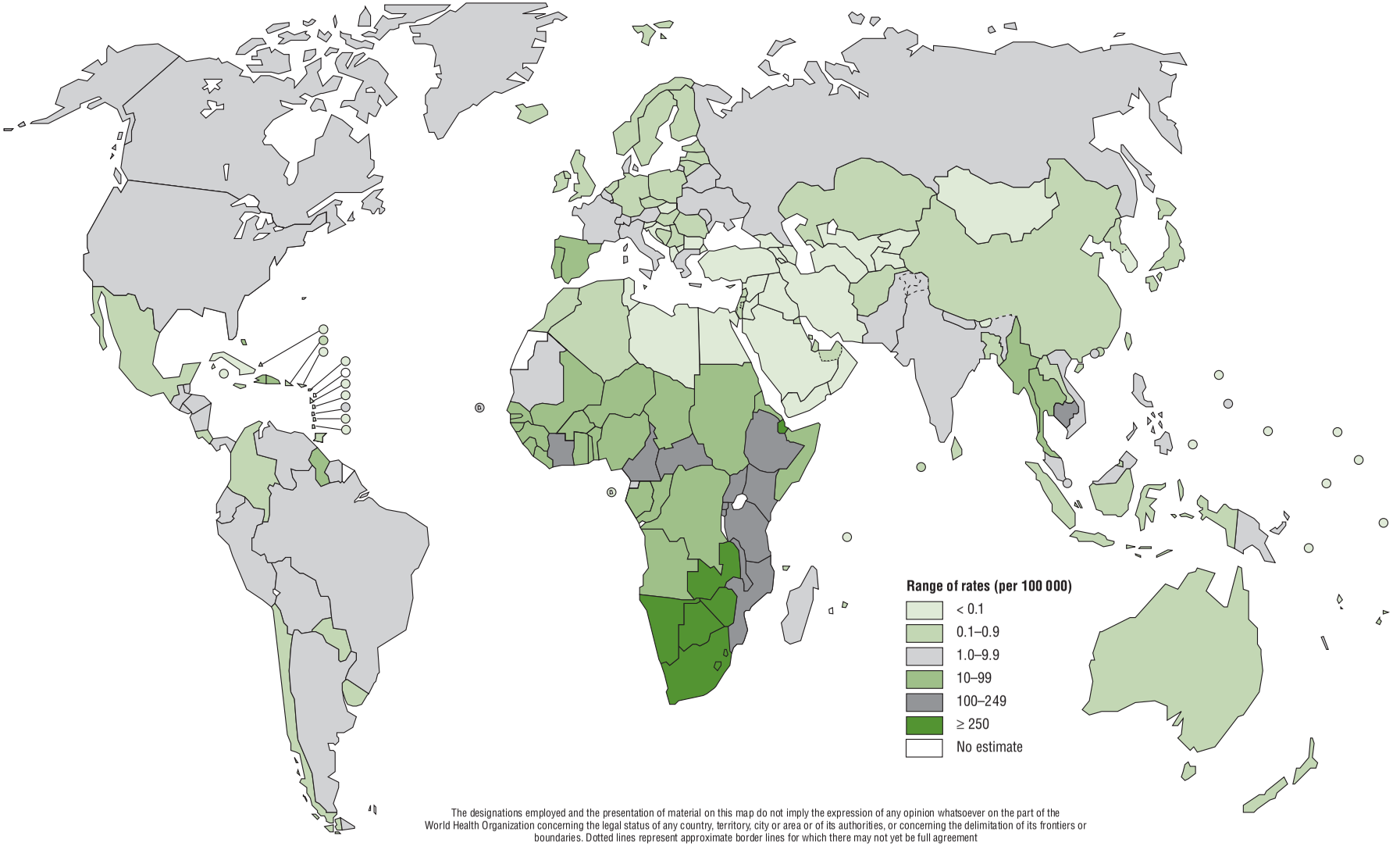
1. Estimated TB incidence rates, 1999
2. Estimated incidence rates of HIV-positive TB, 1999
3. Implementation of DOTS, 1999
4. Tuberculosis notification rates, 1999

1. Estimated TB incidence rates, 1999



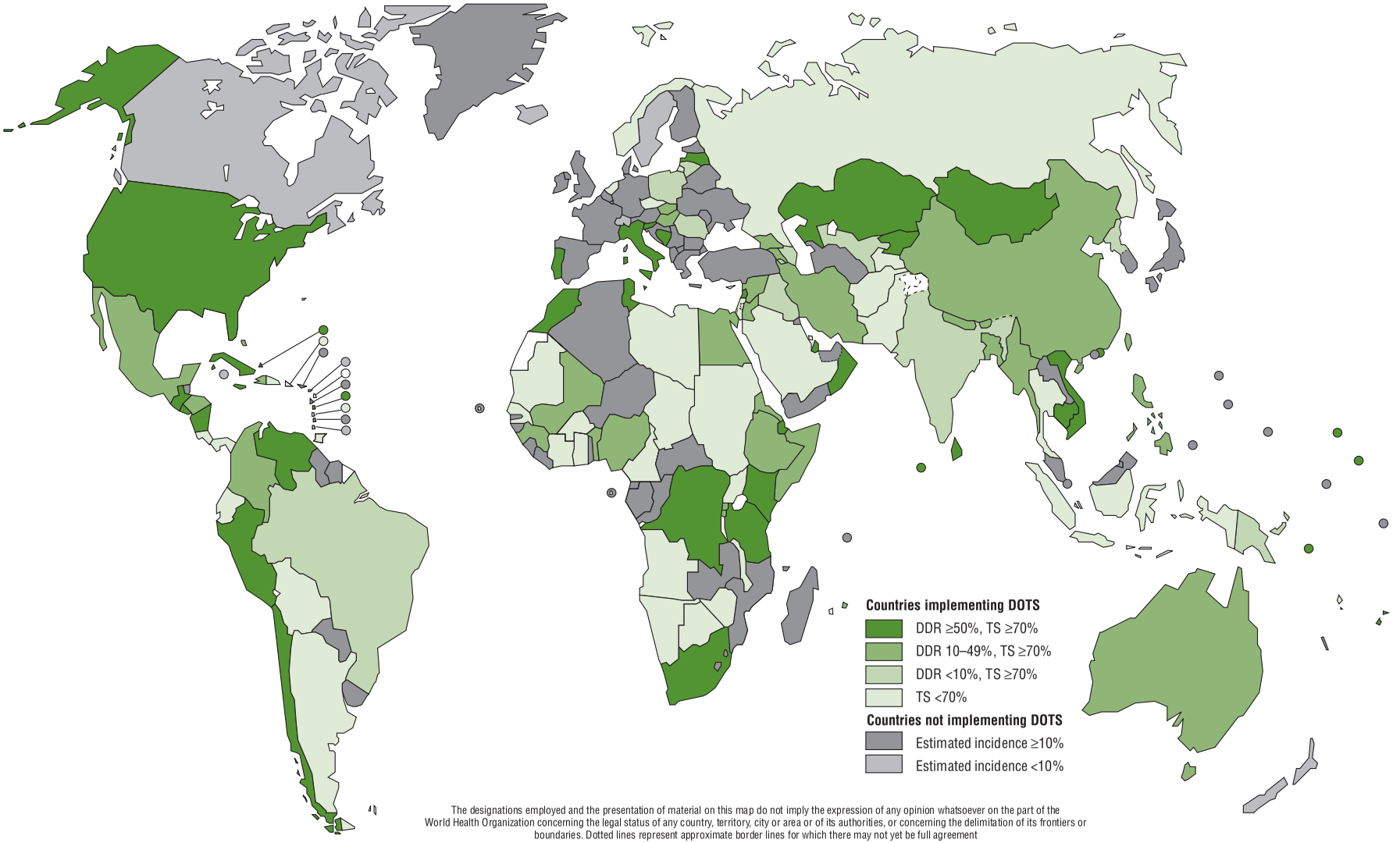
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines represent approximate border lines for which there may not yet be full agreement

2. Estimated incidence rates of HIV-positive TB, 1999



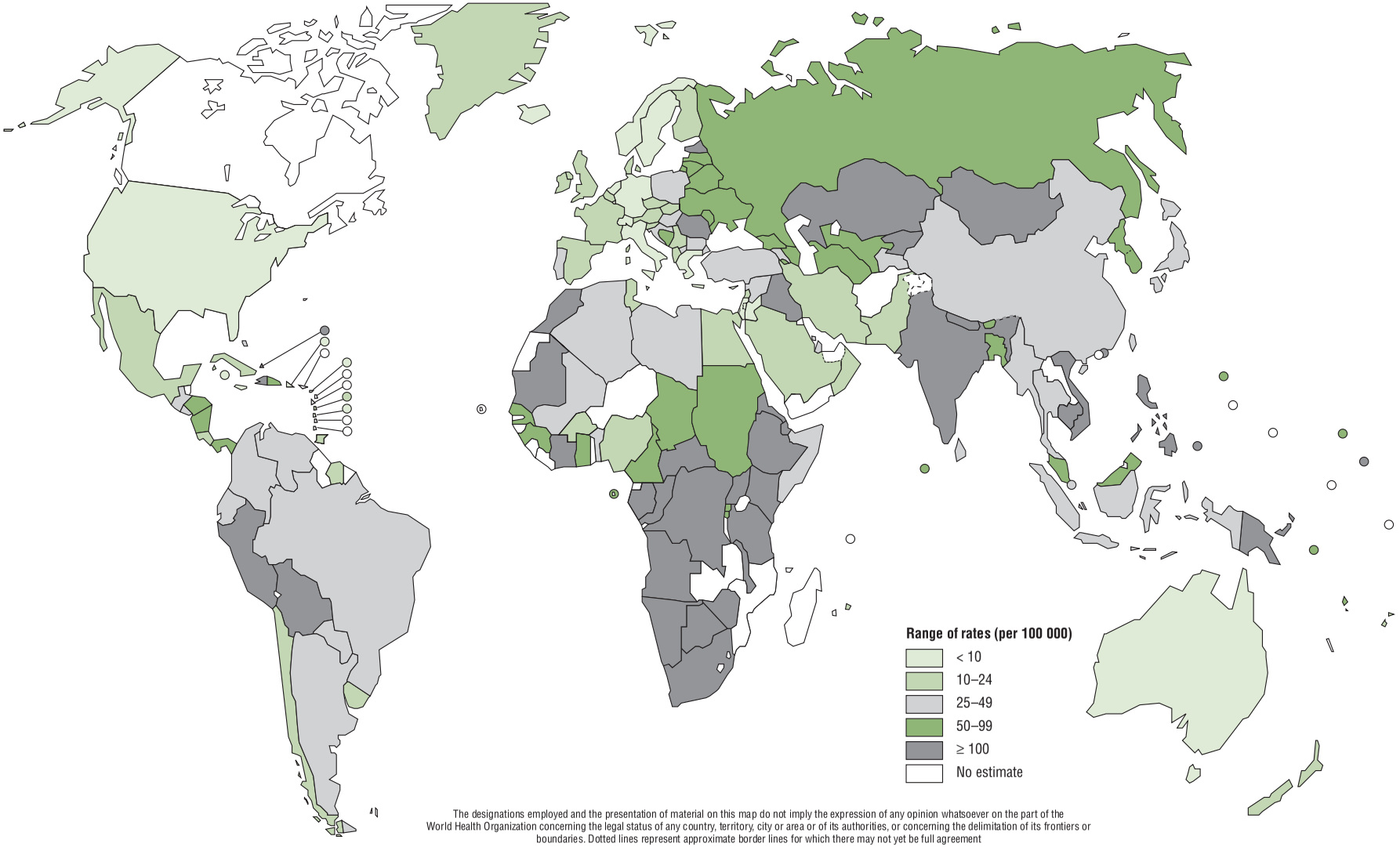
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines represent approximate border lines for which there may not yet be full agreement

3. Implementation of DOTS, 1999



The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines represent approximate border lines for which there may not yet be full agreement

4. Tuberculosis notification rates, 1999



The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines represent approximate border lines for which there may not yet be full agreement

ANNEX 6

Comparison of cases notified and registered for treatment in 1998

Comparison of smear-positive cases notified in 1998 and registered for treatment in 1998

	Number of cases		% of notif
	notified	registered	registered
Afghanistan	1 833	2 913	159
Albania	212		
Algeria	7 462	2 490	33
American Samoa		4	
Andorra	1	2	200
Angola	7 350	2 626	36
Anguilla			
Antigua and Barbuda		4	
Argentina	5 186	5 234	101
Armenia	475	387	81
Australia	203	237	117
Austria			
Azerbaijan	727	727	100
Bahamas	28	32	114
Bahrain	110	99	90
Bangladesh	37 737	38 029	101
Barbados	4		
Belarus	5 047		
Belgium	418		
Belize			
Benin	1 988	1 950	98
Bermuda			
Bhutan	270	294	109
Bolivia	6 750	6 750	100
Bosnia & Herzegovina	640	640	100
Botswana	2 826	2 734	97
Brazil	38 809	30 078	78
British Virgin Islands			
Brunei Darussalam			
Bulgaria	1 325		
Burkina Faso	1 331	1 331	100
Burundi	2 782	2 733	98
Cambodia	13 865	13 287	96
Cameroon	4 374	971	22
Canada			
Cape Verde	104		
Cayman Islands	2	2	100
Central African Republic	2 637		
Chad		2 433	
Chile	1 576	1 565	99
China	214 462	210 096	98
China, Hong Kong SAR		1 566	
China, Macao SAR	226		
Colombia	6 969	562	8
Comoros	94		
Congo	2 044		
Cook Islands	1		
Costa Rica	562	0	0
Côte d'Ivoire	9 850	9 569	97
Croatia	1 129		
Cuba	744	739	99
Cyprus	6	15	250
Czech Republic	545	548	101
Denmark	132		

	Number of cases		% of notif
	notified	registered	registered
Djibouti	1 697	1 673	99
Dominica	5		
Dominican Republic	2 194	2 194	100
DPR Korea	403	2 673	663
DR Congo	33 419	33 442	100
Ecuador	6 455		
Egypt	4 915	4 472	91
El Salvador	1 071	940	88
Equatorial Guinea	284		
Eritrea	223	270	121
Estonia	299	299	100
Ethiopia	18 864	14 836	79
Fiji	74	79	107
Finland	188		
France			
French Polynesia	34	27	79
Gabon	889	577	65
Gambia	900		
Georgia	547	534	98
Germany	3 124		
Ghana	7 005	7 288	104
Greece	313		
Grenada	2		
Guam			
Guatemala	2 255	2 255	100
Guinea	3 362	3 362	100
Guinea-Bissau			
Guyana	85		
Haiti	6 442	6 442	100
Honduras	2 311	1 850	80
Hungary	667	662	99
Iceland	2	2	100
India	284 066	284 063	100
Indonesia	32 280	40 166	124
Iran	5 105	5 249	103
Iraq	8 850	7 933	90
Ireland	116	118	102
Israel	221		
Italy	2 361	353	15
Jamaica	82	80	98
Japan	11 935	4 003	34
Jordan	110	110	100
Kazakhstan	6 180	3 519	57
Kenya	24 029	21 823	91
Kiribati	50	52	104
Kuwait	185		
Kyrgyzstan	830	830	100
Lao PDR	1 508		
Latvia	668	619	93
Lebanon	245	224	91
Lesotho	2 476		
Liberia	1 190		
Libyan Arab Jamahiriya		699	
Lithuania	787	787	100

continued…

Comparison of smear-positive cases notified in 1998 and registered for treatment in 1998, cont'd

	Number of cases		% of notif
	notified	registered	registered
Luxembourg	24		
Madagascar	9 639		
Malawi	8 853	8 824	100
Malaysia	7 802		
Maldives	88	88	100
Mali	2 558	1 381	54
Malta	6	6	100
Marshall Islands	11	12	109
Mauritania			
Mauritius	108	105	97
Mexico	11 473	11 473	100
Micronesia	28		
Monaco			
Mongolia	1 356	1 356	100
Montserrat	0	2	
Morocco	13 426	13 426	100
Mozambique	12 116		
Myanmar	10 089	10 313	102
Namibia	3 490	3 592	103
Nauru			
Nepal	11 306	11 673	103
Netherlands	254	293	115
Netherlands Antilles			
New Caledonia			
New Zealand	81		
Nicaragua	1 648	1 653	100
Niger	2 127		
Nigeria	13 161	13 161	100
Niue			
Northern Mariana Is	26	110	423
Norway	49	49	100
Oman	109	109	100
Pakistan	14 974	29 388	196
Palau		20	
Panama	1 393	669	48
Papua New Guinea	2 107	4 798	228
Paraguay	850	850	100
Peru	27 707	26 137	94
Philippines	71 663	20 683	29
Poland	3 502	122	3
Portugal	2 016	1 948	97
Puerto Rico	105	107	102
Qatar	68	68	100
Rep. Korea	10 359		
Republic of Moldova	477		
Romania	10 841	10 921	101
Russian Federation	42 219	745	2
Rwanda	4 417	5 156	117
Saint Kitts and Nevis	3	4	133
Saint Lucia	12	17	142
Samoa	7	7	100
San Marino	0	0	
Sao Tome and Principe			
Saudi Arabia	1 644	1 665	101
Senegal	5 454	5 454	100
Seychelles	10		
Sierra Leone	2 262		
Singapore	480		
Slovakia	303	304	100
Slovenia	157	158	101
Solomon Islands	140	138	99
Somalia	3 121	2 635	84
South Africa	82 293	37 089	45
Spain	1 906		
Sri Lanka	3 747	3 761	100
St Vincent & Grenadines	3		
St. Helena			
Sudan	10 791	10 791	100
Suriname		46	
Swaziland			
Sweden	97		
Switzerland	165		
Syrian Arab Republic	1 593	748	47
Tajikistan	435		
TFYR Macedonia	179	179	100
Thailand	7 962	7 962	100
Togo	932		
Tokelau		0	
Tonga	16	16	100
Trinidad and Tobago	98	83	85
Tunisia	1 196	1 099	92
Turkey	3 692	22 509	610
Turkmenistan	790		
Turks & Caicos Islands		7	
Tuvalu			
Uganda	18 222	13 236	73
Ukraine	10 586		
United Arab Emirates			
United Kingdom	1 342		
UR Tanzania	23 726	23 726	100
Uruguay	374	379	101
US Virgin Islands			
USA	6 630	6 630	100
Uzbekistan	3 504	74	2
Vanuatu	38		
Venezuela	3 450	3 305	96
Viet Nam	54 873	54 551	99
Wallis & Futuna Is			
West Bank and Gaza	8		
Yemen	4 896		
Yugoslavia	1 873		
Zambia			
Zimbabwe	14 492	12 748	88

ANNEX 7

Changes in treatment success and DOTS detection rate 1995–1999

DOTS treatment success and detection rates, 1995-99

	DOTS treatment success					DOTS detection rate				
	1994	1995	1996	1997	1998	1995	1996	1997	1998	1999
Afghanistan				45	33			2	6	5
Albania										
Algeria			86					132		
American Samoa		100			50			59		29
Andorra					100			213	12	37
Angola				15	68			62	39	62
Anguilla										
Antigua & Barbuda										
Argentina					55			4	6	18
Armenia		83	77	82	81	14	31	51	48	42
Australia				66	75				17	23
Austria										
Azerbaijan			86	87	86	5	9	7	8	9
Bahamas					72					43
Bahrain					13					64
Bangladesh	73	71	72	78	80	7	15	19	24	25
Barbados										11
Belarus										
Belgium										
Belize		52					41	100		
Benin	76	73	72	73	77	32	31	31	30	31
Bermuda										
Bhutan	71	97	96	85	90	28	24	22	21	24
Bolivia	66	62	71	77	62	39	78	73	77	77
Bosnia & Herzegovina				93	88				35	52
Botswana	72	67	70	70	47	67	75	69	71	65
Brazil					91				4	4
British Virgin Is										
Brunei Darussalam										
Bulgaria										
Burkina Faso		25	29	57	59	6	10	8	9	9
Burundi	44	45		67	74	16	19	23	14	28
Cambodia	84	91	94	91	95	48	40	50	53	57
Cameroon					75		2		5	10
Canada										
Cape Verde							43	36		
Cayman Islands										
Central African Rep		37					45	46		
Chad	63	47			64	28	11			33
Chile	83	79	80	77	83	79	75	80	86	85
China	94	96	96	96	97	16	24	25	33	32
China, Hong Kong SAR					85					56
China, Macao SAR	75			81		33	47	68	50	
Colombia					74				72	30
Comoros	94	90		85		60	62		50	
Congo	69					79			58	
Cook Islands				50					32	
Costa Rica										30
Côte d'Ivoire	17	68	56	61	62	48	48	46	46	44
Croatia										
Cuba	86	90	92	90	94	82	89	87	91	95
Cyprus					42				26	85
Czech Republic	73	60	66	69	65	51	63	53	61	51
Denmark										
Djibouti		76	77	76	79		87	93	83	77
Dominica			100					91	51	
Dominican Rep										7
DPR Korea					91					2
DR Congo	71	80	48	64	70	44	50	47	57	53
Ecuador				43				1	18	26

continued…

DOTS treatment success and detection rates, 1995-99, cont'd

	DOTS treatment success					DOTS detection rate				
	1994	1995	1996	1997	1998	1995	1996	1997	1998	1999
Egypt	52		81	82	87	38	0	9	14	25
El Salvador					77			45	52	55
Equatorial Guinea	89	89	77	82		56	51	52	63	
Eritrea				83	73			3	6	12
Estonia										
Ethiopia	74	61	73	72	74	14	19	20	22	22
Fiji	90	86		87	90	51	52	50	57	50
Finland										
France										
French Polynesia		67	95	100	74		100	111	92	90
Gabon										
Gambia	74	76	80	70		67	60	63	65	
Georgia		58		65	78	15	32		35	46
Germany										
Ghana		54	51	48	59	13	12	26	25	23
Greece										
Grenada										
Guam										
Guatemala	62	61	81	73	79	44	59	56	55	54
Guinea	78	78	75	74	73	38	44	42	44	43
Guinea-Bissau										
Guyana										
Haiti				73	79			2	12	24
Honduras					93				2	15
Hungary					80					36
Iceland										
India	83	79	79	82	84	0	1	1	2	6
Indonesia	94	91	81	54	58	1	5	8	12	19
Iran			87	84	83	30		8	21	31
Iraq					83				2	5
Ireland										
Israel								98	106	83
Italy		80	82	69	72		14	9	13	54
Jamaica		67	72	79	89		85	81	91	105
Japan										
Jordan	90				92	56			35	33
Kazakhstan					79				4	73
Kenya	73	75	77	65	77	58	58	54	57	53
Kiribati					83			34	156	182
Kuwait										
Kyrgyzstan			88	76	82		4	4	36	60
Lao PDR		70	55	62			24	33	38	
Latvia		61	64	65	71		70	69	66	52
Lebanon	89				73	47				72
Lesotho	56	47	71	63		45	53	64	60	
Liberia		79		75			27		38	
Libyan Arab Jamahiriya					68					134
Lithuania					79					2
Luxembourg										
Madagascar	51	55		64		64	74		66	
Malawi	22	71	68	71	69	40	40	44	48	42
Malaysia		69				66	70			
Maldives	95	97	93	95	94	93	95	93	97	107
Mali	68	59	65	62	70	19	21	22	21	19
Malta		100	100	100	100		35	22	44	69
Marshall Islands					83				46	69
Mauritania										50
Mauritius	96				91	42			32	34
Mexico			75	65	78			15	29	38
Micronesia	64	80				16	23			

continued…

DOTS treatment success and detection rates, 1995-99, cont'd

	DOTS treatment success					DOTS detection rate				
	1994	1995	1996	1997	1998	1995	1996	1997	1998	1999
Monaco										
Mongolia	59	78	78	86	84	7	31	30	51	63
Montserrat										
Morocco	86	90	88	83	82	98	98	96	91	90
Mozambique	67	39	54	67		49	44	42	41	
Myanmar		66	79	82	82		26	27	30	33
Namibia			54	58	60	31	113	97	114	105
Nauru										
Nepal			85	87	89		5	11	16	44
Netherlands	81	72	81	80	65	71	44	40	36	40
Netherlands Antilles										
New Caledonia	62	75				33	33			
New Zealand										
Nicaragua	81	80	79	81	82	77	85	84	84	80
Niger			57	66				12	10	
Nigeria	65	49	32	73	73	8	13	9	10	11
Niue										
Northern Mariana Is										
Norway		77	80	44	69		88	89	45	20
Oman		84	87	91	86		71	87	87	106
Pakistan	74	70		67	66	1	2		4	2
Palau	64	67	75			129	56	97		
Panama				51	51				13	9
Papua New Guinea		60		93	72		4	1	8	5
Paraguay	46	51				13	54			
Peru	81	83	89	90	92	99	88	95	101	95
Philippines	80		82	83	84	0	1	3	10	20
Poland					75				2	3
Portugal	48	69	74	78	74	79	78	67	84	77
Puerto Rico		65	68	68	68		68	81	70	74
Qatar	83	81	72	79	84	105	74	65	109	88
Rep. Korea	71	76	71	82		27	58	56	65	
Republic of Moldova										
Romania				72	85				86	4
Russian Federation		65	62	67	68		0	1	1	2
Rwanda			61	68	72	30	29	35	45	37
Saint Kitts and Nevis					25				133	42
Saint Lucia				67	82			89	90	63
Samoa	50	80	100		86	51	35	49		60
San Marino				100				103		
Sao Tome & Principe										
Saudi Arabia					57					22
Senegal	35	39	41	52	48	63	65	56	54	48
Seychelles		89	100	100			72	85	75	
Sierra Leone	76	69	74	79		32	47	45	42	
Singapore	88	86				63	28			
Slovakia	96	64	73	67	85	76	82	34	40	36
Slovenia		90	87	82	78		78	58	62	68
Solomon Islands		65	73	92	92		57	70	85	55
Somalia		86	84	90	88		16	21	20	22
South Africa			69	73	74			6	22	68
Spain										
Sri Lanka	77	79	80	77	76	61	59	71	76	76
St Vincent & Grenadines				86					17	
St. Helena										
Sudan					65		2	1	31	32
Suriname								18		
Swaziland										
Sweden										
Switzerland										

continued…

DOTS treatment success and detection rates, 1995-99, cont'd

	DOTS treatment success					DOTS detection rate				
	1994	1995	1996	1997	1998	1995	1996	1997	1998	1999
Syrian Arab Republic			92	88	88			5	13	17
Tajikistan										
TFYR Macedonia										
Thailand			78	62	68		0	5	21	40
Togo	45	60	65	64		18	18		16	
Tokelau										
Tonga	89	75	82	75	94	53	96	74	100	64
Trinidad and Tobago					65					123
Tunisia					91					79
Turkey										
Turkmenistan										
Turks & Caicos Islands					71					109
Tuvalu										
Uganda			33	40	62			63	63	59
Ukraine										
United Arab Emirates										
United Kingdom										
UR Tanzania	80	73	76	77	76	61	60	56	55	51
Uruguay	83	68	80	77	84	74	92	94	85	91
US Virgin Islands		50					97			
USA		72	71	72	72		87	86	89	90
Uzbekistan					78				0	2
Vanuatu	100					44				33
Venezuela	68	74	80	72	81	73	75	75	79	82
Viet Nam	91	91	90	85	93	30	59	77	81	80
Wallis & Futuna Is										
West Bank & Gaza										
Yemen			76	81			9	30	36	
Yugoslavia										
Zambia										
Zimbabwe					70				60	55

ANNEX 8

Global profile (updated)

This **Global profile** is an updated version of the **1999 Global profile** published in *Global TB Control WHO Report 2000*.

The most recent case notifications and treatment outcomes data on TB are in Annex 2.

Global profile: case notification and detection rates, 1998

		Population		All cases			New smear-positive cases (ss+)				
				Notified			Notified			Estimated	
		Number	%	Number	rate	%	Number	rate	% pulm cases ss+	Number	% of est detected
Region*		a	a/sum(a)	b	b/a	b/sum(b)	c	c/a	d	e	c/e
	DOTS	**370 847 041**	**60**	**503 451**	**136**	**77**	**253 162**	**75**	**63**		
	non-DOTS	217 372 201	35	151 106	70	23	86 181	25	72		
	No Report	13 570 310	2.2								
AFR		616 441 115	98	654 557	106	100	339 343	100		794 629	43
	DOTS	**476 547 280**	**59**	**117 596**	**25**	**48**	**70 271**	**52**	**74**		
	non-DOTS	298 846 959	37	129 436	43	52	65 007	48	62		
	No Report	31 687 596	3.9								
AMR		807 081 834	100	247 032	31	100	135 278	100		181 305	75
	DOTS	**157 056 621**	**33**	**79 133**	**50**	**34**	**41 298**	**55**	**76**		
	non-DOTS	317 623 545	67	155 909	49	66	33 584	45	26		
	No Report										
EMR		474 680 166	100	235 042	50	100	74 882	100		273 581	27
	DOTS	**115 618 760**	**13**	**55 853**	**48**	**16**	**18 957**	**17**	**48**		
	non-DOTS	695 825 810	80	287 921	41	84	92 414	83	36		
	No Report	58 683 488									
EUR		870 128 058	93	343 774	40	100	111 371	100		202 937	55
	DOTS	**435 585 190**	**29**	**168 844**	**39**	**13**	**103 498**	**27**	**69**		
	non-DOTS	1 049 470 804	71	1 138 331	108	87	284 450	73			
	No Report										
SEAR		1 485 055 994	100	1 307 175	88	100	387 948	100		1 335 882	29
	DOTS	**961 549 570**	**58**	**495 903**	**52**	**59**	**282 746**	**72**	**62**		
	non-DOTS	696 675 502	42	343 116	49	41	108 599	28	36		
	No Report	791 496	0.0								
WPR		1 659 016 570	100	839 019	51	100	391 345	100		839 126	47
	DOTS	**2 517 204 462**	**43**	**1 420 780**	**56**	**39**	**769 932**	**53**	**64**		
	non-DOTS	3 275 814 821	56	2 205 819	67	61	670 235	47	73		
	No Report	104 732 890	1.8								
Global		5 897 752 173	100	3 626 599	61	100	1 440 167	100		3 627 460	40

* WHO Regions (see Regional profiles for countries/territories in each region): AFR - Africa, AMR - the Americas, EMR - the Eastern Mediterranean, EUR - Europe, SEAR - South-East Asia, WPR - the Western Pacific

Global profile, cont'd: treatment success for the 1997 cohort

Region*		New smear-positive cases									Re-treatment cases								
		Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success	Registered	% cured	% completed	% died	% failed	% default	% transferred	% not eval	% success
AFR	DOTS	188 602	51	11	6.5	1.4	12	5.7	12	63	15 348	46	10	7.7	2.5	11	5	18	56
	non-DOTS	77 887	57	12	7.1	1.8	16	4.5	2.2	69									
AMR	DOTS	54 042	74	6.4	4.3	1.0	5.8	2.1	6.5	80	1 588	38	21	5.3	2.8	10	5.8	17	59
	non-DOTS	70 750	16	25	3.0	0.6	7.9	2.8	44	41									
EMR	DOTS	36 251	65	13	2.9	1.8	11	4.9	2.6	77	4 036	54	11	6.8	5.3	16	5.8	1.4	65
	non-DOTS	23 456	51	13	1.8	3.8	15	4.3	11	64									
EUR	DOTS	15 276	56	17	5.0	6.7	10	1.8	3.1	73	6 463	50	22	5.0	3.1	6.3	1.4	12	72
	non-DOTS	7 329	63	10	3.9	8.2	5.3	1.5	8.5	73									
SEAR	DOTS	71 475	66	6.2	3.4	1.4	7.3	2.2	14	72	6 248	59	7.7	6.2	4.2	12	4.1	6.9	66
	non-DOTS	304 995	2.9	16	0.1	0.1	1.3	0.3	79	19									
WPR	DOTS	242 818	92	1.1	1.7	1.1	1.2	1.1	2.1	93	5 921	73	5.4	3.8	3.9	2.4	2.4	9.2	78
	non-DOTS	50 693	77	4.0	1.6	4.0	6.0	2.6	5.2	81									
Global	**DOTS**	**608 464**	**72**	**6.4**	**3.8**	**1.4**	**6.4**	**3.0**	**6.9**	**78**	**39 604**	**53**	**11**	**6.2**	**3.4**	**9.6**	**4.0**	**12**	**65**
	non-DOTS	**535 110**	**22**	**16**	**1.8**	**1.0**	**5.4**	**1.6**	**52**	**38**									

* WHO Regions (see Regional profiles for countries/territories in each region): AFR - Africa, AMR - the Americas, EMR - the Eastern Mediterranean, EUR - Europe, SEAR - South-East Asia, WPR - the Western Pacific

Global profile, cont'd: WHO TB control categories, 1998

	Number		Number of countries in each category						% regional population in each category**					
Region*	Countries	Reports	0	1	2	3	4	5	0	1	2	3	4	5
AFR	47	41	6	5	1	11	24	0	2	7.0	1.1	54	35	0.0
AMR	44	34	10	8	5	6	13	2	3.9	2.5	23	20	51	0.0
EMR	23	23	0	8	1	8	6	0	0.0	9.2	31	52	8	0.0
EUR	51	50	1	24	4	4	14	4	6.7	47	26	8	10	1.9
SEAR	10	10	0	1	1	5	3	0	0.0	1.6	66	31	1.4	0.0
WPR	36	28	8	10	1	6	10	1	0.0	10	0.3	82	8.4	0.2
Global	**211**	**186**	**25**	**56**	**13**	**40**	**70**	**7**	**1.8**	**12**	**26.3**	**44**	**15**	**0.3**

* WHO Regions (see Regional profiles for countries/territories in each region): AFR - Africa, AMR - the Americas, EMR - the Eastern Mediterranean, EUR - Europe, SEAR - South-East Asia, WPR - the Western Pacific

** Percent of regional population in each category: each country is assigned to only one of the above categories. This is in contrast to the case notification and dectection rates table (page 54), where the population of any country can be divided into DOTS and non-DOTS areas.

The tuberculosis epidemic is growing larger and more dangerous each year. The World Health Organization's programme on Communicable Diseases monitors this epidemic, analyzing data from national control programmes and providing feedback on trends in the disease and progress in its control.

If you would like further information about tuberculosis or other communicable diseases, please contact Mireille Desplobains, tel +41 22 791 3504, e-mail desplobainsm@who.int or Sylvie Lamy Quique, tel +41 22 791 3986, e-mail lamyquiques@who.int

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You can also visit our website at http://www.who.int/health-topics/tb.htm