

GLOBAL TUBERCULOSIS CONTROL

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List of abbreviations

AFR	African Region
AMR	American Region
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)
DOTS	WHO TB control strategy (Directly Observed Treatment, Short-Course)
EMR	Eastern Mediterranean Region
EUR	European Region
IUATLD	International Union Against Tuberculosis and Lung Disease
NGO	Non-government organization
NTP	National Tuberculosis Control Programme
SCC	Standardized short-course chemotherapy
SEAR	South-East Asia Region
TB	Tuberculosis
WPR	Western Pacific Region

Key findings of this report

- ▶ Data from 189 countries show that progress in global tuberculosis control accelerated somewhat between 1997 and 1998: DOTS programmes reported the biggest annual increment in case finding so far, whilst maintaining high average treatment success rates.
- ▶ Forty-five percent of all estimated tuberculosis cases (3.62m/8.08m), and 40% of all smear-positive cases (1.43m/3.57m), 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 include all 22 high-burden countries (which bear 80% of estimated incident cases).
- ▶ Forty-three percent of the global population had access to DOTS, double the fraction reported in 1995.
- ▶ Twenty-one percent of estimated smear-positive cases were reported under DOTS in 1998, also double the fraction reported in 1995.
- ▶ Compared with 1997, an extra 220 000 smear-positive cases were reported by DOTS programmes in 1998, which is faster than the average annual increase since 1994; if programmes could add 250 000 new cases each year, 70% of all (estimated) smear-positive cases would be treated under DOTS by 2005.
- ▶ The average treatment success rate was 78% in all DOTS programmes in 1997 (but only 62% in the African Region); it was 82% in the 22 high-burden countries which, collectively, are close to meeting the WHO target of 85%.
- ▶ The countries which achieved the biggest improvements in case detection under DOTS whilst maintaining high cure rates were China (83 000 additional smear-positives), South Africa (16 000), India (12 000), Bangladesh (12 000) and the Philippines (11 000).
- ▶ Although these five high-burden countries made significant progress in 1997/8, others failed to do so: Indonesia, Pakistan, the Russian Federation and Uganda (among others) all reported low treatment success and/or case detection rates.
- ▶ Peru and Viet Nam are still the only two high-burden countries to have met the WHO targets for case detection and treatment success; they can now diversify their TB control programmes by adopting a wider range of impact indicators to quantify, e.g. the decline in incidence, and by addressing special problems in TB control, such as the treatment of multi-drug resistant disease.

Technical Summary

Background and aims

This is the fourth global report on TB control, based on case notifications and treatment outcome data supplied by national control programmes to WHO. It makes use of five consecutive years of data to assess worldwide progress in TB control, focusing on 22 countries that account for 80% of all new cases. The main aim is to assess progress towards meeting WHO targets for case detection (70%) and treatment success (85%).

Methods

A standard data collection form was sent to 211 countries via WHO Regional Offices. Part A of the form requested, from DOTS areas, the number and types of TB cases notified in 1998, plus treatment and retreatment results for smear-positive or culture-positive (mainly Europe) cases registered in 1997. Part B is for areas that have not implemented DOTS; it asks for the same information about notifications and treatment outcomes, but is less demanding of data (e.g. excluding information about cases undergoing retreatment).

Results

189 countries reported to WHO; 119 of these satisfied the technical criteria for DOTS implementation at the end of 1998, including all 22 of the highest-burden countries. 43% of the global population had access to DOTS, double the rate in 1995. The total number of cases notified to WHO for 1998 was 3 617 045, 45% of the estimated global total. The total number of smear-positive (infectious) cases notified was 1 431 413, or 40% of the estimated global total.

The number of new smear-positive TB cases notified (detected) by DOTS programmes was 767 235 in 1998, 21% of estimated global incidence. This detection rate has doubled since 1995. The number of cases reported under DOTS has increased by about 120 000/year on average since 1994, although recruitment accelerated somewhat between 1997 and 1998 (an extra 219 803 cases reported). At the slower average rate of increase in case finding—which is slightly faster than measured last year—70% of cases would be treated in DOTS programmes by 2012. If 250 000 extra cases were recruited each year, DOTS would be available to 70% of cases by 2005. Whilst the smear-positive case detection rate under DOTS has been growing at 3.5%/year since 1994, the overall smear-positive case detection rate has grown at only 1.7%/year. Therefore DOTS programmes are recruiting cases that would have been notified under non-DOTS programmes.

Most DOTS programmes have demonstrated again that they can achieve high treatment success rates. The average for the 1997 cohort was 82% in the 22 high-burden countries (3% less than the target) and 78% globally.

Five high-burden countries significantly expanded case detection, whilst maintaining high treatment success rates. They are China (83 000 additional smear-positives), South Africa (16 000), India (12 000), Bangladesh (12 000) and the Philippines (11 000); the case detection rate accelerated in all except Bangladesh. Indonesia and Thailand improved case detection, but at the expense of lower treatment success. Afghanistan, Pakistan, the Russian Federation and Uganda all reported low treatment success and/or low case detection rates for 1997/8. Peru and Viet Nam are the only two high-burden countries to have met the WHO targets for case detection and treatment success. Four smaller countries have also met the targets: Cuba, Maldives, Oman and the Solomon Islands. A total of 30 reporting

DOTS countries had case detection rates greater than 50% and treatment success rates over 70%.

This report updates information on temporal trends in notifications, but also highlights, for the first time, regional variation in the age and sex distributions of notified cases. The analysis is intended to raise questions (rather than give answers) about how the age and sex of TB cases is influenced by reporting biases, by transmission rate, by TB/HIV co-infection in Africa, by the resurgence of TB in Eastern Europe, and by the decline of TB in industrialized countries.

Conclusion

Progress in global TB control accelerated between 1997 and 1998. DOTS programmes reported the biggest annual increase in case detection so far, whilst maintaining high rates of treatment success. But there are two important caveats. First, whilst the rate of case finding under DOTS appears to have increased, the increase is small. Second, the gains of 1997/8 were made partly by transferring to DOTS programmes cases that would have been notified anyway. Thus, to reach global targets, most countries will have to introduce innovative methods to find and treat cases that are not yet notified. In sum, we can make no firm predictions about whether global targets will be reached by 2005, 2012, earlier, or later.

By the end of 1998, there were still only two high-burden countries that had reached WHO targets for case detection and treatment success, Peru and Viet Nam. With solid national TB control programmes, these two countries now have the potential to diversify by adopting a wider range of impact indicators to quantify, e.g. the decline in incidence, and by addressing special problems in TB control, such as the treatment of multi-drug resistant disease.

Introduction

Following a 1991 World Health Assembly¹ resolution, WHO has urged each National Tuberculosis Control Programme (NTP) to work towards two objectives (the “WHO targets”) by the year 2000: (1) to treat successfully 85% of detected smear-positive cases, and (2) to detect 70% of all such cases, by the introduction of an effective approach to TB control.²

To assess the magnitude of the global tuberculosis problem, and to measure the achievements of TB control, WHO established a worldwide surveillance and monitoring project in 1995. The global status of TB control and progress towards achieving the WHO targets were reviewed in 1997,^{3,4} 1998^{5,6} and 1999.⁷ The main findings of the last report were:

- ▶ By the end of 1997, 85% of all TB cases were living in 102 countries which had adopted the WHO DOTS strategy for control.
- ▶ The key to meeting WHO targets lies in expanding case detection in high-burden DOTS countries: in 1997, 83% (2.5 million) of all unnotified TB cases were living in countries which have already shown that they can achieve high treatment success rates by using DOTS.
- ▶ The greatest number of cases without access to good treatment was in Asia, especially Bangladesh, India, Indonesia, Pakistan and Philippines.
- ▶ The number of new smear-positive TB cases notified by DOTS programmes has increased by an average of 100 000/year since 1994, reaching 16% of all estimated cases in 1997. By adding 250 000 extra cases each year (10% of the unnotified cases living in DOTS countries), the global target of 70% case detection could be reached by 2005.
- ▶ DOTS can succeed in a variety of settings: among major endemic countries showing high treatment success ($\geq 70\%$) and case detection rates ($\geq 50\%$) were representatives from Africa (Tanzania), Asia (Cambodia, Viet Nam) and Latin America (Peru).
- ▶ Marked upward trends in case notification rates from 1980 to 1997 variously reflect failing TB control (Eastern Europe), the impact of HIV (sub-Saharan Africa), and better case finding (China); marked downward trends (Western Europe) represent the direct (chemotherapy against TB) and indirect (general improvements in health) impact of TB control.
- ▶ Standardized short-course chemotherapy, promptly delivered, can have a major impact on tuberculosis morbidity and mortality, but this impact has not yet been adequately quantified.

¹ Forty-Fourth World Health Assembly, Geneva, 6–16 May 1991. Resolutions and decisions. Geneva, Switzerland: World Health Organization 1991. WHA44/1991/REC/1.

² World Health Organization. WHO Tuberculosis Programme: *Framework for effective tuberculosis control*. Geneva, Switzerland: World Health Organization 1994. WHO/TB/94.179.

³ Raviglione MC, Dye C, Schmidt S, Kochi A. Assessment of worldwide tuberculosis control. *Lancet* 1997; 350: 624–29.

⁴ World Health Organization. Global Tuberculosis Programme. *Global Tuberculosis Control. WHO Report 1997*. WHO/TB/97.225.

⁵ World Health Organization. Global Tuberculosis Programme. *Global Tuberculosis Control. WHO Report 1998*. WHO/TB/98.237.

⁶ Netto E, Dye C, Raviglione MR. Progress in global tuberculosis control 1995–6, with emphasis on 22 high-burden countries. *Int J Tuberc Lung Dis* 1999; 3: 310–320.

⁷ World Health Organization. *Global Tuberculosis Control. WHO Report 1999*. WHO/CDS/CPC/TB/99.259.

This report is the fourth in the series. It presents data available at 24 January 2000 on case notifications for 1998, treatment results for patients registered in 1997, and the status of DOTS implementation by the end of 1998. This information is supplemented, where possible, with the latest data on progress made by countries during 1999. We compare the new information with those in previous reports (data from 1994 onwards), paying special attention to progress in the 22 highest-burden countries, which account for 80% of all new TB cases. As in past years, the primary aim is to assess progress towards meeting WHO targets for case detection and cure.

Methods

Methods were similar to those described previously^{5,6,7} but are nevertheless repeated here in full. An important advance in tuberculosis monitoring and surveillance is the Computerized Information System for Infectious Diseases (CISID), developed during 1999 at WHO's European Regional Office (EURO).

Data collection

In July and August 1999, TB data collection forms (Annex 1) were sent out to 211 countries and territories via the WHO Regional Offices.⁸ These forms follow WHO/IUATLD guidelines on recording and reporting, and are accompanied by detailed instructions and definitions. We asked for information on TB control policy as of 31 December 1998, cases reported for 1998, and treatment outcomes among patients registered during 1997. The information about treatment outcome always lags notifications by one year because treatment success is evaluated after a patient has completed treatment, which usually lasts 6–9 months.

The form is divided into two parts (Annex 1). Part A is designed for those countries or areas within countries that have adopted the WHO TB control strategy (DOTS). It asks for, among other things:

- ▶ the number and types of TB cases notified: pulmonary (sputum smear-positive—new cases and relapses, sputum smear-negative) and extrapulmonary; new, relapse and retreatment
- ▶ age and gender of new smear-positive cases
- ▶ treatment results of sputum smear-positive cases (new and retreatment).

During 1999, part A was extended to allow countries (mainly European) the option of defining cases and treatment outcomes on the basis of bacteriological culture, in addition to sputum smears (Annex 1).

Part B is for countries and areas within countries where DOTS has not been implemented, and is less demanding of data. Countries are not asked to provide data on retreatment cases, or to record smear conversions at 2 months.

With these data we can analyse the performance of the NTP according to the type of control strategy used. In particular, data from countries that have adopted DOTS—and have therefore used standard definitions and a standard recording and reporting system—can be assessed separately.

Late reports (received after 24 January 2000) will be used to update the database (Annex 7 contains the updated global profile for 1996/7). Case notifications for all European countries will be supplied later during 2000 by EuroTB (CESES). These may include some adjustments to the numbers of cases; EuroTB data are considered to be definitive and final.

Computer software for TB surveillance

Reports (completed WHO data collection forms) are sent to WHO regional offices, electronically for the most part (email, fax), and entered manually, with two important exceptions: (1) in Europe, for the first time this year, countries could report via the CISID website

⁸ Four territories (Guadeloupe, French Guyana, Martinique and La Reunion) which have been listed separately in previous years, are now included with France as overseas departments of that country. The Liechtenstein report, which was listed separately last year, is now included with Switzerland.

of the WHO regional office (<http://cisid.who.dk/tb>), receiving immediate feedback on the regional situation, and (2) in any region, countries may report using WHO software which creates a report to be stored as a data file. In terms of software, an EpiInfo application (TBDATA) has been available for several years as an electronic version of the data collection form in which data are saved as a data file. A second EpiInfo application (EPICENTRE) is designed as a database for national programmes to manage their data from quarterly district reports and to carry out recommended analyses. Among its automated outputs is a report to WHO, saved as a data file. EPICENTRE has been used successfully in Nepal and India, and is being adopted by several other countries in the South-East Asia Region. Each of these tools—the European WHO website (CISID), the electronic version of the data collection form (TBDATA), and the database for TB programmes (EPICENTRE)—improve data transfer efficiency and help to ensure data quality.

Data verification

Each data form submitted by a country was 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 management

Data were stored and managed with Microsoft Access 97. A customised computer program provides:

- *Regional Profiles*, which list data on case notifications and treatment results for each country, and according to the control strategy used (Annex 3)
- *Global Profile*, which lists the same information by region (Annex 2)

A Microsoft Excel 97 program also tabulates the total number of cases notified since 1980. Since 1995, notifications have been stratified by age, gender and type of TB (as for part A of the form, above).

Data analysis

Categorization of countries

A qualitative (or semi-quantitative) categorization of progress in TB control is shown in Figure 1, with definitions in Table 1. A country was considered as implementing the DOTS strategy if, by 31 December 1998, it:

- Had a national TB control policy based on WHO recommendations. This requires (1) a national TB manual, or a document issued by the government or an authorised scientific body, including policy recommendations endorsed by WHO, and (2) that a “WHO standard” training

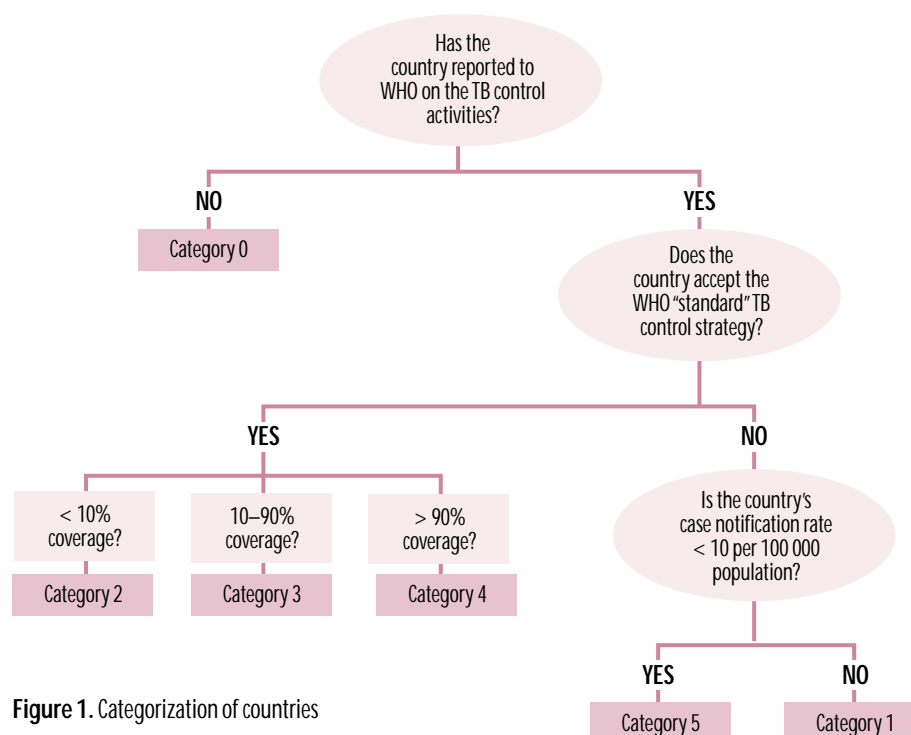


Figure 1. Categorization of countries

Table 1. Categorization of countries

Category	Definition
0	Countries not reporting to WHO.
1	Countries not implementing the DOTS strategy and having a case notification rate of over 10 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 a case notification 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, utilising sputum smear microscopy;
SCC/DOT	Administration of standardised short-course chemotherapy (SCC) to at least all confirmed sputum smear-positive cases under proper case management conditions (Directly Observed Therapy—DOT—during at least the intensive phase of treatment);
Drug Supply	Establishment of a system of regular drug supply of all essential anti-tuberculosis drugs to ensure no interruption in their availability;
Recording and Reporting	Establishment and maintenance of a standardised recording and reporting system, allowing assessment of treatment results (see Table 5).

* In countries which can afford sputum culture, culture can be used for diagnosis, but direct sputum smear microscopy should still be performed for all suspected cases.⁹

** In industrialized countries achieving 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.

course on management of tuberculosis control programmes has been carried out within the past two years. Alternatively, there should be available training materials endorsed by WHO or IUATLD, and which contain the essential elements of DOTS.

- Complied with all of the DOTS strategy's technical elements (Table 2), and reported to WHO on notifications and treatment outcomes from DOTS areas.

If DOTS was implemented only in some districts (or equivalent administrative units) on the initiative of local authorities, but the policy was endorsed by national authorities, the country was classified as a DOTS country. If a country reported that DOTS was newly implemented during 1998, and that the results of cohort analysis were therefore not yet available, it was classified as a DOTS country, provided 1998 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 described in the following section.

Table 3. Definitions of TB cases

New smear-positive pulmonary	TB in a patient with at least two initial sputum smear examinations (direct smear microscopy) positive for acid fast bacilli (AFB+); or TB in a patient with one sputum examination AFB+ and radiographic abnormalities consistent with active pulmonary TB as determined by the treating medical officer; or TB in a patient with one sputum specimen AFB+ and culture positive for AFB.
New smear-negative pulmonary	TB in a patient with symptoms suggestive of TB and at least three sputum smear examinations negative for AFB, and with radiographic abnormalities consistent with active pulmonary TB determined by a medical officer followed by a decision to treat the patient with a full course of anti-tuberculosis therapy; or diagnosis based on positive culture but negative AFB sputum examinations.
Extrapulmonary	Patient with tuberculosis of organs other than the lungs
Retreatment	Failures, treatment interrupted (defaulters), and relapses (see box 'Definitions of treatment outcomes').
Relapse	Patient previously declared cured and diagnosed with sputum smear-positive tuberculosis

⁹ Rieder HL, Watson JL, Raviglione MC et al. Surveillance of tuberculosis in Europe. *Eur Respir J* 1996; 9: 1097-1104.

Case detection

Based on the data provided on parts A and B of the form, we made separate assessments of TB programmes in DOTS and non-DOTS areas. 1998 case notifications distinguished between all types of TB and sputum smear-positive cases (or culture-positive cases, in some countries). Table 3 contains the standard case definitions. 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%).

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 case detection rate is defined as:

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

though we also make reference to the detection rate of all forms of TB. 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 has 100% DOTS coverage. The denominators for 1998 case detection rates are 1997 estimates of the smear-positive incidence rate,¹⁰ re-scaled with 1998 population sizes¹¹ (Map 1, Annex 4). The denominators for 1995–97 were back-calculated from 1997 estimates, allowing for changes in total population size, but not for any changes in the incidence rate. Many of these incidence estimates were obtained by making an independent assessment of the case detection rate. In such instances, the above formulae do not provide new estimates of the case detection rate; they merely return us, by circular reasoning, to our original assumption. Some caution is therefore needed when assessing changes in the case detection rate, especially for countries in which HIV has been responsible for a rise in case notifications (Map 2, Annex 4). It is equally important to remember that the incidence estimates for each country are subject to error: for high-burden countries, the difference between lower and upper estimates of incidence is typically twofold.¹⁰ Estimated incidence rates for the 22 highest-burden countries in 1998 are in Table 4. Incidence estimates are available for all countries, including those not reporting to WHO.

Treatment success and cure rate

To assess the quality of treatment programmes for new infectious cases, we first determined what fraction of registered cases was evaluated for outcome. All registered cases should be evaluated. Second, we compiled the six standard, mutually exclusive outcomes of treatment in Table 5. “Treatment success” (TS) is defined as the proportion of patients who were cured plus the proportion who completed treatment. These figures are reported, where possible, as percentages of all registered cases, so that the six possible outcomes plus the fraction of cases not evaluated sum to 100%. In some instances, 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 (see Table 13). In other instances, the number of registered cases is less than the number evaluated; then we use the number

¹⁰ Dye C, Scheele S, Dolin P, Pathania V, Ravigliione MC. Global burden of tuberculosis: estimated incidence, prevalence and mortality by country. *JAMA* 1999; 282, 677-686.

¹¹ Population data used in this report come from UN Population Division, *World Population Prospects*, 1998 revision.

Table 4. Estimated incidence of TB: 22 high-burden countries, 1998

Country (ranked by burden)	Population x 1000	Number estimated				Cumulative incidence (%)
		All cases		Smear-positive cases		
		Thousands	rate/100 000	Thousands	rate/100 000	
1 India	982 223	1 828	186.1	818	83.3	23
2 China	1 255 698	1 414	112.6	636	50.7	40
3 Indonesia	206 338	591	286.6	266	128.7	47
4 Bangladesh	124 774	305	244.7	137	110.1	51
5 Pakistan	148 166	268	181	120	81.3	55
6 Nigeria	106 409	259	243.4	113	106.1	58
7 Philippines (the)	72 944	224	306.7	101	137.9	61
8 South Africa	39 357	172	437.9	70	177.3	63
9 Ethiopia	59 649	160	268.6	67	112.8	65
10 Viet Nam	77 562	147	189.3	66	85.2	66
11 Russian Federation (the)	147 434	156	105.7	70	47.5	68
12 Democratic Republic of the Congo (the)	49 139	130	263.7	55	112.1	70
13 Brazil	165 851	124	74.7	55	33.3	71
14 United Republic of Tanzania (the)	32 102	99	308.6	41	127.5	73
15 Kenya	29 008	86	296.8	35	121.7	74
16 Thailand	60 300	85	140.9	37	62	75
17 Myanmar	44 497	81	181.9	36	81.9	76
18 Afghanistan	21 354	75	353.1	34	158.9	77
19 Uganda	20 554	68	332.3	27	132.9	78
20 Peru	24 797	66	265	29	118.7	78
21 Zimbabwe	11 377	64	560.1	25	215.6	79
22 Cambodia	10 716	58	540.5	26	241.6	80
total, 22 high-burden countries	3 690 248	6 461	175.1	2 866	77.7	80
Global total	5 898 152	8 083	137	3 574	60.6	100

Table 5. Definitions of treatment outcomes

Cured	Initially smear-positive patient who had a negative sputum smear or after treatment completion, and on at least one previous occasion*.
Completed treatment	Sputum smear-positive patient who had negative sputum smear results at the end of the initial phase of treatment, with no or only one negative sputum smear result in the continuation phase and none at the end of treatment.
Died	Patient who died during treatment, irrespective of cause.
Failure	Smear-positive patient who remained 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 his/her treatment results are not known.
Treatment success	The sum of the percentage of cases cured and that of cases who completed treatment.

* Some European countries define cure in terms of culture conversion, rather than sputum smear conversion¹²

evaluated as the denominator for treatment success. Although these treatment outcomes are expressed as percentages, they are usually referred to as 'rates'. Data describing the outcome of retreatment were collected only from DOTS areas because the definitions of 'failure' and 'relapse' require data on smear conversion (Tables 3 and 5).

To assess the capacity of each NTP to retain patients and to maintain consistent records between years, we also compared the number of cases registered for treatment in 1997 (reported in 1998) with the number of cases notified as smear-positive in 1997 (reported in 1997). These numbers should be the same.

¹² Veen J, Raviglione MC, Rieder HL et al. 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 24 January 2000, 189 (90%) of 211 countries reported case notifications for 1998 and/or treatment outcomes for patients registered in 1997, seven more than last year. Ninety-eight percent of the global population lives in these countries (Annexes 2 and 3). All countries with population sizes of more than 50 million reported to WHO. We received reports from all 22 high-burden countries, and from all countries in the Eastern Mediterranean and South-

Table 6a. List of countries adopting and implementing DOTS, 1998

Category 2 (13 countries)	Category 3 (40 countries)	Category 4 (66 countries)	
Brazil	Afghanistan	Andorra	<u>Mongolia</u>
<i>Burundi</i>	Angola	Benin	Morocco
<i>Dominica</i>	Argentina	Bhutan	<u>Mozambique</u>
Haiti	Armenia	Botswana	Namibia
Honduras	Australia	<u>Burkina Faso</u>	Netherlands (the)
India	Azerbaijan	<u>Cambodia</u>	Nicaragua
Kazakhstan	Bangladesh	Chile	Norway
Pakistan	<i>Bolivia</i>	China, Macao SAR	Oman
Panama	Bosnia and Herzegovina	Colombia	Peru
Papua New Guinea	Cameroon	Congo (the)	Portugal
Poland	China	Côte d'Ivoire	Puerto Rico
Russian Federation (the)	<i>Cook Islands</i>	Cuba	Qatar
Uzbekistan	Democratic Republic of the Congo (the)	Cyprus	Republic of Korea (the)
	Ecuador	Czech Republic (the)	Romania
	Egypt	Djibouti	Rwanda
	<i>El Salvador</i>	Equatorial Guinea	Saint Kitts and Nevis
	Eritrea	Fiji	Saint Vincent and the Grenadines
	Ethiopia	French Polynesia	Senegal
	Ghana	Georgia	Seychelles
	Indonesia	Guatemala	<u>Sierra Leone</u>
	Iran (Islamic Republic of)	Guinea	Slovakia
	Iraq	Israel	Slovenia
	Italy	Jamaica	Solomon Islands
	Lao People's Democratic Republic (the)	Jordan	Sri Lanka
	Liberia	Kenya	<u>Togo</u>
	Mali	<u>Kiribati</u>	<u>Tonga</u>
	Marshall Islands (the)	<u>Kyrgyzstan</u>	Uganda
	<u>Mexico</u>	Latvia	United Republic of Tanzania (the)
	Myanmar	Madagascar	United States of America (the)
	Nepal	Malawi	Uruguay
	Niger (the)	Maldives	Venezuela
	Nigeria	Malta	Viet Nam
	Philippines (the)	Mauritius	Zimbabwe
	<i>Saint Lucia</i>		
	Somalia		
	South Africa		
	<u>Sudan (the)</u>		
	Syrian Arab Republic (the)		
	<u>Thailand</u>		
	Yemen		

Bold: countries which implemented DOTS in 1998

Italics: countries which moved one or more categories down since 1997 due to re-evaluation of coverage

Underline: countries which moved one or more categories up since 1997

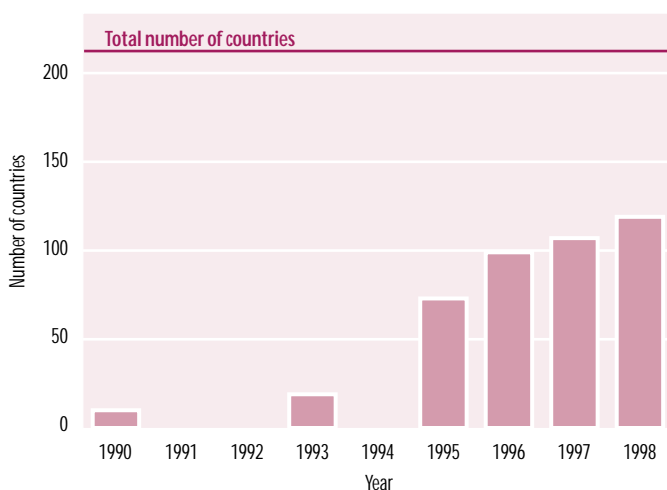
Table 6b. List of countries not implementing DOTS or not reporting to WHO, 1998

Category 0 (22 countries)	Category 1 (55 countries)	Category 5 (15 countries)
American Samoa	Albania	Kuwait
Anguilla	Algeria	Lebanon
Antigua and Barbuda	Austria	Libyan Arab Jamahiriya (the)
Bermuda	Bahamas (the)	Lithuania
Brunei Darussalam	Bahrain	Luxembourg
Canada	Barbados	Malaysia
Comoros (the)	Belarus	Micronesia (Federated States of)
France	Belgium	Paraguay
Gambia (the)	Belize	Republic of Moldova (the)
Guam	Bulgaria	Samoa
Guinea-Bissau	Cape Verde	Saudi Arabia
Lesotho	Central African Republic (the)	Singapore
Mauritania	Chad	Spain
Nauru	China, Hong Kong SAR	Suriname
New Caledonia	Costa Rica	Switzerland
Palau	Croatia	Tajikistan
Sao Tome and Principe	Democratic People's Republic of Korea (the)	The former Yugoslav Republic of Macedonia
St. Helena	Denmark	Trinidad and Tobago
Swaziland	Dominican Republic (the)	Tunisia
Tokelau	Estonia	Turkey
Wallis and Futuna Islands	Finland	Turkmenistan
Zambia	Gabon	Ukraine
	Germany	United Arab Emirates (the)
	Greece	United Kingdom (the)
	Guyana	Vanuatu
	Hungary	West Bank and Gaza
	Ireland	Yugoslavia
	Japan	
		British Virgin Islands
		Cayman Islands
		Grenada
		Iceland
		Monaco
		Montserrat
		Netherlands Antilles
		New Zealand
		Niue
		Northern Mariana Islands
		San Marino
		Sweden
		Turks and Caicos Islands
		Tuvalu
		United States Virgin Islands

Bold: countries which reported in 1997 but not in 1998 (4 countries which submitted DOTS reports in 1997, 5 countries which submitted non-DOTS reports in 1997)

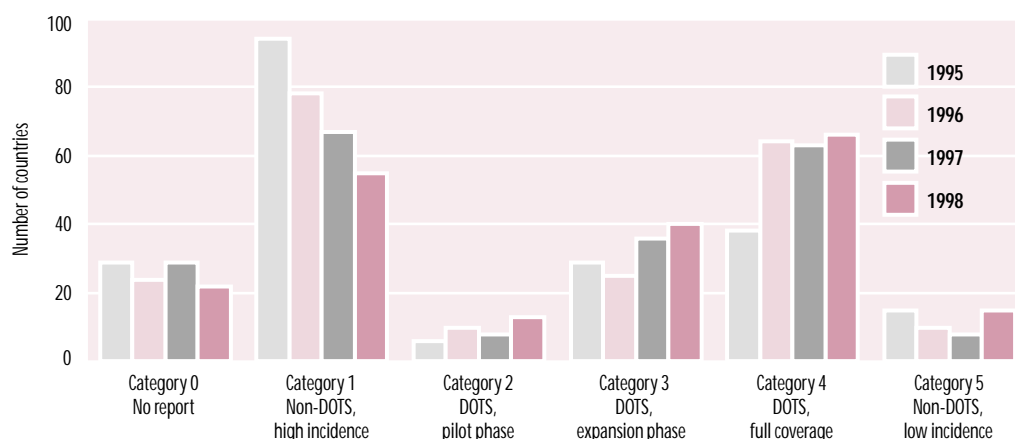
East Asia Regions (Tables 6a and 6b). Twenty-two countries did not report, 21 of which were in Africa, the Americas and the Western Pacific Region. In terms of TB burden, the most important omission was Zambia. All industrialized countries reported, except France (the only missing European country) and Canada.

Six countries (India, Malawi, Nepal, Seychelles, Uganda and Venezuela) submitted reports using TB DATA or EPI-CENTRE. Eight European countries submitted data via the CISID website (Belgium, Denmark, Finland, Iceland, Latvia, Norway, The Netherlands and Slovakia). Twelve DOTS countries and 16 non-DOTS countries in Europe identified TB cases based on bacteriological culture, in addition to the results of sputum smear examinations.

Figure 2. Number of countries which have adopted DOTS, 1990–98

Categorization of countries, 1995–98

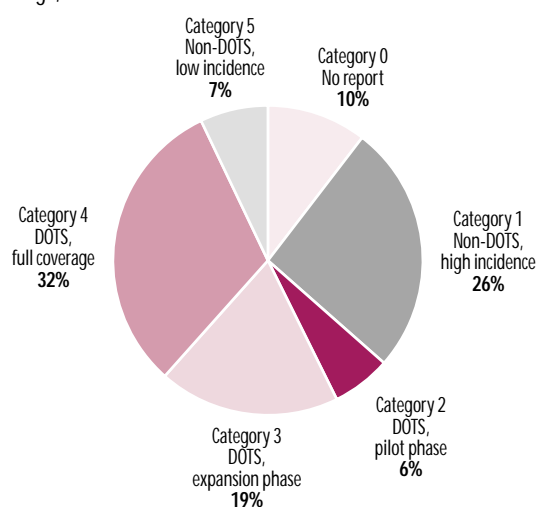
The number of countries using DOTS has been increasing since 1990, reaching 119 (56%) in 1998 (Figure 2, Table 6a). Four countries classified as DOTS based on 1997 data did not report this year, whereas 16 countries were classified as DOTS for the first time in 1998. Of the 211 countries and territories, 66 (31%) had implemented DOTS in over 90% of the country (category 4; Figures 3 and 4, Annexes 2 and 3, Map 3 in Annex 4). Thirteen countries were in the DOTS pilot phase (category 2), and 40 were in the ex-

Figure 3. Changes in the categorization of countries, 1995–98, according to the scheme in Figure 1

pansion phase (category 3). Since 1995, countries have been moving out of category 1 and into categories 2 to 4 (DOTS).

By the end of 1998, 43% of the global population was living in countries, or parts of countries, which had adopted DOTS (categories 2–4). Reported DOTS population coverage was greatest in the Western Pacific (58%), African (61%) and American Regions (59%) in 1998, and relatively low in the other three regions (Figure 5, Table 7, Annex 2). Table 8 tabulates DOTS coverage for the 22 high-burden countries from 1995 to 1998 (see also Annex 3).

Sixteen countries implemented DOTS for the first time in 1998 (Table 6a). Five achieved low coverage (< 10%, Category 2): Brazil, Kazakhstan, Panama, Poland and Uzbekistan. Four achieved moderate coverage (10–90%, Category 3): Australia, Bosnia and Herzegovina, Iraq and the Marshall Islands. The remaining six reached high coverage (> 90%), including Colombia, Cyprus, Romania and Zimbabwe. Mexico, Sudan and Thailand moved up to category 3 in 1998. According to reports, nine countries moved up to category 4 from categories 2 or 3, including Burkina Faso, Cambodia, Mongolia, Mozambique, Sierra Leone and Togo. Four countries that had implemented DOTS by 1997 failed to provide data for 1998: American Samoa, the Gambia, Lesotho and Palau (Table 6b).

Figure 4. Proportions of countries with different levels of DOTS coverage, 1998**Figure 5.** DOTS population coverage by WHO Region, 1998.

Each bar shows the population of the region, and the lower portion of the bar shows the population covered by DOTS. The number above each bar is the percentage of the population covered.

AFR: African Region; EMR: Eastern Mediterranean Region; EUR: European Region; SEAR: South-East Asia Region; WPR: Western Pacific Region

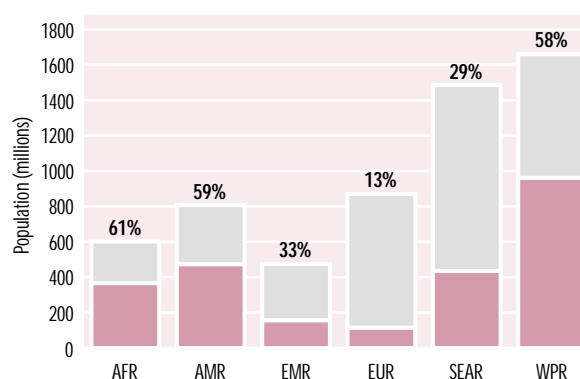


Table 7. Summary of notifications by WHO Region, 1998

		% of pop	Notifications		New ss+ notif	ss+ % of all pulmonary
			Number	%		
AFR	DOTS	61.0	495 736	76.6	249 692	63.4
	non-DOTS	36.1	151 106	23.4	86 181	71.9
	no report	2.9				
	Total		646 842		335 873	
AMR	DOTS	58.7	116 816	49.2	71 044	74.8
	non-DOTS	37.5	120 630	50.8	58 950	60.5
	no report	3.8				
	Total		237 446		129 994	
EMR	DOTS	33.1	79 133	33.7	41 298	76.4
	non-DOTS	66.9	155 909	66.3	33 584	25.5
	no report					
	Total		235 042		74 882	
EUR	DOTS	13.3	53 662	15.3	18 957	48.0
	non-DOTS	80.0	297 859	84.7	92 414	36.2
	no report	6.7				
	Total		351 521		111 371	
SEAR	DOTS	29.3	168 844	12.9	103 498	69.1
	non-DOTS	70.7	1 138 331	87.1	284 450	26.7
	no report					
	Total		1 307 175		387 948	
WPR	DOTS	57.9	495 903	59.1	282 746	61.8
	non-DOTS	42.0	343 116	40.9	108 599	35.9
	no report					
	Total		839 019		391 345	
Global	DOTS	42.6	1 410 094	39	767 235	64.5
	non-DOTS	55.6	2 206 951	61	664 178	33.7
	no report	1.8				
	Total		3 617 045		1 431 413	

Percent of population: the regional non-DOTS population includes the non-DOTS portion of DOTS countries and the entire population of non-DOTS reporting countries.

Table 8. Progress in DOTS implementation: 22 high-burden countries, 1995–98

	Percent of population covered by DOTS services			
	1995	1996	1997	1998
1 India	1	2	2	9
2 China	49	60	64	64
3 Indonesia	6	14	28	80
4 Bangladesh	41	65	80	90
5 Pakistan	2	8		8
6 Nigeria	47	30	40	45
7 Philippines (the)	4	2	15	17
8 South Africa			13	22
9 Ethiopia	39	39	48	64
10 Viet Nam	50	95	93	96
11 Russian Federation (the)		2	2	5
12 Democratic Republic of the Congo (the)	47	51	60	60
13 Brazil				3
14 United Republic of Tanzania (the)	98	100	100	100
15 Kenya	15	100	100	100
16 Thailand		1	4	32
17 Myanmar		59	60	60
18 Afghanistan			12	11
19 Uganda			100	100
20 Peru	100	100	100	100
21 Zimbabwe				100
22 Cambodia	60	80	88	100
all high-burden countries	25	32	36	43
all other countries	19	32	35	42
Global	22	32	35	43

Case notifications, 1995–98

The 189 countries reporting to WHO notified a total of 3 617 045 cases (61 per 100 000 population), of which 1 431 413 (40%) were sputum smear-positive (Table 7). These totals compare with 3 368 879 and 1 292 884 for 1997. The total number of notified cases was 7% higher in 1998, and the number of smear-positive cases was 11% higher.

Among all cases reported for 1998, 1 410 094 (39%) originated in DOTS areas (Table 7, Annex 2), a 42% increase on 1997. Among smear-positive cases, 767 235 (54%) were reported from DOTS areas, 40% higher than in 1997. The African (18%), South-East Asia (36%) and Western Pacific Regions (23%) together accounted for 77% of all notified cases and 78% of sputum smear-positive cases (Figure 6).

In DOTS areas, 54% of all cases were smear-positive (45–60% expected), compared with 30% in other areas. Sixty-five percent of new pulmonary cases were sputum smear-positive in DOTS areas (55–70% expected), compared with 34% elsewhere (Tables 7 and 9). These figures are almost identical to those for 1997.

The annual increments in smear-positive cases detected by DOTS programmes between the five years 1994 to 1998 were: 127 850, 116 462, 54 658 and 219 803; that is, an average of 129 693 extra cases each year. The annual increments in all cases detected by DOTS programmes between 1995 and 1998 were 191 504, 104 329 and 418 034. Thus, last year's increases in smear-positive and all cases are the biggest recorded so far.

As shown in last year's report, the global notification rate has remained more or less stable since 1980, but for some deviations due mainly to re-evaluations of case numbers in India and Indonesia, and to missing data from Pakistan (Figure 7). Figure 8 updates information on regional variation in epidemic trajectories, highlighting temporal trends by expressing notification rates relative to an arbitrary standard of 100 in 1990 (thereby eliminating much of the absolute difference between countries). To recap, the standardized rate for 12 countries in Western Europe shows a steady average decline of 4%/year (Figure 8a). The rate for 11 countries in Eastern Europe also shows the same decline of 4%/year until 1990, but has been rising at 10%/year since 1992 (Figure 8b). In 14 countries of the African Region, notifications were more or less stable from 1980 to 1988, but have increased at 10%/year since then (Figure 8c), the same rate as Eastern Europe. Notifications from 11 Latin American countries have been in continuous, gentle decline of 2%/year since 1980 (Figure 8d). In a selection of Asian countries, the notification rate has increased slowly at 1–2%/year over the period 1980–98 (Figure 8e; Indonesia reported an extraordinarily large number of cases in 1991; these data were therefore excluded).

Figure 9 shows the distribution of smear-positive case notifications by age and sex, arranging groups of countries (approximately) according to the average age of cases. The peak notification rate was in age class 15–24 years in the three highest incidence countries of Latin America (Figure 9a). By contrast, the highest notification rate was in people over 65 years in the lower incidence

Figure 6. Proportions of all notified cases, and smear-positive cases, by WHO Region, 1998

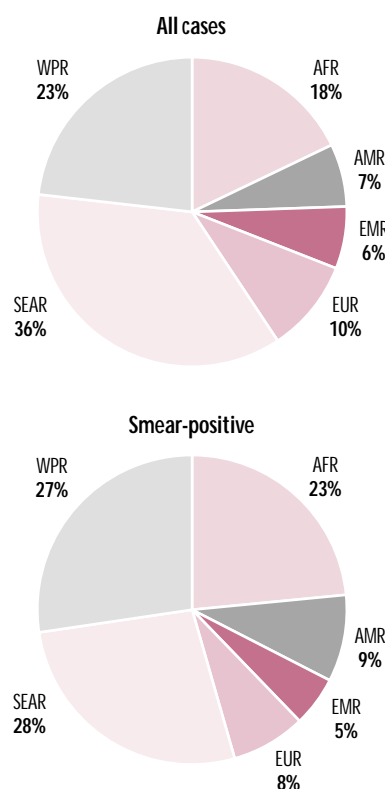
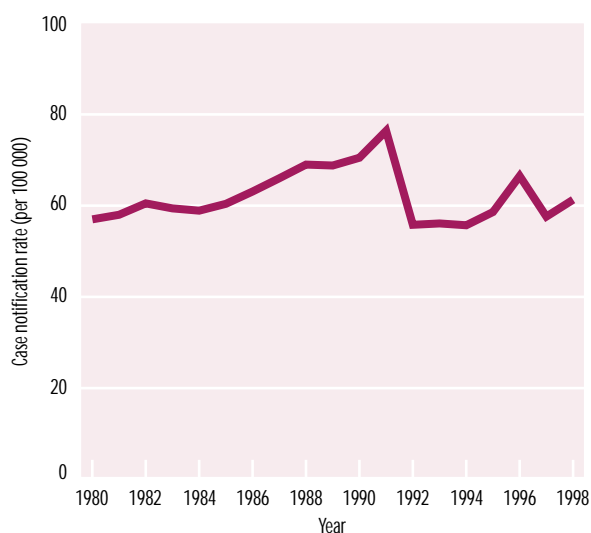


Figure 7. Global trend in case notification rate, 1980–98



countries of Latin America (Figure 9f; note change of scale on y-axis), in most countries of the Western Pacific Region (Figure 9g), and in industrialized countries (Figure 9h). Other groupings of countries lie between these extremes. For African countries with high rates of HIV infection (Figure 9b), incidence was maximum in age class 25–34 years for women and 35–44 years for men. Eastern European countries (Figure 9c) showed the greatest discrepancy between men and women. The male:female ratio for age class 45–54 years exceeded 6, the highest for these eight groups of countries. The notification rate for men was at a maximum in this age class, but the peak rate for women was at a much younger age (25–34 years). For countries in the Eastern Mediterranean (Figure 9d) and South-East Asia Regions (Figure 9e), the notification rate was highest at age 55–64 years, but the rates for ages 25–54 years were not much lower.

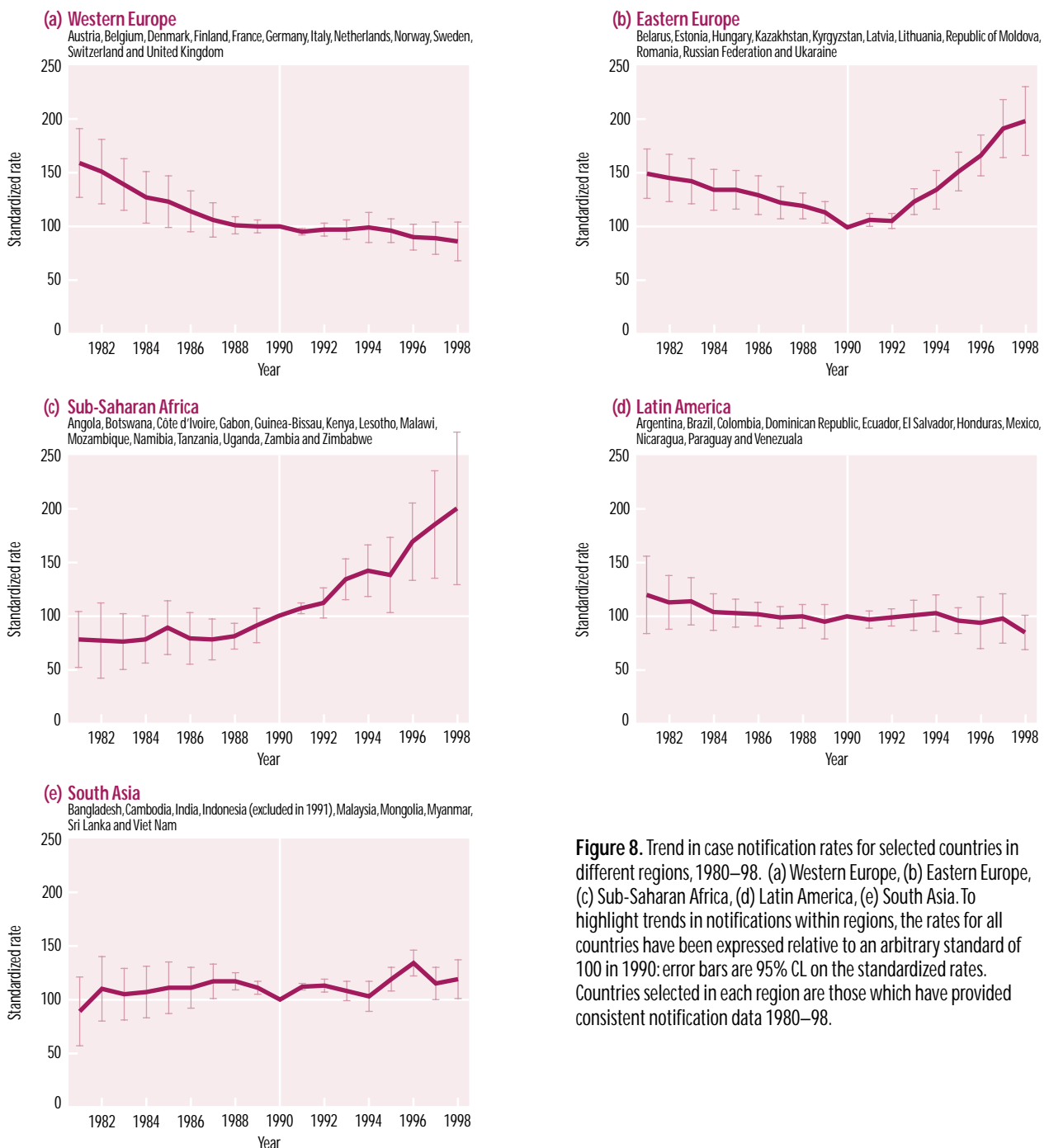


Figure 8. Trend in case notification rates for selected countries in different regions, 1980–98. (a) Western Europe, (b) Eastern Europe, (c) Sub-Saharan Africa, (d) Latin America, (e) South Asia. To highlight trends in notifications within regions, the rates for all countries have been expressed relative to an arbitrary standard of 100 in 1990; error bars are 95% CL on the standardized rates. Countries selected in each region are those which have provided consistent notification data 1980–98.

Figure 9. Incidence rates by age and sex for different regions, 1998. (a) High incidence countries in Latin America, (b) Sub-Saharan Africa, (c) Eastern Europe, (d) Eastern Mediterranean Region (e) South-East Asia Region, (f) Latin American (excluding high incidence countries) (g) Western Pacific Region (excluding industrialized countries), (h) Industrialized countries. Thick line—males; thin line—females; dotted line—ratio of incidence rate in males to incidence rate in females

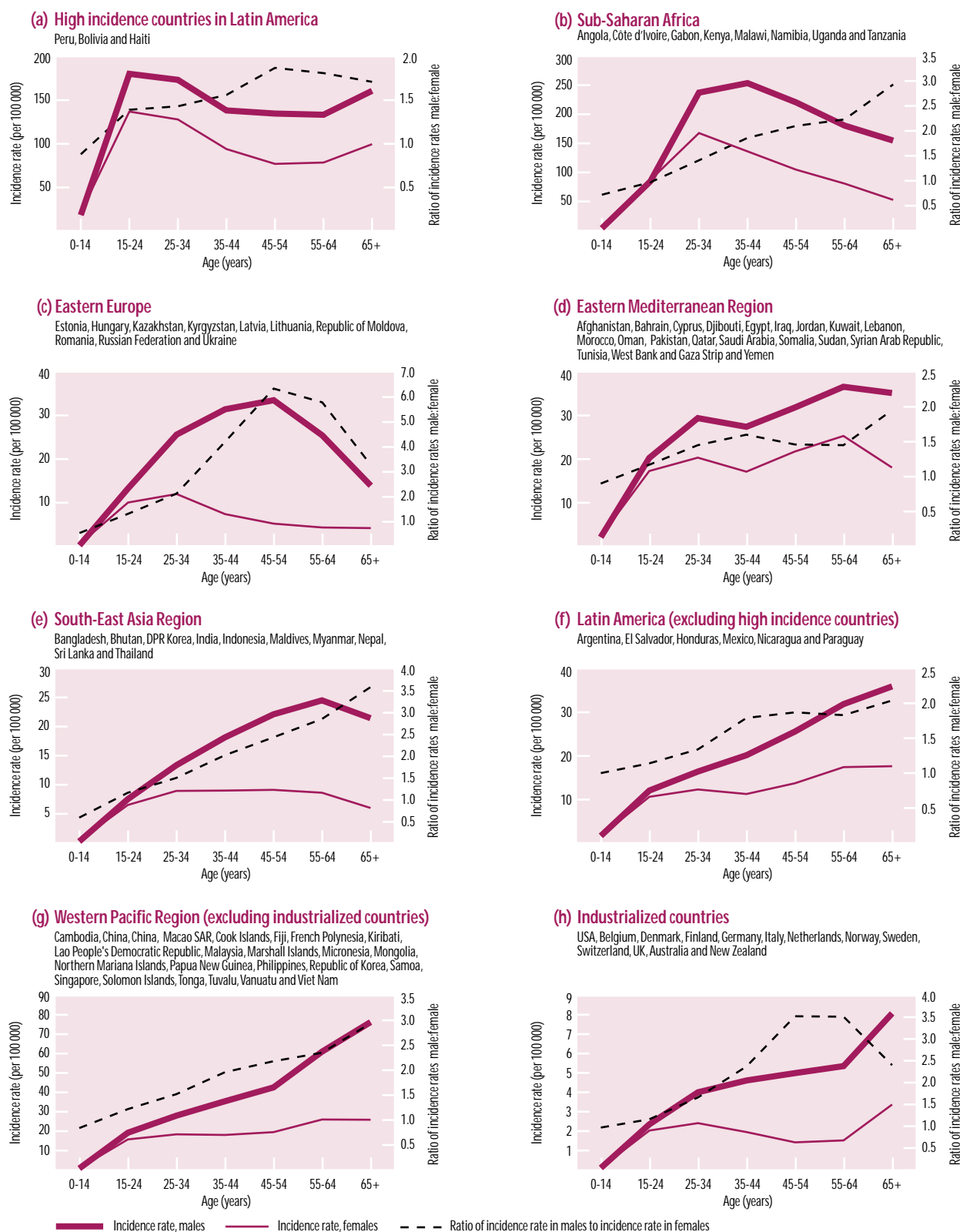


Table 9. Case notifications: 22 high-burden countries, 1998

Country (ranked by burden)	Number notified				New ss+ / New pulmonary cases (%)*	
	All cases		Smear-positive		non-DOTS	DOTS
	non-DOTS	DOTS	non-DOTS	DOTS		
1 India	1 100 364	29 674	271 645	12 421	26	52
2 China	120 814	336 535	23 172	191 290	20	60
3 Indonesia		40 497		32 280		83
4 Bangladesh	19 395	52 861	4 517	33 220	26	68
5 Pakistan	80 104	9 495	10 829	4 145	14	54
6 Nigeria		20 249		13 161		71
7 Philippines (the)	141 580	18 286	61 371	10 292	49	60
8 South Africa	106 294	22 121	66 047	16 246	75	89
9 Ethiopia		69 472		18 864		40
10 Viet Nam	2 850	84 599	1 726	53 147	74	76
11 Russian Federation (the)	119 663	1 771	41 536	683	38	48
12 Democratic Republic of the Congo (the)		58 869		33 419		78
13 Brazil	80 062	4 132	36 588	2 221	59	62
14 United Republic of Tanzania (the)		51 231		23 726		58
15 Kenya		48 936		24 029		58
16 Thailand		15 850		7 962		56
17 Myanmar		14 756		10 089		82
18 Afghanistan		3 084		1 833		79
19 Uganda		29 228		18 222		73
20 Peru		43 723		27 707		83
21 Zimbabwe		47 277		14 492		36
22 Cambodia		16 946		13 865		95
total, 22 high-burden countries	1 771 126	1 019 592	517 431	563 314	32	64
total, all other countries	435 825	390 502	146 747	203 921	43	67
Global	2 206 951	1 410 094	664 178	767 235	34	65

* Expected percentage of new smear-positive to new pulmonary cases is 55–70%.

Case detection rate, 1995–98

The 3 617 045 cases of tuberculosis (all forms) notified in 1998 represent 45% of the 8.08 million estimated cases; the total of 1 431 413 new smear-positives is 40% of 3.57 million estimated cases (Tables 4 and 7). Seventeen percent of all estimated cases, and 21% of estimated smear-positive cases, were detected under DOTS. The detection rate of smear-

positive cases within DOTS programmes has been rising faster (from 10% to 21%, 1995–98) than the overall smear-positive detection rate (34 to 40%; Table 10).

Case detection rates in 1998 were lowest in the Eastern Mediterranean Region and highest in Europe and the Americas (Figure 10, Annexes 2, 3, 4.3). European, South-East Asian and Eastern Mediterranean countries notified relatively few smear-positive cases compared with all forms of TB (Figure 10).

Treatment results, 1994–97 cohorts

In DOTS areas, the number of new sputum smear-positive cases notified in 1997 was 579 623. According to 1998 reports, 615 803 cases were registered for treatment in 1997, i.e. 6% more than expected (Annex 5 lists notified and registered cases for 1997 by country). This discrepancy is due mostly to inconsistencies in reports from China and the Philippines. Of the registered cases, 93% were evaluated for treatment outcome (Tables 11a and 12, Annex 2). Seventy-two percent of the registered cases were cured and a further 6% completed treatment (without demonstrating cure), a treatment success rate of 78%. Eighty-four percent of evaluated cases were treated successfully under DOTS.

Figure 10. Detection rates of smear-positive and all TB cases by WHO Region, 1998

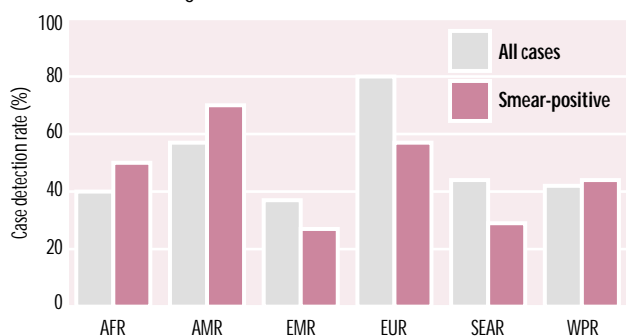


Table 10. Detection of new smear-positive cases: 22 high-burden countries, by control strategy, 1995–98

Country (ranked by burden)	Percent of the country's estimated new smear-positive cases detected by							
	DOTS programmes				Whole country			
	1995	1996	1997	1998	1995	1996	1997	1998
1 India	0.3	0.8	1	1.5	34	36.8	34	34.7
2 China	14.6	22	23.5	30.1	21.8	27	29.9	33.7
3 Indonesia	1.4	4.6	7.4	12.2	12.6	*	*	*
4 Bangladesh	7	14.8	19.2	24.2	15.7	22.3	24.5	27.5
5 Pakistan	1	1.6	—	3.4	2.3	*	—	12.4
6 Nigeria	9.1	14.7	10.2	11.7	*	*	*	*
7 Philippines (the)	0.4	0.5	3.2	10.2	100.3	89.8	84.6	71.2
8 South Africa	—	—	6	23.3	2.1	55.3	80	117.9
9 Ethiopia	14.7	20.7	24.3	28	*	24.7	*	*
10 Viet Nam	29.9	59	76.9	80.4	59.9	76.5	82.5	83.1
11 Russian Federation (the)	—	0.4	0.9	1	53.2	60.5	60	60.3
12 Democratic Republic of the Congo (the)	37.4	46	46.8	60.7	39.5	*	*	*
13 Brazil	—	—	—	4	84.8	82.8	79.9	70.4
14 United Republic of Tanzania (the)	52.3	54.9	55	58	*	*	*	*
15 Kenya	42.1	50.1	55	68.1	*	*	*	*
16 Thailand	—	0.3	5.1	21.3	55.6	46.3	35.7	*
17 Myanmar	—	24.9	25.1	27.7	25	27.5	27	*
18 Afghanistan	—	—	1.9	5.4	—	—	*	*
19 Uganda	—	—	65	66.7	54.3	58.6	*	*
20 Peru	114.9	94.3	95	94.1	*	*	*	*
21 Zimbabwe	—	—	—	59.1	38.7	50.5	60	*
22 Cambodia	46	39	50.1	53.6	*	48.8	*	*
all high-burden countries	8.8	12.7	14.9	19.7	30.7	34.2	34.8	37.7
Global	10.6	14.4	16.5	21.5	34.4	37.6	37.8	40

— not available; * no additional data beyond DOTS report.

The discrepancy between cases notified in 1997 (748 068), and reported in 1998 as having been registered for treatment (533 267), was bigger in non-DOTS areas. Many fewer cases were registered than notified in China, the Philippines and Thailand. Outside DOTS areas a smaller proportion of registered cases (47%) was evaluated for treatment outcome. Twenty-two percent of registered cases were cured and 16% completed treatment, using either short-course chemotherapy or another regimen, a treatment success rate of 38% of registered cases (Tables 11b and 12, Annex 2). Seventy-nine percent of evaluated cases were reported to be successfully treated outside DOTS programmes.

Among the WHO regions, the documented treatment success rates under DOTS

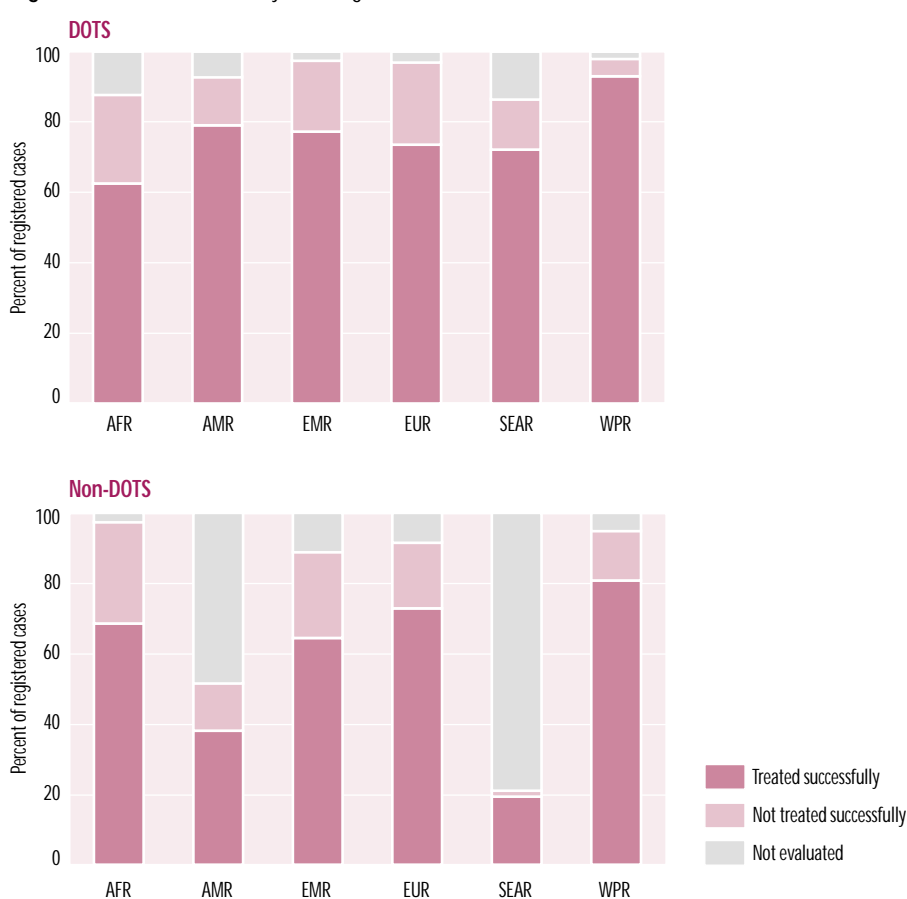
Figure 11. Treatment success by WHO Region, 1997

Table 11a. Treatment outcomes for smear-positive cases: 22 high-burden countries: DOTS strategy, 1997 cohort*

Country (ranked by burden)	Notified	Registered*	Regst'd (%)	Treatment outcomes (%)*							Treatment success* (%)	% est* cases successfully treated under DOTS
				Cured	Completed treatment*	Died	Failed	Defaulted	Transferred	Not eval'd		
1 India	7 708	7 689	99.8	80.4	1.4	3.5	3.4	8.7	2.5	0.1	81.8@	0.8
2 China	147 905	166 279	112.4	96.3	0	1.3	1	0.6	0.3	0.5	96.3@	25.4
3 Indonesia	19 492	21 355	109.6	46.7	7.8	1.1	1	1.7	0.5	41.2	54.5	4.4
4 Bangladesh	25 871	26 374	101.9	72.9	5.6	4.8	1.4	10.1	2.6	2.7	78.4	15.3
5 Pakistan		2 805		52.4	15	3.4	1.2	25.7	2.2	0	67.4	1.6
6 Nigeria	11 235	11 253	100.2	60.4	12.6	6.9	2.7	14.9	2.4	0	73	7.4
7 Philippines (the)	3 190	4 085	128.1	79.7	3.2	2.8	2.9	6.7	4	0.8	82.8@	3.4
8 South Africa	4 146	4 146	100	68.2	4.9	4.9	3	10.9	6.9	1.1	73.2	4.4
9 Ethiopia	15 957	11 592	72.6	61.2	10.4	6.6	1	11.7	4.7	4.4	71.7	12.6
10 Viet Nam	50 016	50 016	100	81.9	3	2.7	1.1	2.1	2.1	7.1	84.9@	65.3
11 Russian Federation (the)	660	661	100.2	66.4	1.1	9.7	7.9	8.2	2.4	4.4	67.5	0.6
12 Democratic Republic of the Congo	25 183	25 183	100	52.2	11.5	4.8	1	8	7.9	14.5	63.7	29.8
13 Brazil												0
14 United Republic of Tanzania (the)	22 010	22 064	100.2	71.2	5.5	9	0.6	6.2	4.7	2.8	76.7	42.3
15 Kenya	19 040	19 040	100	52.9	12.2	4.8	0.5	7.4	6.7	15.5	65.1	35.8
16 Thailand	1 873	1 059	56.5	59.8	2.4	4.9	1.7	8.2	4.3	18.7	62.1	1.8
17 Myanmar	9 014	9 232	102.4	72.9	8.9	4.6	1.2	9.8	2.6	0	81.8@	21
18 Afghanistan	618	2 001	323.8	39.3	5.4	1.6	1.1	8.2	0.9	43.4	44.7	2.7
19 Uganda	17 268	17 500	101.3	19.7	20	6.1	0.4	14.2	4.9	34.7	39.7	26.1
20 Peru	27 498	24 428	88.8	88	1.8	2.3	1.3	3.6	0.6	2.6	89.8@	75.8
21 Zimbabwe												0
22 Cambodia	12 686	12 278	96.8	86.2	4.5	2.2	0.4	2.5	0.6	3.7	90.7@	44
Global (DOTS)	579 623	615 803	106.2	72	6.4	3.8	1.4	6.4	3	7.1	78.3	13.7

* Cohort: cases diagnosed during 1997 and treated/followed-up through 1998. Treatment outcomes divided by number registered (or by number evaluated, if greater). Completed treatment: clinically cured but without lab-confirmation. Treatment success: cured plus completed. @ = treatment success \geq 80%. Est: estimated (as opposed to notified or registered).

Table 11b. Treatment outcomes for smear-positive cases: 22 high-burden countries: non-DOTS strategy, 1997 cohort*

Country (ranked by burden)	Notified	Registered	Regst'd (%)	Treatment outcomes (%)*							Treatment success* (%)	
				Cured	Completed treatment*	Died	Failed	Defaulted	Transferred	Not eval'd		
1 India	265 811	285 794	107.5	0	16.6	0	0	0	0	83.4	16.6	
2 China	40 625	23 010	56.6	84.3	0	1.6	7.1	4.2	1.7	1	84.3@	
3 Indonesia												
4 Bangladesh	7 246	7 410	102.3	42.8	11.4	0.5	0.7	37.1	7.4	0.1	54.3	
5 Pakistan												
6 Nigeria												
7 Philippines (the)	80 163	23 396	29.2	69.9	6.9	1.1	1.1	7.8	3.6	9.7	76.8	
8 South Africa	50 854	50 854	100	55.9	11.6	6.7	2.3	17.3	2.5	3.6	67.4	
9 Ethiopia												
10 Viet Nam	3 631	3 631	100	78.3	8.1	3.1	2.5	5.1	1.6	1.3	86.4@	
11 Russian Federation (the)	41 434											
12 Democratic Republic of the Congo		814		46.6	0	23.2	10.8	2.2	13.5	3.7	69.8	
13 Brazil	43 490	43 490	100	0	26.9	2	0.3	5.2	1.4	64.2	26.9	
14 United Republic of Tanzania (the)												
15 Kenya												
16 Thailand	11 341	2 638	23.3	52.9	3.7	6	1.4	8.8	3.6	23.5	56.6	
17 Myanmar	681											
18 Afghanistan												
19 Uganda												
20 Peru												
21 Zimbabwe	14 512	12 410	85.5	51.3	17.5	10.2	0.2	8.2	12.7	0	68.8	
22 Cambodia												
Global (non-DOTS)	748 068	533 267	71.3	21.9	15.5	1.8	1	5.3	1.6	52.8	37.5	

* Cohort: cases diagnosed during 1997 and treated/followed-up through 1998. Treatment outcomes divided by number registered (or by number evaluated, if greater). Completed treatment: clinically cured but without lab-confirmation. Treatment success: cured plus completed. @ = treatment success \geq 80%.

Table 12. Treatment outcomes for smear-positive cases, by WHO Region and strategy, 1997 cohort*

WHO region/strategy	Notified	Registered	Regst'd (%)	Treatment outcomes (%)*								Treatment success* (%)	% est* cases successfully treated under DOTS
				Cured	Completed treatment*	Died	Failed	Defaulted	Transferred	Not eval'd			
AFR DOTS	197 519	185 863	94.1	51	11.4	6.5	1.4	11.8	5.7	12.3	62.4	17.5	
non-DOTS	77 869	78 270	100.5	56.3	12.2	7.1	1.8	15.6	4.5	2.7	68.4		
AMR DOTS	55 090	64 120	116.4	72.7	6.2	4.2	1.2	6	2.3	7.3	78.9	27.7	
non-DOTS	86 458	68 504	79.2	12.5	25.5	2.8	0.5	7.7	2.6	48.4	38		
EMR DOTS	25 269	36 251	143.5	64.6	12.5	2.9	1.8	10.6	4.9	2.6	77.1	10.2	
non-DOTS	27 811	23 456	84.3	51.2	13.1	1.8	3.8	14.6	4.3	11.2	64.3		
EUR DOTS	5 284	15 276	289.1	56.3	17	5	6.7	10	1.8	3.1	73.4	5.7	
non-DOTS	108 303	7 329	6.8	62.5	10.1	3.9	8.2	5.3	1.5	8.5	72.7		
SEAR DOTS	70 145	71 475	101.9	65.8	6.2	3.4	1.4	7.3	2.2	13.6	72	3.9	
non-DOTS	298 079	304 995	102.3	2.9	16.4	0.1	0.1	1.3	0.3	78.8	19.3		
WPR DOTS	226 316	242 818	107.3	91.7	1.1	1.7	1.1	1.2	1.1	2.1	92.8@	25.6	
non-DOTS	149 548	50 713	33.9	76.6	4	1.6	4	6	2.6	5.2	80.6@		
Global DOTS	579 623	615 803	106.2	72	6.4	3.8	1.4	5.7	3	7.1	78.3	13.7	
non-DOTS	748 068	533 267	71.3	21.9	15.5	1.8	1	4.7	1.6	52.8	37.5		

* Cohort: cases diagnosed during 1997 and treated/followed-up through 1998. Treatment outcomes divided by number registered (or by number evaluated, if greater). Completed treatment: clinically cured but without lab-confirmation. Treatment success: cured plus completed. @=treatment success \geq 80%. Est: estimated (as opposed to notified or registered).

Table 13. Treatment success for smear-positive cases: 22 high-burden countries, 1994–97 cohorts

Country (ranked by burden)	DOTS programmes				Whole country			
	1994	1995	1996	1997	1994	1995	1996	1997
1 India	83.2	78.8	79.0	81.8	*	24.7	20.0	16.6
2 China	94.0	95.8	96.2	96.3	86.0	85.1	86.9	84.3
3 Indonesia	94.3	90.7	81.4	54.5	*	*	*	*
4 Bangladesh	73.0	71.4	72.4	78.4	*	*	45.6	54.3
5 Pakistan	73.8	70.4	—	67.4	64.7	*	—	*
6 Nigeria	65.1	49.1	31.5	73.0	*	*	*	*
7 Philippines (the)	80.4	—	82.4	82.8	87.5	60.0	34.2	76.8
8 South Africa	—	—	69.4	73.2	78.2	57.9	60.5	67.4
9 Ethiopia	74.0	60.6	73.4	71.7	*	*	63.4	*
10 Viet Nam	90.5	91.3	90.2	84.9	*	85.3	86.4	86.4
11 Russian Federation (the)	—	64.8	62.3	67.5	—	*	56.7	*
12 Democratic Republic of the Congo (the)	71.5	79.8	48.0	63.7	78.8	68.9	66.9	69.8
13 Brazil	—	—	—	—	69.6	16.9	20.3	26.9
14 United Republic of Tanzania (the)	79.8	73.5	76.2	76.7	*	*	*	*
15 Kenya	73.3	74.7	76.7	65.1	*	*	*	*
16 Thailand	—	—	77.8	62.1	58.2	63.6	*	56.6
17 Myanmar	—	66.0	79.1	81.8	77.4	77.5	76.2	*
18 Afghanistan	—	—	—	44.7	—	—	—	*
19 Uganda	—	—	33.0	39.7	—	43.7	*	*
20 Peru	81.4	83.4	88.6	89.8	*	*	*	*
21 Zimbabwe	—	—	—	—	51.7	53.3	32.1	68.8
22 Cambodia	84.3	90.8	93.8	90.7	*	*	*	*
all high burden countries	87.0	85.5	79.5	82.2	83.2	54.1	51.3	57.1
Global	76.9	78.6	76.9	78.3	74.7	57.0	53.6	59.4

Cohort: see notes for Tables 11a-b. — not available; * no additional data beyond DOTS report

Table 14. Re-treatment outcomes in DOTS programmes: 22 high-burden countries, 1997 cohort*

Country (ranked by burden)	Registered	Evaluated	Regst'd (%)	Treatment outcomes (%)*							Treatment success* (%)
				Cured	Completed treatment*	Died	Failed	Defaulted	Transferred	Not eval'd	
1 India	2 306	2 209	95.8	62.2	3	7.4	5.6	14.7	2.9	4.2	65.2
2 China											
3 Indonesia											
4 Bangladesh	1 131	844	74.6	53.5	4.2	3.1	2.2	8.1	3.5	25.4	57.6
5 Pakistan	537	537	100	37.4	19.2	8.2	5.4	25.3	4.5	0	56.6
6 Nigeria											
7 Philippines (the)	276	111	40.2	23.6	2.5	1.8	6.5	1.8	4	59.8	26.1
8 South Africa	533	513	96.2	63.4	4.7	5.6	3.2	11.4	7.9	3.8	68.1
9 Ethiopia	784	784	100	52.2	17.1	8.3	4	13.3	5.2	0	69.3
10 Viet Nam	4 866	4 500	92.5	74.4	5.2	3.8	4.1	2.4	2.6	7.5	79.6
11 Russian Federation (the)											
12 Democratic Republic of the Congo (the)	2 771	1 810	65.3	40.4	5.7	4.9	1.5	4.8	8	34.7	46.1
13 Brazil											
14 United Republic of Tanzania (the)		2 095		60.8	14.1	13.8	1.1	6.4	3.8	0	74.9
15 Kenya	1 386	991	71.5	47.5	7.1	6.1	0.6	5.8	4.3	28.5	54.7
16 Thailand	238	194	81.5	52.9	2.1	7.6	4.6	10.5	3.8	18.5	55
17 Myanmar	1 745	1 745	100	60.7	13.5	6.2	3.7	11.3	4.5	0	74.2
18 Afghanistan											
19 Uganda	1 136	1 136	100	31.6	26.3	10.4	1.2	23.6	6.9	0	57.9
20 Peru											
21 Zimbabwe											
22 Cambodia	650	639	98.3	85.1	5.4	3.8	1.2	2.5	0.3	1.7	90.5@
Global total	36 380	34 353		53	11.4	6.1	3.4	9.6	4	12.5	64.4

* Cohort: cases starting retreatment during 1997 and followed-up during 1998. Treatment outcomes divided by number registered (or by number evaluated, if greater). Completed treatment: clinically cured but without lab-confirmation. Treatment success: cured plus completed. @ = treatment success \geq 80%.

varied from 62% in the African Region to over 90% in the Western Pacific Region (Figure 11, Table 12). Africa's low success rate is due in part to a low cure rate (51%), and in part to high proportions of cases that interrupted treatment (6%), that died (7%), that were lost during transfer (6%), or were not evaluated (12%). The success rate in Africa was higher for the 1997 cohort than for the 1996 cohort (58%) as a result of both an improved cure rate, and decreased proportions that interrupted treatment or were not evaluated. A comparison of treatment results for three consecutive cohorts (1995–97) shows that the overall success rates have remained approximately stable at 77–79% under DOTS, and 54–60% world-wide (Table 13).¹³

In DOTS areas, 36 380 cases registered for retreatment in 1997, half as many as in 1996. This fall is due to the fact that China did not provide retreatment reports for 1997. Fifty-three percent were cured and 11% completed treatment, a retreatment success rate of 64% (Table 14, Annex 2).

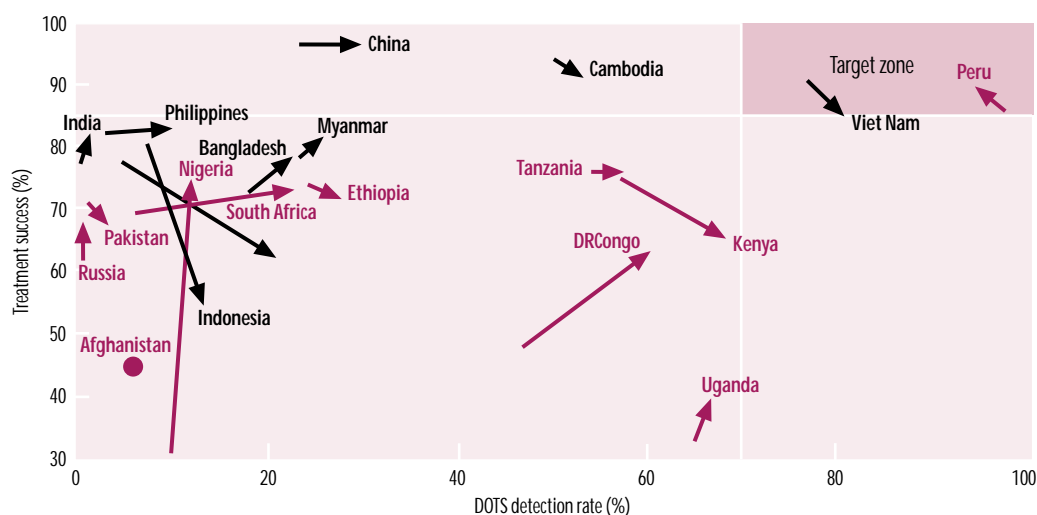
Progress in TB control in 22 high-burden countries

Figure 12, and Tables 10–12, give an overview of progress towards meeting WHO targets for 20 of the 22 high-burden countries (excluding Brazil and Zimbabwe, for which no data on treatment success are yet available). The essential elements of progress in the high-burden countries are as follows. These notes, which include some recent information from local WHO staff, should be read in conjunction with another recent report on the status of tuberculosis control in these countries.¹⁴

¹³ The average treatment success rate for whole countries was relatively high in 1994, mainly because India registered 144 058 cases in non-DOTS areas without providing treatment outcomes; these data were excluded.

¹⁴ World Health Organization. *Status of Tuberculosis in the 22 High-Burden Countries, 1999*. WHO/CDS/TB/99.271.

Figure 12. DOTS progress in high-burden countries, 1997–98. Treatment success refers to cohorts of patients registered in 1996 or 1997, and evaluated, respectively, by the end of 1997 or 1998. DOTS detection rate is the fraction of estimated cases notified under DOTS in 1997–98. Arrows mark progress in countries that supplied notification and cohort data for at least two years. For Pakistan, the start of the arrow is for cases notified in 1996 rather than 1997. Afghanistan (circle) has provided notification data for 1998 and treatment outcome data for patients registered in 1997 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 pink, those from SEAR and WPR are shown in black.



1. India

Between 1993 and 1997, India's DOTS programme reported high treatment success near or above 80%, but by 1998 the proportion of smear-positive cases detected under DOTS was only 1.5%. India's DOTS programme underwent large-scale expansion in the last quarter of 1998 and now covers approximately 20% of the country (200 million people). More than 140 000 patients were treated in 1999, including over 50 000 new smear-positive patients (6% of estimated in the country and approximately 54% of those in DOTS areas). The cure rate in 1998 remained above 80%, and would have been higher but for a default rate of 9%. Coverage is expected to reach 250 million by the end of 2000 and more than 450 million by the end of 2002.

2. China

The existing DOTS programme includes both the Infectious Endemic Disease Control (IEDC) and Ministry of Health Projects, covering 50% and 14% of the population, respectively. Although these population coverage rates did not increase in 1998, the total number of cases reported under DOTS increased by one third (from 253 904 cases in 1997 to 336 535 cases in 1998). The cure rate has remained over 90%, and we estimate that more than 1 in 4 infectious TB cases is now successfully treated under DOTS. It has recently been estimated¹⁵ that the Chinese DOTS programme is preventing at least 30,000 (26 000–59 000) TB deaths each year. Outside DOTS areas, many fewer cases were registered for treatment than notified, and the treatment success was reported to be lower (84%). The two key issues now facing China are the need for new funds to sustain the DOTS programme when World Bank-supported IEDC Project finishes in 2001, and the need for additional funds to expand DOTS to the entire country.

¹⁵ Dye C, Zhao F, Scheele S, Williams B. Evaluating the impact of tuberculosis control: number of deaths prevented by short-course chemotherapy in China. *Int J Epidemiol* 2000; 29: in press.

3. Indonesia

Reported DOTS population coverage expanded dramatically from 28% in 1997 to 80% by the end of 1998, but the detected fraction of incident cases increased from only 7.4% to 12.2%. The treatment success among cases that were evaluated was 93% in the 1997 cohort, but failure to evaluate 41% of registered cases pushed the overall treatment success down to 55%. Failure to evaluate has been a growing problem since 1995, though steps to rectify it were taken in 1999. In 1997, the reported DOTS population coverage was four times the case detection rate under DOTS; coverage in 1998 was seven times the detection rate. Thus case finding is not sufficiently intensive within areas purportedly covered by DOTS. As for 1997 notifications, a relatively high fraction (83%) of new pulmonary cases was smear-positive, outside the expected range of 55–70%. This raises questions about the fate of smear-negative cases. No report was received for non-DOTS areas in 1998.

4. Bangladesh

Bangladesh reported 90% DOTS coverage in 1998, and 95% in 1999 (40% in collaboration with NGOs). An estimated 24% of smear-positive cases were detected under DOTS in 1998, more than a threefold increase over the 1995 detection rate. The big difference between population coverage and detection rate persists because many patients continue to seek treatment from non-DOTS programmes in specialized TB institutions (clinics and hospitals), and perhaps the private sector. The treatment success rate has been consistently greater than 70% since 1994, and rose to 78% in 1997 cohort. However, this is still lower than the WHO target of 85%, mainly because the default rate in 1997 (10%) was as high as in 1996. An estimated 15% of all smear-positive cases were successfully treated under DOTS in 1997. Treatment outside the DOTS programme is characterised by a very high default rate (37%), which explains the low treatment success rate of 54%.

5. Pakistan

DOTS population coverage was 8% in 1998, the same as in 1996 (no report was provided for 1997). The case detection rate under DOTS was therefore also low (3.4%). Just 2802 smear-positive patients were registered in the 1997 cohort. Treatment success was 68%, and only 53% were “cured” (demonstrated smear conversion at 5 months). More than 1 in 4 patients defaulted from treatment, the highest fraction in any of the high-burden countries. Only 2% of smear-positive cases were successfully treated under DOTS in 1997. These data indicate, in short, that Pakistan has a poor National TB Control Programme.

6. Nigeria

Both DOTS population coverage (45% in 1998) and the case detection rate (12% in 1998) have remained stable and low since 1996. Changes in the treatment success between 1996 and 1997 show some positive and some negative signs. The main indication of progress is that 100% of registered cases were reportedly evaluated in 1997, as compared with 44% the previous year. However, the default rate doubled from 8% to 15% between 1996 and 1997. The net result was a treatment success of 73%, well below the WHO target. No data were provided for non-DOTS areas of the country in 1997.

7. The Philippines

The population covered by DOTS was still low (17%) in 1998, but the programme has expanded rapidly since then. Preliminary data indicate that coverage reached 40% by the end of 1999. The case detection rate under DOTS was 10% in 1998, three times that in 1997 (3%). The number of new, pulmonary smear-positive cases reported for the country as a whole was more than 70% of the estimated total. Sixty percent of new pulmonary cases were smear-positive in 1998, within the expected range of 55–70%. Cases registered for DOTS treatment in 1997 outnumbered notifications (recorded the previous year), but the reverse was true in non-DOTS areas. Defects therefore remain in the system of recording

and reporting. Treatment success exceeded 80% in 1996 and 1997 (83%) cohorts, with a high rate of smear-conversion (79% in 1996 and 77% in 1997). The re-treatment success rate was very low in 1997 cohort (27%) because a high fraction of registered patients was not evaluated (60%). The main obstacle to better cure appears to be the default rate, which was 7% among new cases in the 1997 cohort.

8. South Africa

The total number of cases notified in 1998 exceeded the estimated total; it is not clear whether the estimate is wrong, or whether there are errors in defining and reporting cases. The same problem reappears in the indicators used to measure DOTS progress, which has been rapid since 1996: the estimated case detection rate under DOTS (23%) in 1998 was a little bigger than DOTS population coverage (22%). The fraction of new pulmonary cases reported to be smear-positive was 89%, higher than expected, and much higher than reported for 1997. Treatment success rates in DOTS (73%) and non-DOTS areas (67%) were both low due to high default rates. Despite high rates of HIV infection, estimated to be 45% among TB cases in 1997, the DOTS cohort death rate was under 5%.

9. Ethiopia

About half the country was covered by DOTS at the end of 1998, the same as in 1997. However, the case detection under DOTS has continued to increase, doubling from 15% in 1995 to 28% in 1998. As cautioned in last year's report, the rise in case detection might be due to improved coverage, but it might also be driven, at least in part, by the HIV epidemic. Treatment success did not change between 1996 and 1997 (72%), because the default rate remained high (12%). No report was received for non-DOTS areas in 1998. It is therefore unclear from these data how much progress in TB control Ethiopia made between 1997 and 1998.

10. Viet Nam

Having reached WHO targets in 1997, Viet Nam has maintained high rates of DOTS coverage (96%), case detection (80%) and treatment success (85%). An estimated 65% of all smear-positive cases were successfully treated under DOTS in 1997, second only to Peru among the 22 highest burden countries. Treatment success was also high in non-DOTS areas (86%). The fraction of cases reported to be smear-positive (76%) under DOTS was somewhat higher than would be expected among the entire population of new pulmonary cases. Viet Nam must now look for epidemiological impact using a wider range of indicators, assessing, for example, whether incidence and prevalence are now declining, and quantifying the number of deaths averted. A prevalence survey will be carried out this year.

11. Russian Federation

DOTS coverage approximately doubled between 1997 and 1998, rising from 2% to 5%. However, only 1.5% of all notified cases, and 1.0% of all cases, were reported under DOTS. Treatment success was again low in the 1997 cohort (68%), as in the 1996 cohort, because of high death (10%), failure (8%) and default rates (8%). The same was true for patients on retreatment regimens. No treatment results were provided for non-DOTS areas of the country. Though progress has been very slow during the 1990's, Russia is now planning, in collaboration with WHO, the World Bank and other agencies, a major expansion of DOTS coverage. Control efforts in this country will need to confront the considerable problem of multi-drug resistant TB (MDR-TB).

12. The Democratic Republic of the Congo

As in South Africa, DOTS coverage (60%) was reported to be about the same as the DOTS detection rate (61%). There are several possible explanations: the incidence rate has been

underestimated, the notification rate is exaggerated (e.g. because cases from non-DOTS areas are included), or DOTS areas of the country suffer relatively high incidence rates. With present data, we cannot say which applies. Treatment success was low (64%) because 15% of registered cases were not evaluated, 8% defaulted, and because the fate of the 8% of patients that "transferred out" was unknown. No data were provided for non-DOTS areas of the country.

13. Brazil

In 1998, the Brazilian National Health Board declared tuberculosis a priority health problem. In the same year, DOTS was implemented in the central west region of the country. Although the programme in this area is apparently very effective (treatment outcome data are not yet available), it detected only 4% of estimated smear-positive cases in 1998. By contrast, the case detection rate for the whole country was 70%. Non-DOTS areas reported a treatment success rate of 27% in 1997, because 64% were not evaluated. The success rate among those evaluated was 75%. The critical issue for Brazil is to successfully expand the DOTS programme to other parts of the country. Tuberculosis control programmes fall under the aegis of state governments that are independent of the federal government (which supports DOTS). The use of DOTS has been encouraged under a plan wherein states are reimbursed for smear examinations and are paid for each tuberculosis patient cured (with final negative smear conversion). In addition to the current disease surveillance system, an information system to collect and report data on the status of the implementation of DOTS in states throughout the country is urgently needed.

14. The United Republic of Tanzania

DOTS coverage remains officially 100%, but the detection rate under DOTS has stayed in the range 50-60% since 1995. Assuming that the estimated TB incidence rate is correct, the National TB Control Programme is missing 15 000-20 000 new smear-positive cases each year. Treatment success has also remained between 75% and 80%, with smear-conversion demonstrated for most patients that complete treatment. Treatment success has been low partly due to the 8-9% death rate in 1994-97 cohorts (14% under retreatment in 1997), which in turn could be explained by the high rate of HIV infection among TB patients (estimated at 37% in 1997). Forty-two percent of all (estimated) smear-positive cases were successfully treated under DOTS in 1997, about the same as in 1996.

15. Kenya

All cases are reported under DOTS, and the case detection rate increased to 68% of estimated cases in 1998. As we have previously remarked (see paragraph 9 on Ethiopia), the apparent improvement in case detection could be explained by the rise in incidence due to HIV. Treatment success fell sharply between 1996 and 1997 (from 77% down to 65%), because 16% of registered cases were not evaluated, 7% defaulted and 7% transferred out. The death rate among cases evaluated was under 5%, but we do not know how many unevaluated cases died. Kenya appears to have understated its treatment outcomes for 1997: among the 16% of cases for which there were no treatment results, 10% (1913) were nomads, and 85% of these were successfully treated. Adding these results to those in Table 11a, and excluding 1032 patients receiving a standard rather than a short-course regimen, gives an overall success rate of 78% instead of 65%.

16. Thailand

Thailand began to implement DOTS in October 1996. Coverage rose to 32% at the end of 1998 (and 40% in 1999), with a detection rate of 21%. By the middle of 1999, all provinces in the country had demonstration districts and 40% of all districts had implemented the new control policy. The rapid expansion led to difficulties in case monitoring in some areas. Some reports received in the central unit have been incomplete, and the number of

cases registered in 1997 was significantly lower than the number notified for that year. Treatment outcomes for 19% of cases registered in 1997 were unknown. While this is clearly the main reason for the low overall success rate of 62%, another contributing factor was the relatively high default rate of 8%. Failure to evaluate cases under treatment, and a high default rate, also explain the low non-DOTS treatment success of 57%. A strong focus on quality control, and especially on the accuracy of reporting, dominates the current activities of the National TB Control Programme.

17. Myanmar

DOTS coverage remained at about 60% between 1996 and 1998, but is now reported to be somewhat higher at 64%. Case detection under DOTS has been similarly steady at 25–28%. Treatment success jumped from 66% to 79% between 1995 and 1996, and reached 82% in 1997. The main loss was through defaulting, both among new and retreatment cases (10%). No report was received for non-DOTS areas. Myanmar has a good-quality DOTS programme, which is in need of investment for further expansion.

18. Afghanistan

Despite civil conflict, Afghanistan retained its DOTS status in 1998 by reporting from the 11% of the population covered. About 5% of the estimated smear-positive cases were notified. Cohort data show, first, a major discrepancy between the number of cases notified for 1997 (618) and the number registered for treatment (2001). The treatment success was 45%, mainly because 43% were not evaluated, and 8% defaulted. In sum, Afghanistan made little progress in TB control between 1997 and 1998.

19. Uganda

The NTP achieved full country coverage with the DOTS strategy in 1996. Routine support and supervision showed that TB control services were available, but not easily accessible, to the mostly rural population. Uganda reported a case detection rate of 67% in 1998, but treatment success (40%) was the lowest of all 22 the high-burden countries. The two main problems were failure to evaluate newly-registered cases (35% of outcomes unknown), and defaulting (14%). The default rate was even higher among cases being retreated (24%). The high death rate of retreatment cases (10%) might be a consequence of interrupted treatment, or linked to HIV co-infection. The NTP began to address these problems in 1998–99 by testing a community DOTS programme based on the observation of treatment by volunteers in rural villages. At the end of 1999, the NTP had completed follow-up of the cohort from the first demonstration district, with strikingly improved results. All patients had 8 months supervision by community volunteers and all were evaluated at the end of treatment. Treatment success was 87%, the death rate was 12%, and the transfer rate was just 1%. Treatment interruption and failures were nil. Preliminary data from other two demonstration districts are equally promising. The new approach to DOTS implementation, based on community involvement, has been adopted by the Ministry of Health and will be expanded all over Uganda during the next 2–3 years.

20. Peru

Peru had reached the WHO targets by 1995, and has continued to maintain its performance. In terms of nationwide case finding and cure, Peru is still the most successful DOTS country among the top 22. The estimated case detection rate was 94% in 1998. Of all cases notified in 1997, 89% were registered for treatment. Among registered cases, 90% were treated successfully. Given these very strong results, we expect to see TB incidence in decline. The number of notified cases peaked at 52 552 in 1992, and fell to 41 739 in 1996, but has increased again over the past two years. The number of sputum smears examined increased from 466 000 in 1992 to 1.4 million in 1997. The decline in notifications from 1992 to 1996 is therefore not due to any reduced effort in case finding, and it may reflect a

genuine fall in the incidence rate. However, that cannot be proven with the data supplied for this report. Peru is the first NTP in the world to address systematically the problem of multi-drug resistant TB (MDR-TB) through an innovative scheme of referral to a special unit responding to the NTP manager. The high rate of case detection in Peru allows the programme to treat MDR-TB cases, via this mechanism, countrywide.

21. Zimbabwe

DOTS pilot projects began only during 1998, and yet Zimbabwe reported 100% DOTS coverage for that year. In fact, DOTS was implemented only in five districts during 1998, and plans exist to expand to all 58 districts by 2002. The 14 492 smear-positive cases notified in 1998 represent 59% of all estimated cases. The non-DOTS treatment success for 1997 was 69%, with high death (10%) and default rates (8%).

22. Cambodia

DOTS was introduced in 1994 and coverage reached all 23 provinces by 1998. The NTP doubled its treatment capacity from less than 10 000 TB patients in 1991 to nearly 20,000 in 1999. Some 12 686 smear-positive cases were notified in 1998, 54% of the estimated total, an increase of 4% over 1997. Cambodia has the highest case notification rate for new sputum smear-positive cases in the Western Pacific Region with 121 per 100 000 in 1998. Eighty-five percent of the treated patients are pulmonary positive, 4% are pulmonary negative and 6% are extra-pulmonary. Treatment success has been maintained above 85% since 1995, and reached 91% in 1997. The principal concern of the programme at present is the rapidly increasing case-load of TB patients related to HIV/AIDS epidemic. 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.

Progress in TB control in all DOTS countries

Of 91 DOTS countries for which data were submitted, 60 (66%) had treatment success rates over 70% (Figure 13, Annex 6). Among these 60 countries, 30 had DOTS detection rates above 50%, including Botswana, Chile, Morocco and Venezuela (Figure 14). These countries appear to have reached or are close to reaching WHO targets, but together account for only 8% of all incident TB cases. Of 71 countries that provided data from two consecutive cohorts, 62% showed higher treatment success rates during 1996–97. About half (34/71) improved DOTS detection by more than 1% whilst maintaining treatment success above 70%. Annex 6 tabulates case detection and treatment success rates by country for 1995 to 1998.

Figure 13. DOTS status in 1998. Estimated DOTS detection rate in 1998 and treatment success in 1997 for 90 countries reporting to WHO during 1998. The remaining DOTS countries have adopted the strategy too recently to provide data on treatment outcomes.

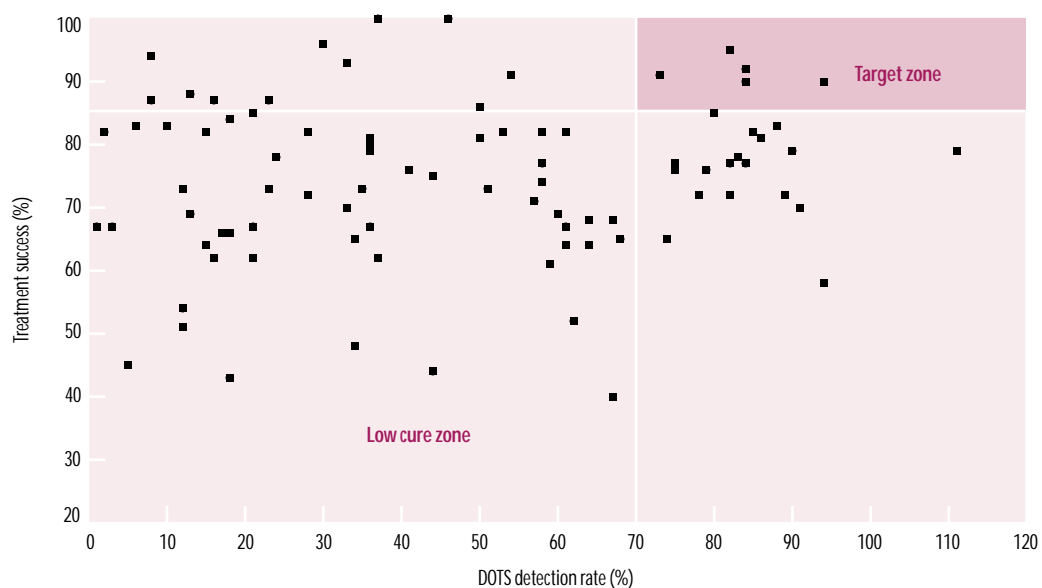
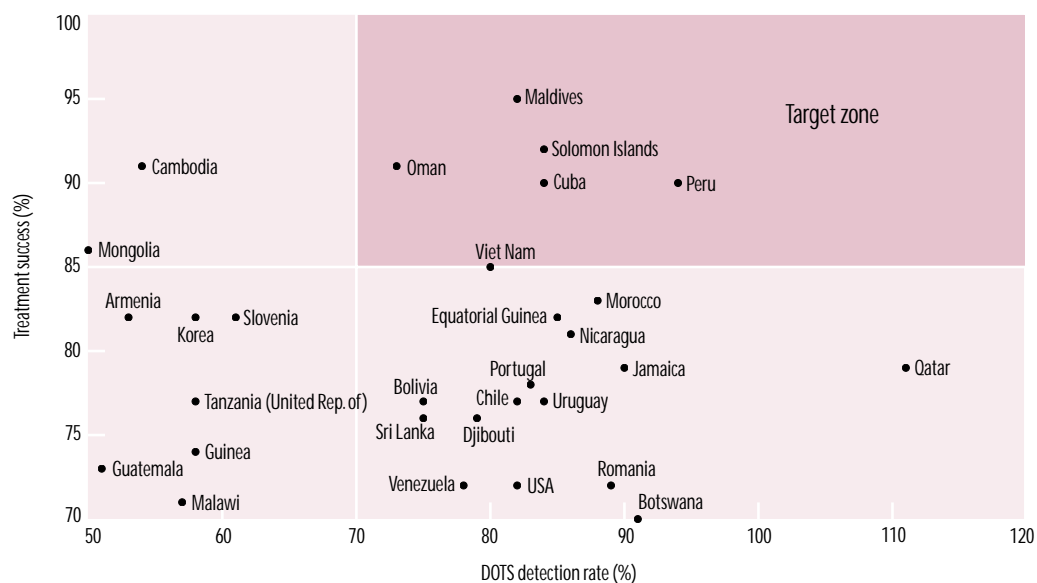


Figure 14. Magnified view of Figure 14, showing 30 countries that reported treatment success rates over 70% and estimated DOTS detection rates over 50%



Discussion

Global and regional progress in TB control

Progress in controlling tuberculosis accelerated somewhat during 1997–98. DOTS programmes reported the biggest annual increase in case detection so far, whilst maintaining a high average rate of treatment success.

The number of reporting DOTS countries increased from 102 in 1997 to 119 in 1998. Between 1997 and 1998, the shift continued away from categories 0 (no report) and 1 (non-DOTS), and towards categories 2 (pilot phase), 3 (expansion) and 4 (full coverage). The net increase in DOTS population coverage was 8%, up to 43%, and coverage has doubled since 1995. The fraction of all estimated cases reported climbed another increment from 38% to 40% (it was 34% in 1995). The fraction of all smear-positive cases treated under DOTS exceeded 20% for the first time in 1998, and has also doubled since 1995.

Compared with 1997, nearly quarter of a million (219 803) additional smear-positive cases (and nearly half a million more TB cases in total) were reported by DOTS programmes in 1998. This is the biggest recorded annual increment, although it followed a slower rate of improvement between 1996 and 1997 (Figure 15). If the average rate of increase is maintained, adding about 120 000 cases/year, 70% of cases would be detected under DOTS by year 2012. More optimistically, if programmes can add 250 000 cases annually, 70% case detection would be achieved by 2005. As reported for 1997, the greatest potential for improving case finding was in the South-East Asia

Region, which had the highest incidence of TB cases, but a relatively low detection rate, especially of smear-positive cases (29%).

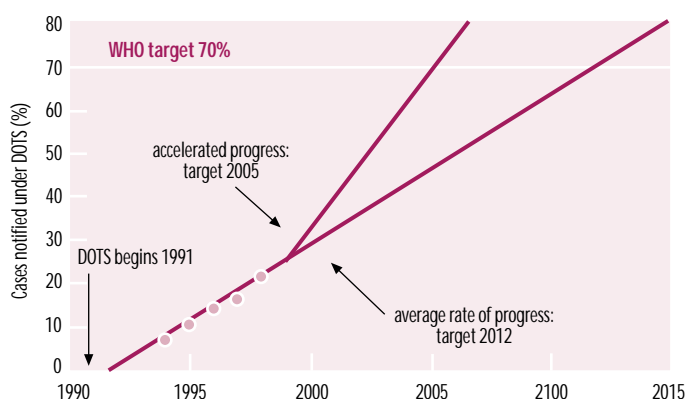
DOTS programmes have made these gains, in part, by claiming a proportion of cases from non-DOTS programmes, but this is recommended procedure. Because over 600 000 infectious cases were reported outside DOTS areas in 1998, it is conceivable that the same progress could be made under passive case detection for the next 2–3 years. Thereafter, a different strategy will be needed for finding cases that would not otherwise have been reported (either because they were treated but not notified, or because they were not treated).

The case detection rate accelerated under DOTS whilst the average treatment success rate remained high in the 1997 cohort. All regions, except Africa, had rates over 70%, and the global average (weighted by population size) under DOTS was 78%. Combining case detection

and treatment success, an estimated 14% of all smear-positive cases were cured under DOTS in 1997, up from 10% in 1996. The average re-treatment success rate (64%) was much lower than reported for 1996, largely because China provided no data.

Other new data in this report reinforce two familiar themes in global TB control. First, diagnosis and treatment appear to be better under DOTS: 65% of new pulmonary cases were sputum smear-positive (55–70% expected), compared with 34% elsewhere. Treatment success was also higher under DOTS (78% vs 38%), mainly because a greater fraction of

Figure 15. Progress towards the 70% case detection target. Points mark the number of smear-positive cases notified under DOTS 1994–1998, expressed as a percentage of all estimated cases (1997). The solid line through these points indicates the current average annual increment of about 120 000 new cases, which intersects the target in year 2012; the steeper line represents a higher annual increment of 250 000 cases, and reaches the 70% target by 2005.



registered cases was evaluated (94% vs 48%). The treatment success rates among evaluated cases were similar in DOTS and non-DOTS areas (85% and 79%), though cohort data from non-DOTS programmes are generally less trustworthy. In the African Region, the treatment success rate was low under DOTS (62%), but not as low as in 1996. As is often remarked, the elevated death rate (6%) is almost certainly linked to high HIV infection rates among TB patients, estimated to be 33% in 1997. HIV-related deaths are an obstacle to reaching the target cure rate in Africa, but treatment success was low in 1997 mainly because 12% of cases were not evaluated.

Second, whilst notification data need to be examined critically, several groups of countries show clear trends. TB incidence has been falling in Western Europe and Latin America since 1980, though the direct contribution of TB control to this decline is unclear. The decline in Western Europe has been steady at 4%/year since 1980, despite the growing number of cases among non-nationals.⁷ Eastern Europe has suffered a sharp rise in tuberculosis since 1992. The rate of increase has been the same as that in sub-Saharan Africa, which in that setting is almost certainly due to the spread of HIV.

This is the first of our reports to highlight regional variations in the age and sex distribution of notified smear-positive cases. These data represent TB epidemiology, distorted by reporting biases, both of which need to be understood so as to improve TB control. A full analysis of the data presented in Figure 9 is beyond the scope of this report. Nonetheless, a preliminary comparison of patterns at least serves to generate hypotheses that could be tested with further data.

Two clear results are that more cases are reported in men than women, and the male/female ratio increases with age everywhere. The consistency of these patterns suggests that they represent epidemiological phenomena, and are not purely artefactual. Figure 9a-h orders groups of countries roughly according to the age at which the notification rate peaks, and this ranking is clearly related to present and past transmission and incidence rates. Bolivia, Haiti and Peru have the highest estimated TB incidence rates in Latin America,¹⁴ and thus the earliest ages of infection and breakdown to disease. In contrast, industrialized countries now have low incidence rates, and most cases occur in older people who were infected years ago when transmission rates were higher. Prior to the mid-1980s, the average age of TB cases in Africa may have been increasing as the transmission rate slowly declined. HIV is probably reversing this trend by increasing the breakdown rate to TB in young, co-infected adults. African women with TB are younger than men with TB; women typically acquire HIV infection at younger ages, and this may be part of the explanation. The gap between men and women was greatest in Eastern Europe, where there has also been a resurgence of TB. The hypothesis to be tested here is that the notification rate has increased most sharply among men aged 35-54 years.

Progress in TB control in 22 high-burden countries

Based on 1998 estimates of case detection and treatment outcomes for the 1997 cohort, we have re-graded the top 22 countries as in Table 15. Six countries made sufficient progress to be reclassified with higher rank (bold, underlined). Data from 3 countries showed signs of deteriorating control, and moved to a lower rank (underlined). On balance, TB control in the high-burden countries in 1998 was better than in 1997, as indicated by higher DOTS coverage (43%), better case detection (20% of estimated smear-positive cases), and a marginally higher treatment success rate (82%). The large increment in the number of smear-positive cases reported under DOTS is explained mainly by improvements in China, South Africa, India, Bangladesh and the Philippines. Case detection rates accelerated in all these countries, except Bangladesh. Given the enormous populations of these countries, even a small percentage increase in case detection (as shown by the short arrows in Figure 12) means a large increase in the number of cases detected.

As in the previous report, the top performing countries (treatment success $\geq 70\%$, DOTS detection rate $\geq 50\%$) included representatives from Africa (Tanzania), Asia (Cambodia, Viet Nam) and Latin America (Peru). The central problem facing Tanzania and Cambodia is to maintain high-quality programmes, despite the spread of HIV. Kenya has slipped out of the

top rank since 1997 because treatment success fell to 65%, apparently due to a reporting error. The real treatment success appears to be 78%.

Peru and Viet Nam maintained case detection and treatment success rates above WHO targets between 1997 and 1998. Both programmes now have firm foundations upon which to diversify TB control. Peru has already begun to address the special problem of drug resistant and multi-drug resistant TB. Both countries should consider introducing additional indicators of impact to determine, for example, whether there has been a fall in incidence attributable to the control programme, and whether it is possible to quantify the number of deaths averted, as has been done in China.¹⁵

The seven countries in the second rank have high treatment success rates (> 70%) with intermediate rates of case detection (DDR 10–49%), and now include Nigeria, the Philippines and South Africa. Nigeria's main achievement has been to evaluate all registered smear-positive cases for treatment outcome. The Philippines has maintained high treatment success whilst expanding case detection, reporting an additional 11 000 smear-positive cases in 1998. South Africa has improved both treatment success and case detection. The challenges to the other members of this group are well-known. Thus, patients in Bangladesh are encouraged to seek treatment from health facilities delivering DOTS close to their homes, rather than at specialized TB institutions that do not provide DOTS. There are signs that this is now happening—Bangladesh reported 12 000 additional smear-positive cases under DOTS in 1998. China reported the biggest increase in cases notified under DOTS during 1998, an extra 83 000 smear-positive cases, as compared with 1997. Though China must maintain and improve on its success in the 13 DOTS provinces, it must also extend DOTS to the other half of the country.

India is the sole remaining country with high treatment success and low national case detection rate (third rank). The persistently low case detection rate belies progress made since 1997. India reported an extra 12 000 smear-positive cases under DOTS in 1998, and improved treatment success in the 1997 cohort. DOTS should reach one quarter of the country by the end of 2000, and 35% of all smear-positive cases are now reported countrywide. India could therefore have moved up at least one rank by the time year 2000 notifications are reported to WHO. This would have a huge impact on the global case detection rate.

The Russian Federation and Uganda remain among the high-burden countries with low treatment success (fourth rank). The case detection rate in Uganda was higher than in Tanzania, a top-ranking country. However, treatment outcomes remained poor in 1997 because a high proportion of cases defaulted or were not evaluated. Even among patients that were treated successfully, about half did not have cure confirmed by smear examination. Russia continues to report low treatment success and low case detection; based on available information, drug resistance appears to be a partial explanation for low cure. Indonesia, Kenya and Thailand have moved down to this group because treatment success rates fell below 70% between 1996 and 1997. The benign explanation is that all three programmes failed to follow up all registered cases. In the three sets of cohort data, more than 70% of evaluated cases were successfully treated, though it is possible that the evaluated cases were a biased sample. Afghanistan, the Democratic Republic of the Congo and Pakistan moved up into this category by virtue of providing data to WHO; all three countries failed to report on treatment outcomes for 1996.⁷

The lowest rank in Table 15 is occupied by Brazil and Zimbabwe, both countries that

Table 15. Progress in DOTS implementation: top 22 countries, 1996–98

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

* Implementing DOTS but data not yet available

** DOTS detection rate: patients found and treated through DOTS programmes.

Underline: countries which have moved down one or more categories since 1997.

Underline bold: countries which moved one or more categories up since 1997.

began to implement DOTS in 1998. Significantly, no high-burden country failed to provide WHO with data for this report, and none is actively promoting a system of TB control that is incompatible with DOTS. This underscores the principal conclusion of last year's report: the central problem in global TB control is to expand DOTS coverage in high-burden countries, where 95% of TB patients live. All of these countries have now accepted that the DOTS system embodies, for most patients, best practice in TB control.

Developments in tuberculosis monitoring and surveillance

An important limitation of our present global surveillance system is that it presents information with a delay of 1–2 years: in the year 2000, we are reporting on cases notified during 1998, and on treatment outcomes for patients registered in 1997. The advantages of rapid, accurate reporting are obvious: we could be more confident that case detection in countries such as India is accelerating, we could better assess whether the growth in Russian case notifications is at last beginning to slow, and we could more easily judge whether the excellent control programmes in Peru and Viet Nam are now forcing down incidence.

Three initiatives in 1999 began to address the problem of reporting delays. WHO's Eastern Mediterranean Office has introduced quarterly reporting from countries by fax. The European Office has developed the CISID system of reporting data through the Internet. The American Office now has on site the Access software developed at WHO Geneva for compiling notifications and treatment outcomes. Full details are available from the relevant Regional Offices. With these, and other similar developments, it should be possible to report aggregate case notifications and treatment outcomes (once evaluated) with a delay of only 3–6 months.

There are, however, some aspects of surveillance that are beyond the compass of the present system of recording and reporting. The current method of (mostly) quarterly reporting from districts cannot alert countries or regions to local outbreaks of, for example, multi-drug resistant TB. This will require a network of laboratories equipped and quality-controlled for drug-susceptibility testing. Some European countries already have a system for reporting laboratory diagnostic results to a central, national office.⁹ EuroTB (CESES) are now working on a Europe-wide extension of this network.

**The tuberculosis epidemic is
growing and becoming more dangerous each year.
The World Health Organization's Programme on Communicable
Diseases (CDS) monitors this epidemic, analyzing data from national
control programmes and providing feedback on trends in disease
and implementation of control strategies.**



**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
or write to:**

**Information Resource Centre
Communicable Diseases
World Health Organization
20 avenue Appia
CH-1211 Geneva 27, Switzerland**

You can also access our website at <http://www.who.int>.

ANNEX 1

Data collection Forms A and B

(used for data collection in 1999)



1999 TUBERCULOSIS DATA COLLECTION FORM

1	Country: _____ Date of Report ___/___/___
2	Name of National TB Control Programme Manager (or equivalent):..... Title:..... Address:..... Telephone:..... Fax:..... E-mail:.....

3 The WHO TB Control Strategy (DOTS) assessment (see *Guidelines* for further explanations)

3.1	Do you routinely use sputum microscopy to diagnose suspected pulmonary TB cases?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.2	Do you use standardized, short-course chemotherapy (less than 9 months) all sputum smear positive cases?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.3	Do you provide directly observed treatment during, at least, the initial phase (2 or 3 months) of treatment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.4	During the last year, have you always maintained sufficient supplies of drugs to treat all patients?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.5	Do you use a recording and reporting system consistent with the one recommended by WHO?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.6	Do you evaluate the treatment outcome of all new sputum smear positive cases using cohort analysis and WHO definitions?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>

4 National TB Control Policy and Training

4.1	Do you have a national TB control manual which includes recommendations on questions 3.1 to 3.6?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2	Has the manual been reviewed (and endorsed) by WHO - Regional Office or Headquarters?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3	Has a training course which utilized the WHO training modules, or compatible tools, been organized within the past 2 years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

If you answered questions 3.1 to 3.6 in the following manner:

- “Yes” to all questions → please complete Part A only (DOTS)
 “Yes” and “Parts of country” to some of the questions → please complete Part A and B (DOTS and Non-DOTS)
 “No” to one or more of the questions → please complete Part B only (non-DOTS)

PART A - For areas of the country where the WHO TB control strategy (DOTS) was implemented

5 History

5.1	When did you start using the WHO recommended recording and reporting system?	Month:	Year:
-----	--	--------	-------

6 Coverage in 1998

6.1	How many basic administrative/operational units (where the TB register is being kept) in your country were implementing the WHO TB control strategy (DOTS) by December 31, 1998?	Total no. of administrative/operational units in country:
		No. of administrative/operational units implementing DOTS:
6.2	What proportion of the country's population live in these administrative/operational units (implementing DOTS)?	%
6.3	Did all of these administrative/operational units (implementing DOTS) notify their TB cases to the central level?	Yes <input type="checkbox"/> No <input type="checkbox"/>
	If not, how many administrative/operational units did not report?	No. not reporting:

FOR SECTIONS 7, 8, 9 and 10 - PLEASE REPORT FOR 1998 – Only DOTS areas*(If the data presented in these sections is only available for part of 1998, please indicate the period to which the data applies somewhere in the margins of the form.)***7 Case notifications (absolute numbers) – in DOTS areas**

Pulmonary				Extra-pulmonary (e)	TOTAL (f)
Smear Positive		Smear Negative (c)	Smear not done (d)		
New Cases (a)	Relapses (b)				

Section 8 is optional. If you do not have this information available, please move on to Section 9.**8 Retreatment cases (absolute numbers) – in DOTS areas**

Smear-Positive			
Relapses (a)	Failures (b)	Retreatment after interruption (c)	Total (d)

9 New pulmonary smear positive cases by age and gender (absolute numbers) – in DOTS areas

0-14		15-24		25-34		35-44		45-54		55-64		≥65		TOTAL	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F

10 Smear conversion– in DOTS areas

10.1	What was the number of new sputum smear positive cases that converted to smear negative by the end of the 3rd month of treatment?	
10.2	What was the number of new sputum smear positive cases that were evaluated for smear conversion by the end of the 3rd month of treatment?	

FOR SECTIONS 11 and 12 - PLEASE REPORT FOR 1997

(If the data presented in these sections is only available for part of 1997, please indicate the period to which the data applies somewhere in the margins of the form.)

IMPORTANT:

1. If DOTS was not implemented by the beginning of 1997, do not complete Sections 11 and 12. Please write the information in Part B, Section 15 (for new sputum smear positive cases only).
2. If any new sputum smear positive cases were treated with another regimen (not short-course), please record their treatment outcomes in Part B, section 16.

11 Treatment results for new pulmonary smear positive cases (absolute numbers) – in DOTS areas

Total cases registered (a)	Total cases evaluated (b)	Smear negative at end of treatment (cured) (c)	Completed treatment, but smear not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)

12 Treatment results for retreatment smear positive cases (absolute numbers) – in DOTS areas

Total cases registered (a)	Total cases evaluated (b)	Smear negative at end of treatment (cured) (c)	Completed treatment, but smear not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)

PART B - For areas of the country where the WHO TB control strategy was not implemented – (non-DOTS areas)

13 Coverage in 1998 – non-DOTS areas

13.1	How many basic administrative/operational units (where the TB register is being kept) in your country were NOT implementing DOTS by December 31, 1998?	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Total no. of administrative/operational units in the country:</td> <td style="width: 20%;"></td> </tr> <tr> <td>No. of administrative/operational units NOT implementing DOTS:</td> <td></td> </tr> </table>	Total no. of administrative/operational units in the country:		No. of administrative/operational units NOT implementing DOTS :	
Total no. of administrative/operational units in the country:						
No. of administrative/operational units NOT implementing DOTS :						
13.2	What proportion of the country's population live in these administrative/operational units (non-DOTS areas)?	%				
13.3	Did all of these administrative/operational units (non-DOTS areas) notify their TB cases to the central level? If not, how many did not report?	Yes <input type="checkbox"/> No <input type="checkbox"/> No. not reporting:.....				

FOR SECTIONS 14 and 15 - PLEASE REPORT FOR 1998

(If the data presented in these sections is only available for part of 1998, please indicate the period to which the data applies somewhere in the margins of the form.)

14 Case notifications (absolute numbers) – non-DOTS areas

Pulmonary				Extra-pulmonary (e)	TOTAL (f)
Smear Positive		Smear Negative (c)	Smear not done (d)		
New Cases (a)	Relapses (b)				

15 New pulmonary smear positive cases by age and gender (absolute numbers) – non-DOTS areas

0-14		15-24		25-34		35-44		45-54		55-64		≥65		TOTAL	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F

FOR SECTIONS 16 - PLEASE REPORT FOR 1997

(If the data presented in these sections is only available for part of 1997, please indicate the period to which the data applies somewhere in the margins of the form.)

16 Treatment results for new smear positive cases (absolute numbers) – non-DOTS areas

Total cases registered (a)	Total cases evaluated (b)	Smear negative at end of treatment (cured) (c)	Completed treatment, but smear not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)



1999 - TUBERCULOSIS DATA COLLECTION FORM

For countries where
culture examinations are routinely available

1	Country: _____	Date of Report ____/____/____
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2	Name of National TB Control Programme Manager (or equivalent):..... Title:..... Address:..... Telephone:..... Fax:..... E-mail:.....		
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3 WHO TB Control Strategy (see *Guidelines* for further explanations)

3.1	Do you routinely use sputum microscopy to diagnose suspected pulmonary TB cases?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.2	Do you use standardized, short-course chemotherapy (less than 9 months) all sputum smear positive cases?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.3	Do you provide directly observed treatment during, at least, the initial phase (2 or 3 months) of treatment?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.4	During the last year, have you always maintained sufficient supplies of drugs to treat all patients?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.5	Do you use a recording and reporting system consistent with the one recommended by WHO?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>
3.6	Do you evaluate the treatment outcome of all new sputum smear positive cases using cohort analysis and WHO definitions?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	parts of country only <input type="checkbox"/>

4 National TB Control Policy and Training

4.1	Do you have a national TB control manual which includes recommendations on questions 3.1 to 3.6?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.2	Has the manual been reviewed (and endorsed) by WHO - Regional Office or Headquarters?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
4.3	Has a training course which utilized the WHO training modules, or compatible tools, been organized within the past 2 years?	Yes <input type="checkbox"/>	No <input type="checkbox"/>

If you answered questions 3.1 to 3.6 in the following manner:

- “Yes” to all questions** → **please complete Part A only.**
- “Yes” and “Parts of country” to some of the questions** → **please complete Part A and B.**
- “No” to one or more of the questions** → **please complete Part B only.**

PART A - For areas of the country where the WHO TB control strategy was implemented (DOTS areas)**5 History**

5.1	When did you start using the WHO recommended recording and reporting system (DOTS)?	Month:	Year:
-----	---	--------	-------

6 Coverage in 1998

6.1	How many basic administrative/operational units (where the TB register is being kept) in your country were implementing the WHO TB control strategy by December 31, 1998?	Total no. of administrative/operational units in country:
		No. of administrative/operational units implementing WHO strategy:
6.2	What proportion of the country's population live in these administrative/operational units (implementing the WHO TB control strategy)?	%
6.3	Did all of these administrative/operational units (implementing the WHO TB control strategy) notify their TB cases to the central level?	Yes <input type="checkbox"/> No <input type="checkbox"/>
	If not, how many administrative/operational units did not report?	No. not reporting:

FOR SECTIONS 7, 8, 9 and 10 - PLEASE REPORT FOR 1998

(If the data presented in these sections is only available for part of 1998, please indicate the period to which the data applies somewhere in the margins of the form.)

7 Case notifications (absolute numbers)

Pulmonary								Extra-pulmonary new		TOTAL	
Smear Positive				Smear Negative new (c)	Smear Not Done new (d)		(e)	(f)			
New Cases (a)		Relapses (b)									
C+ (g)	C-/? (h)	C+ (i)	C-/? (j)	C+ (k)	C-/? (l)	C+ (m)	C-/? (n)	C+ (o)	C-/? (p)	C+ (q)	C-/? (r)

Notes:

If you do not do cultures, then fill in the upper level only (a-f).

C-/? = culture *negative* or *unknown* or *not done*.

"Recurrent" cases whose treatment history is *no treatment* or *unknown* should be counted as *new* (cell a).

Section 8 is optional. If you do not have this information available, please move on to Section 9.

8 Retreatment cases (absolute numbers)

Smear-Positive				Other *	TOTAL
Relapses (a)	Failures (b)	Retreatment after interruption (c)	Unknown treatment outcome (d)		
				(e)	(f)

* "Other" = a previously treated case who is culture-positive but smear-negative/unknown (regardless of the outcome of previous treatment).

9a New pulmonary smear positive cases by age and gender (absolute numbers)

0-14		15-24		25-34		35-44		45-54		55-64		≥65		TOTAL	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F

9b New pulmonary culture positive cases by age and gender (absolute numbers)

0-14		15-24		25-34		35-44		45-54		55-64		≥65		TOTAL	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F

Exclude extrapulmonary cases

10 Smear conversion

10.1	What was the number of new sputum smear positive cases that converted to smear negative by the end of the 3rd month of treatment?	
10.2	What was the number of new sputum smear positive cases that were evaluated for smear conversion by the end of the 3rd month of treatment?	

FOR SECTIONS 11 and 12 - PLEASE REPORT FOR 1997

(If the data presented in these sections is only available for part of 1997, please indicate the period to which the data applies somewhere in the margins of the form.)

IMPORTANT:

1. If the WHO TB control strategy (DOTS) was not implemented by the beginning of 1997, do not complete Sections 11 and 12. Please write the information in Part B, Section 15 (for new sputum smear positive cases only).

2. If any new sputum smear positive cases were treated with another regimen (not short-course), please record their treatment outcomes in Part B, section 16.

11a Treatment results for new pulmonary smear positive cases (absolute numbers)

Total cases registered (a)	Total cases evaluated (b)	Smear negative at end of treatment (c)	Completed treatment, but smear not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)

3. If any new culture positive cases were treated with another regimen (not short-course), please record their treatment outcomes in Part B, section 16.

11b Treatment results for new pulmonary culture positive cases (absolute numbers)

Total cases registered (a)	Total cases evaluated (b)	Culture negative at end of treatment (c)	Completed treatment, but culture not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)

12a Treatment results for retreatment smear positive cases (absolute numbers)

Total cases registered (a)	Total cases evaluated (b)	Smear negative at end of treatment (c)	Completed treatment, but smear not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)

12b Treatment results for retreatment culture positive cases (absolute numbers)

Total cases registered (a)	Total cases evaluated (b)	Culture negative (c)	Completed treatment, but culture not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)

Do not report treatment results on extrapulmonary cases

PART B - For areas of the country where the WHO TB control strategy was not implemented (NON-DOTS)

13 Coverage in 1998

13.1	How many basic administrative/operational units (where the TB register is being kept) in your country were NOT implementing the WHO TB control strategy by December 31, 1998?	Total no. of administrative/operational units in the country:
		No. of administrative/operational units NOT implementing the WHO strategy:
13.2	What proportion of the country's population live in these administrative/operational units (not implementing the WHO TB control strategy)?	%
13.3	Did all of these administrative/operational units (not implementing the WHO TB control strategy) notify their TB cases to the central level? If not, how many did not report?	Yes <input type="checkbox"/> No <input type="checkbox"/> No. not reporting:.....

FOR SECTIONS 14 and 15 - PLEASE REPORT FOR 1998

(If the data presented in these sections is only available for part of 1998, please indicate the period to which the data applies somewhere in the margins of the form.)

14 Case notifications (absolute numbers)

Pulmonary								Extra-pulmonary new		TOTAL	
Smear Positive				Smear Negative new		Smear Not Done new		(e)		(f)	
New Cases (a)		Relapses (b)		(c)		(d)					
C+ (g)	C-/? (h)	C+ (i)	C-/? (j)	C+ (k)	C-/? (l)	C+ (m)	C-/? (n)	C+ (o)	C-/? (p)	C+ (q)	C-/? (r)

Notes:

If you do not do cultures, then fill in the upper level only (a-f).

C-/? = culture *negative* or *unknown* or *not done*.

“Recurrent” cases whose treatment history is *no treatment* or *unknown* should be counted as *new* (cell a).

15a New pulmonary smear positive cases by age and gender (absolute numbers)

0-14		15-24		25-34		35-44		45-54		55-64		≥65		TOTAL	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F

15b New pulmonary culture positive cases by age and gender (absolute numbers)

0-14		15-24		25-34		35-44		45-54		55-64		≥65		TOTAL	
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F

Exclude the extrapulmonary culture positive cases

FOR SECTIONS 16 - PLEASE REPORT FOR 1997

(If the data presented in these sections is only available for part of 1997, please indicate the period to which the data applies somewhere in the margins of the form.)

16a Treatment results for new smear positive cases (absolute numbers)

Total cases registered (a)	Total cases evaluated (b)	Smear negative at end of treatment (c)	Completed treatment, but smear not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)

16b Treatment results for new pulmonary culture positive cases (absolute numbers)

Total cases registered (a)	Total cases evaluated (b)	Culture negative at end of treatment (c)	Completed treatment, but culture not done at end of treatment (d)	Died (e)	Failure (f)	Interrupted Treatment (g)	Transferred out (h)

ANNEX 2

Global Profile

Explanatory notes

GLOBAL PROFILE

Case Finding, 1998

Rows

- DOTS** The information listed in this row refer to those areas of the Region in which DOTS is implemented.
- non-DOTS** The information listed in this row refers to those areas of the Region in which DOTS is *not* implemented.
- No report** The information listed in this row refers to those areas of the Region on which GTB has no direct information as no reports were received.
- Total** The sum of the three cells listed above (DOTS, non-DOTS, and no report).

Columns

- a The total number of people which live in those areas of the Region where DOTS is implemented/not implemented and on which no report is available.
- b The proportion of the population which lives in those areas of the Region where DOTS is implemented/not implemented and on which no report is available out of the total population of the Region.
- c The total number of tuberculosis cases (all types) notified to WHO.
- d The case notification rate (per 100 000 population) of those areas where DOTS is implemented/not implemented.
- e The proportion of the notified cases in those areas where DOTS is implemented/not implemented out of the total number of notified cases.
- f The total number of new sputum smear positive cases notified to WHO.
- g The case notification rate (per 100 000 population) of the new sputum smear positive cases in those areas where DOTS is implemented/not implemented.
- h The total number of new sputum smear positive cases estimated for the entire Region, based on estimates provided in ref. 8 of the main text.
- f/h The proportion of new sputum smear positive cases notified by the Region out of the total number of new sputum smear positive cases estimated for the Region.
- i The proportion of new sputum smear positive cases out of the number of new pulmonary cases (new sputum smear positive + sputum smear negative) in those areas where DOTS is implemented/not implemented. This indicator measures quality of diagnosis.

Explanatory notes

GLOBAL PROFILE

Treatment Outcomes, 1997

New sputum smear positive cases

- j The number of new smear positive cases *registered* in 1997.
- k The proportion of new smear positive cases not evaluated ($(j)-[l+m+n+o+p+q]$) out of the number of new smear positive cases registered (j). This indicator should at best be 0.0%, showing that all registered cases have been evaluated for treatment outcome.
- l The proportion of new sputum smear positive cases which were cured (defined as a patient who completed treatment and had a negative sputum smear result, on at least two occasions, one of which was at completion of treatment) out of the number of cases registered (j). This indicator should at least be 85%.
- m The proportion of new sputum smear positive cases which completed treatment (no or only one negative sputum exam at the end of treatment) out of the number of cases registered (j). This indicator should be as small as possible as all cases should have a sputum examination at the end of treatment.
- n The proportion of new sputum smear positive cases who did not collect anti-tuberculosis drugs for 2 months or more out of the number of cases registered (j). This indicator should be as close to zero as possible.
- o The proportion of new sputum smear positive cases who remained or became again smear positive 5 months or later after starting treatment out of the number of cases registered (j). This indicator should be as close to zero as possible.
- p The proportion of new sputum smear positive cases who died during treatment, regardless of cause, out of the number of cases registered (j). This indicator should be as close to zero as possible.
- q The proportion of new sputum smear positive cases who were transferred out to another treatment unit and whose treatment results are unknown out of the number of cases registered (j). This indicator should be close to zero since the treatment outcomes of all cases – except those leaving the country – should be known at national level, regardless of patients moving from one district to another.
- r The proportion of the sum of cases which were cured (l) and which completed treatment (m) out of the number of cases *registered* (j). This indicator measures the treatment success of the programme.

Retreatment cases

The same explanations apply as above.

(Retreatment cases are defined as those cases which previously received treatment but returned to the health centre with a positive sputum smear examination. These cases include defaulters (n), failures (o), and relapses, i.e., previously cured cases.)

Explanatory Notes

GLOBAL PROFILE

WHO TB Control Categories

No. of countries The number of countries, territories and areas.

No. of countries reporting The number of countries which have reported to WHO, using the appropriate TB data collection form, as of the date of the Global Profile.

No. of countries in category

- 0 The number of countries which have not reported to WHO.
- 1 Countries not implementing the DOTS strategy and having a case notification rate of over 10 cases per 100 000 population
- 2 The number of countries implementing the DOTS strategy in less than 10% of the total population (pilot phase).
- 3 The number of countries implementing the DOTS strategy in between 10 to 90% of the total population (expansion phase).
- 4 The number of countries implementing the DOTS strategy in over 90% of the total population (routine implementation).
- 5 The number of countries not implementing the DOTS strategy but having a case notification rate of less than 10 cases per 100 000 population (low incidence). These countries are considered as being of low priority because their TB burden is small.

Proportion of countries in category

- 0 The proportion of the total population of the Region leaving in those countries or areas which have not reported to WHO.
- 1 The proportion of the total population of the Region leaving in those countries or areas which do not accept DOTS and have a case notification rate of over 10 cases per 100 000 population.
- 2 The proportion of the total population of the Region leaving on those countries or areas which accept DOTS and implement it in <10% of their population.
- 3 The proportion of the total population of the Region leaving in those countries or areas which accept DOTS and implement it in <10-90% of their population.
- 4 The proportion of the total population of the Region leaving in those countries or areas which accept DOTS and implement it in >90% of their population.
- 5 The proportion of the total population of the Region leaving in those countries or areas which do not accept DOTS but have a case notification rate of <10 per 100 000 population.

Note: For category 2 and 3 under “Proportion of countries or areas in category”, the proportion reported does not correspond to the true percentage of the global population having access to DOTS because not all of these countries implement the strategy in the entire country. A more realistic indicator for illustrating the population coverage with DOTS is shown on the first page of the Global Profile under column b/row “DOTS”.

Global Profile

Case Finding (1998)

	Population Covered		Notified Cases					Estimated cases	Case detection	New ss+ / all pulm. cases
	No.	%	All types			New ss+		New ss+	%	%
			No.	Rate	%	No.	Rate			
	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>f/h</i>	<i>i</i>
AFR	DOTS	366 893 569	61.0	495 736	135.1	76.6	249 692	68.1		63.4
	non-DOTS	217 377 244	36.1	151 106	69.5	23.4	86 181	39.6		71.9
	no report	17 518 687	2.9							
	Total	601 789 500	100.0	646 842	110.7	100.0	335 873	57.5	676 886	49.6
AMR	DOTS	473 675 988	58.7	116 816	24.7	49.2	71 044	15.0		74.8
	non-DOTS	301 949 144	37.4	120 630	40.0	50.8	58 950	19.5		60.5
	no report	31 633 504	3.9							
	Total	807 258 636	100.0	237 446	30.6	100.0	129 994	16.8	185 448	70.1
EMR	DOTS	157 056 621	33.1	79 133	50.4	33.7	41 298	26.3		76.4
	non-DOTS	317 623 545	66.9	155 909	49.1	66.3	33 584	10.6		25.5
	no report	0	0.0							
	Total	474 680 166	100.0	235 042	49.5	100.0	74 882	15.8	282 129	26.5
EUR	DOTS	115 622 581	13.3	53 662	46.4	15.3	18 957	16.4		48.0
	non-DOTS	695 825 915	80.0	297 859	42.8	84.7	92 414	13.3		36.2
	no report	58 715 488	6.7							
	Total	870 163 984	100.0	351 521	43.3	100.0	111 371	13.7	197 052	56.5
SEAR	DOTS	435 576 290	29.3	168 844	38.8	12.9	103 498	23.8		69.1
	non-DOTS	1 049 479 704	70.7	1 138 331	108.5	87.1	284 450	27.1		26.7
	no report	0	0.0							
	Total	1 485 055 994	100.0	1 307 175	88.0	100.0	387 948	26.1	1 341 751	28.9
WPR	DOTS	961 553 341	57.9	495 903	51.6	59.1	282 746	29.4		61.8
	non-DOTS	697 058 245	42.0	343 116	49.2	40.9	108 599	15.6		35.9
	no report	786 643	0.0							
	Total	1 659 398 229	100.0	839 019	50.6	100.0	391 345	23.6	891 198	43.9
GLOBAL	DOTS	2 510 378 390	42.6	1 410 094	56.2	39.0	767 235	30.6		64.5
	non-DOTS	3 279 313 797	55.6	2 206 951	67.3	60.6	664 178	20.3		33.7
	no report	108 654 322	1.8							
	Total	5 898 346 509	100.0	3 617 045	62.5	99.6	1 431 413	24.7	3 574 463	40.0

Treatment Outcomes (1997)

	New ss+ cases									Retreatment cases									
	Registered	% not eval.	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treatm. success (%)	Registered	% not eval.	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treatm. success (%)	
	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>n</i>	<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	
AFR	DOTS	185 863	12.3	51.0	11.4	11.8	1.4	6.5	5.7	62.4	15 060	18.0	45.8	10.0	11.0	2.5	7.5	5.1	55.8
	non-DOTS	78 270	2.7	56.3	12.2	15.6	1.8	7.1	4.5	68.4									
AMR	DOTS	64 120	7.3	72.7	6.2	6.0	1.2	4.2	2.3	78.9	1 411	19.0	37.8	21.0	10.3	2.4	3.8	5.6	58.8
	non-DOTS	68 504	48.4	12.5	25.5	7.7	0.5	2.8	2.6	38.0									
EMR	DOTS	36 251	2.6	64.6	12.5	10.6	1.8	2.9	4.9	77.1	4 036	1.4	54.1	10.7	15.9	5.3	6.8	5.8	64.8
	non-DOTS	23 456	11.2	51.2	13.1	14.6	3.8	1.8	4.3	64.3									
EUR	DOTS	15 276	3.1	56.3	17.0	10.0	6.7	5.0	1.8	73.4	6 463	11.8	49.9	22.4	6.3	3.1	5.0	1.4	72.3
	non-DOTS	7 329	8.5	62.5	10.1	5.3	8.2	3.9	1.5	72.7									
SEAR	DOTS	71 475	13.6	65.8	6.2	7.3	1.4	3.4	2.2	72.0	6 248	6.9	58.7	7.7	12.2	4.2	6.2	4.1	66.4
	non-DOTS	304 995	78.8	2.9	16.4	1.3	0.1	0.1	0.3	19.3									
WPR	DOTS	242 818	2.1	91.7	1.1	1.2	1.1	1.7	1.1	92.8	5 921	9.2	72.9	5.4	2.4	3.9	3.8	2.4	78.2
	non-DOTS	50 713	5.2	76.6	4.0	6.0	4.0	1.6	2.6	80.6									
GLOBAL	DOTS	615 803	7.1	72.0	6.4	6.4	1.4	3.8	3.0	78.3	39 139	12	53.2	11.5	9.6	3.4	6.1	4.0	64.7
	non-DOTS	533 267	52.8	21.9	15.5	5.3	1.0	1.8	1.6	37.5									

Global Profile - cont'd.

WHO TB Control Categories (1998)

Regions	No. of countries	No. of countries	No. of countries in category						Proportion of population in category (%)					
			0	1	2	3	4	5	0	1	2	3	4	5
AFR	47	38	9	5	1	11	21		2.9	7.0	1.1	54.4	34.6	
AMR	44	35	9	8	5	6	13	3	3.9	2.5	22.6	19.6	51.3	
EMR	23	23		8	1	8	6			9.2	31.2	51.5	8.0	
EUR	51	50	1	25	4	4	13	4	6.7	47.7	26.0	8.3	10.2	1.1
SEAR	10	10		1	1	5	3			1.6	66.1	30.9	1.4	
WPR	36	28	8	10	1	6	10	1		9.6	0.3	81.5	8.4	0.2
GLOBAL	211	184	27	57	13	40	66	8	1.8	11.9	26.3	44.3	15.4	0.2

No. of countries in each category: The text of this report incorrectly states that 189 countries reported, instead of 184, due to misclassifications discovered after going to print. In Table 6, the following should be in Category 0: Suriname (from Category 1, Table 6a), and British Virgin Islands, Netherlands Antilles, Turks and Caicos Islands, and the US Virgin Islands (from Category 5, Table 6). In addition, Northern Mariana Islands, Niue, and Tuvalu were incorrectly listed as Category 5 in Table 6b; they should be in Category 1. Figure 2 also contains these errors in DOTS categorization.

Proportion of population in each category: The proportions above comprise whole populations of countries in each category. In contrast, in the column "Populations Covered" on the first page of this Global Profile ("Case Finding"), a country's population may be split into both DOTS and non-DOTS areas. The proportions of DOTS populations above (Categories 2-4) are therefore not meant to correspond with the % population covered by DOTS in "Case Finding" (page 60) other than in Category 0.

Regional Profiles

Africa

The Americas

The Eastern Mediterranean

Europe

South East Asia

Western Pacific

For each Region:

TB control police ■

Regional profile ■

Case notification by age and sex ■

Case notification trends ■

Explanatory Notes

REGIONAL PROFILE

Each Regional Profile is separated into two parts, each consisting of three sections:

Part 1 is on those areas of the country where DOTS is implemented.

Part 2 is on those areas of the country where DOTS is not implemented.

Each part has three sections:

1: country information.

2: coverage of TB control strategy.

3: treatment outcomes of new sputum smear positive cases and retreatment cases.

Country Information, 1998

- a The total number of people who live in the country.
- b The total number of tuberculosis cases (all types) notified to WHO.
- c The case notification rate (per 100 000 population).
- d The total number of new sputum smear positive cases notified to WHO.
- e The new sputum smear positive case notification rate (per 100 000 population).
- f The total number of new sputum smear positive cases estimated for the country.
- d/f The proportion of new sputum smear positive cases notified by the country (d) out of the total number of new sputum smear positive cases estimated for the country (f).
- g The TB control category by which the country is classified.

WHO TB Control Strategy (DOTS)

Coverage

- h The total number of people which are covered by DOTS.
- h/a The proportion of the population covered by DOTS (h) out of the total population of the country (a).
- i The number of case (all types) notified in those areas of the country where DOTS is implemented.
- j The case notification rate (per 100 000 population) in those areas of the country where DOTS is implemented.
- k The proportion of cases notified in those areas where DOTS is implemented (i) out of the total number of cases notified for the entire country (b).
- l The number of new sputum smear positive case notified in those areas of the country where DOTS is implemented.
- m The new sputum smear positive case notification rate (per 100 000 population) in those areas of the country where DOTS is implemented.
- n The proportion of new sputum smear positive cases out of all new pulmonary cases. This indicator reflects prioritisation of and capability to perform smear microscopy examinations.

Explanatory Notes

REGIONAL PROFILE

Treatment Outcomes, 1997

New sputum smear positive cases

- o The number of new smear positive cases *registered* in 1997 in those areas of the country where DOTS is implemented.
- p The proportion of new smear positive cases not evaluated ($([o]-[q+r+s+t+u+v])$) out of the number of new smear positive cases registered (o). This indicator should at best be 0%, showing that all registered cases have been evaluated for treatment outcome.
- q The proportion of new sputum smear positive cases which were cured (defined as a patient who completed treatment and had a negative sputum smear result, on at least two occasions, one of which was at completion of treatment) out of the number of cases registered (o). This indicator should at least be 85%.
- r The proportion of new sputum smear positive cases which completed treatment (no or only one negative sputum examination at the end of treatment) out of the number of cases registered (o). This indicator should be as small as possible as all cases should have a sputum examination at the end of treatment.
- s The proportion of new sputum smear positive cases who did not collect anti-tuberculosis drugs for 2 months or more out of the number of cases evaluated (p). This indicator should be as close to zero as possible.
- t The proportion of new sputum smear positive cases who remained or became again smear positive 5 months or later after starting treatment out of the number of cases evaluated (p). This indicator should be as close to zero as possible.
- u The proportion of new sputum smear positive cases who died during treatment, regardless of cause, out of the number of cases registered (o). This indicator should be as close to zero as possible.
- v The proportion of new sputum smear positive cases who were transferred out to another treatment unit and whose treatment results are unknown out of the number of cases registered (o). This indicator should be close to zero since the treatment outcomes of all cases - except those leaving the country - should be known at national level, regardless of patients moving from one district to another.
- w The proportion of the sum of cases which were cured (q) and which completed treatment (r) out of the number of cases *registered* (o). This indicator measures the treatment success of the programme.

Retreatment cases

The same explanations apply as above.

(Retreatment cases are defined as those cases which previously received treatment but returned to the health centre with a positive sputum smear examination. These cases include defaulters (n), failures (o), and relapses, i.e., previously cured cases.)

Other Strategy (non-DOTS)

The same explanations apply as those listed under WHO TB Control Strategy (DOTS) except that all information shown here refer to those areas of the country where the strategy is not implemented.

Africa



African Region – Summary of TB control policies

Country	Category of the country as of 31/12/97	DOTS Technical Elements							DOTS newly implemented in 1998
		National manual ¹	Training ²	Use of microscopy for diagnosis	SCC ³	DOT ⁴	Drug availability ⁵	Recording and reporting system ⁶	
Algeria	1								
Angola	3								
Benin	4								
Botswana	4								
Burkina Faso	4								
Burundi	2								
Cameroon	3								
Cape Verde	1								
Central African Republic (the)	1								
Chad	1								
Comoros (the)	0								
Congo (the)	4								
Côte d'Ivoire	4								
Democratic Republic of the Congo (the)	3								
Equatorial Guinea	4								
Eritrea	3								
Ethiopia	3								
Gabon	1								
Gambia (the)	0								
Ghana	3								
Guinea	4								
Guinea-Bissau	0								
Kenya	4								
Lesotho	0								
Liberia	3								
Madagascar	4								
Malawi	4								
Mali	3								
Mauritania	0								
Mauritius	4								
Mozambique	4								
Namibia	4								
Niger (the)	3								
Nigeria	3								
Rwanda	4								
Sao Tome and Principe	0								
Senegal	4								
Seychelles	4								X
Sierra Leone	4								
South Africa	3								
St. Helena	0								
Swaziland	0								
Togo	4								
Uganda	4								
United Republic of Tanzania (the)	4								
Zambia	0								
Zimbabwe	4								X

1 Presence of national manual, or a document issued by the government or an authorized scientific body, including policy recommendations endorsed by WHO

2 "WHO standard" training course on management of TB control programmes has been carried out within the past two years; or training materials endorsed by WHO or IUATLD

3 Short course chemotherapy

4 Directly observed treatment

5 A regular supply system of all essential anti-tuberculosis drugs and diagnostic materials

6 Presence of WHO/IUATLD recommended recording and reporting system showing assessment of treatment results

dark pink fully implemented (more than 90% of country)

light pink implemented in part of country

grey not implemented

white unknown

Regional Profile - AFR

Countries	Country Information (1998)								WHO TB Control Strategy (DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage						% new ss+ out of all new pulm. cases	
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.		Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Algeria	30 080 642	15 324	50.9	7 462	24.8	6 032	123.7	1								
Angola	12 091 841	12 293	101.7	7 350	60.8	12 094	60.8	3	4 377 246	36.2	10 387	237.3	84.5	5 444	124.4	57.6
Benin	5 780 961	2 384	41.2	1 988	34.4	5 690	34.9	4	5 780 961	100.0	2 384	41.2	100.0	1 988	34.4	93.1
Botswana	1 570 226	4 764	303.4	2 826	180.0	3 112	90.8	4	1 570 226	100.0	4 764	303.4	100.0	2 826	180.0	77.4
Burkina Faso	11 304 557	2 074	18.3	1 331	11.8	7 262	18.3	4	11 078 466	98.0	2 074	18.7	100.0	1 331	12.0	86.7
Burundi	6 457 356	6 546	101.4	2 782	43.1	6 389	43.5	2	387 441	6.0	2 854	736.6	43.6	1 366	352.6	80.2
Cameroon	14 305 466	5 022	35.1	4 374	30.6	8 113	53.9	3	4 434 694	31.0	1 264	28.5	25.2	971	21.9	88.5
Cape Verde	408 172	205	50.2	104	25.5	300	34.7	1								
Central African Republic (the)	3 484 881	4 875	139.9	2 637	75.7	3 178	83.0	1								
Chad	7 270 337	2 784	38.3			6 143		1								
Comoros (the)	657 849					191		0								
Congo (the)	2 785 423	3 863	138.7	2 044	73.4	3 129	65.3	4	2 785 423	100.0	3 863	138.7	100.0	2 044	73.4	68.8
Côte d'Ivoire	14 292 066	14 841	103.8	9 850	68.9	16 804	58.6	4	13 434 542	94.0	14 841	110.5	100.0	9 850	73.3	83.8
Democratic Republic of the Congo (the)	49 138 831	58 869	119.8	33 419	68.0	55 074	60.7	3	29 483 299	60.0	58 869	199.7	100.0	33 419	113.3	78.0
Equatorial Guinea	430 792	416	96.6	284	65.9	336	84.5	4	413 560	96.0	416	100.6	100.0	284	68.7	69.6
Eritrea	3 577 214	7 789	217.7	223	6.2	3 729	6.0	3	2 146 328	60.0	575	26.8	7.4	223	10.4	54.4
Ethiopia	59 649 132	69 472	116.5	18 864	31.6	67 295	28.0	3	38 414 041	64.4	69 472	180.9	100.0	18 864	49.1	40.4
Gabon	1 167 017	1 380	118.3	889	76.2	876	101.5	1								
Gambia (the)	1 228 896					1 128		0								
Ghana	19 161 677	10 173	53.1	7 005	36.6	17 159	40.8	3	13 413 174	70.0	8 191	61.1	80.5	5 778	43.1	75.5
Guinea	7 336 704	4 783	65.2	3 362	45.8	5 748	58.5	4	7 336 704	100.0	4 783	65.2	100.0	3 362	45.8	87.0
Guinea-Bissau	1 161 155					873		0								
Kenya	29 007 622	48 936	168.7	24 029	82.8	35 297	68.1	4	29 007 622	100.0	48 936	168.7	100.0	24 029	82.8	57.9
Lesotho	2 061 859					3 772		0								
Liberia	2 665 567	1 753	65.8	1 190	44.6	2 719	43.8	3	1 066 227	40.0	1 753	164.4	100.0	1 190	111.6	75.7
Madagascar	15 057 063	14 661	97.4	9 639	64.0	14 985	64.3	4	14 153 639	94.0	14 661	103.6	100.0	9 639	68.1	88.0
Malawi	10 346 382	22 764	220.0	8 853	85.6	15 590	56.8	4	10 346 382	100.0	22 764	220.0	100.0	8 853	85.6	51.6
Mali	10 693 656	4 142	38.7	2 558	23.9	15 298	16.7	3	8 768 798	82.0	4 030	46.0	97.3	2 474	28.2	76.6
Mauritania	2 528 591					2 875		0								
Mauritius	1 141 261	135	11.8	108	9.5	335	32.2	4	1 141 261	100.0	135	11.8	100.0	108	9.5	92.3
Mozambique	18 879 889	19 672	104.2	12 116	64.2	19 934	60.8	4	17 935 895	95.0	19 672	109.7	100.0	12 116	67.6	71.6
Namibia	1 659 506	7 972	480.4	3 490	210.3	3 697	94.4	4	1 659 506	100.0	7 972	480.4	100.0	3 490	210.3	58.9
Niger (the)	10 078 493	3 470	34.4	2 127	21.1	6 371	33.4	3	2 534 741	25.1	1 890	74.6	54.5	1 121	44.2	80.9

Regional Profile - AFR

Countries	Country Information (1998)								WHO TB Control Strategy (DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage							
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		% new ss+ out of all new pulm. cases
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.	Rate	
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Nigeria	106 409 278	20 249	19.0	13 161	12.4	112 909	11.7	3	47 884 175	45.0	20 249	42.3	100.0	13 161	27.5	71.0
Rwanda	6 603 991	6 112	92.6	4 417	66.9	6 937	63.7	4	6 603 991	100.0	6 112	92.6	100.0	4 417	66.9	85.4
Sao Tome and Principe	141 000					76		0								
Senegal	9 003 151	8 475	94.1	5 454	60.6	8 833	61.7	4	9 003 151	100.0	8 475	94.1	100.0	5 454	60.6	79.2
Seychelles	76 000	11	14.5	10	13.2	12	82.0	4	75 240	99.0	11	14.6	100.0	10	13.3	100.0
Sierra Leone	4 567 641	3 270	71.6	2 262	49.5	6 339	35.7	4	4 567 641	100.0	3 270	71.6	100.0	2 262	49.5	74.4
South Africa	39 357 467	128 415	326.3	82 293	209.1	69 800	117.9	3	8 658 643	22.0	22 121	255.5	17.2	16 246	187.6	89.0
Swaziland	952 074					1 813		0								
Togo	4 397 477	1 212	27.6	932	21.2	6 410	14.5	4	4 397 477	100.0	1 212	27.6	100.0	932	21.2	97.2
Uganda	20 554 254	29 228	142.2	18 222	88.7	27 316	66.7	4	20 554 254	100.0	29 228	142.2	100.0	18 222	88.7	72.8
United Republic of Tanzania (the)	32 101 777	51 231	159.6	23 726	73.9	40 915	58.0	4	32 101 777	100.0	51 231	159.6	100.0	23 726	73.9	58.2
Zambia	8 781 263					19 464		0								
Zimbabwe	11 377 043	47 277	415.5	14 492	127.4	24 531	59.1	4	11 377 043	100.0	47 277	415.5	100.0	14 492	127.4	36.1
Other Territories																
St. Helena	6 000					3		0								
Regional Total	601 789 500	646 842	110.7	335 873	57.5	676 886	49.6		366 893 569	61.0	495 736	135.1	76.6	249 692	68.1	63.4

Regional Profile - AFR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage						% new ss+ out of all new pulm. cases	
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.		Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Algeria	30 080 642	15 324	50.9	7 462	24.8	6 032	123.7	1	30 080 642	100.0	15 324	50.9	100.0	7 462	24.8	82.0
Angola	12 091 841	12 293	101.7	7 350	60.8	12 094	60.8	3	7 714 595	63.8	1 906	24.7	15.5	1 906	24.7	100.0
Benin	5 780 961	2 384	41.2	1 988	34.4	5 690	34.9	4								
Botswana	1 570 226	4 764	303.4	2 826	180.0	3 112	90.8	4								
Burkina Faso	11 304 557	2 074	18.3	1 331	11.8	7 262	18.3	4								
Burundi	6 457 356	6 546	101.4	2 782	43.1	6 389	43.5	2	6 069 915	94.0	3 692	60.8	56.4	1 416	23.3	41.0
Cameroon	14 305 466	5 022	35.1	4 374	30.6	8 113	53.9	3	9 870 772	69.0	3 758	38.1	74.8	3 403	34.5	94.0
Cape Verde	408 172	205	50.2	104	25.5	300	34.7	1	408 172	100.0	205	50.2	100.0	104	25.5	60.5
Central African Republic (the)	3 484 881	4 875	139.9	2 637	75.7	3 178	83.0	1	3 310 637	95.0	4 875	147.3	100.0	2 637	79.7	67.7
Chad	7 270 337	2 784	38.3			6 143		1			2 784		100.0			
Comoros (the)	657 849					191		0								
Congo (the)	2 785 423	3 863	138.7	2 044	73.4	3 129	65.3	4	2 785 423	100.0						
Côte d'Ivoire	14 292 066	14 841	103.8	9 850	68.9	16 804	58.6	4								
Democratic Republic of the Congo (the)	49 138 831	58 869	119.8	33 419	68.0	55 074	60.7	3	19 655 532	40.0						
Equatorial Guinea	430 792	416	96.6	284	65.9	336	84.5	4								
Eritrea	3 577 214	7 789	217.7	223	6.2	3 729	6.0	3	1 430 886	40.0	7 214	504.2	92.6			
Ethiopia	59 649 132	69 472	116.5	18 864	31.6	67 295	28.0	3								
Gabon	1 167 017	1 380	118.3	889	76.2	876	101.5	1	688 540	59.0	1 380	200.4	100.0	889	129.1	74.4
Gambia (the)	1 228 896					1 128		0								
Ghana	19 161 677	10 173	53.1	7 005	36.6	17 159	40.8	3	5 748 503	30.0	1 982	34.5	19.5	1 227	21.3	69.2
Guinea	7 336 704	4 783	65.2	3 362	45.8	5 748	58.5	4								
Guinea-Bissau	1 161 155					873		0								
Kenya	29 007 622	48 936	168.7	24 029	82.8	35 297	68.1	4								
Lesotho	2 061 859					3 772		0								
Liberia	2 665 567	1 753	65.8	1 190	44.6	2 719	43.8	3	1 599 340	60.0						
Madagascar	15 057 063	14 661	97.4	9 639	64.0	14 985	64.3	4								
Malawi	10 346 382	22 764	220.0	8 853	85.6	15 590	56.8	4								
Mali	10 693 656	4 142	38.7	2 558	23.9	15 298	16.7	3	1 924 858	18.0	112	5.8	2.7	84	4.4	82.4
Mauritania	2 528 591					2 875		0								
Mauritius	1 141 261	135	11.8	108	9.5	335	32.2	4								
Mozambique	18 879 889	19 672	104.2	12 116	64.2	19 934	60.8	4	943 994	5.0						
Namibia	1 659 506	7 972	480.4	3 490	210.3	3 697	94.4	4								
Niger (the)	10 078 493	3 470	34.4	2 127	21.1	6 371	33.4	3	7 543 752	74.9	1 580	20.9	45.5	1 006	13.3	79.5

Regional Profile - AFR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage						% new ss+ out of all new pulm. cases	
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.		Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Nigeria	106 409 278	20 249	19.0	13 161	12.4	112 909	11.7	3								
Rwanda	6 603 991	6 112	92.6	4 417	66.9	6 937	63.7	4								
Sao Tome and Principe	141 000					76		0								
Senegal	9 003 151	8 475	94.1	5 454	60.6	8 833	61.7	4								
Seychelles	76 000	11	14.5	10	13.2	12	82.0	4								
Sierra Leone	4 567 641	3 270	71.6	2 262	49.5	6 339	35.7	4								
South Africa	39 357 467	128 415	326.3	82 293	209.1	69 800	117.9	3	30 698 824	78.0	106 294	346.2	82.8	66 047	215.1	74.9
Swaziland	952 074					1 813		0								
Togo	4 397 477	1 212	27.6	932	21.2	6 410	14.5	4								
Uganda	20 554 254	29 228	142.2	18 222	88.7	27 316	66.7	4								
United Republic of Tanzania (the)	32 101 777	51 231	159.6	23 726	73.9	40 915	58.0	4								
Zambia	8 781 263					19 464		0								
Zimbabwe	11 377 043	47 277	415.5	14 492	127.4	24 531	59.1	4								
Other Territories																
St. Helena	6 000					3		0								
Regional Total	601 789 500	646 842	110.7	335 873	57.5	676 886	49.6		130 474 385	21.7	151 106	115.8	23.4	86 181	66.1	71.9

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Algeria																		
Angola	8 246	77.6	9.8	4.8	6.0	0.6	1.2	0.2	14.5	1 340	83.6	5.9	3.8	3.5	2.5	0.7		9.7
Benin	1 854	0.0	55.3	18.2	18.0	2.1	5.3	1.1	73.5	170	0.0	42.9	21.8	21.2	8.2	4.7	1.2	64.7
Botswana	2 635	0.9	27.7	42.8	10.4		7.3	10.9	70.5									
Burkina Faso	1 281	0.0	51.3	9.9	20.8	2.3	11.5	4.3	61.2									
Burundi	1 138	0.0	38.1	29.3	27.9	1.1	2.5	1.1	67.5									
Cameroon	460	0.0	78.3	2.0	6.3	2.2	10.0	1.3	80.2	63	0.0	66.7	1.6	14.3	6.3	4.8	6.3	68.3
Cape Verde																		
Central African Republic (the)																		
Chad																		
Comoros (the)																		
Congo (the)																		
Côte d'Ivoire	8 083	0.0	54.3	6.7	17.9	1.7	5.3	14.1	61.1	361	0.0	54.3	11.6	18.0	3.0	7.8	5.3	65.9
Democratic Republic of the Congo (the)	25 183	14.5	52.2	11.5	8.0	1.0	4.8	7.9	63.7	2 771	34.7	40.4	5.7	4.8	1.5	4.9	8.0	46.1
Equatorial Guinea	226	0.0	64.2	17.7	9.3	3.1	5.3	0.4	81.9	16	0.0	50.0	12.5	25.0	12.5			62.5
Eritrea	128	7.0	75.0	7.8	1.6	1.6	0.8	6.3	82.8									
Ethiopia	11 592	4.4	61.2	10.4	11.7	1.0	6.6	4.7	71.7	784	0.0	52.2	17.1	13.3	4.0	8.3	5.2	69.3
Gabon																		
Gambia (the)																		
Ghana	5 596	13.2	40.0	8.3	23.9	2.4	7.5	4.7	48.3									
Guinea	2 981	0.0	59.4	14.5	10.0	1.6	8.1	6.4	73.9	120	0.0	40.8	5.0	23.3	5.0	14.2	11.7	45.8
Guinea-Bissau																		
Kenya	19 040	15.5	52.9	12.2	7.4	0.5	4.8	6.7	65.1	1 386	28.5	47.5	7.1	5.8	0.6	6.1	4.3	54.7
Lesotho																		
Liberia	1 139	0.0	43.8	31.0	21.5	1.4	2.3		74.8	27	0.0	25.9	29.6	22.2	7.4	14.8		55.6
Madagascar	9 229	4.1	55.5	8.6	18.5	6.9	1.4	4.9	64.1	1 136	12.0	55.3	6.6	12.5	5.8	3.1	4.8	61.9
Malawi	7 587	0.3	68.3	2.5	4.2	0.9	20.8	3.1	70.8	517	0.0	68.5	2.3	3.7	1.2	23.0	1.4	70.8
Mali	812	0.0	45.7	16.7	28.0	1.6	1.2	6.8	62.4									
Mauritania																		
Mauritius																		
Mozambique	8 571	0.5	58.7	7.8	16.0	1.7	8.6	6.7	66.5	890	9.0	60.4	3.8	13.4	1.7	6.4	5.3	64.3
Namibia	3 223	8.7	33.5	24.6	18.9	1.4	5.9	7.0	58.1	428	0.0	38.3	23.4	17.3	5.1	8.9	7.0	61.7
Niger (the)	734	2.6	38.7	27.7	12.1	3.7	9.9	5.3	66.3	147	3.4	43.5	6.8	23.1	8.8	7.5	6.8	50.3

Regional Profile - AFR cont'd.

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Nigeria	11 253	0.0	60.4	12.6	14.9	2.7	6.9	2.4	73.0									
Rwanda	2 922	0.0	42.8	25.4	8.8	1.1	7.9	14.0	68.2	173	0.0	29.5	28.3	12.1	3.5	12.7	13.9	57.8
Sao Tome and Principe																		
Senegal	5 340	19.2	45.1	6.6	19.9	1.9	2.9	4.5	51.7	725	0.0	47.0	7.6	32.6	3.3	5.1	4.4	54.6
Seychelles	11	0.0	100.0						100.0									
Sierra Leone	1 958	0.0	69.7	9.6	12.8	1.4	5.8	0.7	79.3	193	0.0	69.4	4.7	10.9	4.7	8.3	2.1	74.1
South Africa	4 146	1.1	68.2	4.9	10.9	3.0	4.9	6.9	73.2	533	3.8	63.4	4.7	11.4	3.2	5.6	7.9	68.1
Swaziland																		
Togo	931	1.2	43.4	20.3	18.5	1.2	9.8	5.7	63.7	49	0.0	26.5	18.4	36.7	8.2	8.2	2.0	44.9
Uganda	17 500	34.7	19.7	20.0	14.2	0.4	6.1	4.9	39.7	1 136	0.0	31.6	26.3	23.6	1.2	10.4	6.9	57.9
United Republic of Tanzania (the)	22 064	2.8	71.2	5.5	6.2	0.6	9.0	4.7	76.7	2 095	0.0	60.8	14.1	6.4	1.1	13.8	3.8	74.9
Zambia																		
Zimbabwe																		
Other Territories																		
St. Helena																		
Regional Total	185 863	12.3	51.0	11.4	11.8	1.4	6.5	5.7	62.4	15 060	5.4	45.8	10.0	11.0	2.5	7.5	5.1	55.8

Countries	Other Strategy (non-DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases (Short Course)									New ss+ cases (Other Regimen)								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Algeria	6 860	0.0	82.1	3.5	5.3	0.8	2.8	5.5	85.6									
Angola																		
Benin																		
Botswana																		
Burkina Faso																		
Burundi	1 051	0.5	17.2	48.2	28.9	0.2	4.8	0.2	65.5									
Cameroon	3 117	0.0	50.1	7.2	28.0	1.5	8.9	4.3	57.3									
Cape Verde																		
Central African Republic (the)																		
Chad																		
Comoros (the)																		
Congo (the)																		
Côte d'Ivoire																		
Democratic Republic of the Congo (the)	814	0.0	46.6	23.2	13.5	2.2	10.8	3.7	69.8									
Equatorial Guinea																		
Eritrea																		
Ethiopia																		
Gabon	577	33.3	43.8	5.9	13.0	0.2	0.3	3.5	49.7									
Gambia (the)																		
Ghana																		
Guinea																		
Guinea-Bissau																		
Kenya																		
Lesotho																		
Liberia																		
Madagascar																		
Malawi																		
Mali																		
Mauritania																		
Mauritius																		
Mozambique	2 587	1.6	48.9	10.4	23.7	2.6	8.9	3.8	59.3									
Namibia																		
Niger (the)																		

Regional Profile - AFR cont'd.

Countries	Other Strategy (non-DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases (Short Course)									New ss+ cases (Other Regimen)								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Nigeria																		
Rwanda																		
Sao Tome and Principe																		
Senegal																		
Seychelles																		
Sierra Leone																		
South Africa	50 854	3.6	55.9	11.6	17.3	2.3	6.7	2.5	67.4									
Swaziland																		
Togo																		
Uganda																		
United Republic of Tanzania (the)																		
Zambia																		
Zimbabwe	12 410	0.0	51.3	17.5	8.2	0.2	10.2	12.7	68.8									
Other Territories																		
St. Helena																		
Regional Total	78 270	2.7	56.3	12.2	15.6	1.8	7.1	4.5	68.4									

AFR - Notification rates by age and sex, 1998.

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total
Algeria																								
Angola	8.3	81.3	128.8	165.6	136.5	98.3	89.0	63.1	10.3	95.4	127.7	117.2	86.7	68.0	49.1	58.2	9.3	88.4	128.3	140.8	110.7	82.3	66.9	60.6
Benin	1.5	41.7	102.4	103.0	127.8	126.7	89.8	44.3	1.1	33.3	63.4	54.6	39.2	39.5	24.2	24.9	1.3	37.5	82.2	76.7	82.8	80.8	57.1	34.4
Botswana																								
Burkina Faso	0.1	9.3	35.8	53.2	54.0	46.9	49.8	16.4	0.3	7.5	13.0	19.0	26.1	14.9	8.9	7.1	0.2	8.4	24.4	36.0	39.6	29.9	27.4	11.8
Burundi	3.0	49.2	122.4	172.1	206.2	126.9	50.2	58.8	3.3	42.7	72.7	73.9	67.2	40.8	15.5	32.3	3.1	45.9	97.3	121.7	130.0	76.2	29.0	45.2
Cameroon	0.5	45.9	105.7	125.4	60.8	29.7	15.4	40.0	1.0	31.2	61.7	41.4	24.5	16.5	11.0	21.3	0.7	38.5	83.6	82.8	42.1	22.8	13.0	30.6
Cape Verde	2.4	21.0	41.2	91.0	209.1	128.9	143.3	31.7	2.5	26.8	10.6	20.3	37.3	47.4	93.5	18.9	2.4	24.0	25.2	47.5	82.4	72.4	112.0	24.7
Central African Republic (the)	3.8	61.5	217.3	205.8	150.0	106.6	81.8	78.2	9.0	101.2	199.3	124.7	96.5	71.5	34.6	73.5	6.4	81.8	207.9	163.4	121.5	87.5	54.8	75.7
Chad																								
Congo (the)																								
Côte d'Ivoire	2.3	78.2	176.6	219.5	176.6	143.6	133.1	82.0	3.3	64.4	116.0	116.1	90.3	48.3	54.3	48.9	2.8	71.3	147.1	170.4	136.8	99.4	94.9	65.7
Democratic Republic of the Congo (the)	3.8	80.4	163.8	175.7	150.0	118.2	90.3	67.1	5.5	88.3	143.8	129.3	89.8	73.1	35.6	57.5	4.7	84.4	153.7	152.1	118.8	93.9	59.0	62.2
Equatorial Guinea	6.4	76.4	163.4	192.1	206.6	168.1	148.2	83.4	3.2	93.4	107.0	93.8	46.0	46.6	43.7	49.1	4.8	84.9	134.8	141.7	123.1	103.7	90.5	65.9
Eritrea	0.5	10.6	12.2	11.4	13.3	11.4	22.7	6.9	0.4	12.6	11.7	6.4	7.6	7.8	9.2	5.9	0.4	11.6	11.9	8.9	10.4	9.5	15.2	6.4
Ethiopia	5.2	46.5	79.0	58.0	46.2	38.3	23.3	32.1	6.1	54.6	62.7	45.7	29.0	16.5	6.0	27.9	5.6	50.5	71.0	52.0	37.7	27.1	13.6	29.9
Gabon	6.0	94.3	215.0	220.5	159.5	123.9	106.9	94.9	6.5	97.7	113.3	112.1	64.1	77.6	39.2	57.8	6.3	96.0	163.8	165.7	110.7	99.5	70.0	75.9
Ghana	2.0	29.5	77.9	101.4	131.3	138.7	185.7	45.4	2.0	25.8	57.8	53.3	59.2	62.2	78.5	27.8	2.0	27.6	67.8	77.0	94.4	98.9	127.6	36.6
Guinea	1.3	55.6	152.7	142.6	123.2	126.3	130.4	60.9	2.3	42.3	74.3	59.1	51.0	48.9	23.8	30.7	1.8	49.0	113.9	101.1	86.6	85.9	72.9	45.8
Kenya	3.2	104.2	271.4	236.8	193.8	151.2	100.6	99.4	5.0	104.0	173.8	109.0	87.8	70.2	31.6	66.4	4.1	104.1	222.9	172.8	139.5	108.5	63.3	82.8
Liberia	2.9	48.4	144.4	170.4	98.7	66.1	33.3	50.2	2.9	54.0	107.3	111.9	62.5	31.0	38.5	39.1	2.9	51.2	126.4	142.0	80.7	48.0	36.2	44.6
Madagascar	2.1	59.5	140.3	196.3	181.9	207.1	143.9	73.1	3.3	62.3	109.1	104.9	86.0	91.1	50.8	49.9	2.7	60.9	124.7	148.7	131.7	144.2	93.6	61.3
Malawi	1.9	66.8	237.6	277.1	239.7	167.6	127.1	88.6	3.5	112.9	230.0	192.1	141.8	74.1	42.0	82.7	2.7	89.7	233.7	233.0	187.3	116.8	79.6	85.6
Mali	0.5	17.8	76.9	104.5	114.2	109.0	80.6	33.8	0.4	15.8	36.3	37.9	28.7	35.1	14.3	14.5	0.5	16.8	56.6	70.3	68.7	68.8	43.1	23.9
Mauritius	0.7	11.2	10.2	22.7	32.4	31.4	66.3	16.2	0.0	8.6	5.3	4.5	5.0	8.3	15.8	5.3	0.3	9.9	7.8	13.7	18.5	19.1	37.5	10.7
Mozambique																								
Namibia	5.7	157.5	685.6	661.0	487.8	392.9	386.9	255.3	9.0	183.1	451.8	366.7	195.8	150.5	194.7	166.3	7.4	170.2	568.7	512.8	337.4	264.5	281.8	210.3
Niger (the)	0.2	23.0	81.2	94.2	86.6	96.6	56.7	31.8	0.6	9.6	24.7	28.5	29.6	24.7	11.2	10.6	0.4	16.3	52.6	60.6	57.1	58.4	31.4	21.1
Nigeria	0.5	17.1	34.1	27.5	28.0	21.3	26.4	14.1	0.7	17.5	23.8	18.3	16.5	12.7	7.8	10.6	0.6	17.3	28.9	22.9	22.0	16.8	16.2	12.4
Rwanda																								
Senegal	4.4	87.6	200.2	204.7	168.2	151.6	218.5	85.8	4.2	46.5	73.7	72.0	64.0	53.3	60.6	35.5	4.3	67.1	136.8	137.7	115.2	99.7	130.5	60.6
Seychelles	0.0	0.0	14.3	50.0	50.0	50.0	50.0	21.1	0.0	0.0	0.0	16.7	0.0	50.0	0.0	5.3	0.0	0.0	7.7	33.3	25.0	50.0	20.0	13.2
Sierra Leone	1.4	52.9	144.5	158.6	134.5	86.5	72.8	59.6	3.6	53.7	92.3	96.7	55.9	41.5	23.0	39.9	2.5	53.3	118.0	126.8	93.6	62.4	44.8	49.5
South Africa								0.0																
Togo	1.2	20.2	61.0	70.6	7.2	57.3	63.4	22.9	1.6	23.1	38.2	24.9	26.3	25.7	27.4	15.9	1.4	21.7	49.5	47.4	17.1	40.6	43.6	19.4
Uganda	6.5	72.9	273.8	316.1	322.8	279.2	218.9	103.1	9.1	80.8	206.1	180.8	155.3	140.9	80.7	74.4	7.8	76.8	240.0	248.0	235.8	205.0	143.2	88.7
United Republic of Tanzania (the)	2.7	78.9	224.1	252.3	226.6	207.2	212.1	93.7	3.3	69.0	142.8	120.8	89.9	78.3	54.5	55.3	3.0	73.9	182.8	185.4	156.0	139.4	125.4	74.2
Zimbabwe																								
AFR	2.2	41.0	97.4	100.5	87.7	73.4	66.6	41.5	2.9	41.6	69.2	56.7	43.2	33.9	21.9	29.0	2.6	41.3	83.3	78.4	64.9	52.5	41.8	35.2

AFR - Age and sex distribution of smear-positive TB cases in DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Angola	196	755	719	621	312	119	75	2 797	218	888	744	448	187	93	41	2 619	414	1 643	1 463	1 069	499	212	116	5 416
Benin	20	233	367	251	205	113	71	1 260	15	189	242	159	65	39	19	728	35	422	609	410	270	152	90	1 988
Botswana																								
Burkina Faso	4	104	270	236	159	89	65	927	9	83	98	86	82	32	14	404	13	187	368	322	241	121	79	1 331
Burundi	22	148	259	260	187	50	16	942	24	130	198	118	62	23	8	563	46	278	457	378	249	73	24	1 505
Cameroon	11	132	228	161	66	29	10	637	13	97	123	50	27	18	6	334	24	229	351	211	93	47	16	971
Congo (the)																								
Côte d'Ivoire	72	1173	1747	1471	795	433	273	5 964	104	955	1087	703	347	126	105	3 427	176	2 128	2 834	2 174	1 142	559	378	9 391
Democratic Republic of the Congo (the)	455	3684	5073	3578	2002	997	518	16 307	651	4074	4536	2716	1295	722	272	14 266	1 106	7 758	9 609	6 294	3 297	1 719	790	30 573
Equatorial Guinea	6	30	46	39	29	16	11	177	3	37	31	20	7	5	4	107	9	67	77	59	36	21	15	284
Eritrea	4	36	30	19	15	8	10	122	3	43	29	11	9	6	5	106	7	79	59	30	24	14	15	228
Ethiopia	715	2643	3187	1610	839	429	171	9 594	832	3016	2434	1220	519	194	55	8 270	1 547	5 659	5 621	2 830	1 358	623	226	17 864
Ghana	71	465	826	741	642	422	400	3 567	62	390	623	412	304	212	208	2 211	133	855	1 449	1 153	946	634	608	5 778
Guinea	22	409	763	494	271	168	117	2 244	37	303	365	202	115	71	25	1 118	59	712	1 128	696	386	239	142	3 362
Kenya	210	3372	5477	2983	1378	626	382	14 428	318	3315	3469	1378	656	324	141	9 601	528	6 687	8 946	4 361	2 034	950	523	24 029
Liberia	18	150	229	158	72	34	11	672	18	164	160	98	45	17	16	518	36	314	389	256	117	51	27	1 190
Madagascar	70	827	1545	1420	829	485	282	5 458	108	852	1193	824	430	253	117	3 777	178	1 679	2 738	2 244	1 259	738	399	9 235
Malawi	46	677	1581	1158	643	281	151	4 537	85	1131	1585	867	437	148	63	4 316	131	1 808	3 166	2 025	1 080	429	214	8 853
Mali	11	190	482	413	299	201	126	1 722	11	167	228	156	84	76	30	752	22	357	710	569	383	277	156	2 474
Mauritius	1	12	10	21	19	10	19	92	0	9	5	4	3	3	6	30	1	21	15	25	22	13	25	122
Mozambique																								
Namibia	20	256	791	530	265	139	107	2 108	31	294	521	298	113	60	65	1 382	51	550	1 312	828	378	199	172	3 490
Niger (the)	3	132	314	218	101	65	26	859	9	52	80	54	32	24	11	262	12	184	394	272	133	89	37	1 121
Nigeria	125	1798	2543	1282	889	451	369	7 457	169	1856	1808	881	560	298	132	5 704	294	3 654	4 351	2 163	1 449	749	501	13 161
Rwanda																								
Senegal	90	781	1208	856	453	250	215	3 853	84	412	447	307	178	98	75	1 601	174	1 193	1 655	1 163	631	348	290	5 454
Seychelles	0	0	1	3	2	1	1	8	0	0	0	1	0	1	0	2	0	0	1	4	2	2	1	10
Sierra Leone	14	226	445	338	191	78	42	1 334	36	235	294	217	86	43	17	928	50	461	739	555	277	121	59	2 262
South Africa																								
Togo	12	85	175	134	9	46	38	499	16	98	111	49	35	23	20	352	28	183	286	183	44	69	58	851
Uganda	334	1512	3672	2491	1429	676	428	10 542	467	1682	2760	1441	744	395	191	7 680	801	3 194	6 432	3 932	2 173	1 071	619	18 222
United Republic of Tanzania (the)	198	2528	4910	3400	1973	1112	767	14 888	240	2234	3243	1686	835	466	241	8 945	438	4 762	8 153	5 086	2 808	1 578	1 008	23 833
Zimbabwe																								
AFR	2 750	22 358	36 898	24 886	14 074	7 328	4 701	112 995	3 563	22 706	26 414	14 406	7 257	3 770	1 887	80 003	6 313	45 064	63 312	39 292	21 331	11 098	6 588	192 998
%	2.4	19.8	32.7	22.0	12.5	6.5	4.2	100	4.5	28.4	33.0	18.0	9.1	4.7	2.4	100	3.3	23.3	32.8	20.4	11.1	5.8	3.4	100

AFR - Age and sex distribution of smear-positive TB cases in non-DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total
Algeria																								
Angola	44	160	231	218	158	100	60	971	79	196	226	175	132	76	51	935	123	356	457	393	290	176	111	1 906
Burundi	23	153	268	270	132	52	17	915	25	135	123	122	64	24	8	501	48	288	391	392	196	76	25	1 416
Cameroon	4	519	778	626	196	58	25	2 206	17	346	472	218	85	35	24	1 197	21	865	1 250	844	281	93	49	3 403
Cape Verde	2	9	14	14	6	6	9	60	2	12	4	5	3	5	10	41	4	21	18	19	9	11	19	101
Central African Republic (the)	28	205	482	328	157	76	46	1 322	67	353	476	217	115	61	26	1 315	95	558	958	545	272	137	72	2 637
Chad																								
Congo (the)																								
Democratic Republic of the Congo (the)																								
Eritrea																								
Gabon	14	93	159	129	76	43	32	546	15	97	85	67	32	30	14	340	29	190	244	196	108	73	46	886
Ghana	12	88	183	172	133	87	87	762	23	93	135	81	62	36	35	465	35	181	318	253	195	123	122	1 227
Liberia																								
Mali	2	3	19	15	9	4	4	56	0	6	9	8	4	3	0	30	2	9	28	23	13	7	4	86
Mozambique																								
Niger (the)	1	86	197	181	133	94	35	727	5	40	80	72	54	22	4	277	6	126	277	253	187	116	39	1 004
South Africa																								
Zimbabwe																								
AFR	130	1 316	2 331	1 953	1 000	520	315	7 565	233	1 278	1 610	965	551	292	172	5 101	363	2 594	3 941	2 918	1 551	812	487	12 666
%	1.7	17.4	30.8	25.8	13.2	6.9	4.2	100	4.6	25.1	31.6	18.9	10.8	5.7	3.4	100	2.9	20.5	31.1	23.0	12.2	6.4	3.8	100

AFR - Number of tuberculosis cases notified, 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria		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	15 324
Angola	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
Benin	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
Botswana	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
Burkina Faso	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
Burundi	643	951	1 053	1 904	2 317	2 569	2 739	3 745	4 608	4 575	4 883	4 464	4 677	3 640	3 326	3 796	5 335	6 546
Cameroon	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
Cape Verde	344	393	230	285	259		285	276	210	221					303	179	196	205
Central African Republic (the)	758	1 475	1 686	468	520	779	499	814	64	2 124	2 045				3 339	3 623	4 459	4 875
Chad	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		2 784
Comoros (the)								212	139	140	119	108	129	115	129	140		
Congo (the)	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
Côte d'Ivoire	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
Democratic Republic of the Congo (the)	8 929					5 043	6 343				21 135	31 400	34 319		78 099	45 999	45 576	58 869
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
Ethiopia	42 423	52 403	56 824	65 045	71 731	80 846	85 867	95 521	80 795	88 634	60 006	60 006		99 329	26 034	183 375	59 105	69 472
Gabon	796	761	752	654	855	769	864	721	912	917	906	926	972	1 034	1 115	951	1 434	1 380
Gambia (the)	58														1 023	1 242	1 357	
Ghana	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
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
Guinea-Bissau	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	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
Lesotho	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	
Liberia	1 002	835	885		425	232	384	894				1 948	1 766	1 764	1 393	840		1 753
Madagascar	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	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
Mali	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
Mauritania	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	
Mauritius	157	121	152	118	111	119	117	114	129	119	134	130	159	149	153			135
Mozambique	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
Niger (the)	2 871	754	673	665	698	570	556	631	608	5 200				626	3 784	1 980	3 812	3 470
Nigeria	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
Rwanda	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
Sao Tome and Principe	37	40	59	49	40	8	55	13		17	120			97	41			
Senegal	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
Seychelles	0	16	16	10	10	24	14	10	6	41			5		9	15	20	11
Sierra Leone	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	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
Swaziland	143	3 059	1 955			1 098	1 352	1 394		1 531			1 458		2 055	3 893		
Togo	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		1 212
Uganda	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
United Republic of Tanzania (the)	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
Zambia	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	4 051	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
Other territories																		
St. Helena																		
Total	224 730	230 352	245 939	243 741	269 045	278 295	314 589	343 166	334 084	403 407	399 346	427 967	423 060	511 706	529 221	696 941	562 974	646 842
<i>No. of countries reporting</i>	<i>41</i>	<i>38</i>	<i>40</i>	<i>36</i>	<i>40</i>	<i>41</i>	<i>43</i>	<i>43</i>	<i>40</i>	<i>42</i>	<i>40</i>	<i>37</i>	<i>41</i>	<i>37</i>	<i>45</i>	<i>41</i>	<i>36</i>	<i>38</i>
<i>% of countries reporting</i>	<i>87</i>	<i>81</i>	<i>85</i>	<i>77</i>	<i>85</i>	<i>87</i>	<i>91</i>	<i>91</i>	<i>85</i>	<i>89</i>	<i>85</i>	<i>79</i>	<i>87</i>	<i>79</i>	<i>96</i>	<i>87</i>	<i>77</i>	<i>81</i>

AFR - Case notification rates (per 100 000 population), 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Algeria		69.7	66.4	61.8	63.2	57.4	48.5	47.7	45.4	46.5	44.4	43.7	49.8	48.7	48.1		56.2	50.9
Angola	104.0	106.9	87.2	130.2	108.1	113.9	100.7	94.2	107.2	111.3	116.7	114.1	80.8	67.5	72.7	136.0	122.3	101.7
Benin	52.3	48.9	47.7	49.1	50.8	52.2	44.5	46.1	42.9	44.7	45.1	49.1	46.3	40.8	45.0	43.3	34.4	41.2
Botswana	277.4	278.1	286.1	297.1	250.4	234.9	274.3	229.1	204.9	230.2	248.6	307.7	332.8	330.9	383.6	439.9	449.1	303.4
Burkina Faso	33.7	31.1	41.0	11.4	57.7	12.6	16.9	11.1	18.3	16.5	16.0		14.6	8.5	24.7	16.9	14.9	18.3
Burundi	15.2	21.8	23.5	41.3	48.9	52.7	54.6	72.5	86.8	83.9	87.1	77.6	79.3	63.7	54.0	60.6	83.9	101.4
Cameroon	25.1	41.1	36.6	34.4	34.0	20.8	36.8	45.9	49.5	51.4	57.8	56.1	56.6	57.0	25.0	22.5	28.4	35.1
Cape Verde	117.6	132.7	76.6	93.5	83.6		88.7	84.3	62.8	64.8					79.6	46.0	49.2	50.2
Central African Republic (the)	32.0	60.8	67.9	18.4	19.9	29.2	18.2	29.0	2.2	72.2	67.9				101.6	108.0	130.4	139.9
Chad	6.2	2.7	40.7	28.7	29.0	24.5	20.3	54.4	46.0	45.1	49.2	44.0	45.5	50.7	47.5	28.1		38.3
Comoros (the)								42.6	27.1	26.6	22.0	19.4	22.5	19.5	21.3	22.5		
Congo (the)	70.7	210.4	228.8	148.6	137.8	157.7	170.6	185.1	202.3	26.6	27.1	50.2	81.7	120.2	141.2	169.7	126.1	138.7
Côte d'Ivoire	51.9	56.5	65.3	63.6	58.0	59.4	60.8	60.1	62.0	67.4	66.7	73.2	74.6	106.1	88.6	94.8	98.1	103.8
Democratic Republic of the Congo (the)	32.0				15.4	18.8					54.4	77.5	81.2		171.9	98.3	95.0	119.8
Equatorial Guinea				61.6	5.5	0.3	3.3	5.9	45.5	73.9	92.0	71.0	81.5	91.5	76.6	77.9	87.1	96.6
Eritrea										128.0		147.5	385.3	500.6	673.2	158.2	242.4	217.7
Ethiopia	113.9	137.5	145.6	162.5	174.3	190.7	196.3	211.5	173.3	184.3	121.1	117.6		184.2	47.0	322.9	101.5	116.5
Gabon	111.6	103.6	99.4	83.9	106.5	92.9	101.2	81.9	100.5	98.1	94.1	93.5	95.4	98.7	103.5	85.9	126.1	118.3
Gambia (the)	8.8														92.1	108.0	114.1	
Ghana	36.2	37.5	22.1	15.5	25.0	29.4	42.6	37.2	41.0	42.4	45.7	43.7	51.5	99.2	23.4	57.6	57.6	53.1
Guinea	41.4	31.6	17.5	24.7	26.4	22.1	23.2	32.4	33.7	34.5	37.6	46.4	47.6	47.5	48.4	58.9	59.1	65.2
Guinea-Bissau	56.9	24.6	44.3	42.7	60.5	146.6	82.5	83.5	143.0	119.5	125.3	104.2	150.0	155.1	161.0	155.6		
Kenya	58.1		64.6		52.6	48.7	49.4	49.7	55.2	50.1	50.7	58.2	79.2	86.4	103.4	125.6	139.7	168.7
Lesotho	277.4	348.3	237.1	196.4	191.8	1.3	14.0	142.8	146.4	146.6	169.9	184.6	183.7	230.1	251.6	221.3	271.9	
Liberia	51.8	42.0	43.3		19.4	10.1	15.9	35.6				82.5	80.1	84.1	66.6	38.2		65.8
Madagascar	82.0	38.2	37.4	88.0	31.8	35.8	37.5	40.1	48.0	53.8	50.1	65.4	76.6	80.2	157.3	89.7		97.4
Malawi	79.2	67.6	70.2	63.5	73.6	82.5	93.5	95.9	104.5	132.4	150.6	158.6	178.6	203.3	198.1	209.8	205.4	220.0
Mali	13.2	2.6	7.1	24.3	20.5	22.8	30.6	30.4	18.8	33.2	29.1	33.6	33.8	31.7	31.0	35.9	48.1	38.7
Mauritania	592.6	142.6	139.3	231.3	249.5	124.4	199.6	205.0	205.0	260.8	147.1	201.5	181.4		165.2		153.9	
Mauritius	16.1	12.2	15.2	11.7	10.9	11.6	11.3	11.0	12.3	11.3	12.6	12.0	14.6	13.5	13.7			11.8
Mozambique	56.2	45.4	45.4	39.0	41.7	60.5	80.2	100.8	114.8	112.0	113.2	98.6	103.5	102.5	102.8	102.7	102.2	104.2
Namibia					410.9	365.8	292.7	220.3	282.0	197.9	180.2	123.2	375.5		99.8	427.9	370.2	480.4
Niger (the)	49.7	12.6	10.9	10.4	10.6	8.4	7.9	8.7	8.1	67.3			7.3	42.8	21.6		39.0	34.4
Nigeria	16.1	16.8	14.3	15.5	19.7	18.0	24.6	31.2	15.7	23.1	22.0	16.1	12.3	8.8	13.6	23.7	16.0	19.0
Rwanda	26.0		24.1	24.3	21.9	38.9	49.6	60.2	67.4	91.4	47.7				58.1	64.6	79.0	92.6
Sao Tome and Principe	38.5	40.4	58.4	47.6	37.7	7.4	49.5	11.5		14.3	99.2		76.4	31.5				
Senegal	45.2	27.5	40.1		16.7	14.1	91.1	80.9	83.6	67.9	90.2	96.0	86.4	85.1	90.8	99.7	93.8	94.1
Seychelles		25.0	25.0	15.4	15.4	36.4	20.9	14.7	8.7	58.6			6.9		12.3	20.3	26.7	14.5
Sierra Leone	25.7	26.4	8.5	23.3	24.1	9.8	3.5	3.1		15.8	36.3	41.0	65.9	62.2	46.7	75.6	71.5	71.6
South Africa	212.7	222.6	212.5	208.5	193.2	175.4	179.3	188.2	204.2	236.4	223.8	233.1	248.7	245.4	232.0	240.2	271.3	326.3
Swaziland	24.8	514.6	319.4				159.4	190.6	190.7		197.4		177.2		235.5	433.3		
Togo	4.7	7.4	6.1	11.7	24.6	19.1	36.9	32.4	27.6	37.7	34.4	32.8	26.2	28.8	74.7	39.6		27.6
Uganda	8.7	3.6	14.4			9.2	9.5	19.5	6.5	89.6	112.6	118.9	120.7	146.7	134.5	140.5	138.6	142.2
United Republic of Tanzania (the)	36.3	59.3	57.6	57.3	62.9	68.8	73.0	76.2	78.1	87.4	95.7	104.4	111.6	119.7	133.2	144.7	147.8	159.6
Zambia	103.1	108.3	113.1	103.6	105.3	120.6	171.6	187.0	201.7	316.4	314.9	338.1	472.7	440.4	155.5	481.8		
Zimbabwe	55.1	60.3	49.5	70.2	56.7	60.3	65.0	64.5	71.1	92.6	115.9	157.4	191.5	224.0	283.6	323.5	390.2	415.5
Other territories																		
St. Helena																		
AFR	59.3	59.1	61.3	59.0	63.3	63.7	70.0	74.2	70.3	82.5	79.5	82.9	79.8	94.0	94.8	121.7	95.9	107.5

AFR - New smear-positive cases

Country	Number of cases						Rate (per 100 000 population)					
	1993	1994	1995	1996	1997	1998	1993	1994	1995	1996	1997	1998
Algeria		6 793	5 735		7 740	7 462		24.8	20.4		26.3	24.8
Angola	4 874	4 337	5 951	8 016	8 201	7 350	47.6	40.9	54.2	70.7	70.0	60.8
Benin	1 653	1 618	1 839	1 868	1 939	1 988	32.7	31.1	34.5	34.1	34.4	34.4
Botswana	1 508	1 668	1 903	2 393	2 442	2 826	107.8	116.0	129.1	158.6	158.5	180.0
Burkina Faso		561	1 028	1 381	1 126	1 331		5.5	9.9	12.9	10.2	11.8
Burundi	1 861	1 527	1 121	1 533	2 022	2 782	31.6	25.3	18.2	24.5	31.8	43.1
Cameroon	2 316	1 883	2 896	2 312	3 548	4 374	18.6	14.7	22.0	17.1	25.5	30.6
Cape Verde			111	117	103	104			29.2	30.0	25.8	25.5
Central African Republic (the)			1 794	1 992	2 267	2 637			54.6	59.4	66.3	75.7
Chad			2 002	870					29.8	12.6		
Comoros (the)			105	111					17.3	17.8		
Congo (the)		1 691	2 013	2 505	1 984	2 044	67.9	78.6	95.1	73.2	73.4	
Côte d'Ivoire	7 012		8 254	8 927	9 093	9 850	54.7		61.0	64.6	64.7	68.9
Democratic Republic of the Congo (the)	14 924		20 084	24 125	25 183	33 419	35.3		44.2	51.6	52.5	68.0
Equatorial Guinea			219	209	226	284			54.8	51.0	53.8	65.9
Eritrea					109	223					3.2	6.2
Ethiopia		5 752	9 040	15 694	15 957	18 864	10.7	16.3	27.6	27.4	31.6	
Gabon		395	486	263	577	889	37.7	45.1	23.8	50.7	76.2	
Gambia (the)			778	743	820				70.1	64.6	68.9	
Ghana		5 778	2 638	6 474	7 287	7 005		33.7	14.9	35.7	39.1	36.6
Guinea	2 082	2 158	2 263	2 844	2 981	3 362	31.3	31.1	31.6	39.1	40.7	45.8
Guinea-Bissau			956	922					88.0	83.0		
Kenya	10 149	11 324	13 934	16 978	19 040	24 029	39.3	42.7	51.2	61.0	66.9	82.8
Lesotho	1 405	1 330	1 361	1 788	2 398		76.3	70.6	70.6	90.7	119.0	
Liberia	1 547		1 154	668		1 190	70.2		55.2	30.4		44.6
Madagascar	6 881	7 366	8 026	8 456		9 639	53.5	55.4	58.4	59.6		64.0
Malawi		5 988	6 293	6 703	7 587	8 853		62.4	65.1	68.2	75.4	85.6
Mali		1 740	1 866	2 173	3 178	2 558		17.9	18.8	21.3	30.5	23.9
Mauritania			2 074		2 519				89.0		102.4	
Mauritius			131			108			11.8			9.5
Mozambique	9 526	9 677	10 566	10 478	11 116	12 116	59.5	57.8	60.8	58.4	60.3	64.2
Namibia			697	2 820	2 674	3 490			45.2	178.2	164.9	210.3
Niger (the)	463	1 865	1 492		2 779	2 127	5.4	21.1	16.3		28.5	21.1
Nigeria	1 723		9 476	15 704	11 235	13 161	1.8		9.6	15.5	10.8	12.4
Rwanda			1 840	2 034	2 820	4 417			35.0	37.1	47.3	66.9
Sao Tome and Principe												
Senegal		4 599	5 421	5 940	5 340	5 454		56.6	65.1	69.5	60.9	60.6
Seychelles	2		6	9	11	10	2.8		8.2	12.2	14.7	13.2
Sierra Leone		1 408	1 454	2 234	2 296	2 262		34.2	34.7	52.1	51.9	49.5
South Africa			1 408	37 178	55 000	82 293			3.8	97.5	141.9	209.1
Swaziland			660	2 226					75.6	247.8		
Togo	545		887	913		932	14.2		21.8	21.9		21.2
Uganda	11 949	14 763	13 678	15 175	17 268	18 222	66.8	80.2	72.2	78.0	86.3	88.7
United Republic of Tanzania (the)			19 955	21 472	22 010	23 726			66.7	69.9	70.1	73.9
Zambia		9 620	8 577	12 072				120.3	104.7	143.9		
Zimbabwe	5 331		8 965	11 965	14 512	14 492	50.7		82.5	108.3	129.4	127.4
Other territories												
St. Helena												
Grand Total	85 751	103 841	191 137	260 285	275 388	335 873	16.2	19.1	34.2	45.4	46.9	55.8

Notes

Chad No report submitted; minimal official notification data obtained by other means.

Congo (the) Country at war. Only 36/80 expected quarterly reports were received at national level, often incomplete. Cohort analysis of treatment outcomes was not possible.

Ethiopia Treatment outcomes are from 3 quarters only.

Kenya The numerator of reported treatment success refers to 16 095 non-nomadic smear-positive cases registered on short-course chemotherapy, but excludes 1 877 nomadic cases. Calculated treatment success is therefore too low.

Rwanda Increase in notifications partly due to increased case-finding activity in prisons.

Zimbabwe Began DOTS in 1998, so treatment outcomes for DOTS areas are not yet available.

The Americas



American Region – Summary of TB control policies

Country	Category of the country as of 31/12/97	DOTS Technical Elements							DOTS newly implemented in 1998
		National manual ¹	Training ²	Use of microscopy for diagnosis	SCC ³	DOT ⁴	Drug availability ⁵	Recording and reporting system ⁶	
Anguilla	0								
Antigua and Barbuda	0								
Argentina	3								
Bahamas (the)	1								X
Barbados	1								
Belize	1								
Bermuda	0								
Bolivia	3								
Brazil	2								X
British Virgin Islands	0								
Canada	0								
Cayman Islands	5								
Chile	4								
Colombia	4								X
Costa Rica	1								
Cuba	4								
Dominica	2								X
Dominican Republic (the)	1								
Ecuador	3								
El Salvador	3								
Grenada	5								
Guatemala	4								
Guyana	1								
Haiti	2								
Honduras	2								X
Jamaica	4								
Mexico	3								
Montserrat	5								
Netherlands Antilles	0								
Nicaragua	4								
Panama	2								
Paraguay	1								
Peru	4								
Puerto Rico	4								
Saint Kitts and Nevis	4								
Saint Lucia	3								
Saint Vincent and the Grenadines	4								
Suriname	1								
Trinidad and Tobago	1								
Turks and Caicos Islands	0								
United States of America (the)	4								
United States Virgin Islands	0								
Uruguay	4								
Venezuela	4								

1 Presence of national manual, or a document issued by the government or an authorized scientific body, including policy recommendations endorsed by WHO

2 "WHO standard" training course on management of TB control programmes has been carried out within the past two years; or training materials endorsed by WHO or IUATLD

3 Short course chemotherapy

4 Directly observed treatment

5 A regular supply system of all essential anti-tuberculosis drugs and diagnostic materials

6 Presence of WHO/IUATLD recommended recording and reporting system showing assessment of treatment results

dark pink fully implemented (more than 90% of country)

light pink implemented in part of country

grey not implemented

white unknown

Regional Profile - AMR

Countries	Country Information (1998)								WHO TB Control Strategy (DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage				% new ss+ out of all new pulm. cases			
		All types		New ss+					Population		Notified cases			% cases out of all cases	New ss+ cases notified	
		No.	Rate	No.	Rate				No.	(%)	No.	Rate			No.	Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Antigua and Barbuda	67 000					2		0								
Argentina	36 123 428	12 276	34.0	5 186	14.4	8 970	57.8	3	10 548 041	29.2	1 277	12.1	10.4	573	5.4	55.2
Bahamas (the)	296 110	75	25.3	28	9.5	72	38.9	1								
Barbados	268 106	7	2.6	4	1.5	16	25.0	1								
Belize	229 796					48		1								
Bolivia	7 957 253	10 132	127.3	6 750	84.8	9 057	74.5	3	4 535 634	57.0	10 132	223.4	100.0	6 750	148.8	78.9
Brazil	165 850 620	84 194	50.8	38 809	23.4	55 160	70.4	2	4 975 519	3.0	4 132	83.0	4.9	2 221	44.6	62.4
Canada	30 562 524					930		0								
Chile	14 823 614	3 668	24.7	1 576	10.6	1 927	81.8	4	14 823 614	100.0	3 668	24.7	100.0	1 576	10.6	61.8
Colombia	40 803 202	9 155	22.4	6 969	17.1	9 245	75.4	4	40 803 202	100.0	9 155	22.4	100.0	6 969	17.1	84.1
Costa Rica	3 841 496	694	18.1	562	14.6	296	189.9	1								
Cuba	11 115 605	1 304	11.7	744	6.7	881	84.4	4	11 115 605	100.0	1 304	11.7	100.0	744	6.7	70.1
Dominica	71 000	5	7.0	5	7.0	5	100.0	2	2 840	4.0	3	105.6	60.0	3	105.6	100.0
Dominican Republic (the)	8 231 879	4 263	51.8	2 194	26.7	4 127	53.2	1								
Ecuador	12 174 641	9 184	75.4	6 455	53.0	9 006	71.7	3	1 339 211	11.0	2 020	150.8	22.0	1 623	121.2	89.0
El Salvador	6 032 269	1 700	28.2	1 071	17.8	1 993	53.7	3	5 429 042	90.0	1 587	29.2	93.4	984	18.1	70.2
Grenada	93 000	2	2.2	2	2.2	2	100.0	5								
Guatemala	10 801 109	2 755	25.5	2 255	20.9	4 395	51.3	4	10 801 109	100.0	2 755	25.5	100.0	2 255	20.9	86.9
Guyana	849 559	318	37.4	85	10.0	293	29.0	1								
Haiti	7 952 408	9 857	123.9	6 442	81.0	12 147	53.0	2	715 717	9.0	1 932	269.9	19.6	1 476	206.2	87.4
Honduras	6 147 498	4 916	80.0	2 311	37.6	2 617	88.3	2	36 885	0.6	80	216.9	1.6	56	151.8	77.8
Jamaica	2 538 284	124	4.9	82	3.2	89	92.1	4	2 538 284	100.0	121	4.8	97.6	80	3.2	73.4
Mexico	95 830 901	7 584	7.9	6 189	6.5	17 089	36.2	3	31 624 197	33.0	6 846	21.6	90.3	5 714	18.1	96.0
Nicaragua	4 806 908	2 604	54.2	1 648	34.3	1 907	86.4	4	4 806 908	100.0	2 604	54.2	100.0	1 648	34.3	73.8
Panama	2 767 250	1 479	53.4	1 393	50.3	705	197.6	2	190 940	6.9	106	55.5	7.2	88	46.1	85.4
Paraguay	5 222 139	1 858	35.6	850	16.3	1 702	49.9	1								
Peru	24 796 829	43 723	176.3	27 707	111.7	29 442	94.1	4	24 796 829	100.0	43 723	176.3	100.0	27 707	111.7	82.9
Puerto Rico	3 809 532	200	5.2	105	2.8	156	67.3	4	3 809 532	100.0	200	5.2	100.0	105	2.8	60.0
Saint Kitts and Nevis	41 000	5	12.2	3	7.3	2	150.0	4	41 000	100.0	5	12.2	100.0	3	7.3	75.0
Saint Lucia	148 000	21	14.2	12	8.1	12	98.4	3	68 080	46.0	21	30.8	100.0	12	17.6	80.0
Saint Vincent and Grenadines	115 000	5	4.3	3	2.6	16	18.6	4	115 000	100.0	5	4.3	100.0	3	2.6	60.0
Suriname	413 786					160		0								
Trinidad and Tobago	1 282 897	192	15.0	98	7.6	65	150.8	1								

Regional Profile - AMR

Countries	Country Information (1998)								WHO TB Control Strategy (DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Population		Notified cases		% cases out of all cases	New ss+ cases notified		% new ss+ out of all new pulm. cases
		All types		New ss+					No.	(%)	No.	Rate		No.	Rate	
		No.	Rate	No.	Rate											
<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>d/f</i>	<i>g</i>	<i>h</i>	<i>h/a</i>	<i>i</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>n</i>	
United States of America (the)	274 027 521	18 199	6.6	6 630	2.4	8 055	82.3	4	274 027 521	100.0	18 199	6.6	100.0	6 630	2.4	45.2
Uruguay	3 289 240	668	20.3	374	11.4	447	83.7	4	3 289 240	100.0	668	20.3	100.0	374	11.4	67.3
Venezuela	23 242 038	6 273	27.0	3 450	14.8	4 400	78.4	4	23 242 038	100.0	6 273	27.0	100.0	3 450	14.8	67.6
Other Territories																
Anguilla	8 000					1		0								
Bermuda	64 000					1		0								
British Virgin Islands	20 000					1		0								
Cayman Islands	34 000	3	8.8	2	5.9			5								
Montserrat	11 000	3	27.3					5								
Netherlands Antilles	212 694					2		0								
Turks and Caicos Islands	16 000					1		0								
United States Virgin Islands	107 000					5		0								
Regional Total	807 096 136	237 446	30.6	129 994	16.8	185 448	70.1		473 675 988	58.7	116 816	24.7	49.2	71 044	15.0	74.8

Regional Profile - AMR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage						% new ss+ out of all new pulm. cases	
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.		Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Antigua and Barbuda	67 000					2		0								
Argentina	36 123 428	12 276	34.0	5 186	14.4	8 970	57.8	3	25 575 387	70.8	10 999	43.0	89.6	4 613	18.0	48.5
Bahamas (the)	296 110	75	25.3	28	9.5	72	38.9	1	296 110	100.0	75	25.3	100.0	28	9.5	39.4
Barbados	268 106	7	2.6	4	1.5	16	25.0	1	268 106	100.0	7	2.6	100.0	4	1.5	100.0
Belize	229 796					48		1								
Bolivia	7 957 253	10 132	127.3	6 750	84.8	9 057	74.5	3								
Brazil	165 850 620	84 194	50.8	38 809	23.4	55 160	70.4	2	160 875 101	97.0	80 062	49.8	95.1	36 588	22.7	59.4
Canada	30 562 524					930		0								
Chile	14 823 614	3 668	24.7	1 576	10.6	1 927	81.8	4								
Colombia	40 803 202	9 155	22.4	6 969	17.1	9 245	75.4	4								
Costa Rica	3 841 496	694	18.1	562	14.6	296	189.9	1	3 841 496	100.0	694	18.1	100.0	562	14.6	89.5
Cuba	11 115 605	1 304	11.7	744	6.7	881	84.4	4								
Dominica	71 000	5	7.0	5	7.0	5	100.0	2	68 160	96.0	2	2.9	40.0	2	2.9	100.0
Dominican Republic (the)	8 231 879	4 263	51.8	2 194	26.7	4 127	53.2	1	8 231 879	100.0	4 263	51.8	100.0	2 194	26.7	62.9
Ecuador	12 174 641	9 184	75.4	6 455	53.0	9 006	71.7	3	10 835 430	89.0	7 164	66.1	78.0	4 832	44.6	71.6
El Salvador	6 032 269	1 700	28.2	1 071	17.8	1 993	53.7	3	603 227	10.0	113	18.7	6.6	87	14.4	91.6
Grenada	93 000	2	2.2	2	2.2	2	100.0	5	93 000	100.0	2	2.2	100.0	2	2.2	100.0
Guatemala	10 801 109	2 755	25.5	2 255	20.9	4 395	51.3	4								
Guyana	849 559	318	37.4	85	10.0	293	29.0	1	849 559	100.0	318	37.4	100.0	85	10.0	29.1
Haiti	7 952 408	9 857	123.9	6 442	81.0	12 147	53.0	2	7 236 691	91.0	7 925	109.5	80.4	4 966	68.6	73.3
Honduras	6 147 498	4 916	80.0	2 311	37.6	2 617	88.3	2	6 110 613	99.4	4 836	79.1	98.4	2 255	36.9	50.9
Jamaica	2 538 284	124	4.9	82	3.2	89	92.1	4	2 538 284	100.0	3	0.1	2.4	2	0.1	66.7
Mexico	95 830 901	7 584	7.9	6 189	6.5	17 089	36.2	3	64 206 704	67.0	738	1.1	9.7	475	0.7	88.8
Nicaragua	4 806 908	2 604	54.2	1 648	34.3	1 907	86.4	4								
Panama	2 767 250	1 479	53.4	1 393	50.3	705	197.6	2	2 576 310	93.1	1 373	53.3	92.8	1 305	50.7	100.0
Paraguay	5 222 139	1 858	35.6	850	16.3	1 702	49.9	1	5 222 139	100.0	1 858	35.6	100.0	850	16.3	49.9
Peru	24 796 829	43 723	176.3	27 707	111.7	29 442	94.1	4								
Puerto Rico	3 809 532	200	5.2	105	2.8	156	67.3	4								
Saint Kitts and Nevis	41 000	5	12.2	3	7.3	2	150.0	4								
Saint Lucia	148 000	21	14.2	12	8.1	12	98.4	3								
Saint Vincent and Grenadines	115 000	5	4.3	3	2.6	16	18.6	4								
Suriname	413 786					160		0								
Trinidad and Tobago	1 282 897	192	15.0	98	7.6	65	150.8	1	1 282 897	100.0	192	15.0	100.0	98	7.6	54.7

Regional Profile - AMR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage						% new ss+ out of all new pulm. cases	
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.		Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
United States of America (the)	274 027 521	18 199	6.6	6 630	2.4	8 055	82.3	4								
Uruguay	3 289 240	668	20.3	374	11.4	447	83.7	4								
Venezuela	23 242 038	6 273	27.0	3 450	14.8	4 400	78.4	4								
Other Territories																
Anguilla	8 000					1		0								
Bermuda	64 000					1		0								
British Virgin Islands	20 000					1		0								
Cayman Islands	34 000	3	8.8	2	5.9			5	34 000	100.0	3	8.8	100.0	2	5.9	66.7
Montserrat	11 000	3	27.3					5	6 820	62.0	3	44.0	100.0			
Netherlands Antilles	212 694					2		0								
Turks and Caicos Islands	16 000					1		0								
United States Virgin Islands	107 000					5		0								
Regional Total	807 096 136	237 446	30.6	129 994	16.8	185 448	70.1		300 751 914	37.3	120 630	40.1	50.8	58 950	19.6	60.5

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Antigua and Barbuda																		
Argentina																		
Bahamas (the)																		
Barbados																		
Belize																		
Bolivia	6 458	3.1	68.9	8.5	11.2	0.7	3.5	4.1	77.4									
Brazil																		
Canada																		
Chile	1 640	3.5		76.6	7.1	0.4	7.3	5.2	76.6	269	13.8		63.6	16.0		3.0	3.7	63.6
Colombia																		
Costa Rica																		
Cuba	765	0.7	90.3		0.9	1.2	5.9	1.0	90.3	93	0.0	79.6		2.2	5.4	12.9		79.6
Dominica																		
Dominican Republic (the)																		
Ecuador	1 481	46.3	25.8	17.1	8.4	0.3	0.8	1.3	42.9	251	45.4	17.9	16.3	7.2	5.6	1.6	6.0	34.3
El Salvador																		
Grenada																		
Guatemala	3 164	12.9	64.2	8.5	8.4	0.4	4.0	1.7	72.7	420	27.6	42.9	4.8	10.2	1.2	2.4	11.0	47.6
Guyana																		
Haiti	206	0.0	63.6	9.2	8.3	1.5	8.3	9.2	72.8									
Honduras																		
Jamaica	71	0.0	9.9	69.0	5.6		15.5		78.9	21	0.0	4.8	81.0	14.3				85.7
Mexico	13 489	11.2	64.1	6.1	8.0	2.5	4.1	4.1	70.2	12	0.0	66.7	33.3					100.0
Nicaragua	1 655	0.0	69.5	11.1	9.2	1.6	4.1	4.4	80.6	296	0.0	70.6	8.4	10.5	2.4	5.7	2.4	79.1
Panama	77	0.0	9.1	41.6	36.4		6.5	6.5	50.6	11	0.0		27.3	54.5		9.1	9.1	27.3
Paraguay																		
Peru	24 428	2.6	88.0	1.8	3.6	1.3	2.3	0.6	89.8									
Puerto Rico	126	8.7	68.3		4.0		19.0		68.3									
Saint Kitts and Nevis																		
Saint Lucia	12	25.0	58.3	8.3			8.3		66.7	5	0.0	40.0	40.0		20.0			80.0
Saint Vincent and Grenadines	7	0.0	85.7				14.3		85.7									
Suriname																		
Trinidad and Tobago																		

Regional Profile - AMR cont'd.

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
United States of America (the)	6 925	10.0	72.2		2.5		11.4	3.9	72.2									
Uruguay	422	2.4	53.6	23.9	4.0	4.5	11.6		77.5	33	3.0	42.4	42.4		6.1	6.1		84.8
Venezuela	3 194	14.3	71.8	0.4	8.7	0.4	4.3		72.2									
Other Territories																		
Anguilla																		
Bermuda																		
British Virgin Islands																		
Cayman Islands																		
Montserrat																		
Netherlands Antilles																		
Turks and Caicos Islands																		
United States Virgin Islands																		
Regional Total	64 120	7.3	72.7	6.2	6.0	1.2	4.2	2.3	78.9	1 411	19.0	37.8	21.0	10.3	2.4	3.8	5.6	58.8

Countries	Other Strategy (non-DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases (Short Course)									New ss+ cases (Other Regimen)								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Antigua and Barbuda																		
Argentina	5 234	44.1	14.3	27.3	6.7	0.2	3.5	3.9	41.6									
Bahamas (the)	48	0.0		77.1			22.9		77.1									
Barbados	6	0.0		83.3	16.7				83.3									
Belize																		
Bolivia																		
Brazil	43 490	64.2		26.9	5.2	0.3	2.0	1.4	26.9									
Canada																		
Chile																		
Colombia																		
Costa Rica																		
Cuba																		
Dominica	6	0.0	83.3			16.7			83.3									
Dominican Republic (the)	2 682	4.2	66.0	18.0	7.8	1.9	0.7	1.5	83.9									
Ecuador	3 989	5.1	15.2	44.5	16.8	1.2	4.5	12.6	59.7									
El Salvador	771	0.0	66.3	2.3	11.3	0.4	4.3	15.4	68.6									
Grenada	4	0.0		75.0				25.0	75.0									
Guatemala																		
Guyana	363	69.1	6.6	8.3	11.3	0.8	3.9		14.9									
Haiti	5 291	0.0	54.9	15.9	20.5	0.5	5.9	2.3	70.8									
Honduras	1 928	12.6	36.6	33.9	6.7	0.4	7.3	2.5	70.4									
Jamaica																		
Mexico	4 048	53.1	31.3	3.7	5.7	2.1	2.3	1.9	35.0									
Nicaragua																		
Panama	592	0.0	0.7	51.0	26.7	2.4	9.6	9.6	51.7									
Paraguay																		
Peru																		
Puerto Rico																		
Saint Kitts and Nevis																		
Saint Lucia																		
Saint Vincent and Grenadines																		
Suriname																		
Trinidad and Tobago	52	0.0	46.2	28.8	5.8	5.8	13.5		75.0									

Regional Profile - AMR cont'd.

Countries	Other Strategy (non-DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases (Short Course)									New ss+ cases (Other Regimen)								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
United States of America (the)																		
Uruguay																		
Venezuela																		
Other Territories																		
Anguilla																		
Bermuda																		
British Virgin Islands																		
Cayman Islands																		
Montserrat																		
Netherlands Antilles																		
Turks and Caicos Islands																		
United States Virgin Islands																		
Regional Total	68 504	48.4	12.5	25.5	7.7	0.5	2.8	2.6	38.0									

AMR - Notification rates by age and sex, 1998.

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Argentina	1.6	17.5	22.6	21.4	26.4	29.1	27.1	16.6	1.9	17.3	19.9	12.1	12.1	13.9	14.6	11.7	1.8	17.4	21.2	16.6	19.1	21.1	19.8	14.0
Bahamas (the)	0.0	11.3	7.8	33.6	41.3	37.9	0.0	13.8	2.2	3.8	11.5	22.2	7.6	0.0	0.0	7.3	1.1	7.6	9.7	27.6	23.7	17.6	0.0	10.5
Barbados																								
Bolivia	10.3	159.4	156.4	148.3	178.8	205.0	260.0	103.5	12.9	99.6	101.2	66.6	89.7	79.1	138.4	62.4	11.6	129.7	128.5	106.4	132.6	138.6	193.1	82.7
Brazil																								
Cayman Islands	0.0	0.0	0.0	0.0	0.0	0.0	94.1	5.9	0.0	0.0	31.4	0.0	0.0	0.0	0.0	5.9	0.0	0.0	15.7	0.0	0.0	0.0	47.1	5.9
Chile																								
Colombia																								
Costa Rica	4.6	14.2	24.7	25.9	33.1	44.1	42.9	18.5	3.7	5.4	14.2	18.5	17.0	17.1	27.5	10.7	4.1	9.9	19.6	22.2	25.1	30.5	34.7	14.6
Cuba	0.0	7.3	12.3	14.0	11.8	11.4	22.7	9.7	0.1	2.2	4.3	2.9	4.5	6.5	11.2	3.7	0.0	4.8	8.4	8.4	8.1	8.9	16.7	6.7
Dominica	0.0	0.0	0.0	0.0	33.3	0.0	0.0	2.9	0.0	33.3	0.0	16.7	0.0	50.0	0.0	10.8	0.0	16.7	0.0	8.3	14.3	25.0	0.0	7.0
Dominican Republic (the)	4.4	42.1	58.1	34.6	39.3	55.7	30.2	31.0	4.4	34.0	35.8	27.6	25.1	36.5	19.3	22.2	4.4	38.1	47.2	31.2	32.4	46.2	24.7	26.7
Ecuador	7.8	31.8	29.0	8.2				15.0	2.1	23.6	18.0	13.9				10.1	5.0	27.8	23.6	11.0				12.5
El Salvador	1.9	14.2	30.0	36.2	42.6	47.1	68.5	19.7	2.0	12.3	19.4	16.5	17.8	27.9	45.6	13.1	1.9	13.3	24.4	25.6	29.6	37.0	55.7	16.3
Grenada	0.0	12.2	0.0	14.0	0.0	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	7.0	0.0	0.0	0.0	2.2
Guatemala	2.5	18.2	34.8	50.6	52.7	70.4	86.8	22.3	1.9	18.5	30.1	41.8	50.6	55.7	55.2	19.5	2.2	18.3	32.4	46.1	51.6	63.0	70.5	20.9
Guyana	6.8	36.5	67.9	71.6	112.3	11.1	80.7	44.4	10.0	40.2	45.8	41.3	11.6	39.1	59.8	30.8	8.4	38.3	56.8	55.9	60.1	26.0	69.1	37.4
Haiti	11.1	98.6	183.4	182.0	142.3	114.3	115.4	83.8	12.7	101.7	171.8	150.8	107.0	76.0	79.1	78.6	11.9	100.1	177.5	165.4	123.0	93.4	95.4	81.0
Honduras	11.0	43.3	57.0	71.9	116.8	158.5	55.4	42.9	8.0	33.2	43.5	53.7	85.3	112.5	36.8	32.3	9.6	38.3	50.3	62.8	100.9	135.0	45.5	37.6
Jamaica	0.0	1.2	9.1	6.0	10.8	11.1	9.5	4.4	0.3	3.3	1.4	4.9	1.1	6.1	2.3	2.1	0.1	2.2	5.1	5.4	5.9	8.6	5.6	3.2
Mexico	0.8	6.1	9.0	13.1	16.4	21.4	31.2	7.9	0.9	5.1	5.6	6.7	9.3	11.5	14.5	5.0	0.9	5.6	7.3	9.8	12.7	16.2	22.1	6.5
Montserrat	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nicaragua	2.3	43.7	59.0	72.0	80.4	117.7	175.1	37.8	3.3	39.9	62.5	49.6	46.2	71.8	70.7	30.9	2.8	41.8	60.8	60.4	62.9	94.0	117.4	34.3
Panama	0.4	5.3	6.0	5.7	3.3	3.9	7.3	3.7	0.2	3.5	5.6	4.0	2.5	1.3	2.8	2.6	0.3	4.4	5.8	4.9	2.9	2.6	5.0	3.2
Paraguay	1.3	19.6	25.9	31.8	46.2	63.7	118.2	20.7	1.6	17.6	14.5	12.6	21.0	31.3	38.2	11.8	1.5	18.6	20.3	22.4	33.9	47.1	71.8	16.2
Peru	16.2	244.3	206.6	152.4	142.1	131.9	177.0	131.2	20.5	179.8	143.5	97.4	69.8	80.4	106.2	93.0	18.4	212.2	174.3	124.0	105.2	105.4	138.9	111.7
Puerto Rico	0.2	2.7	3.9	7.0	6.1	9.9	7.9	4.1	0.2	0.0	1.7	1.9	1.3	5.3	3.6	1.5	0.2	1.4	2.8	4.2	3.5	7.4	5.5	2.8
Saint Kitts and Nevis	0.0	0.0	0.0	65.0	48.8	0.0	0.0	14.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.5	24.4	0.0	0.0	7.3
Saint Lucia	0.0	16.6	7.6	8.3	0.0	0.0	14.2	6.9	0.0	24.8	16.6	0.0	0.0	19.9	9.0	9.3	0.0	20.7	11.9	4.1	0.0	11.0	11.0	8.1
Saint Vincent and the Grenadines	0.0	0.0	19.7	0.0	19.7	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8	0.0	8.9	0.0	0.0	2.6
Trinidad and Tobago	0.0	7.0	11.9	22.7	22.1	23.3	22.5	11.5	0.6	3.9	3.0	5.3	3.1	12.2	9.7	3.9	0.3	5.5	7.4	13.9	12.6	17.6	15.6	7.6
United States of America (the)	0.0	1.7	3.3	4.4	5.7	5.7	6.9	3.4	0.1	1.5	2.1	1.9	1.5	1.5	2.9	1.5	0.1	1.6	2.7	3.2	3.6	3.5	4.6	2.4
Uruguay	0.5	11.1	20.5	25.6	28.2	27.5	24.6	16.1	0.5	11.5	12.6	7.0	7.8	3.8	10.3	7.1	0.5	11.3	16.5	16.0	17.6	14.8	16.2	11.4
Venezuela																								
AMR	1.6	17.1	16.2	12.9	13.7	15.3	16.5	11.3	1.7	13.4	11.9	8.0	6.8	7.8	8.1	7.7	1.7	15.3	14.0	10.4	10.2	11.4	11.8	9.4

AMR - Age and sex distribution of smear-positive TB cases in DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Argentina	14	57	57	51	69	43	38	329	12	59	56	42	24	18	23	234	26	116	113	93	93	61	61	563
Bolivia	167	1254	885	579	488	364	353	4 090	202	777	587	274	264	157	230	2 491	369	2 031	1 472	853	752	521	583	6 581
Brazil																								
Chile																								
Colombia																								
Cuba	0	60	140	109	75	53	102	539	1	17	48	23	30	31	55	205	1	77	188	132	105	84	157	744
Dominica	0	0	0	0	1	0	0	1	0	1	0	1	0	0	0	2	0	1	0	1	1	0	0	3
Ecuador	169	402	286	58				915	44	290	175	99				608	213	692	461	157	0	0	0	1 523
El Salvador	21	95	131	99	87	65	84	582	21	81	93	53	40	43	71	402	42	176	224	152	127	108	155	984
Guatemala	60	206	248	234	163	148	152	1 211	45	203	216	199	160	118	103	1 044	105	409	464	433	323	266	255	2 255
Haiti	58	156	201	141	93	37	32	718	75	192	221	135	69	36	30	758	133	348	422	276	162	73	62	1 476
Honduras	2	6	6	5	5	4	4	32	2	3	5	4	5	3	2	24	4	9	11	9	10	7	6	56
Jamaica	0	3	19	9	10	7	6	54	1	8	2	8	1	4	2	26	1	11	21	17	11	11	8	80
Mexico	128	576	647	639	526	436	512	3 464	129	476	428	359	320	256	282	2 250	257	1 052	1 075	998	846	692	794	5 714
Nicaragua	24	221	193	155	106	94	110	903	34	202	215	114	64	61	55	745	58	423	408	269	170	155	165	1 648
Panama	2	14	14	10	4	3	5	52	1	9	13	7	3	1	2	36	3	23	27	17	7	4	7	88
Peru	704	6271	3987	2095	1337	831	889	16 114	862	4560	2894	1431	686	537	623	11 593	1 566	10 831	6 881	3 526	2 023	1 368	1 512	27 707
Puerto Rico	1	9	11	16	12	14	12	75	1	0	5	5	3	9	7	30	2	9	16	21	15	23	19	105
Saint Kitts and Nevis	0	0	0	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	3
Saint Lucia	0	2	1	1	0	0	1	5	0	3	2	0	0	1	1	7	0	5	3	1	0	1	2	12
Saint Vincent and the Grenadines	0	0	2	0	1	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3
United States of America (the)	14	323	661	1003	1002	628	913	4 544	17	267	422	426	271	181	496	2 080	31	590	1 083	1 429	1 273	809	1 409	6 624
Uruguay	2	30	47	52	47	38	39	255	2	30	29	15	14	6	23	119	4	60	76	67	61	44	62	374
Venezuela																								
AMR	1 366	9 685	7 536	5 258	4 027	2 765	3 252	33 889	1 449	7 178	5 411	3 195	1 954	1 462	2 005	22 654	2 815	16 863	12 947	8 453	5 981	4 227	5 257	56 543
%	4.0	28.6	22.2	15.5	11.9	8.2	9.6	100	6.4	31.7	23.9	14.1	8.6	6.5	8.9	100	5.0	29.8	22.9	14.9	10.6	7.5	9.3	100

AMR - Age and sex distribution of smear-positive TB cases in non-DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Argentina	70	521	514	412	407	344	332	2 600	82	499	442	229	205	189	253	1 899	152	1 020	956	641	612	533	585	4 499
Bahamas (the)	0	3	2	7	5	3	0	20	1	1	3	5	1	0	0	11	1	4	5	12	6	3	0	31
Barbados																								
Brazil																								
Cayman Islands	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	2
Costa Rica	30	53	78	67	53	43	36	360	23	19	43	47	27	17	26	202	53	72	121	114	80	60	62	562
Dominica	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	1	0	0	0	1	0	2
Dominican Republic (the)	62	340	416	184	130	114	50	1 296	60	265	247	141	79	73	33	898	122	605	663	325	209	187	83	2 194
Ecuador																								
El Salvador																								
Grenada	0	1	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2
Guyana	9	29	56	42	36	2	12	186	13	32	38	26	4	8	11	132	22	61	94	68	40	10	23	318
Haiti	130	648	770	515	238	140	110	2 551	133	635	737	485	231	105	89	2 415	263	1 283	1 507	1 000	469	245	199	4 966
Honduras	145	271	250	206	200	177	46	1 295	101	203	187	154	147	132	36	960	246	474	437	360	347	309	82	2 255
Jamaica	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0	1	0	0	1	0	0	0	1	2
Mexico	9	34	56	56	46	37	57	295	15	29	32	22	26	22	34	180	24	63	88	78	72	59	91	475
Montserrat																								
Panama																								
Paraguay	14	100	101	96	82	66	85	544	17	87	55	37	36	34	38	304	31	187	156	133	118	100	123	848
Trinidad and Tobago	0	9	12	21	14	9	8	73	1	5	3	5	2	5	4	25	1	14	15	26	16	14	12	98
AMR	469	2 009	2 255	1 607	1 211	935	738	9 224	446	1 776	1 789	1 151	758	586	524	7 030	915	3 785	4 044	2 758	1 969	1 521	1 262	16 254
%	5.1	21.8	24.4	17.4	13.1	10.1	8.0	100	6.3	25.3	25.4	16.4	10.8	8.3	7.5	100	5.6	23.3	24.9	17.0	12.1	9.4	7.8	100

AMR- Number of tuberculosis cases notified, 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Antigua and Barbuda	3		1	3	2	7	0	3	3	1	0	6			5			
Argentina	16693	17292	17305	16359	15987	14681	13368	13267	12636	12309	12185	12606	13887	13683	13433	13397	12358	12276
Bahamas (the)	67	54	58	53	63	52	43	51	52	46	53	63	60	78	57	59	89	75
Barbados	3	30	17	14	12	7	3	4	5	5	5	6			20	3	6	7
Belize	33	44	140	35	25	23	41	28	30	57	89	65	80	59	61	53	89	
Bolivia	5072	4777	5178	4131	7679	6837	8960	10664	12563	11166	11223	9520	8614	9431	14422	10194	9853	10132
Brazil	86411	87822	86617	88365	84310	83731	81826	82395	80048	74570	84990	85955		75759	88109	87254	83309	84194
Canada	2554	2515	2186	2345	1980	2046	1952	2032	1982	1964	2043	2091	2012	2074		1849		
Chile	7337	6941	6989	6561	6644	6854	6280	6324	6728	6151	5498	5304	4598	4138	4150	4038	3879	3668
Colombia	11483	12126	13716	12792	12024	11639	11437	11469	11329	12447	12263	11199	11043	8901	9912	9702	8042	9155
Costa Rica	521	459	479	393	376	418	434	442	311	230	201	118	313	325	321	162	633	694
Cuba	833	815	762	705	680	656	630	628	581	546	514	410	790	1681	1607	1579	1441	1304
Dominica	26	18	16	5	8	35	27	7	13	6	14	13	7	12	8	10	6	5
Dominican Republic (the)	1778	2457	2959	3100	2335	2634	2459	3081	3145	2597	1837	3490	4033	4337	4053	6006	5601	4263
Ecuador	3966	3880	3985	4301	4798	5687	5867	5497	5480	8243	6879	7313	7050	9685	7893	6327	9527	9184
El Salvador	2091	2171	2053	1564	1461	1659	1647	2378	617	2367	2304	2495	3347	3901	2422	1686	1662	1700
Grenada	1	1	6	4	2	1	2	0	4	0	1	3	0	3	2		4	2
Guatemala	6641	7277	6013	6586	6570	4806	5700	5739	4900	3813	2631	2517	2474	2508	5726	3496	3175	2755
Guyana	117	135	149	165	215	190	117	150	120	168	134	182	91	266	296	314	407	318
Haiti	6550	3337	6839	5803	4959	8583	8514	8054	8100		10237					6632	10116	9857
Honduras	1696	1714	1935	2120	3377	4213	4227	3962	4026	3647	4560	4155	3745	4291	4984	4176	4030	4916
Jamaica	178	153	157	160	130	88	133	65	86	123	121	111	115	109	109	121	118	124
Mexico	32572	24853	22795	14531	15017	13180	14631	15371	15489	14437	15216	14446	15145	16353	11329	10852	23575	7584
Nicaragua	3723	3082	2773	2705	2604	2617	2983	2737	3106	2944	2797	2885	2798	2750	2842	3003	2806	2604
Panama	580	580	429	413	614	709	765	770	672	846	863	750	1146	827	1316	1099	1067	1479
Paraguay	1388	1415	1800	1718	1931	1628	1502	1438	2270	2167	2283	1927	2037	1850	2305	2148	1995	1858
Peru	21925	21579	22753	22792	24438	24702	30571	36908	35687	37905	40580	52552	51675	48601	45310	41739	42062	43723
Puerto Rico	521	473	452	418	338	363	303	275	314	159	241		257	274	263	219	236	200
Saint Kitts and Nevis	4	6	2	3	0	0	0	0	0	0	1	4	6	2	4	3		5
Saint Lucia	39	37	48	55	21	34	25	32	28	13	25	26		24	12		15	21
Saint Vincent and the Grenadines	11	14	4	23	14	9	3	6	3	2	1	4	13		24			5
Suriname	81	56	78	76	50	60	77	77	70	82	47	58	45	53		53	71	
Trinidad and Tobago	82	62	112	108	112	119	122	108	124	120	141	142	112	129	178	205	276	192
United States of America (the)	27373	25520	23846	22255	22201	22768	22517	22436	23495	25701	26283	26673	25287	24361	22860	21337	17314	18199
Uruguay	1699	1450	1359	1389	1201	1082	1023	951	987	886	759	699	689	666	625	701	708	668
Venezuela	4093	4159	4266	4737	4822	4974	4954	4557	4524	5457	5216	5444	5169	4877	5554	5576	5984	6273
Other territories																		
Anguilla	0	4	0	0	1	0	0	0	0	0	0	0			2			
Bermuda	2	5	10	3	3	6	2	1	2	0	3	4			4			
British Virgin Islands	0	0	0	0	0	0	0	0	0	0	0	0		0			3	
Cayman Islands	2	0	1	1	4	1	0		2	2	3	3	2		3	0	0	3
Montserrat	0	0	1	7	9	5	13	6	5	1	1	0		0				3
Netherlands Antilles																		
Turks and Caicos Islands	0	2	5	0	4	2	12			0	0	0						
United States Virgin Islands	1	1	2	3	1	1	2	6	4	4	4			10	4	8		
Total	248,150	237,316	238,296	226,801	227,022	227,107	233,172	241,919	239,541	231,182	252,246	253,239	166,640	242,018	250,220	244,006	250,457	237,445
<i>No. of countries reporting</i>	43	42	43	43	43	43	43	41	42	42	43	40	33	35	36	35	34	34
<i>% of countries reporting</i>	98	95	98	98	98	98	98	93	95	95	98	91	75	80	82	80	77	77

AMR - Case notification rates (per 100 000 population), 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Antigua and Barbuda	4.9		1.6	4.8	3.2	11.3		4.8	4.8	1.6		9.2				7.6		
Argentina	58.5	59.7	58.8	54.8	52.8	47.7	42.9	41.9	39.4	37.8	37.0	37.7	41.0	39.9	38.6	38.0	34.6	34.0
Bahamas (the)	31.3	24.7	26.0	23.3	27.2	22.0	17.9	20.8	20.8	18.0	20.4	23.8	22.2	28.3	20.3	20.7	30.6	25.3
Barbados	1.2	12.0	6.8	5.6	4.7	2.8	1.2	1.6	2.0	1.9	1.9	2.3			7.6	1.1	2.2	2.6
Belize	22.1	28.7	89.0	21.7	15.1	13.5	23.5	15.7	16.4	30.4	46.3	32.9	39.5	28.4	28.6	24.2	39.7	
Bolivia	92.8	85.8	91.3	71.5	130.3	113.6	145.8	169.8	195.6	169.9	166.8	138.1	122.0	130.3	194.5	134.3	126.7	127.3
Brazil	69.5	69.1	66.7	66.7	62.3	60.7	58.3	57.6	55.0	50.4	56.5	56.3		48.2	55.3	54.0	50.9	50.8
Canada	10.3	10.0	8.6	9.1	7.6	7.8	7.3	7.5	7.2	7.1	7.3	7.3	7.0	7.1		6.2		
Chile	64.8	60.4	59.9	55.3	55.2	56.0	50.4	49.9	52.2	47.0	41.3	39.2	33.4	29.6	29.2	28.0	26.5	24.7
Colombia	39.5	40.8	45.2	41.3	38.0	36.0	34.7	34.1	33.0	35.6	34.4	30.8	29.8	23.5	25.7	24.7	20.1	22.4
Costa Rica	22.1	18.9	19.2	15.3	14.2	15.4	15.5	15.4	10.5	7.5	6.4	3.6	9.3	9.4	9.0	4.4	16.9	18.1
Cuba	8.5	8.3	7.7	7.0	6.7	6.4	6.1	6.0	5.5	5.1	4.8	3.8	7.3	15.4	14.7	14.3	13.0	11.7
Dominica	35.1	24.7	21.9	6.8	11.1	48.6	37.5	9.7	18.1	8.5	19.7	18.3	9.9	16.9	11.3	14.1	8.5	7.0
Dominican Republic (the)	30.5	41.2	48.5	49.7	36.6	40.4	36.9	45.2	45.2	36.5	25.3	47.2	53.5	56.4	51.8	75.4	69.2	51.8
Ecuador	48.5	46.1	46.1	48.5	52.7	61.0	61.4	56.1	54.6	80.3	65.5	68.1	64.2	86.3	68.9	54.1	79.8	75.4
El Salvador	45.1	46.4	43.7	33.1	30.6	34.4	33.8	48.1	12.3	46.3	44.2	46.9	61.6	70.3	42.7	29.1	28.1	28.2
Grenada	1.1	1.1	6.7	4.4	2.2	1.1	2.2		4.4		1.1	3.3		3.3	2.2		4.3	2.2
Guatemala	95.0	101.4	81.7	87.3	84.9	60.6	70.2	68.9	57.4	43.6	29.3	27.3	26.2	25.8	57.4	34.1	30.2	25.5
Guyana	15.3	17.4	19.1	20.9	27.1	23.9	14.7	18.9	15.1	21.1	16.8	22.6	11.2	32.4	35.7	37.5	48.3	37.4
Haiti	117.5	58.5	117.1	97.1	81.0	136.7	132.1	121.9	119.7		145.1					86.3	129.4	123.9
Honduras	46.0	45.0	49.2	52.3	80.7	97.6	94.9	86.3	85.1	74.8	90.7	80.2	70.2	78.1	88.2	71.8	67.4	80.0
Jamaica	8.2	7.0	7.0	7.0	5.7	3.8	5.7	2.8	3.7	5.2	5.1	4.6	4.7	4.4	4.4	4.9	4.7	4.9
Mexico	47.1	35.1	31.5	19.7	19.9	17.1	18.6	19.2	19.0	17.3	17.9	16.7	17.2	18.3	12.4	11.7	25.0	7.9
Nicaragua	123.4	98.9	86.3	81.7	76.5	75.0	83.6	75.0	83.2	76.9	71.1	71.3	67.1	64.0	64.2	66.0	60.0	54.2
Panama	29.1	28.5	20.6	19.5	28.3	32.0	33.9	33.4	28.6	35.3	35.3	30.1	45.2	32.0	50.0	41.1	39.2	53.4
Paraguay	43.3	42.8	52.9	49.1	53.5	43.7	39.1	36.2	55.4	51.4	52.6	43.2	44.5	39.3	47.7	43.3	39.2	35.6
Peru	123.4	118.6	122.1	119.6	125.4	124.0	150.3	177.8	168.6	175.7	184.8	235.1	227.3	210.1	192.5	174.3	172.6	176.3
Puerto Rico	16.1	14.4	13.6	12.5	10.0	10.7	8.8	7.9	9.0	4.5	6.8		7.1	7.4	7.1	5.8	6.2	5.2
Saint Kitts and Nevis	9.1	13.6	4.5	7.0							2.4	9.5	14.3	4.9	9.8	7.3		12.2
Saint Lucia	33.3	31.1	40.0	45.1	16.9	27.0	19.5	24.8	21.4	9.8	18.5	19.0		17.0	8.5		10.3	14.2
Saint Vincent and the Grenadines	11.1	14.0	4.0	22.8	13.7	8.7	2.9	5.7	2.8	1.9	0.9	3.7	11.8		21.4			4.3
Suriname	22.6	15.4	21.0	20.1	13.0	15.4	19.6	19.4	17.5	20.4	11.6	14.3	11.1	13.0		12.9	17.2	
Trinidad and Tobago	7.4	5.5	9.8	9.3	9.5	10.0	10.2	9.0	10.3	9.9	11.5	11.5	9.0	10.3	14.1	16.1	21.6	15.0
United States of America (the)	11.8	10.9	10.1	9.3	9.2	9.3	9.1	9.0	9.3	10.1	10.2	10.3	9.7	9.2	8.6	7.9	6.4	6.6
Uruguay	57.9	49.1	45.7	46.5	39.9	35.7	33.6	31.0	32.0	28.5	24.3	22.2	21.7	20.8	19.4	21.6	21.7	20.3
Venezuela	26.4	26.1	26.1	28.3	28.1	28.3	27.4	24.6	23.8	28.0	26.1	26.6	24.7	22.8	25.4	25.0	26.3	27.0
Other territories																		
Anguilla		57.1			14.3										25.0			
Bermuda	3.7	9.1	18.2	5.5	5.4	10.5	3.4	1.7	3.3		4.8	6.5		6.3				
British Virgin Islands																	15.0	
Cayman Islands	11.1		5.0	5.0	19.0	4.5			8.0	7.7	11.1	10.7	6.9		9.7			8.8
Montserrat			9.1	63.6	81.8	45.5	118.2	54.5	45.5	9.1	9.1							27.3
Netherlands Antilles																		
Turks and Caicos Islands		25.0	55.6		44.4	20.0	120.0											
United States Virgin Islands	1.0	1.0	2.0	3.0	1.0	1.0	2.0	5.9	4.0	3.9	3.9			9.6	3.8	7.5		
AMR	39.6	37.3	36.8	34.5	34.0	33.5	33.8	34.6	33.7	32.0	34.4	34.1	22.1	31.6	32.3	31.0	31.4	29.4

AMR - New smear-positive cases

Country	Number of cases						Rate (per 100 000 population)					
	1993	1994	1995	1996	1997	1998	1993	1994	1995	1996	1997	1998
Antigua and Barbuda				2						3.0		
Argentina	5 937	5 696	5 698	5 787	5 307	5 186	17.5	16.6	16.4	16.4	14.9	14.4
Bahamas (the)	41	41	37	26	57	28	15.2	14.9	13.2	9.1	19.6	9.5
Barbados				3	5	4				1.1	1.9	1.5
Belize	50	36	22	20	48		24.7	17.3	10.3	9.1	21.4	
Bolivia	6 833	6 905	7 010	6 949	6 458	6 750	96.7	95.4	94.6	91.5	83.1	84.8
Brazil		39 167	45 004	44 501	43 490	38 809		24.9	28.2	27.5	26.6	23.4
Canada	542			450			1.9			1.5		
Chile	2 629	1 951	1 624	1 480	1 524	1 576	19.1	13.9	11.4	10.3	10.4	10.6
Colombia	6 987	6 532	7 530	7 572	6 090	6 969	18.8	17.3	19.5	19.3	15.2	17.1
Costa Rica	230	230	219	122	578	562		6.7	6.2	3.3	15.4	14.6
Cuba	565	914	834	835	765	744	5.2	8.4	7.6	7.6	6.9	6.7
Dominica	6	8	5	7	5	5	8.5	11.3	7.0	9.9	7.0	7.0
Dominican Republic (the)	2 297	3 177	2 187	3 609	2 682	2 194	30.5	41.3	28.0	45.3	33.1	26.7
Ecuador	5 325	6 674	5 236	4 356	7 329	6 455	48.5	59.5	45.7	37.2	61.4	53.0
El Salvador	2 471	2 144		965	882	1 071	45.5	38.6		16.7	14.9	17.8
Grenada		3	2		2	2		3.3	2.2		2.2	2.2
Guatemala	2 128	1 994	2 368	2 308	2 224	2 255	22.5	20.5	23.7	22.5	21.1	20.9
Guyana	51	61	85	71	105	85	6.3	7.4	10.2	8.5	12.4	10.0
Haiti				3 524	5 497	6 442				45.8	70.3	81.0
Honduras	2 016	2 385	2 438	1 739	1 579	2 311	37.8	43.4	43.1	29.9	26.4	37.6
Jamaica	83	61	91	75	71	82	3.4	2.5	3.7	3.0	2.8	3.2
Mexico	8 164	9 726	9 220	8 495	15 440	6 189	9.3	10.9	10.1	9.2	16.4	6.5
Nicaragua	1 714	1 615	1 568	1 722	1 670	1 648	41.1	37.6	35.4	37.8	35.7	34.3
Panama	1 046	748	1 066	904	592	1 393	41.2	28.9	40.5	33.8	21.7	50.3
Paraguay	985	873	748	894	895	850	21.5	18.6	15.5	18.0	17.6	16.3
Peru	35 646	33 925	32 096	26 800	27 498	27 707	156.8	146.7	136.4	111.9	112.8	111.7
Puerto Rico	117		126	110	126	105	3.2		3.4	2.9	3.3	2.8
Saint Kitts and Nevis	2	2	4	2		3	4.8	4.9	9.8	4.9		7.3
Saint Lucia		17			11	12		12.1			7.5	8.1
Saint Vincent and the Grenadines	11		13			3	10.0		11.6			2.6
Suriname				39	27					9.5	6.6	
Trinidad and Tobago		55	76	59	52	98		4.4	6.0	4.6	4.1	7.6
United States of America (the)	16 046	14 346	8 013	7 401	6 882	6 630	6.1	5.4	3.0	2.7	2.5	2.4
Uruguay	388	381	349	426	423	374	12.2	11.9	10.8	13.1	13.0	11.4
Venezuela	2 849	2 738	3 056	3 195	3 234	3 450	13.6	12.8	14.0	14.3	14.2	14.8
Other territories												
Anguilla												
Bermuda			2						3.2			
British Virgin Islands				0	0							
Cayman Islands	2				0	2	6.9					5.9
Montserrat												
Netherlands Antilles	0											
Turks and Caicos Islands												
United States Virgin Islands			2	5					1.9	4.7		
Total	104 931	142 405	136 729	134 453	141 548	129 994	13.9	18.6	17.6	17.1	17.8	16.1

Notes

Argentina Began DOTS in late 1997, so treatment outcomes for DOTS areas are not yet available. Age unknown for 7 males and 3 females in DOTS areas, 66 males and 48 females in non-DOTS areas.

Dominica Began DOTS in 1998, so treatment outcomes for DOTS areas are not yet available.

Haiti Relapse is not separated from failure.

United States of America (the) Age and sex unknown for 6 cases.

The Eastern Mediterranean



Eastern Mediterranean Region – Summary of TB control policies

Country	Category of the country as of 31/12/97	DOTS Technical Elements							DOTS newly implemented in 1998
		National manual ¹	Training ²	Use of microscopy for diagnosis	SCC ³	DOT ⁴	Drug availability ⁵	Recording and reporting system ⁶	
Afghanistan	3								
Bahrain	1								
Cyprus	4								X
Djibouti	4								
Egypt	3								
Iran (Islamic Republic of)	3								
Iraq	3								X
Jordan	4								X
Kuwait	1								
Lebanon	1								X
Libyan Arab Jamahiriya (the)	1								
Morocco	4								
Oman	4								
Pakistan	2								
Qatar	4								
Saudi Arabia	1								
Somalia	3								
Sudan (the)	3								
Syrian Arab Republic (the)	3								
Tunisia	1								
United Arab Emirates (the)	1								
West Bank and Gaza	1								
Yemen	3								

1 Presence of national manual, or a document issued by the government or an authorized scientific body, including policy recommendations endorsed by WHO

2 "WHO standard" training course on management of TB control programmes has been carried out within the past two years; or training materials endorsed by WHO or IUATLD

3 Short course chemotherapy

4 Directly observed treatment

5 A regular supply system of all essential anti-tuberculosis drugs and diagnostic materials

6 Presence of WHO/IUALTD recommended recording and reporting system showing assessment of treatment results

dark pink fully implemented (more than 90% of country)

light pink implemented in part of country

grey not implemented

white unknown

Regional Profile - EMR

Countries	Country Information (1998)									WHO TB Control Strategy (DOTS)						
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage				% new ss+ out of all new pulm. cases			
		All types		New ss+					Population		Notified cases			% cases out of all cases	New ss+ cases notified	
		No.	Rate	No.	Rate				No.	(%)	No.	Rate			No.	Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Afghanistan	21 353 783	3 084	14.4	1 833	8.6	33 930	5.4	3	2 348 916	11.0	3 084	131.3	100.0	1 833	78.0	78.9
Bahrain	594 545	213	35.8	110	18.5	145	75.9	1								
Cyprus	771 216	47	6.1	6	0.8	20	30.0	4	771 216	100.0	47	6.1	100.0	6	0.8	20.7
Djibouti	622 540	3 715	596.7	1 697	272.6	2 136	79.4	4	622 540	100.0	3 715	596.7	100.0	1 697	272.6	90.2
Egypt	65 977 506	12 662	19.2	4 915	7.4	10 513	46.8	3	17 813 927	27.0	3 548	19.9	28.0	1 600	9.0	63.0
Iran (Islamic Republic of)	65 758 186	11 794	17.9	5 105	7.8	18 010	28.3	3	45 373 148	69.0	7 539	16.6	63.9	3 323	7.3	65.2
Iraq	21 800 073	30 324	139.1	8 850	40.6	15 693	56.4	3	2 180 007	10.0	914	41.9	3.0	299	13.7	46.5
Jordan	6 303 527	385	6.1	110	1.7	290	37.9	4	6 303 527	100.0	385	6.1	100.0	110	1.7	49.1
Kuwait	1 810 737	564	31.1	185	10.2	258	71.7	1								
Lebanon	3 191 309	730	22.9	245	7.7	376	65.2	1								
Libyan Arab Jamahiriya (the)	5 339 135	1 575	29.5			516		1								
Morocco	27 376 661	29 087	106.2	13 426	49.0	15 319	87.6	4	27 376 661	100.0	29 087	106.2	100.0	13 426	49.0	81.1
Oman	2 381 924	215	9.0	109	4.6	149	73.2	4	2 381 924	100.0	215	9.0	100.0	109	4.6	80.7
Pakistan	148 165 652	89 599	60.5	14 974	10.1	120 413	12.4	2	11 853 252	8.0	9 495	80.1	10.6	4 145	35.0	53.8
Qatar	579 027	253	43.7	68	11.7	61	111.5	4	579 027	100.0	253	43.7	100.0	68	11.7	49.3
Saudi Arabia	20 181 178	3 235	16.0	1 644	8.1	4 217	39.0	1								
Somalia	9 236 563	4 071	44.1	3 121	33.8	17 974	17.4	3	4 803 013	52.0	4 071	84.8	100.0	3 121	65.0	87.6
Sudan (the)	28 292 290	22 762	80.5	10 791	38.1	25 629	42.1	3	16 975 374	60.0	11 306	66.6	49.7	7 809	46.0	87.5
Syrian Arab Republic (the)	15 332 717	5 342	34.8	1 593	10.4	5 750	27.7	3	8 892 976	58.0	2 178	24.5	40.8	748	8.4	58.3
Tunisia	9 335 492	2 211	23.7	1 196	12.8	1 706	70.1	1								
United Arab Emirates (the)	2 353 122	773	32.8			225		1								
Yemen	16 886 755	12 383	73.3	4 896	29.0	8 444	58.0	3	8 781 113	52.0	3 296	37.5	26.6	3 004	34.2	99.8
Other Territories																
West Bank and Gaza	1 036 228	18	1.7	8	0.8	355	2.3	1								
Regional Total	474 680 166	235 042	49.5	74 882	15.8	282 129	26.5		157 056 621	33.1	79 133	50.4	33.7	41 298	26.3	76.4

Regional Profile - EMR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage				% new ss+ out of all new pulm. cases			
		All types		New ss+					Population		Notified cases			% cases out of all cases	New ss+ cases notified	
		No.	Rate	No.	Rate				No.	(%)	No.	Rate			No.	Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Afghanistan	21 353 783	3 084	14.4	1 833	8.6	33 930	5.4	3								
Bahrain	594 545	213	35.8	110	18.5	145	75.9	1	594 545	100.0	213	35.8	100.0	110	18.5	64.7
Cyprus	771 216	47	6.1	6	0.8	20	30.0	4								
Djibouti	622 540	3 715	596.7	1 697	272.6	2 136	79.4	4								
Egypt	65 977 506	12 662	19.2	4 915	7.4	10 513	46.8	3	48 163 579	73.0	9 114	18.9	72.0	3 315	6.9	51.6
Iran (Islamic Republic of)	65 758 186	11 794	17.9	5 105	7.8	18 010	28.3	3	20 385 038	31.0	4 255	20.9	36.1	1 782	8.7	61.8
Iraq	21 800 073	30 324	139.1	8 850	40.6	15 693	56.4	3	19 620 066	90.0	29 410	149.9	97.0	8 551	43.6	39.3
Jordan	6 303 527	385	6.1	110	1.7	290	37.9	4								
Kuwait	1 810 737	564	31.1	185	10.2	258	71.7	1	1 810 737	100.0	564	31.1	100.0	185	10.2	65.6
Lebanon	3 191 309	730	22.9	245	7.7	376	65.2	1	3 191 309	100.0	730	22.9	100.0	245	7.7	50.3
Libyan Arab Jamahiriya (the)	5 339 135	1 575	29.5			516		1	5 339 135	100.0	1 575	29.5	100.0			
Morocco	27 376 661	29 087	106.2	13 426	49.0	15 319	87.6	4								
Oman	2 381 924	215	9.0	109	4.6	149	73.2	4								
Pakistan	148 165 652	89 599	60.5	14 974	10.1	120 413	12.4	2	136 312 400	92.0	80 104	58.8	89.4	10 829	7.9	13.7
Qatar	579 027	253	43.7	68	11.7	61	111.5	4								
Saudi Arabia	20 181 178	3 235	16.0	1 644	8.1	4 217	39.0	1	20 181 178	100.0	3 235	16.0	100.0	1 644	8.1	70.9
Somalia	9 236 563	4 071	44.1	3 121	33.8	17 974	17.4	3								
Sudan (the)	28 292 290	22 762	80.5	10 791	38.1	25 629	42.1	3	11 316 916	40.0	11 456	101.2	50.3	2 982	26.3	34.0
Syrian Arab Republic (the)	15 332 717	5 342	34.8	1 593	10.4	5 750	27.7	3	6 439 741	42.0	3 164	49.1	59.2	845	13.1	43.8
Tunisia	9 335 492	2 211	23.7	1 196	12.8	1 706	70.1	1	9 335 492	100.0	2 211	23.7	100.0	1 196	12.8	87.7
United Arab Emirates (the)	2 353 122	773	32.8			225		1	2 353 122	100.0	773	32.8	100.0			
Yemen	16 886 755	12 383	73.3	4 896	29.0	8 444	58.0	3	8 105 642	48.0	9 087	112.1	73.4	1 892	23.3	30.5
Other Territories																
West Bank and Gaza	1 036 228	18	1.7	8	0.8	355	2.3	1	1 036 228	100.0	18	1.7	100.0	8	0.8	88.9
Regional Total	474 680 166	235 042	49.5	74 882	15.8	282 129	26.5		294 185 128	62.0	155 909	53.0	66.3	33 584	11.4	25.5

Regional Profile - EMR cont'd.

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Afghanistan	2 001	43.4	39.3	5.4	8.2	1.1	1.6	0.9	44.7									
Bahrain																		
Cyprus																		
Djibouti	1 904	0.2	54.5	21.9	20.0	0.9	2.5		76.4	251	0.0	39.4	13.1	37.8	2.0	6.8	0.8	52.6
Egypt	861	0.0	68.5	13.8	6.6	2.2	2.9	5.9	82.3	183	0.0	47.5	4.4	13.7	14.2	6.6	13.7	51.9
Iran (Islamic Republic of)	1 579	0.8	74.6	9.8	2.6	1.5	5.1	5.6	84.4	205	1.0	60.0	16.1	4.9	3.9	7.8	6.3	76.1
Iraq																		
Jordan																		
Kuwait																		
Lebanon																		
Libyan Arab Jamahiriya (the)																		
Morocco	14 134	0.5	73.7	9.0	6.4	1.3	2.0	7.2	82.7	1 830	2.1	63.6	8.0	10.4	5.2	4.8	5.9	71.6
Oman	120	0.0	90.0	0.8		3.3	3.3	2.5	90.8	6	0.0	50.0			33.3		16.7	50.0
Pakistan	2 805	0.0	52.4	15.0	25.7	1.2	3.4	2.2	67.4	537	0.0	37.4	19.2	25.3	5.4	8.2	4.5	56.6
Qatar	39	0.0	71.8	7.7	2.6		5.1	12.8	79.5									
Saudi Arabia																		
Somalia	2 779	0.0	83.9	6.5	3.7	1.3	3.7	0.9	90.4	68	0.0	80.9	10.3	5.9		1.5	1.5	91.2
Sudan (the)	7 285	0.0	46.5	23.4	16.5	3.8	4.2	5.6	69.9	741	0.0	42.8	11.5	21.7	4.6	11.7	7.7	54.3
Syrian Arab Republic (the)	307	0.0	85.3	2.6	3.6	2.0	3.3	3.3	87.9	50	34.0	50.0		4.0	12.0			50.0
Tunisia																		
United Arab Emirates (the)																		
Yemen	2 437	0.0	74.5	6.6	10.1	1.6	3.0	4.2	81.1	165	0.0	67.3	9.1	12.1	3.6	6.1	1.8	76.4
Other Territories																		
West Bank and Gaza																		
Regional Total	36 251	2.6	64.6	12.5	10.6	1.8	2.9	4.9	77.1	4 036	-20.7	54.1	10.7	15.9	5.3	6.8	5.8	64.8

Regional Profile - EMR cont.

Countries	Other Strategy (non-DOTS)																	
	Treatment Outcomes in 199*																	
	New ss+ cases (Short Course)									New ss+ cases (Other Regimens)								
	Registered	Not eval.	Cured	Comp.	Def.	Failed	Dead	Trans.	Treat. Success	Registered	Not eval.	Cured	Comp.	Def.	Failed	Dead	Trans.	Treat. Success
o	p (%)	q (%)	r (%)	s (%)	t (%)	u (%)	v (%)	w (%)	x	y (%)	z (%)	aa (%)	ab (%)	ac (%)	ad (%)	ae (%)	af (%)	
Afghanistan																		
Bahrain																		
Cyprus																		
Djibouti																		
Egypt	2 606	1.9	58.1	18.3	9.2	4.2	2.2	6.0	76.4									
Iran (Islamic Republic of)	3 172	2.6	67.8	14.2	2.9	2.2	5.5	4.8	82.0									
Iraq	8 164	0.0	56.0	10.9	23.0	7.0	3.0	66.9										
Jordan	136	0.0	84.6		5.9	2.9	5.1	1.5	84.6									
Kuwait																		
Lebanon	206	0.5	64.6	22.8	2.9	1.5	7.8	64.6										
Libyan Arab Jamahiriya (the)																		
Morocco																		
Oman																		
Pakistan																		
Qatar																		
Saudi Arabia	1 431	20.9	39.1	16.8	14.6	0.3	3.6	4.6	56.0									
Somalia																		
Sudan (the)	3 600	56.1	22.0	13.9	3.3	1.3	1.5	1.9	35.9									
Syrian Arab Republic (the)	1 114	14.5	48.1	10.0	17.1	3.5	1.5	5.3	58.1									
Tunisia	1 099	0.8	88.7	3.7	1.1	3.0	2.6	88.7										
United Arab Emirates (the)																		
Yemen	1 928	0.0	41.1	14.4	30.8	1.0	1.6	11.2	55.5									
<i>Other Territories</i>																		
West Bank and Gaza																		
Regional Total	23 456	11.2	51.2	13.1	14.6	3.8	1.8	4.3	64.3									

EMR - Notification rates by age and sex, 1998.

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Afghanistan	0.6	6.5	7.5	8.8	11.7	12.9	14.0	5.2	1.0	18.6	26.0	20.2	16.6	12.7	6.4	11.6	0.8	12.4	16.5	14.3	14.1	12.8	10.1	8.3
Bahrain	0.0	6.4	74.6	44.6	47.1	91.0	258.3	39.5	3.4	9.0	21.8	16.1	25.9	19.8	77.3	14.1	1.7	7.7	51.6	34.6	40.4	61.6	172.0	28.6
Cyprus	0.0	0.0	1.8	0.0	0.0	0.0	2.9	0.5	0.0	1.8	5.6	0.0	0.0	0.0	0.0	1.1	0.0	0.9	3.7	0.0	0.0	0.0	1.3	0.8
Djibouti	17.8	582.9	929.6	656.1	376.8	404.9	258.7	366.9	21.8	340.3	428.5	239.9	184.7	108.5	82.9	182.3	19.8	460.2	669.5	439.2	276.9	248.7	162.1	272.6
Egypt	0.4	11.4	18.7	18.4	18.2	19.2	15.2	10.3	0.5	7.8	8.6	7.3	7.6	8.5	3.0	5.0	0.4	9.7	13.8	13.0	12.9	13.6	8.4	7.7
Iran (Islamic Republic of)	0.3	5.9	10.1	11.8	12.3	26.7	43.5	7.6	0.7	8.0	8.4	9.0	14.2	32.6	40.7	8.1	0.5	6.9	9.2	10.4	13.3	29.6	42.1	7.8
Iraq	9.7	39.2	47.9	53.5	127.8	172.0	82.1	41.4	9.5	37.8	47.1	51.8	116.0	163.5	68.7	39.9	9.6	38.5	47.5	52.7	122.0	167.7	75.0	40.6
Jordan	0.0	3.2	4.8	2.4	7.2	8.4	7.3	2.6	0.0	1.1	1.3	1.1	1.8	6.0	1.1	0.9	0.0	2.2	3.1	1.8	4.5	7.2	4.1	1.7
Kuwait	0.0	7.8	31.1	27.7	24.8	27.7	28.4	14.3	0.0	7.4	11.2	6.9	8.6	16.6	34.6	5.8	0.0	7.6	21.6	18.1	15.9	22.9	31.2	10.2
Lebanon	0.2	9.0	11.2	13.9	18.4	22.4	21.2	8.7	0.6	7.7	6.9	2.8	5.8	9.1	3.2	4.3	0.4	8.3	9.1	7.6	11.6	15.2	11.5	6.5
Libyan Arab Jamahiriya (the)								0.0								0.0								0.0
Morocco	2.5	76.6	112.0	105.8	88.2	97.4	99.2	63.4	4.1	55.1	51.4	40.2	41.3	55.6	53.9	34.8	3.3	66.0	82.1	72.6	64.3	74.2	74.9	49.0
Oman	0.0	8.1	5.6	5.6	11.9	18.0	42.2	5.5	0.6	6.4	4.3	6.4	7.9	7.2	7.1	3.5	0.3	7.2	5.0	5.9	10.5	13.1	24.7	4.6
Pakistan	0.2	4.4	3.9	3.9	6.8	6.6	6.2	2.8	0.5	5.5	4.9	3.5	4.6	3.1	2.2	2.8	0.3	4.9	4.4	3.7	5.8	4.9	4.2	2.8
Qatar	0.0	26.2	38.9	7.2	13.3	14.8	28.7	13.4	1.3	11.3	8.7	9.6	8.7	41.9	64.1	8.5	0.6	19.0	28.5	7.8	12.2	20.5	39.6	11.7
Saudi Arabia	0.0	3.9	9.9	5.4	5.9	9.8	22.3	4.3	0.4	4.4	7.6	4.2	5.0	8.1	14.8	3.5	0.2	4.2	8.8	5.0	5.6	9.1	18.6	3.9
Somalia	4.5	60.7	102.1	85.5	80.3	97.8	124.9	44.6	3.5	30.1	53.4	43.0	29.9	44.7	68.0	23.1	4.0	45.4	77.5	63.8	54.4	69.8	94.2	33.8
Sudan (the)	13.9	37.8	74.4	78.1	85.0	84.9	109.2	44.8	12.0	30.7	51.5	49.2	51.6	53.8	56.4	31.5	13.0	34.3	63.1	63.5	67.8	68.8	82.1	38.1
Syrian Arab Republic (the)	0.2	20.0	25.0	15.4	23.7	19.2	23.3	12.1	0.6	12.1	8.9	6.1	12.1	6.6	8.9	5.9	0.4	16.1	17.1	10.7	17.8	12.6	15.7	9.0
Tunisia	0.7	13.6	27.3	26.3	31.4	35.0	37.0	17.0	0.8	8.5	8.4	7.3	11.1	16.6	10.4	6.7	0.8	11.1	17.8	16.9	21.1	25.7	23.9	11.8
United Arab Emirates (the)																								
West Bank and Gaza		1.0	1.6		9.8		6.3	1.0				2.8		5.0	6.2	0.6							6.3	0.8
Yemen	2.0	41.9	52.4	79.6	86.1	69.2	66.4	29.8	2.9	43.7	57.3	55.7	62.7	51.8	32.7	28.2	2.4	42.8	54.6	66.8	72.1	59.3	47.5	29.0
EMR	1.8	17.6	25.8	24.4	28.1	33.8	35.2	15.2	2.1	15.4	18.1	15.5	20.2	25.7	20.9	11.4	1.9	16.5	22.1	20.1	24.3	29.7	27.8	13.3

EMR - Age and sex distribution of smear-positive TB cases in DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Afghanistan	30	129	128	90	89	64	41	571	45	350	419	194	118	61	20	1 207	75	479	547	284	207	125	61	1 778
Cyprus	0	0	1	0	0	0	1	2	0	1	3	0	0	0	0	4	0	1	4	0	0	0	1	6
Djibouti	23	348	396	191	81	57	23	1 119	28	208	197	76	43	17	9	578	51	556	593	267	124	74	32	1 697
Egypt	19	266	288	235	165	79	70	1 122	21	155	108	93	53	32	16	478	40	421	396	328	218	111	86	1 600
Iran (Islamic Republic of)	22	273	314	250	152	228	406	1 645	48	340	271	196	197	299	327	1 678	70	613	585	446	349	527	733	3 323
Iraq	5	69	47	22	16	16	8	183	9	41	28	5	17	7	9	116	14	110	75	27	33	23	17	299
Jordan	0	22	26	7	12	10	6	83	0	7	6	3	3	7	1	27	0	29	32	10	15	17	7	110
Morocco	116	2308	2573	1744	843	560	527	8 671	182	1600	1150	679	412	402	330	4 755	298	3 908	3 723	2 423	1 255	962	857	13 426
Oman	0	18	9	8	14	9	12	70	3	14	6	6	5	3	2	39	3	32	15	14	19	12	14	109
Pakistan	59	633	449	328	335	194	137	2 135	159	735	507	260	209	90	50	2 010	218	1 368	956	588	544	284	187	4 145
Qatar	0	10	17	8	10	4	2	51	1	4	2	3	2	3	2	17	1	14	19	11	12	7	4	68
Somalia	99	541	599	337	198	145	126	2 045	77	270	321	176	78	74	80	1 076	176	811	920	513	276	219	206	3 121
Sudan (the)	585	781	1109	820	593	375	328	4 591	492	633	750	523	385	257	178	3 218	1 077	1 414	1 859	1 343	978	632	506	7 809
Syrian Arab Republic (the)	1	162	127	33	35	13	24	395	10	68	30	15	14	5	5	147	11	230	157	48	49	18	29	542
Yemen	37	437	443	314	172	90	71	1 564	83	413	404	236	161	94	49	1 440	120	850	847	550	333	184	120	3 004
EMR	996	5 997	6 526	4 387	2 715	1 844	1 782	24 247	1 158	4 839	4 202	2 465	1 697	1 351	1 078	16 790	2 154	10 836	10 728	6 852	4 412	3 195	2 860	41 037
%	4.1	24.7	26.9	18.1	11.2	7.6	7.3	100	6.9	28.8	25.0	14.7	10.1	8.0	6.4	100	5.2	26.4	26.1	16.7	10.8	7.8	7.0	100

EMR - Age and sex distribution of smear-positive TB cases in non-DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Bahrain	0	3	40	36	20	13	22	134	3	4	9	7	5	2	6	36	3	7	49	43	25	15	28	170
Egypt	26	495	655	526	310	207	104	2 323	39	334	297	198	151	107	28	1 154	65	829	952	724	461	314	132	3 477
Iran (Islamic Republic of)	13	153	178	150	93	135	173	895	39	221	132	111	93	132	195	923	52	374	310	261	186	267	368	1 818
Iraq	448	810	734	561	897	719	234	4 403	417	765	712	537	789	705	223	4 148	865	1 575	1 446	1 098	1 686	1 424	457	8 551
Jordan																								
Kuwait	0	14	42	42	20	11	5	134	0	13	14	9	5	5	5	51	0	27	56	51	25	16	10	185
Lebanon	1	27	33	22	19	17	17	136	3	23	20	6	7	8	3	70	4	50	53	28	26	25	20	206
Libyan Arab Jamahiriya (the)																								
Pakistan																								
Saudi Arabia	2	76	140	96	65	45	62	486	16	82	86	32	27	28	40	311	18	158	226	128	92	73	102	797
Sudan (the)	220	298	424	313	227	148	125	1 755	188	242	286	200	143	99	69	1 227	408	540	710	513	370	247	194	2 982
Syrian Arab Republic (the)	4	173	166	78	58	35	26	540	10	129	69	28	35	13	16	300	14	302	235	106	93	48	42	840
Tunisia	11	134	206	155	108	88	95	797	12	80	65	43	39	43	26	308	23	214	271	198	147	131	121	1 105
United Arab Emirates (the)																								
West Bank and Gaza		1	1		2		1	5				1		1	1	3	0	1	1	1	2	1	2	8
Yemen	46	281	255	177	99	70	44	972	32	276	228	164	133	64	23	920	78	557	483	341	232	134	67	1 892
EMR	771	2 465	2 874	2 156	1 918	1 488	908	12 580	759	2 169	1 918	1 336	1 427	1 207	635	9 451	1 530	4 634	4 792	3 492	3 345	2 695	1 543	22 031
%	6.1	19.6	22.8	17.1	15.2	11.8	7.2	100	8.0	22.9	20.3	14.1	15.1	12.8	6.7	100	6.9	21.0	21.8	15.9	15.2	12.2	7.0	100

EMR - Number of tuberculosis cases notified, 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Afghanistan	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
Bahrain	262	156	232	208	194	156	120	142	122	117	142	140	114		115	156	154	213
Cyprus	69	86	73	39	61	48	35	39	23	29	43	39	37	37	36	24	47	47
Djibouti	2 265	671		1 489	2 262	1 864	1 978	2 030	2 040	2 100	2 900	2 884	3 489	3 311		3 071	3 727	3 715
Egypt	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
Iran (Islamic Republic of)	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
Iraq	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
Jordan	646	860	856	672	769	592	537	553	484	439	390	504	427	443	504	474	407	385
Kuwait	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
Libyan Arab Jamahiriya (the)	481	512	610	357	325	276	331	416	265	442	239	1 164			1 440	1 282		1 575
Morocco	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
Oman	928	897	802	843	861	1 265	616	477	478	482	442	367	281	304	276	222	235	215
Pakistan	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
Qatar	213	172	206	203	250	220	248	223	191	184	195		200		304	257	212	253
Saudi Arabia	8 263	8 529	7 551	7 163	3 966	3 696	3 029	2 433	2 583	2 415	2 221	2 016	2 386	2 518			3 138	3 235
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
Sudan (the)	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
Syrian Arab Republic (the)	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	
Tunisia	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
United Arab Emirates (the)	638	597	507	534	568	464	818	339	308	285	234	227		426		507		773
Yemen															14 428	14 364	12 013	12 383
Other territories																		
West Bank and Gaza	139	136	136	123	113	63	82	85	145	64	89	97	72	146	77	40		18
Total	514 860	433 357	234 555	171 691	186 405	230 475	288 840	271 839	250 271	229 948	295 155	84 108	190 653	108 047	173 606	144 552	126 649	235 042

EMR - Case notification rates (per 100 000 population), 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Afghanistan	451.1	268.5	345.9	126.8	74.0	100.4	127.9	113.7	100.5	29.4	148.9						6.2	14.4
Bahrain	72.6	41.7	60.0	52.0	46.9	36.4	27.1	30.9	25.7	23.9	28.2	27.0	21.4		20.6	27.4	26.4	35.8
Cyprus	11.2	13.8	11.6	6.1	9.4	7.3	5.3	5.9	3.4	4.3	6.2	5.5	5.1	5.1	4.8	3.2	6.2	6.1
Djibouti	753.3	208.8		406.0	578.3	447.5	446.8	433.0	413.1	406.2	538.9	517.5	607.6	562.4		503.5	604.3	596.7
Egypt	2.9	3.9	4.1	3.2	2.6	2.4	42.1	2.6	2.7	3.8	6.3	15.1	5.7	6.4	56.1	19.4	21.6	19.2
Iran (Islamic Republic of)	28.8	22.4	19.5	22.9	18.3	16.2	19.6	18.8	21.9	16.4	24.7	23.9	34.2	21.3	47.3	22.4	19.6	17.9
Iraq	79.0	55.8	48.6	46.0	42.3	43.2	39.6	38.2	45.7	81.2			96.3	100.4	134.1	141.7	125.6	139.1
Jordan	20.7	25.5	23.4	17.2	18.7	13.9	12.3	12.5	10.8	9.5	8.1	10.0	8.1	8.0	8.8	8.0	6.6	6.1
Kuwait	56.8	58.5	54.6	49.6	41.7	33.5	27.8	23.4	22.0	12.9	15.8	14.2	11.7	13.5	19.9	23.7	30.5	31.1
Lebanon	2.5	2.8	10.6	15.3	72.8	85.5	95.4				33.9	32.8		32.2	32.7	27.1	22.3	22.9
Libyan Arab Jamahiriya (the)	15.1	15.3	17.5	9.8	8.6	7.0	8.2	10.0	6.2	10.0	5.3	25.1			29.0	25.2		29.5
Morocco	144.5	138.6	130.0	105.2	123.8	124.6	120.3	111.6	113.9	115.6	113.5	102.7	109.9	118.7	114.9	120.3	112.4	106.2
Oman	78.3	72.2	61.7	62.0	60.4	84.8	39.4	29.1	27.9	27.0	23.8	19.0	14.0	14.6	12.8	10.0	10.2	9.0
Pakistan	368.5	358.4	124.8	93.7	110.1	142.3	165.6	173.5	147.5	131.6	158.5		56.6		9.6	3.1		60.5
Qatar	85.2	62.7	68.4	61.6	69.9	57.0	60.0	50.7	41.1	37.9	38.8		37.9		55.5	46.0	37.3	43.7
Saudi Arabia	81.3	79.4	66.5	59.8	31.4	27.7	21.5	16.5	16.7	15.1	13.4	11.9	13.8	14.2			16.1	16.0
Somalia			45.1	42.5	41.6	45.5	104.0	37.2	17.4						35.2	38.4	46.7	44.1
Sudan (the)	246.5				7.0	11.2	3.6	3.0	3.0	0.9	66.8	77.8	146.7	88.8	41.6	74.7	42.1	80.5
Syrian Arab Republic (the)	21.2	19.7	19.3	21.1	20.8	36.6	38.4	42.7	45.9	48.6	44.3	41.4		37.1	31.0	35.7	33.1	34.8
Tunisia	35.0	37.6	43.9	34.9	34.2	33.1	29.6	29.5	30.1	25.2	24.8	25.5	29.7	27.0	26.6	26.3		23.7
United Arab Emirates (the)	56.6	48.1	37.5	36.7	36.6	28.3	47.6	18.9	16.6	14.8	11.8	11.1		19.7		22.4		32.8
Yemen															96.0	91.6	73.7	73.3
<i>Other territories</i>																		
West Bank and Gaza															8.5	4.2		1.7
EMR	174	141.7	74.4	52.8	55.6	66.7	81.1	74.1	66.3	59.2	74.1	20.6	45.5	25.2	39.4	32.0	27.3	49.5

EMR - New smear-positive cases

Country	Number of cases						Rate (per 100 000 population)					
	1993	1994	1995	1996	1997	1998	1993	1994	1995	1996	1997	1998
Afghanistan					618	1 833					3.0	8.6
Bahrain	82		16	121	110	110	15.4		2.9	21.2	18.9	18.5
Cyprus			12	3	19	6			1.6	0.4	2.5	0.8
Djibouti	1 668	1 743		1 796	1 905	1 697	290.5	296.1		294.5	308.9	272.6
Egypt		1 811	8 803	5 084	5 469	4 915		3.0	14.1	8.0	8.4	7.4
Iran (Islamic Republic of)		4 615	9 324	5 373	5 253	5 105		7.5	15.0	8.5	8.1	7.8
Iraq	5 240	5 781	11 553	10 240	8 001	8 850	27.2	29.4	57.5	49.7	37.8	40.6
Jordan	173	161	187	170	126	110	3.3	2.9	3.3	2.9	2.1	1.7
Kuwait	148	155	175	153	201	185	7.9	8.8	10.4	9.1	11.6	10.2
Lebanon		148	197	198	206	245		5.1	6.5	6.4	6.6	7.7
Libyan Arab Jamahiriya (the)				515						10.1		
Morocco			14 171	14 278	14 134	13 426			54.6	54.0	52.6	49.0
Oman	123	135	135	108	120	109	6.1	6.5	6.3	4.8	5.2	4.6
Pakistan	11 020		2 578	1 849		14 974	8.5		1.9	1.3		10.1
Qatar			59	43	39	68			10.8	7.7	6.9	11.7
Saudi Arabia	800				1 568	1 644	4.6				8.0	8.1
Somalia		1 168	1 739	2 318	3 097	3 121		14.5	21.2	27.4	35.1	33.8
Sudan (the)		3 728	6 280	8 978	6 095	10 791		14.3	23.6	33.1	22.0	38.1
Syrian Arab Republic (the)			1 295	1 523	1 402	1 593			9.1	10.5	9.4	10.4
Tunisia	1 006	983	1 243	1 005		1 196	11.6	11.2	13.9	11.1		12.8
United Arab Emirates (the)												
Yemen			3 681	4 371	4 717	4 896			24.5	27.9	29.0	29.0
Other territories												
West Bank and Gaza			9	24		8			1.0	2.5		0.8
Total	20 260	20 428	61 457	58 150	53 080	74 882	4.8	4.8	13.9	12.9	11.5	15.8

Notes

Afghanistan Treatment outcomes are for new and retreatment cases combined.

Iraq Began DOTS in 1998, so treatment outcomes for DOTS areas are not yet available. Notification data from DOTS areas are for quarters 2–4 only.

Jordan Began DOTS in 1998, so treatment outcomes for DOTS areas are not yet available.

Kuwait Classified as DOTS country in this report on the basis of promised treatment results that, in the end, did not materialise.

Lebanon Began DOTS in 1998, so treatment outcomes for DOTS areas are not yet available. Cure not distinguished from completed treatment.

Libyan Arab Jamahiriya (the) No report submitted; minimal official notification data obtained by other means.

Pakistan Data are incomplete, and do not include Punjab.

United Arab Emirates (the) No report submitted; minimal official notification data obtained by other means.

Europe



Updated information will be available later in 2000 from:

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

European Region – Summary of TB control policies

Country	Category of the country as of 31/12/97	DOTS Technical Elements							DOTS newly implemented in 1998
		National manual ¹	Training ²	Use of microscopy for diagnosis	SCC ³	DOT ⁴	Drug availability ⁵	Recording and reporting system ⁶	
Albania	1								
Andorra	4								
Armenia	3								
Austria	1								
Azerbaijan	3								
Belarus	1								
Belgium	1								
Bosnia and Herzegovina	3								
Bulgaria	1								
Croatia	1								
Czech Republic (the)	4								X
Denmark	1								
Estonia	1								
Finland	1								
France	0								
Georgia	4								
Germany	1								
Greece	1								
Hungary	1								
Iceland	5								
Ireland	1								
Israel	4								
Italy	3								
Kazakhstan	2								X
Kyrgyzstan	4								
Latvia	4								
Lithuania	1								
Luxembourg	1								
Malta	4								
Monaco	5								
Netherlands (the)	4								
Norway	4								
Poland	2								X
Portugal	4								
Republic of Moldova (the)	1								
Romania	4								
Russian Federation (the)	2								
San Marino	5								
Slovakia	4								
Slovenia	4								
Spain	1								
Sweden	5								
Switzerland	1								
Tajikistan	1								
The former Yugoslav Republic of Macedonia	1								
Turkey	1								
Turkmenistan	1								
Ukraine	1								
United Kingdom of Great Britain and Northern Ireland (the)	1								
Uzbekistan	2								X
Yugoslavia	1								

1 Presence of national manual, or a document issued by the government or an authorized scientific body, including policy recommendations endorsed by WHO

2 "WHO standard" training course on management of TB control programmes has been carried out within the past two years; or training materials endorsed by WHO or IUATLD

3 Short course chemotherapy

4 Directly observed treatment

5 A regular supply system of all essential anti-tuberculosis drugs and diagnostic materials

6 Presence of WHO/IUATLD recommended recording and reporting system showing assessment of treatment results

dark pink fully implemented (more than 90% of country)

light pink implemented in part of country

grey not implemented

white unknown

Regional Profile - EUR

Countries	Country Information (1998)								WHO TB Control Strategy (DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage						% new ss+ out of all new pulm. cases	
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.		Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Albania	3 119 089	694	22.3	212	6.8	425	49.9	1								
Andorra	76 000	8	10.5	1	1.3	8	12.2	4	76 000	100.0	8	10.5	100.0	1	1.3	16.7
Armenia	3 536 449	1 381	39.1	475	13.4	725	65.5	3	2 829 159	80.0	1 230	43.5	89.1	387	13.7	41.7
Austria	8 139 937	1 268	15.6			615		1								
Azerbaijan	7 668 715	4 672	60.9	727	9.5	1 997	36.4	3	920 246	12.0	338	36.7	7.2	161	17.5	58.5
Belarus	10 314 539	6 150	59.6	5 047	48.9	3 021	167.1	1								
Belgium	10 140 775	1 055	10.4	418	4.1	731	57.2	1								
Bosnia and Herzegovina	3 675 480	2 711	73.8	640	17.4	1 444	44.3	3	992 380	27.0	1 850	186.4	68.2	481	48.5	31.0
Bulgaria	8 335 580	4 559	54.7	1 325	15.9	1 608	82.4	1								
Croatia	4 480 743	2 118	47.3	1 129	25.2	1 294	87.2	1								
Czech Republic (the)	10 281 729	1 758	17.1	545	5.3	905	60.2	4	10 281 729	100.0	1 758	17.1	100.0	545	5.3	36.9
Denmark	5 269 719	506	9.6	132	2.5	257	51.4	1								
Estonia	1 429 417	820	57.4	299	20.9	324	92.3	1								
Finland	5 153 847	508	9.9	188	3.6	285	66.0	1								
France	58 683 488					4 899		0								
Georgia	5 058 518	4 876	96.4	547	10.8	1 625	33.7	4	5 007 933	99.0	4 876	97.4	100.0	547	10.9	18.0
Germany	82 133 337	10 440	12.7	3 124	3.8	5 353	58.4	1								
Greece	10 600 283	1 079	10.2	313	3.0	1 139	27.5	1								
Hungary	10 116 299	3 489	34.5	667	6.6	2 111	31.6	1								
Iceland	276 049	16	5.8	2	0.7	5	40.0	5								
Ireland	3 681 073	365	9.9	116	3.2	357	32.5	1								
Israel	5 984 047	625	10.4	221	3.7	212	104.2	4	5 984 047	100.0	625	10.4	100.0	221	3.7	48.3
Italy	57 369 144	5 727	10.0	2 361	4.1	2 518	93.8	3	12 047 520	21.0	818	6.8	14.3	321	2.7	46.2
Kazakhstan	16 318 584	20 623	126.4	6 180	37.9	7 839	78.8	2	652 743	4.0	847	129.8	4.1	314	48.1	43.7
Kyrgyzstan	4 642 924	5 706	122.9	830	17.9	2 006	41.4	4	4 642 924	100.0	3 214	69.2	56.3	830	17.9	30.9
Latvia	2 424 397	1 970	81.3	668	27.6	903	74.0	4	2 424 397	100.0	1 970	81.3	100.0	668	27.6	43.7
Lithuania	3 693 679	3 016	81.7	787	21.3	1 330	59.2	1								
Luxembourg	421 856	44	10.4	24	5.7	30	80.0	1								
Malta	383 677	16	4.2	6	1.6	13	46.2	4	383 677	100.0	16	4.2	100.0	6	1.6	50.0
Monaco	33 000							5								
Netherlands (the)	15 678 486	1 212	7.7	254	1.6	699	36.3	4	15 678 486	100.0	1 212	7.7	100.0	254	1.6	34.2
Norway	4 419 091	223	5.0	49	1.1	112	43.8	4	4 419 091	100.0	223	5.0	100.0	49	1.1	34.3
Poland	38 718 148	13 302	34.4	3 502	9.0	7 817	44.8	2	1 935 907	5.0	364	18.8	2.7	132	6.8	44.1

Regional Profile - EUR

Countries	Country Information (1998)								WHO TB Control Strategy (DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage							
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		% new ss+ out of all new pulm. cases
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.	Rate	
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Portugal	9 868 982	5 260	53.3	2 016	20.4	2 429	83.0	4	9 868 982	100.0	5 260	53.3	100.0	2 016	20.4	57.2
Republic of Moldova (the)	4 378 058	2 625	60.0	477	10.9	1 467	32.5	1								
Romania	22 474 175	25 623	114.0	10 841	48.2	12 237	88.6	4	22 474 175	100.0	25 623	114.0	100.0	10 841	48.2	57.6
Russian Federation (the)	147 433 600	121 434	82.4	42 219	28.6	70 055	60.3	2	7 371 680	5.0	1 771	24.0	1.5	683	9.3	48.3
San Marino	26 000							5	26 000	100.0						
Slovakia	5 377 162	1 117	20.8	303	5.6	835	36.3	4	5 377 162	100.0	1 117	20.8	100.0	303	5.6	37.6
Slovenia	1 992 600	424	21.3	157	7.9	259	60.6	4	1 992 600	100.0	424	21.3	100.0	157	7.9	48.5
Spain	39 627 632	8 927	22.5	1 906	4.8	10 225	18.6	1								
Sweden	8 874 974	447	5.0	97	1.1	194	50.0	5								
Switzerland	7 299 100	749	10.3	165	2.3	348	47.4	1								
Tajikistan	6 015 392	2 448	40.7	435	7.2	2 378	18.3	1								
The former Yugoslav Republic of Macedonia	1 998 776	620	31.0	179	9.0	461	38.8	1								
Turkey	64 479 315	22 509	34.9	3 692	5.7	11 703	31.5	1								
Turkmenistan	4 308 688	3 839	89.1	790	18.3	1 436	55.0	1								
Ukraine	50 861 259	31 318	61.6	10 586	20.8	14 578	72.6	1								
United Kingdom of Great Britain and N. Ireland	58 648 658	5 658	9.6	1 342	2.3	4 859	27.6	1								
Uzbekistan	23 574 250	14 558	61.8	3 504	14.9	8 589	40.8	2	235 743	1.0	118	50.1	0.8	40	17.0	48.2
Yugoslavia	10 635 264	3 028	28.5	1 873	17.6	2 392	78.3	1								
Regional Total	870 131 984	351 521	43.3	111 371	13.7	197 052	56.5		115 622 581	13.3	53 662	46.4	15.3	18 957	16.4	48.0

Regional Profile - EUR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage				% new ss+ out of all new pulm. cases			
		All types		New ss+					Population		Notified cases			% cases out of all cases	New ss+ cases notified	
		No.	Rate	No.	Rate				No.	(%)	No.	Rate			No.	Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Albania	3 119 089	694	22.3	212	6.8	425	49.9	1	31 191	1.0	694	2225.0	100.0	212	679.7	58.4
Andorra	76 000	8	10.5	1	1.3	8	12.2	4								
Armenia	3 536 449	1 381	39.1	475	13.4	725	65.5	3	707 290	20.0	151	21.3	10.9	88	12.4	64.7
Austria	8 139 937	1 268	15.6			615		1			1 268		100.0			
Azerbaijan	7 668 715	4 672	60.9	727	9.5	1 997	36.4	3	6 748 469	88.0	4 334	64.2	92.8	566	8.4	13.7
Belarus	10 314 539	6 150	59.6	5 047	48.9	3 021	167.1	1	10 314 539	100.0	6 150	59.6	100.0	5 047	48.9	100.0
Belgium	10 140 775	1 055	10.4	418	4.1	731	57.2	1			1 055		100.0	418		53.7
Bosnia and Herzegovina	3 675 480	2 711	73.8	640	17.4	1 444	44.3	3	2 683 100	73.0	861	32.1	31.8	159	5.9	21.1
Bulgaria	8 335 580	4 559	54.7	1 325	15.9	1 608	82.4	1	8 335 580	100.0	4 559	54.7	100.0	1 325	15.9	37.5
Croatia	4 480 743	2 118	47.3	1 129	25.2	1 294	87.2	1	4 480 743	100.0	2 118	47.3	100.0	1 129	25.2	64.7
Czech Republic (the)	10 281 729	1 758	17.1	545	5.3	905	60.2	4								
Denmark	5 269 719	506	9.6	132	2.5	257	51.4	1	5 269 719	100.0	506	9.6	100.0	132	2.5	41.4
Estonia	1 429 417	820	57.4	299	20.9	324	92.3	1	1 429 417	100.0	820	57.4	100.0	299	20.9	48.0
Finland	5 153 847	508	9.9	188	3.6	285	66.0	1	5 153 847	100.0	508	9.9	100.0	188	3.6	57.3
France	58 683 488					4 899		0								
Georgia	5 058 518	4 876	96.4	547	10.8	1 625	33.7	4								
Germany	82 133 337	10 440	12.7	3 124	3.8	5 353	58.4	1	82 133 337	100.0	10 440	12.7	100.0	3 124	3.8	35.5
Greece	10 600 283	1 079	10.2	313	3.0	1 139	27.5	1	10 600 283	100.0	1 079	10.2	100.0	313	3.0	37.1
Hungary	10 116 299	3 489	34.5	667	6.6	2 111	31.6	1	10 116 299	100.0	3 489	34.5	100.0	667	6.6	21.3
Iceland	276 049	16	5.8	2	0.7	5	40.0	5	276 049	100.0	16	5.8	100.0	2	0.7	20.0
Ireland	3 681 073	365	9.9	116	3.2	357	32.5	1	3 681 073	100.0	365	9.9	100.0	116	3.2	43.9
Israel	5 984 047	625	10.4	221	3.7	212	104.2	4								
Italy	57 369 144	5 727	10.0	2 361	4.1	2 518	93.8	3	45 321 624	79.0	4 909	10.8	85.7	2 040	4.5	54.0
Kazakhstan	16 318 584	20 623	126.4	6 180	37.9	7 839	78.8	2	15 665 841	96.0	19 776	126.2	95.9	5 866	37.4	35.4
Kyrgyzstan	4 642 924	5 706	122.9	830	17.9	2 006	41.4	4			2 492		43.7			
Latvia	2 424 397	1 970	81.3	668	27.6	903	74.0	4								
Lithuania	3 693 679	3 016	81.7	787	21.3	1 330	59.2	1	3 693 679	100.0	3 016	81.7	100.0	787	21.3	31.0
Luxembourg	421 856	44	10.4	24	5.7	30	80.0	1	421 856	100.0	44	10.4	100.0	24	5.7	66.7
Malta	383 677	16	4.2	6	1.6	13	46.2	4								
Monaco	33 000							5								
Netherlands (the)	15 678 486	1 212	7.7	254	1.6	699	36.3	4								
Norway	4 419 091	223	5.0	49	1.1	112	43.8	4								
Poland	38 718 148	13 302	34.4	3 502	9.0	7 817	44.8	2	36 782 241	95.0	12 938	35.2	97.3	3 370	9.2	28.2

Regional Profile - EUR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Population		Notified cases		% cases out of all cases	New ss+ cases notified		% new ss+ out of all new pulm. cases
		All types		New ss+					No.	Rate	No.	Rate		No.	Rate	
		No.	Rate	No.	Rate											
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Portugal	9 868 982	5 260	53.3	2 016	20.4	2 429	83.0	4								
Republic of Moldova (the)	4 378 058	2 625	60.0	477	10.9	1 467	32.5	1	4 378 058	100.0	2 625	60.0	100.0	477	10.9	19.9
Romania	22 474 175	25 623	114.0	10 841	48.2	12 237	88.6	4								
Russian Federation (the)	147 433 600	121 434	82.4	42 219	28.6	70 055	60.3	2	138 587 584	94.0	119 663	86.3	98.5	41 536	30.0	37.9
San Marino	26 000							5								
Slovakia	5 377 162	1 117	20.8	303	5.6	835	36.3	4								
Slovenia	1 992 600	424	21.3	157	7.9	259	60.6	4								
Spain	39 627 632	8 927	22.5	1 906	4.8	10 225	18.6	1	39 627 632	100.0	8 927	22.5	100.0	1 906	4.8	21.4
Sweden	8 874 974	447	5.0	97	1.1	194	50.0	5	8 874 974	100.0	447	5.0	100.0	97	1.1	35.5
Switzerland	7 299 100	749	10.3	165	2.3	348	47.4	1	7 299 100	100.0	749	10.3	100.0	165	2.3	30.1
Tajikistan	6 015 392	2 448	40.7	435	7.2	2 378	18.3	1	6 015 392	100.0	2 448	40.7	100.0	435	7.2	21.4
The former Yugoslav Republic of Macedonia	1 998 776	620	31.0	179	9.0	461	38.8	1	19 988	1.0	620	3101.9	100.0	179	895.5	33.9
Turkey	64 479 315	22 509	34.9	3 692	5.7	11 703	31.5	1	64 479 315	100.0	22 509	34.9	100.0	3 692	5.7	22.3
Turkmenistan	4 308 688	3 839	89.1	790	18.3	1 436	55.0	1	4 308 688	100.0	3 839	89.1	100.0	790	18.3	22.5
Ukraine	50 861 259	31 318	61.6	10 586	20.8	14 578	72.6	1	50 861 259	100.0	31 318	61.6	100.0	10 586	20.8	40.6
United Kingdom of Great Britain and N. Ireland	58 648 658	5 658	9.6	1 342	2.3	4 859	27.6	1	58 648 658	100.0	5 658	9.6	100.0	1 342	2.3	40.5
Uzbekistan	23 574 250	14 558	61.8	3 504	14.9	8 589	40.8	2	23 338 508	99.0	14 440	61.9	99.2	3 464	14.8	27.1
Yugoslavia	10 635 264	3 028	28.5	1 873	17.6	2 392	78.3	1	10 635 264	100.0	3 028	28.5	100.0	1 873	17.6	66.2
Regional Total	870 131 984	351 521	43.3	111 371	13.7	197 052	56.5		670 920 596	77.1	297 859	44.4	84.7	92 414	13.8	36.2

Regional Profile - EUR cont'd.

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Portugal	1 876	6.7	51.2	27.2	2.9	3.6	4.4	3.9	78.4									
Republic of Moldova (the)																		
Romania	8 872	0.0	53.8	18.1	13.6	8.9	4.5	1.1	71.9	2 887	18.3	36.3	28.3	8.3	4.6	3.4	0.8	64.6
Russian Federation (the)	661	4.4	66.4	1.1	8.2	7.9	9.7	2.4	67.5									
San Marino	1	0.0	100.0						100.0	1	0.0	100.0						100.0
Slovakia	283	24.0	61.1	6.0	3.2	0.4	5.3		67.1	463	16.4	73.9	0.4	3.0	0.2	5.8	0.2	74.3
Slovenia	156	1.3	64.7	17.3	5.1	0.6	8.3	2.6	82.1									
Spain																		
Sweden																		
Switzerland																		
Tajikistan																		
The former Yugoslav Republic of Macedonia																		
Turkey																		
Turkmenistan																		
Ukraine																		
United Kingdom of Great Britain and N. Ireland																		
Uzbekistan																		
Yugoslavia																		
Regional Total	15 276	3.1	56.3	17.0	10.0	6.7	5.0	1.8	73.4	6 463	11.8	49.9	22.4	6.3	3.1	5.0	1.4	72.3

Regional Profile - EUR cont'd.

Countries	Other Strategy (non-DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases (Short Course)									New ss+ cases (Other Regimen)								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
o	p	q	r	s	t	u	v	w	x	y	z	aa	ab	ac	ad	ae	af	
Portugal																		
Republic of Moldova (the)																		
Romania																		
Russian Federation (the)																		
San Marino																		
Slovakia																		
Slovenia																		
Spain																		
Sweden																		
Switzerland																		
Tajikistan	373	0.0	74.5		5.1	4.0	12.3	4.0	74.5									
The former Yugoslav Republic of Macedonia																		
Turkey																		
Turkmenistan	557	13.6	58.9			2.3	10.4	14.7	58.9									
Ukraine																		
United Kingdom of Great Britain and N. Ireland																		
Uzbekistan																		
Yugoslavia																		
Regional Total	7 329	8.5	62.5	10.1	5.3	8.2	3.9	1.5	72.7									

EUR - Notification rates by age and sex, 1998.

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Albania	0.2	5.9	7.8	10.6	13.2	24.0	31.9	8.2	0.4	7.1	4.3	5.6	10.4	11.0	13.6	5.3	0.3	6.5	6.1	8.2	11.8	17.7	21.7	6.8
Andorra	0.0	0.0	0.0	19.5	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.7	0.0	0.0	0.0	1.3
Armenia	0.4	52.1	34.1	27.8	26.5	13.1	13.6	23.4	0.2	7.1	7.5	3.6	6.0	3.3	3.8	4.1	0.3	30.0	20.7	15.2	15.6	7.8	7.8	13.4
Austria																								
Azerbaijan	0.0	6.3	7.2	4.4	3.6	1.7	1.1	3.5	0.0	1.1	1.5	1.2	2.1	0.4	0.0	0.8	0.0	3.8	4.4	2.7	2.8	1.0	0.4	2.1
Belarus																								
Belgium	0.3	3.5	6.7	7.2	6.9	7.1	12.4	6.0	0.2	1.0	4.2	2.6	2.5	2.4	4.1	2.4	0.3	2.3	5.4	4.9	4.7	4.7	7.6	4.1
Bosnia and Herzegovina	0.3	10.0	24.2	25.9	34.3	33.3	57.3	21.7	0.8	13.9	14.1	8.3	9.8	15.7	45.4	13.3	0.5	11.9	19.3	17.2	21.9	23.9	50.3	17.4
Bulgaria																								
Croatia	3.4	14.9	26.5	52.1	57.2	42.8	57.3	33.9	4.9	14.3	21.4	16.0	12.3	17.3	35.7	17.4	4.1	14.6	24.0	34.1	34.7	29.3	43.9	25.2
Czech Republic (the)	0.0	0.8	5.0	12.2	13.2	14.0	19.0	8.0	0.1	0.7	2.4	1.7	2.3	2.0	10.6	2.8	0.1	0.8	3.7	7.0	7.7	7.7	13.9	5.3
Denmark	0.0	2.2	4.9	5.4	4.6	2.5	3.0	3.2	0.2	1.9	4.1	2.1	1.8	2.1	1.5	1.9	0.1	2.1	4.5	3.8	3.2	2.3	2.1	2.5
Estonia	0.0	14.2	48.1	55.6	73.6	48.6	37.1	36.5	0.0	6.8	7.4	13.5	9.2	7.8	8.6	7.4	0.0	10.6	28.4	34.3	39.5	25.6	18.2	20.9
Finland	0.0	1.2	1.1	2.3	3.7	8.2	23.7	4.7	0.0	0.9	1.2	2.4	1.0	4.4	9.7	2.8	0.0	1.1	1.2	2.3	2.3	6.3	15.2	3.6
Georgia	0.7	16.5	25.0	27.3	23.7	22.1	8.7	16.1	0.7	11.0	14.4	6.3	5.1	5.9	2.0	6.1	0.7	13.8	19.8	16.3	13.8	13.2	4.6	10.8
Germany	0.1	3.9	4.9	6.7	6.9	6.5	12.0	5.6	0.2	2.8	2.6	2.2	1.8	1.5	4.3	2.2	0.2	3.3	3.8	4.5	4.4	4.0	7.3	3.8
Greece	1.8	1.9	3.9	4.3	3.3	5.2	6.3	3.7	1.4	2.7	1.5	1.8	1.2	0.8	2.8	1.8	1.6	2.3	2.7	3.0	2.3	2.9	4.4	2.7
Hungary	0.0	1.8	9.1	21.0	23.6	12.8	11.4	10.6	0.0	1.7	4.0	4.7	3.4	2.8	4.8	3.0	0.0	1.7	6.6	12.8	13.1	7.2	7.4	6.6
Iceland	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	6.6	0.7	0.0	0.0	2.4	0.0	0.0	0.0	3.5	0.7
Ireland	0.2	3.3	3.0	8.4	3.6	5.1	11.4	4.2	0.0	1.6	4.1	0.4	0.5	2.6	6.1	1.9	0.1	2.4	3.6	4.3	2.0	3.9	8.4	3.0
Israel	0.1	3.8	6.6	9.1	6.0	8.4	13.3	5.1	0.1	1.8	2.3	1.8	2.8	4.3	8.6	2.4	0.1	2.8	4.5	5.4	4.4	6.2	10.6	3.7
Italy	0.4	3.6	7.0	5.8	5.0	6.9	11.3	5.7	0.2	3.1	3.3	2.6	1.5	2.1	5.4	2.7	0.3	3.4	5.2	4.2	3.2	4.4	7.9	4.1
Kazakhstan	1.4	54.6	82.1	66.6	66.9	93.7	21.5	48.9	2.7	43.7	60.7	36.1	25.8	25.8	10.0	27.7	2.1	49.2	71.6	51.1	55.0	56.2	14.0	37.9
Kyrgyzstan	0.5	24.1	51.5	48.5	49.9	37.5	21.8	24.9	0.4	15.8	26.4	17.7	12.4	16.5	5.6	11.3	0.4	20.0	39.0	32.7	30.4	26.3	11.7	17.9
Latvia	0.0	35.1	61.7	72.9	88.7	56.2	35.8	46.9	0.4	14.3	26.4	13.6	14.2	9.1	8.6	11.7	0.2	24.6	44.0	42.1	48.2	29.0	17.3	27.6
Lithuania	0.0	14.1	27.6	58.9	81.0	47.7	37.8	33.5	0.0	10.3	9.3	22.6	9.6	9.5	16.4	10.7	0.0	12.2	18.7	40.5	43.0	26.1	23.9	21.3
Luxembourg	0.0	11.1	18.0	21.0	14.0	9.0	0.0	10.7	2.7	0.0	3.1	6.0	7.3	0.0	6.2	3.8	1.3	5.7	10.7	13.4	10.7	4.4	3.7	7.1
Malta	0.0	3.4	0.0	0.0	3.6	0.0	17.3	2.6	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.5	0.0	3.5	0.0	0.0	1.8	0.0	7.4	1.6
Monaco																								
Netherlands (the)	0.1	3.2	3.1	3.2	1.8	1.4	3.2	2.2	0.1	2.1	2.0	1.4	0.4	0.8	0.8	1.1	0.1	2.6	2.6	2.3	1.1	1.1	1.8	1.6
Norway	0.0	0.4	1.2	0.9	0.3	1.0	6.5	1.3	0.0	3.0	0.6	1.0	0.3	1.0	1.4	1.0	0.0	1.6	0.9	0.9	0.3	1.0	3.6	1.1
Poland	0.1	3.0	10.3	24.4	25.8	19.9	22.8	13.0	0.1	3.2	6.5	7.1	4.9	4.4	14.2	5.4	0.1	3.1	8.4	15.8	15.1	11.5	17.5	9.0
Portugal	0.9	20.0	47.8	53.9	39.4	29.0	29.7	30.5	0.6	17.7	21.0	17.5	6.9	5.8	10.0	11.5	0.8	18.9	34.4	35.3	22.5	16.5	18.2	20.4
Republic of Moldova (the)	0.4	19.4	23.0	35.0	24.4	21.9	10.6	17.5	0.4	9.4	6.7	9.4	3.9	2.4	2.8	4.9	0.4	14.4	14.8	21.7	13.5	10.9	5.8	10.9
Romania	1.0	48.4	89.6	150.5	130.7	90.3	45.6	74.3	2.1	40.9	39.6	29.6	21.5	17.1	15.0	23.5	1.5	44.7	65.1	90.6	75.2	51.3	28.1	48.1
Russian Federation (the)	0.0	0.4	0.9	1.3	1.5	1.2	0.6	0.8	0.0	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.0	0.3	0.6	0.8	0.8	0.6	0.3	0.5
San Marino	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Slovakia	0.0	1.1	7.7	12.7	15.0	18.0	16.1	8.1	0.0	1.1	0.8	3.9	1.7	2.0	17.3	3.4	0.0	1.1	4.3	8.4	8.2	9.2	16.8	5.6
Slovenia	0.0	3.3	14.8	16.9	13.8	12.7	15.8	10.4	0.0	5.6	8.2	6.4	5.2	1.8	12.1	5.7	0.0	4.4	11.5	11.8	9.6	7.0	13.4	7.9
Spain	0.8	6.0	10.8	10.2	8.3	5.9	8.1	7.2	0.1	5.1	5.2	2.1	1.1	1.2	3.1	2.7	0.5	5.6	8.0	6.1	4.7	3.5	5.2	4.8
Sweden	0.2	1.1	1.4	0.5	1.2	0.6	2.5	1.1	0.1	2.0	2.5	0.9	0.0	0.4	2.4	1.2	0.2	1.6	2.0	0.7	0.6	0.5	2.4	1.1
Switzerland	0.0	3.5	5.0	4.2	2.4	2.7	5.9	3.2	0.2	2.7	2.6	1.0	0.8	0.3	2.0	1.4	0.1	3.1	3.8	2.7	1.6	1.5	3.7	2.3
Tajikistan	0.7	11.6	20.7	14.7	11.5	17.4	9.7	8.8	0.2	5.8	13.4	11.0	13.3	7.7	5.6	5.7	0.4	8.7	17.0	12.8	12.4	12.5	7.3	7.2
The former Yugoslav Republic of Macedonia	1.2	8.4	12.5	38.1	15.6	23.5	15.8	14.5	2.2	10.0	12.2	5.6	6.7	6.2	4.0	6.5	1.7	9.2	12.3	22.1	11.1	14.5	9.3	10.5
Turkey																								
Turkmenistan	0.0	24.1	63.2	51.1	50.9	54.3	17.9	26.5	0.2	14.4	20.9	15.8	20.8	16.4	7.7	10.4	0.1	19.3	42.1	32.9	35.3	34.4	11.7	18.3
Ukraine	0.5	18.4	43.4	65.6	65.8	42.7	26.0	35.1	0.8	12.9	16.1	10.9	7.7	5.6	9.0	8.7	0.6	15.7	29.7	37.6	34.8	21.8	14.8	20.8
United Kingdom of Great Britain and N. Ireland (the)	0.2	2.8	3.8	3.4	2.8	3.5	6.3	3.0	0.2	3.0	2.4	1.7	1.1	1.3	2.4	1.7	0.2	2.9	3.1	2.5	1.9	2.4	4.1	2.3
Uzbekistan	0.0	0.3	0.3	0.0	0.1	0.2	0.0	0.1	0.0	0.4	0.5	0.3	0.3	0.2	0.2	0.2	0.0	0.3	0.4	0.1	0.2	0.2	0.1	0.2
Yugoslavia																								
EUR	0.3	6.9	12.5	16.3	16.0	13.0	11.1	9.9	0.3	5.3	6.1	4.4	3.1	2.9	4.7	3.7	0.3	6.1	9.3	10.3	9.4	7.6	7.2	6.6

EUR - Age and sex distribution of smear-positive TB cases in DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total
Andorra	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Armenia	2	108	75	67	35	17	15	319	1	20	17	10	9	5	6	68	3	128	92	77	44	22	21	387
Azerbaijan	0	44	47	24	9	4	2	130	0	7	10	7	6	1	0	31	0	51	57	31	15	5	2	161
Bosnia and Herzegovina	1	26	62	64	50	37	50	290	2	30	34	20	18	23	64	191	3	56	96	84	68	60	114	481
Czech Republic (the)	0	7	37	86	104	67	95	398	1	6	17	12	18	11	82	147	1	13	54	100	122	78	177	545
Georgia	4	64	91	99	58	52	19	387	4	41	52	25	14	17	7	160	8	105	143	124	72	69	26	547
Israel	1	20	29	35	19	16	30	150	1	9	10	7	9	9	26	71	2	29	39	42	28	25	56	221
Italy	2	21	48	37	29	29	36	202	1	21	26	16	8	9	38	119	3	42	74	53	37	38	74	321
Kazakhstan	2	61	52	39	23	10	6	193	2	38	43	19	5	6	8	121	4	99	95	58	28	16	14	314
Kyrgyzstan	4	105	176	141	75	43	21	565	3	68	89	54	20	22	9	265	7	173	265	195	95	65	30	830
Latvia	0	58	105	129	121	68	35	516	1	24	45	26	23	15	18	152	1	82	150	155	144	83	53	668
Malta	0	1	0	0	1	0	3	5	0	1	0	0	0	0	0	1	0	2	0	0	1	0	3	6
Netherlands (the)	2	31	40	41	21	11	26	172	2	19	25	17	4	6	9	82	4	50	65	58	25	17	35	254
Norway	0	1	4	3	1	2	17	28	0	8	2	3	1	2	5	21	0	9	6	6	2	4	22	49
Poland	0	2	13	28	20	13	15	91	0	4	6	16	5	1	9	41	0	6	19	44	25	14	24	132
Portugal	8	154	367	362	232	141	173	1 437	5	132	160	123	44	33	82	579	13	286	527	485	276	174	255	2 016
Romania	21	895	1624	2327	1762	1011	522	8 162	43	725	692	448	300	219	232	2 659	64	1 620	2 316	2 775	2 062	1 230	754	10 821
Russian Federation (the)	0	45	89	161	131	81	34	541	2	24	24	33	20	15	24	142	2	69	113	194	151	96	58	683
San Marino	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Slovakia	0	5	30	53	50	37	35	210	0	5	3	16	6	5	58	93	0	10	33	69	56	42	93	303
Slovenia	0	5	22	27	19	13	14	100	0	8	12	10	7	2	18	57	0	13	34	37	26	15	32	157
Uzbekistan	0	6	5	0	1	1	0	13	0	9	9	4	2	1	1	26	0	15	14	4	3	2	1	39
EUR	47	1 659	2 916	3 726	2 761	1 653	1 148	13 910	68	1 199	1 276	866	519	402	696	5 026	115	2 858	4 192	4 592	3 280	2 055	1 844	18 936
%	0.3	11.9	21.0	26.8	19.8	11.9	8.3	100	1.4	23.9	25.4	17.2	10.3	8.0	13.8	100	0.6	15.1	22.1	24.3	17.3	10.9	9.7	100

EUR - Age and sex distribution of smear-positive TB cases in non-DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
EUR Albania	1	17	21	24	18	26	24	131	2	19	11	12	13	11	13	81	3	36	32	36	31	37	37	212
EUR Armenia	0	51	15	12	4	0	0	82	0	1	3	1	1	0	0	6	0	52	18	13	5	0	0	88
EUR Austria																								
EUR Azerbaijan																								
EUR Belarus																								
EUR Belgium	3	22	50	58	48	36	78	295	2	6	30	20	17	13	35	123	5	28	80	78	65	49	113	418
EUR Bosnia and Herzegovina	0	2	13	21	25	18	25	104	1	7	8	7	4	7	21	55	1	9	21	28	29	25	46	159
EUR Bulgaria																								
EUR Croatia	14	48	81	177	176	106	129	731	19	44	64	54	38	48	131	398	33	92	145	231	214	154	260	1 129
EUR Denmark	0	7	20	21	18	7	9	82	1	6	16	8	7	6	6	50	1	13	36	29	25	13	15	132
EUR Estonia	0	15	49	60	64	34	22	244	0	7	7	15	9	7	10	55	0	22	56	75	73	41	32	299
EUR Finland	0	4	4	9	15	21	63	116	0	3	4	9	4	12	40	72	0	7	8	18	19	33	103	188
EUR Germany	9	179	333	448	358	349	538	2 214	11	121	166	141	93	80	298	910	20	300	499	589	451	429	836	3 124
EUR Greece	15	15	31	31	22	31	47	192	11	20	12	13	8	5	26	95	26	35	43	44	30	36	73	287
EUR Hungary	0	14	64	149	163	62	59	511	0	13	27	34	25	17	40	156	0	27	91	183	188	79	99	667
EUR Iceland	0	0	1	0	0	0	0	1	0	0	0	0	0	0	1	1	0	0	1	0	0	0	1	2
EUR Ireland	1	11	8	21	8	8	19	76	0	5	11	1	1	4	13	35	1	16	19	22	9	12	32	111
EUR Italy	13	107	279	211	160	197	393	1 360	9	84	124	94	50	66	245	672	22	191	403	305	210	263	638	2 032
EUR Kazakhstan	32	734	957	778	605	505	72	3 683	60	587	670	438	199	168	61	2 183	92	1 321	1 627	1 216	804	673	133	5 866
EUR Kyrgyzstan																								
EUR Lithuania	0	38	77	165	163	81	57	581	0	27	25	65	22	21	46	206	0	65	102	230	185	102	103	787
EUR Luxembourg	0	3	6	7	4	2	0	22	1	0	1	2	2	0	2	8	1	3	7	9	6	2	2	30
EUR Monaco																								
EUR Poland	4	97	253	724	627	298	352	2 355	5	98	155	203	122	80	352	1 015	9	195	408	927	749	378	704	3 370
EUR Republic of Moldova (the)	2	72	67	116	56	36	16	365	2	34	20	34	10	5	7	112	4	106	87	150	66	41	23	477
EUR Russian Federation (the)																								
EUR Spain	25	186	361	294	195	114	205	1 380	3	149	167	61	27	25	104	536	28	335	528	355	222	139	309	1 916
EUR Sweden	2	6	9	3	8	3	15	46	1	10	15	5	0	2	18	51	3	16	24	8	8	5	33	97
EUR Switzerland	0	15	30	26	12	10	23	116	1	11	15	6	4	1	11	49	1	26	45	32	16	11	34	165
EUR Tajikistan	9	67	90	48	18	22	10	264	2	33	60	37	21	10	8	171	11	100	150	85	39	32	18	435
EUR The former Yugoslav Republic of Macedonia	3	14	19	56	18	21	13	144	5	16	18	8	8	6	4	65	8	30	37	64	26	27	17	209
EUR Turkey																								
EUR Turkmenistan	0	100	210	131	64	48	12	565	2	59	69	43	28	16	8	225	2	159	279	174	92	64	20	790
EUR Ukraine	24	687	1500	2460	1873	1140	576	8 260	36	468	556	431	248	194	393	2 326	60	1 155	2 056	2 891	2 121	1 334	969	10 586
EUR United Kingdom of Great Britain and N. Ireland (the)	11	103	164	141	108	105	225	857	9	105	103	71	44	39	114	485	20	208	267	212	152	144	339	1 342
EUR Uzbekistan																								
EUR Yugoslavia																								
EUR	168	2 614	4 712	6 191	4 830	3 280	2 982	24 777	183	1 933	2 357	1 813	1 005	843	2 007	10 141	351	4 547	7 069	8 004	5 835	4 123	4 989	34 918
%	0.7	10.6	19.0	25.0	19.5	13.2	12.0	100	1.8	19.1	23.2	17.9	9.9	8.3	19.8	100	1.0	13.0	20.2	22.9	16.7	11.8	14.3	100

EUR - Number of tuberculosis cases notified, 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Albania	954	978	891	975	916	989	915	759	695	653	628			707	641	738	655	694
Armenia	924	759	702	774	768	832	766	651	649	590	741	235	590	753	1 157	928	1 051	1 381
Austria	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	1 268
Azerbaijan	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
Belarus	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
Belgium	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	1 289	1 055
Bosnia and Herzegovina	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
Bulgaria	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	4 559
Croatia	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
Czech Republic (the)	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	1 758
Denmark	394	378	348	302	312	299	322	304	328	350	334	359	411	495	448	484	555	506
Estonia	560	563	587	546	541	522	446	471	422	332	406	403	532	645	624	521	744	820
Finland	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	508
France	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	6 832
Georgia	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	4 876
Germany	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
Greece	7 334	5 193	3 880	1 956	1 566	1 566	1 193	907	1 068	877	762	920					768	1 079
Hungary	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	3 489
Iceland	23	25	24	26	13	13	12	16	18	18	15	16		18	12	11	10	16
Ireland	1 018	975	924	837	804	802	581	534	672	624	640	604				434	428	365
Israel	227	232	222	257	368	239	184	226	160	234	505	345	419	395		369	422	625
Italy	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	4 886	5 727
Kazakhstan	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	17 060	20 623
Kyrgyzstan	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	5 346	5 706
Latvia	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	1 970
Lithuania	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
Luxembourg	45	41	41	46	42	45	48	16	45	48	48	25	35	33		41	38	44
Malta	26	13	24	15	11	14	14	12	16	13	26	30	26	25	11	28	11	16
Monaco	0	0	0	0	1	2	2	1	1	1	0	1		1		0	0	0
Netherlands (the)	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	1 212
Norway	461	448	396	373	374	343	307	294	255	285	290	288	256	242	236	217	205	223
Poland	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
Portugal	7 249	7 309	7 052	6 908	6 889	6 624	7 099	6 363	6 684	6 214	5 980	5 927	5 447	5 619	5 577	5 248	5 112	5 260
Republic of Moldova (the)	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
Romania	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	24 350	25 623
Russian Federation (the)	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	121 491	121 434
San Marino										1	1		3	2			1	0
Slovakia	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	1 302	1 117
Slovenia	939	982	925	896	923	816	792	760	788	722	583	640	646	526	525	563	481	424
Spain	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
Sweden	875	784	832	754	702	640	545	536	595	557	521	610	616	537	564	497	459	447
Switzerland	1 193	1 167	1 097	946	961	881	1 018	1 201	1 104	1 278	1 134	987	930	924	831	764	747	749
Tajikistan	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
The former Yugoslav Republic of Macedonia												1 602	1 712	728	786	724	693	620
Turkey	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	22 509
Turkmenistan	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
Ukraine	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	31 318
United Kingdom of Great Britain and Northern Ireland (the)	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	5 658
Uzbekistan	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
Yugoslavia	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	4 066	3 028
Other territories																		
Andorra								12	23	24	21	15	24		17	19		8
Total	346 035	324 494	319 147	308 362	298 872	302 554	290 571	277 104	267 209	242 309	231 608	248 480	241 779	243 132	288 084	321 033	357 580	351 521
No. of countries reporting	48	20	20	20	20	20	20	20	21	22	21	22	21	20	20	22	23	23
% of countries reporting	94	39	39	39	39	39	39	39	41	43	41	43	41	39	39	43	45	45

EUR - Case notification rates (per 100 000 population), 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Albania	35.0	35.2	31.4	33.7	30.9	32.6	29.4	23.8	21.4	19.9	19.0			22.0	20.2	23.4	20.9	22.3
Armenia	29.4	23.7	21.6	23.5	23.0	24.6	22.3	18.7	18.5	16.6	20.8	6.6	16.5	21.0	32.4	26.0	29.6	39.1
Austria	27.3	25.8	24.2	23.4	19.1	18.2	18.3	18.4	17.4	19.7	18.4	17.3	16.1	15.9	17.5	17.1	16.9	15.6
Azerbaijan	50.8	50.6	49.1	53.4	56.5	56.2	53.5	47.9	42.3	36.6	38.2	38.4	40.9	37.8	21.6	32.6	60.7	60.9
Belarus	63.7	55.8	55.8	51.0	48.7	41.0	38.7	37.1	36.3	29.6	36.4	23.3	39.9	41.9	46.7	53.9	57.8	59.6
Belgium	28.8	26.9	22.2	21.8	19.8	19.2	17.9	16.0	16.6	15.8	14.7	13.3	15.0	15.1	13.7	13.3	12.7	10.4
Bosnia and Herzegovina	110.8	117.4	111.1	115.3	113.2	109.8	105.8	94.2	95.7	94.5	85.1	15.2	18.3	45.3	62.4	64.9	81.5	73.8
Bulgaria	33.8	33.6	32.3	31.9	28.5	28.3	26.5	27.0	26.2	25.9	30.1	35.9	37.4	62.0	38.2	36.8	41.0	54.7
Croatia	91.4	84.1	81.8	81.1	80.6	74.8	73.9	66.0	63.4	57.0	47.8	48.5	50.6	49.3	47.1	48.4	45.8	47.3
Czech Republic (the)	41.8	40.2	38.9	35.4	30.2	24.8	21.3	19.9	18.5	18.8	20.2	19.2	18.1	19.0	17.8	19.1	17.8	17.1
Denmark	7.7	7.4	6.8	5.9	6.1	5.8	6.3	5.9	6.4	6.8	6.5	6.9	7.9	9.5	8.6	9.2	10.6	9.6
Estonia	37.8	37.8	39.2	36.2	35.6	34.1	28.8	30.2	26.9	21.1	26.0	26.0	34.8	42.8	42.0	35.5	51.4	57.4
Finland	45.9	45.0	38.8	36.7	37.1	31.4	28.7	21.8	19.5	15.5	15.4	13.9	10.7	10.9	12.9	12.6	11.1	9.9
France	30.4	28.4	25.3	22.4	20.5	19.0	18.4	16.4	16.0	15.9	14.9	15.0	16.6	15.7	15.0	13.1	11.7	
Georgia	41.5	42.1	36.2	35.4	34.5	34.4	33.6	29.5	29.5	28.2			39.3	69.7	31.0	67.9	164.9	96.4
Germany	34.7	32.6	29.6	26.1	25.8	23.0	21.9	20.7	19.5	18.5	16.9	17.6	17.5	16.0	14.9	14.4	13.6	12.7
Greece	75.4	53.0	39.4	19.8	15.7	15.7	11.9	9.0	10.5	8.6	7.4	8.9					7.3	10.2
Hungary	49.7	48.5	47.2	42.1	45.9	42.9	39.3	38.4	36.2	34.6	35.4	38.4	40.9	40.6	42.4	43.2	41.7	34.5
Iceland	10.0	10.7	10.2	10.9	5.4	5.3	4.9	6.4	7.1	7.1	5.8	6.1		6.8	4.5	4.1	3.7	5.8
Ireland	29.6	28.0	26.3	23.6	22.6	17.0	16.4	15.2	19.2	17.8	18.2	17.1			11.9	11.7	9.9	
Israel	5.7	5.8	5.4	6.2	8.7	5.6	4.2	5.1	3.5	5.0	10.5	6.9	8.1	7.3		6.4	7.2	10.4
Italy	5.6	6.8	7.5	6.1	7.2	7.2	5.8	6.3	7.0	7.4	6.5	8.2	8.3	10.2	9.8	7.2	8.5	10.0
Kazakhstan	92.0	90.5	86.5	80.4	78.5	81.6	81.7	82.0	80.0	85.5	84.5	65.2	62.5	63.4	68.5	84.8	104.2	126.4
Kyrgyzstan	56.3	54.3	51.4	51.4	52.2	51.8	50.0	50.7	49.2	52.5	56.6	57.6	53.7	60.0	74.2	89.1	115.7	122.9
Latvia	44.9	42.2	41.9	40.9	47.1	37.5	35.9	35.2	32.0	33.8	35.3	36.1	38.0	43.9	60.7	70.5	81.4	81.3
Lithuania	46.4	43.1	42.3	40.3	40.9	39.3	37.7	36.4	37.2	39.4	41.5	42.6	50.5	57.1	63.4	70.2	79.0	81.7
Luxembourg	12.4	11.3	11.2	12.6	11.5	12.2	12.9	4.3	11.9	12.6	12.5	6.4	8.3	8.2		9.9	9.1	10.4
Malta	7.9	3.9	7.1	4.4	3.2	4.0	4.0	3.4	4.6	3.7	7.3	8.3	7.1	6.7	2.9	7.4	2.9	4.2
Monaco					3.6	7.1	6.9	3.4	3.3	3.3		3.2		3.2				
Netherlands (the)	12.2	10.6	9.9	9.7	9.4	8.5	8.4	9.1	8.9	9.2	8.9	9.7	10.4	11.8	10.5	10.8	9.5	7.7
Norway	11.2	10.9	9.6	9.0	9.0	8.2	7.3	7.0	6.0	6.7	6.8	6.7	5.9	5.6	5.4	5.0	4.7	5.0
Poland	67.1	65.3	64.0	61.0	58.2	55.0	52.5	49.0	42.6	42.3	43.1	43.1	43.8	43.2	41.3	39.7	36.1	34.4
Portugal	73.7	73.9	71.2	69.7	69.6	66.9	71.7	64.4	67.5	63.0	60.6	60.1	55.3	57.0	56.6	53.2	51.8	53.3
Republic of Moldova (the)	70.4	78.2	69.1	61.2	64.8	71.1	65.5	58.1	52.5	39.6	43.7	41.9	55.4	60.0	66.8	66.8	66.4	60.0
Romania	60.9	60.6	60.2	57.3	55.8	56.3	58.2	61.2	63.3	70.0	66.8	78.4	88.5	93.8	102.4	106.9	108.0	114.0
Russian Federation (the)	52.6	51.4	51.8	52.4	45.1	49.7	48.2	46.0	42.7	34.1	33.9	35.7	42.8	47.7	57.4	75.1	82.3	82.4
San Marino										4.3	4.3		12.5	8.0			3.8	
Slovakia	45.9	44.8	44.3	42.1	38.7	39.1	35.3	31.7	28.7	27.5	30.7	32.7	33.8	33.0	28.8	28.0	24.2	20.8
Slovenia	50.9	52.9	49.6	47.8	49.1	43.2	41.8	40.0	40.3	37.6	30.2	32.9	32.9	26.6	26.4	28.2	24.1	21.3
Spain	14.7	20.9	23.5	26.3	27.9	35.6	24.4	21.8	20.6	19.3	22.9	24.6	23.9		22.1	21.0	23.6	22.5
Sweden	10.5	9.4	10.0	9.0	8.4	7.6	6.5	6.3	7.0	6.5	6.1	7.0	7.1	6.1	6.4	5.6	5.2	5.0
Switzerland	18.8	18.3	17.1	14.6	14.7	13.4	15.3	17.9	16.3	18.7	16.4	14.2	13.2	13.0	11.6	10.6	10.3	10.3
Tajikistan	64.7	62.9	58.3	54.8	54.4	55.4	56.0	49.2	50.7	46.4	39.1	30.3	11.7	15.7	35.3	28.2	36.2	40.7
The former Yugoslav Republic of Macedonia												82.9	88.1	37.3	40.0	36.7	34.9	31.0
Turkey	87.9	56.7	59.8	56.2	61.5	60.2	57.9	51.8	48.5	43.6	44.0	43.7		37.5	32.4	40.5	34.9	
Turkmenistan	55.4	51.9	50.1	50.9	49.8	48.7	57.5	54.5	60.6	63.4	62.8	54.1	70.2		47.5	49.9	81.2	89.1
Ukraine	51.1	49.0	47.9	48.0	47.2	44.9	43.1	40.2	39.0	31.7	32.2	35.0	38.6	40.0	41.7	45.7	55.5	61.6
United Kingdom of Great Britain and Northern Ireland (the)	16.5	15.0	13.8	12.4	11.8	12.1	10.1	10.1	10.6	10.3	10.5	11.1	11.2	10.6	10.6	10.7	10.9	9.6
Uzbekistan	59.1	51.7	51.1	48.2	48.0	50.6	51.2	51.7	53.0	45.9		43.9	45.0	67.4	43.9	52.2	57.5	61.8
Yugoslavia	66.5	64.9	66.2	65.9	63.4	61.8	60.6	55.7	50.0	41.3	44.0	36.5	36.9	34.3	26.5	37.9	38.3	28.5
Other territories																		
Andorra									24.0	44.2	44.4	36.2	24.6	36.9		23.9	25.7	10.5
EUR	43.2	40.2	39.3	37.8	36.4	36.6	34.9	33.0	31.6	28.5	27.1	29.0	28.1	28.2	33.3	37.1	41.2	40.4

EUR - New smear-positive cases

Country	Number of cases						Rate (per 100 000 population)					
	1993	1994	1995	1996	1997	1998	1993	1994	1995	1996	1997	1998
Albania		250	139	173	241	212		7.8	4.4	5.5	7.7	6.8
Armenia		319	436	327	400	475		8.9	12.2	9.2	11.3	13.4
Austria			662	580	370				8.3	7.2	4.6	
Azerbaijan	499	513	669	990	981	727	6.7	6.8	8.8	13.0	12.8	9.5
Belarus	1 493	1 775	1 845	2 117	2 273	5 047	14.4	17.1	17.8	20.4	22.0	48.9
Belgium	484	427	400	364	434	418	4.8	4.2	4.0	3.6	4.3	4.1
Bosnia and Herzegovina			865	927	803	640			25.3	27.1	22.8	17.4
Bulgaria		3 096	1 087	903	1 037	1 325		36.2	12.6	10.7	12.4	15.9
Croatia			1 204	1 228	1 073	1 129			26.8	27.4	23.9	25.2
Czech Republic (the)	548	524	487	586	481	545	5.3	5.1	4.7	5.7	4.7	5.3
Denmark	243	120	128	97	114	132	4.7	2.3	2.4	1.9	2.2	2.5
Estonia	303	347	369	240	289	299	19.8	23.0	24.8	16.4	18.6	20.9
Finland			244	240	186	188			4.8	4.7	3.6	3.6
France	4 455	3 196	3 449	3 002	2 430		7.7	5.5	5.9	5.2	4.2	
Georgia			221	482	595	547			4.2	9.3	11.6	10.8
Germany	4 730	4 177	3 852	3 689	3 346	3 124	5.8	5.1	4.7	4.5	4.1	3.8
Greece				285	313						2.7	3.0
Hungary	1 905	1 357	796	1 066	702	667	18.5	13.2	7.8	10.5	6.9	6.6
Iceland		6	2	1	4	2		2.3	0.7	0.4	1.5	0.7
Ireland				339	123	116				9.3	3.4	3.2
Israel	150	129		147	207	221	2.9	2.4		2.6	3.5	3.7
Italy		1 441	1 413	1 738	1 903	2 361		2.5	2.5	3.0	3.3	4.1
Kazakhstan			3 022	4 290	4 332	6 180			18.3	26.1	26.5	37.9
Kyrgyzstan		681	832	991	1 536	830		15.0	18.2	21.6	33.3	17.9
Latvia	470		504	575	634	688	18.0		19.9	23.0	25.8	27.6
Lithuania	688		979	1 121	1 200	787	18.4		26.3	30.2	32.4	21.3
Luxembourg			29	31	24					7.0	7.4	5.7
Malta	13	6	5	5	3	6	3.5	1.6	1.3	1.3	0.8	1.6
Monaco				0	0	0						
Netherlands (the)	1 063		575	358	312	254	7.0		3.7	2.3	2.0	1.6
Norway		86	62	103	100	49		2.0	1.4	2.4	2.3	1.1
Poland	7 606	4 000	6 955	6 819	3 497	3 502	19.8	10.4	18.0	17.6	9.0	9.0
Portugal		2 072	2 019	1 938	1 628	2 016		21.0	20.5	19.7	16.5	20.4
Republic of Moldova (the)	615	704	665	219	397	477	14.0	16.1	15.2	5.0	9.1	10.9
Romania	9 339	10 385	10 489	10 359	11 666	10 841	40.7	45.5	46.1	45.8	51.7	48.2
Russian Federation (the)		30 389	37 512	42 534	42 084	42 219		20.5	25.3	28.8	28.5	28.6
San Marino				0	1	0						3.8
Slovakia	882	409	788	760	283	303	16.6	7.7	14.7	14.2	5.3	5.6
Slovenia	361	294	303	221	156	157	18.4	14.8	15.2	11.1	7.8	7.9
Spain			2 605	8 331	6 970	1 906			6.6	21.0	17.6	4.8
Sweden	312	106	102	90	94	97	3.6	1.2	1.2	1.0	1.1	1.1
Switzerland	528	507	185	172	144	165	7.5	7.2	2.6	2.4	2.0	2.3
Tajikistan			1 042	232	373	435			18.1	4.0	6.3	7.2
The former Yugoslav Republic of Macedonia			319	209	192	179			16.2	10.6	9.7	9.0
Turkey			4 383	2 816	3 439	3 692			7.2	4.5	5.4	5.7
Turkmenistan	472		544	557	764	790	12.0		13.3	13.4	18.0	18.3
Ukraine	8 314	8 471	8 263	7 827	9 533	10 586	16.1	16.4	16.1	15.3	18.7	20.8
United Kingdom of Great Britain and Northern Ireland (the)	283	270		4 147	844	1 342	0.5	0.5		7.1	1.4	2.3
Uzbekistan		7 487	2 735	3 350	3 388	3 504		33.9	12.2	14.7	14.6	14.9
Yugoslavia			1 497	1 783	1 702	1 873			14.2	16.8	16.0	17.6
Other territories												
Andorra	15	24		8	17	1	24.6	36.9		11.3	23.0	1.3
Total	45 771	83 568	104 633	119 080	113 587	111 371	5.3	9.7	12.1	13.7	13.1	12.8

Notes

Andorra Began DOTS in late 1997, so treatment outcomes for DOTS areas are not yet available.

Austria No report submitted; minimal official notification data obtained by other means.

Belarus Smear results not separated from culture results. Age and sex distribution includes all cases.

Bulgaria Smear results not separated from culture results.

Denmark Data from Greenland and the Faeroe Islands are not included. (In 1998, 58 cases from Greenland were included.) Cannot distinguish between smear-negative and smear-not-done.

Estonia Notification total includes 61 relapses that were not smear-positive.

Germany New cases not separated from relapses.

Hungary DOTS started in a pilot district late in 1998 (10% of population).

Israel Treatment outcome data incomplete since DOTS was started in April 1997.

Kyrgyzstan Data are from DOTS areas only (100% by mid year 1998).

Poland Smear-positive and culture-positive cases not distinguished. New cases and relapse not distinguished.

Romania Total notifications includes 12 cases with site of disease unknown, and 519 smear-negative culture-positive relapses.

Russian Federation (the) Smear results not separated from culture results in non-DOTS areas.

Sweden Smear-negative includes 8 relapses, smear-not-done includes 8 relapses and extra pulmonary includes 5 relapses. Age and sex available for new culture positive cases only.

Switzerland Smear-negative includes 8 recurrent cases. smear-not-done new includes 28 recurrent cases. Extra-pulmonary includes 16 relapses.

Turkey Smear results not separated from culture results

United Kingdom of Great Britain and Northern Ireland (the) The total number of cases includes 34 cases with site of disease unknown, and 148 relapses.

Uzbekistan Smear results not separated from culture results in non-DOTS areas.

Yugoslavia Smear results not separated from culture results. Data from Kosovo not included.

South-East Asia



South-East Asia Region – Summary of TB control policies

Country	Category of the country as of 31/12/97	DOTS Technical Elements						DOTS newly implemented in 1998
		National manual ¹	Training ²	Use of microscopy for diagnosis	SCC ³	DOT ⁴	Drug availability ⁵	
Bangladesh	3							
Bhutan	4							
Democratic People's Republic of Korea (the)	1							X
India	2							
Indonesia	3							
Maldives	4							
Myanmar	3							
Nepal	3							
Sri Lanka	4							
Thailand	3							

1 Presence of national manual, or a document issued by the government or an authorized scientific body, including policy recommendations endorsed by WHO

2 "WHO standard" training course on management of TB control programmes has been carried out within the past two years; or training materials endorsed by WHO or IUATLD

3 Short course chemotherapy

4 Directly observed treatment

5 A regular supply system of all essential anti-tuberculosis drugs and diagnostic materials

6 Presence of WHO/IUATLD recommended recording and reporting system showing assessment of treatment results

dark pink fully implemented (more than 90% of country)

light pink implemented in part of country

grey not implemented

white unknown

Regional Profile - SEAR

Countries	Country Information (1998)								WHO TB Control Strategy (DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage				% new ss+ out of all new pulm. cases			
		All types		New ss+					Population		Notified cases			% cases out of all cases	New ss+ cases notified	
		No.	Rate	No.	Rate				No.	(%)	No.	Rate			No.	Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Bangladesh	124 773 789	72 256	57.9	37 737	30.2	137 318	27.5	3	112 296 410	90.0	52 861	47.1	73.2	33 220	29.6	67.9
Bhutan	2 003 605	1 292	64.5	270	13.5	1 275	21.2	4	2 003 605	100.0	1 292	64.5	100.0	270	13.5	30.0
Democratic People's Republic of Korea (the)	23 347 614	1 152	4.9	403	1.7	18 560	2.2	1								
India	982 222 827	1 130 038	115.0	284 066	28.9	818 209	34.7	2	88 400 054	9.0	29 674	33.6	2.6	12 421	14.1	52.4
Indonesia	206 337 751	40 497	19.6	32 280	15.6	265 522	12.2	3	165 070 201	80.0	40 497	24.5	100.0	32 280	19.6	83.1
Maldives	270 847	175	64.6	88	32.5	107	82.2	4	270 847	100.0	175	64.6	100.0	88	32.5	64.2
Myanmar	44 497 002	14 756	33.2	10 089	22.7	36 426	27.7	3	26 822 793	60.3	14 756	55.0	100.0	10 089	37.6	82.0
Nepal	22 847 345	24 135	105.6	11 306	49.5	21 937	51.5	3	3 884 049	17.0	6 715	172.9	27.8	3 421	88.1	65.7
Sri Lanka	18 455 021	7 024	38.1	3 747	20.3	5 019	74.7	4	17 532 270	95.0	7 024	40.1	100.0	3 747	21.4	66.3
Thailand	60 300 193	15 850	26.3	7 962	13.2	37 378	21.3	3	19 296 062	32.0	15 850	82.1	100.0	7 962	41.3	56.4
Regional Total	1 485 055 994	1 307 175	88.0	387 948	26.1	1 341 751	28.9		435 576 290	29.3	168 844	38.8	12.9	103 498	23.8	69.1

Regional Profile - SEAR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage				% new ss+ out of all new pulm. cases			
		All types		New ss+					Population		Notified cases			% cases out of all cases	New ss+ cases notified	
		No.	Rate	No.	Rate				No.	(%)	No.	Rate			No.	Rate
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Bangladesh	124 773 789	72 256	57.9	37 737	30.2	137 318	27.5	3	24 954 758	20.0	19 395	77.7	26.8	4 517	18.1	26.0
Bhutan	2 003 605	1 292	64.5	270	13.5	1 275	21.2	4								
Democratic People's Republic of Korea (the)	23 347 614	1 152	4.9	403	1.7	18 560	2.2	1	23 347 614	100.0	1 152	4.9	100.0	403	1.7	46.8
India	982 222 827	1 130 038	115.0	284 066	28.9	818 209	34.7	2	893 822 773	91.0	1 100 364	123.1	97.4	271 645	30.4	26.3
Indonesia	206 337 751	40 497	19.6	32 280	15.6	265 522	12.2	3								
Maldives	270 847	175	64.6	88	32.5	107	82.2	4								
Myanmar	44 497 002	14 756	33.2	10 089	22.7	36 426	27.7	3								
Nepal	22 847 345	24 135	105.6	11 306	49.5	21 937	51.5	3	18 963 296	83.0	17 420	91.9	72.2	7 885	41.6	54.0
Sri Lanka	18 455 021	7 024	38.1	3 747	20.3	5 019	74.7	4								
Thailand	60 300 193	15 850	26.3	7 962	13.2	37 378	21.3	3	41 004 131	68.0						
Regional Total	1 485 055 994	1 307 175	88.0	387 948	26.1	1 341 751	28.9		002 092 572	67.5	1 138 331	113.6	87.1	284 450	28.4	26.7

Regional Profile - SEAR cont'd.

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Bangladesh	26 374	2.7	72.9	5.6	10.1	1.4	4.8	2.6	78.4	1 131	25.4	53.5	4.2	8.1	2.2	3.1	3.5	57.6
Bhutan	284	0.0	52.8	31.7	2.1	2.1	5.6	5.6	84.5	8	0.0	75.0	12.5			12.5		87.5
Democratic People's Republic of Korea (the)																		
India	7 689	0.1	80.4	1.4	8.7	3.4	3.5	2.5	81.8	2 306	4.2	62.2	3.0	14.7	5.6	7.4	2.9	65.2
Indonesia	21 355	41.2	46.7	7.8	1.7	1.0	1.1	0.5	54.5									
Maldives	94	0.0	94.7		1.1		4.3		94.7	5	0.0	100.0						100.0
Myanmar	9 232	0.0	72.9	8.9	9.8	1.2	4.6	2.6	81.8	1 745	0.0	60.7	13.5	11.3	3.7	6.2	4.5	74.2
Nepal	1 771	0.3	84.7	2.1	6.2	1.5	3.5	1.8	86.8	373	1.1	74.8	3.5	5.6	4.8	7.0	3.2	78.3
Sri Lanka	3 617	0.1	69.8	6.7	12.5	0.8	3.1	7.0	76.5	442	0.2	34.8	24.2	19.7	3.6	6.3	11.1	59.0
Thailand	1 059	18.7	59.8	2.4	8.2	1.7	4.9	4.3	62.1	238	18.5	52.9	2.1	10.5	4.6	7.6	3.8	55.0
Regional Total	71 475	13.6	65.8	6.2	7.3	1.4	3.4	2.2	72.0	6 248	6.9	58.7	7.7	12.2	4.2	6.2	4.1	66.4

Regional Profile - SEAR cont'd.

Countries	Other Strategy (non-DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases (Short Course)									New ss+ cases (Other Regimen)								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Bangladesh	7 410	0.1	42.8	11.4	37.1	0.7	0.5	7.4	54.3									
Bhutan																		
Democratic People's Republic of Korea (the)	302	53.6	31.5	2.6	0.3	4.3	7.0	0.7	34.1									
India	285 794	83.4		16.6					16.6									
Indonesia																		
Maldives																		
Myanmar																		
Nepal	8 851	15.4	48.3	17.6	12.6	1.2	2.7	2.2	65.9									
Sri Lanka																		
Thailand	2 638	23.5	52.9	3.7	8.8	1.4	6.0	3.6	56.6									
Regional Total	304 995	78.8	2.9	16.4	1.3	0.1	0.1	0.3	19.3									

SEAR - Notification rates by age and sex, 1998.

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total	0-14	15-24	25-34	35-44	45-54	55-64	>65	Total
Bangladesh	1.1	23.8	63.6	94.3	102.8	125.0	136.2	42.1	1.9	19.0	35.9	33.1	29.2	26.1	16.8	17.7	1.5	21.5	49.9	63.9	68.0	78.7	75.9	30.2
Bhutan	0.7	24.1	28.7	24.3	35.1	46.0	24.9	16.4	1.7	24.8	19.6	25.7	11.7	22.1	14.6	12.9	1.2	24.4	24.2	25.0	23.4	33.8	19.4	14.7
Democratic People's Republic of Korea (the)	0.0	1.1	1.4	1.9	3.2	4.5	6.6	1.6	0.0	0.6	1.0	1.4	2.5	2.8	2.0	1.0	0.0	0.9	1.2	1.7	2.9	3.7	3.6	1.3
India	0.0	1.9	2.5	2.9	3.3	3.2	1.9	1.7	0.1	1.6	1.5	1.2	0.9	0.7	0.4	0.8	0.1	1.7	2.0	2.1	2.1	1.9	1.1	1.3
Indonesia	0.2	12.9	21.9	31.5	43.1	45.6	36.4	17.9	0.3	13.0	19.4	23.7	27.4	25.1	12.6	13.5	0.3	12.9	20.7	27.6	35.1	34.9	23.5	15.6
Maldives	1.6	68.8	95.7	60.9	52.6	102.1	41.2	41.7	1.7	48.9	29.1	7.9	78.0	81.6	0.0	22.8	1.7	59.0	63.9	34.9	65.4	92.8	21.4	32.5
Myanmar	1.0	16.6	37.1	55.2	69.3	63.3	48.2	28.6	1.1	13.9	24.7	28.8	32.4	28.5	21.6	16.9	1.1	15.3	30.9	41.8	50.5	45.0	33.9	22.7
Nepal	2.7	70.3	102.0	137.2	162.4	166.8	121.8	64.3	3.8	51.7	51.4	53.1	49.9	43.3	43.3	31.4	3.2	61.3	75.6	93.8	105.5	106.5	82.6	48.0
Sri Lanka	0.3	12.9	29.0	52.1	74.4	78.5	56.6	29.8	0.9	12.8	15.4	12.6	17.7	19.4	14.9	11.1	0.6	12.8	22.1	31.3	44.8	47.8	34.9	20.3
Thailand	0.1	7.1	19.7	25.4	33.2	54.7	71.4	18.3	0.2	5.1	7.0	7.3	14.0	24.8	31.9	8.2	0.2	6.1	13.4	16.3	23.5	39.0	49.3	13.2
SEAR	0.2	7.5	13.3	18.1	22.1	24.5	21.4	10.0	0.4	6.5	8.9	9.0	9.1	8.6	6.0	5.5	0.3	7.0	11.2	13.7	15.7	16.4	13.3	7.8

SEAR - Age and sex distribution of smear-positive TB cases in DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Bangladesh	218	3047	5176	5544	4238	3158	2320	23 701	373	2264	2875	1904	1088	586	280	9 370	591	5 311	8 051	7 448	5 326	3 744	2 600	33 071
Bhutan	3	45	39	24	24	22	9	166	7	45	26	25	8	11	6	128	10	90	65	49	32	33	15	294
India	84	1773	2013	1851	1389	885	419	8 414	190	1375	1121	670	349	200	102	4 007	274	3 148	3 134	2 521	1 738	1 085	521	12 421
Indonesia	78	2732	3873	4054	3486	2654	1517	18 394	108	2674	3412	3130	2335	1610	617	13 886	186	5 406	7 285	7 184	5 821	4 264	2 134	32 280
Maldives	1	19	18	8	4	6	2	58	1	13	5	1	6	4	0	30	2	32	23	9	10	10	2	88
Myanmar	64	798	1491	1584	1187	763	438	6 325	73	650	997	856	577	382	229	3 764	137	1 448	2 488	2 440	1 764	1 145	667	10 089
Nepal	45	354	451	477	373	202	91	1 993	81	222	389	272	198	179	87	1 428	126	576	840	749	571	381	178	3 421
Sri Lanka	7	237	430	628	663	445	304	2 714	22	228	235	169	173	119	87	1 033	29	465	665	797	836	564	391	3 747
Thailand	11	427	1153	1098	892	945	985	5 511	17	297	401	317	386	475	558	2 451	28	724	1 554	1 415	1 278	1 420	1 543	7 962
SEAR	511	9 432	14 644	15 268	12 256	9 080	6 085	67 276	872	7 768	9 461	7 344	5 120	3 566	1 966	36 097	1 383	17 200	24 105	22 612	17 376	12 646	8 051	103 373
%	0.8	14.0	21.8	22.7	18.2	13.5	9.0	100	2.4	21.5	26.2	20.3	14.2	9.9	5.4	100	1.3	16.6	23.3	21.9	16.8	12.2	7.8	100

SEAR - Age and sex distribution of smear-positive TB cases in non-DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Bangladesh	36	469	812	698	533	364	249	3 161	65	399	444	252	124	63	44	1 391	101	868	1 256	950	657	427	293	4 552
Democratic People's Republic of Korea (the)	0	21	36	34	36	31	25	183	0	11	24	24	25	20	15	119	0	32	60	58	61	51	40	302
India																								
Nepal	88	1267	1071	1023	919	682	389	5 439	92	890	449	349	209	40	83	2 112	180	2 157	1 520	1 372	1 128	722	472	7 551
Thailand																								
SEAR	124	1 757	1 919	1 755	1 488	1 077	663	8 783	157	1 300	917	625	358	123	142	3 622	281	3 057	2 836	2 380	1 846	1 200	805	12 405
%	1.4	20.0	21.8	20.0	16.9	12.3	7.5	100	4.3	35.9	25.3	17.3	9.9	3.4	3.9	100	2.3	24.6	22.9	19.2	14.9	9.7	6.5	100

SEAR - Number of tuberculosis cases notified, 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Bangladesh	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
Bhutan	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
Democratic People's Republic of Korea (the)																	11 050	1 152
India	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
Indonesia	32 461	33 000	31 809	32 432	17 681	16 750		97 505	105 516	74 470	469 832	98 458	62 966	49 647	35 529	24 647	22 184	40 497
Maldives	112	111	143	123	91	111	115	85	203	152	123	92	175	249	231	212	173	175
Myanmar	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	42 361	17 122	14 756
Nepal	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
Sri Lanka	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
Thailand	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
Total	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	2 156 276	1 322 709	1 287 176	1 298 759	1 402 836	1 501 177	1 312 091	1 307 175
<i>No. of countries reporting</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>8</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>8</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>9</i>	<i>10</i>	<i>10</i>
<i>% of countries reporting</i>	<i>90</i>	<i>90</i>	<i>90</i>	<i>90</i>	<i>90</i>	<i>90</i>	<i>80</i>	<i>90</i>	<i>90</i>	<i>90</i>	<i>90</i>	<i>80</i>	<i>90</i>	<i>90</i>	<i>90</i>	<i>90</i>	<i>100</i>	<i>100</i>

SEAR - Case notification rates (per 100 000 population), 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Bangladesh	47.1	53.7	55.7	47.0	42.1	44.9	43.8	41.9	42.0	44.5	50.4	27.8	47.0	41.4	47.6	52.6	51.7	57.9
Bhutan	197.0	52.2	72.0	62.4	72.2	103.6	38.7	69.7	91.9	68.0	57.6	8.0	6.1	64.0	70.3	67.2	62.2	64.5
Democratic People's Republic of Korea (the)																	48.1	4.9
India	109.3	128.3	146.2	147.6	152.2	163.1	175.2	178.3	181.1	178.6	179.3	126.8	120.0	121.5	130.7	136.9	117.6	115.0
Indonesia	21.1	21.0	19.8	19.8	10.6	9.8		55.2	58.7	40.7	252.9	52.2	32.9	25.5	18.0	12.3	10.9	19.6
Maldives	68.8	66.2	82.8	69.1	49.6	58.5	58.7	42.0	97.1	70.5	55.3	40.2	74.3	102.8	92.7	82.8	65.7	64.6
Myanmar	36.1	34.2	30.5	30.0	28.0	28.4	30.9	23.7	27.4	30.6	36.3	41.0	45.3	36.8	42.5	97.6	39.0	33.2
Nepal	2.3	9.6	4.5	1.2	0.3	1.5	5.8	9.0	60.1	54.0	46.7		65.0	75.0	93.1	105.4	108.3	105.6
Sri Lanka	41.7	47.9	42.8	40.3	36.7	40.6	38.9	36.5	38.1	39.1	35.8	39.1	38.7	34.6	33.2	30.1	35.7	38.1
Thailand	103.8	100.0	132.4	137.7	151.7	100.2	97.8	92.8	81.3	83.7	77.9	83.8	86.4	82.3	77.5	67.4	50.7	26.3
SEAR	84.8	97.5	110.4	110.7	112.5	117.7	124.1	133.5	136.3	132.5	163.2	98.4	94.1	93.3	99.2	104.4	89.8	88.0

SEAR - New smear-positive cases

Country	Number of cases						Rate (per 100 000 population)					
	1993	1994	1995	1996	1997	1998	1993	1994	1995	1996	1997	1998
Bangladesh	18 993	1 710	20 524	29 674	33 117	37 737	16.5	1.5	17.3	24.6	27.0	30.2
Bhutan		352	367	308	284	270		19.4	19.9	16.3	14.6	13.5
Democratic People's Republic of Korea (the)					3 980	403					17.3	1.7
India	225 256	226 543	264 618	291 205	273 519	284 066	25.0	24.7	28.3	30.7	28.3	28.9
Indonesia	62 966	49 647	31 768	11 790	19 492	32 280	32.9	25.5	16.1	5.9	9.6	15.6
Maldives	126	125	114	106	94	88	53.5	51.6	45.8	41.4	35.7	32.5
Myanmar			8 681	9 716	9 695	10 089			20.2	22.4	22.1	22.7
Nepal	6 679	10 442	8 591	10 365	11 323	11 306	33.0	50.3	40.4	47.6	50.7	49.5
Sri Lanka	3 335	3 405	3 049	2 958	3 506	3 747	19.0	19.2	17.0	16.3	19.2	20.3
Thailand		20 260	20 273	16 997	13 214	7 962		34.9	34.6	28.7	22.1	13.2
Total	317 355	312 484	357 985	373 119	368 224	387 948	23.2	22.5	25.3	25.9	25.2	26.1

Notes

Democratic People's Republic of Korea (the) DOTS started in 1998, so treatment outcomes for DOTS areas are not yet available.

Western Pacific



Western Pacific Region – Summary of TB control policies

Country	Category of the country as of 31/12/97	DOTS Technical Elements							DOTS newly implemented in 1998
		National manual ¹	Training ²	Use of microscopy for diagnosis	SCC ³	DOT ⁴	Drug availability ⁵	Recording and reporting system ⁶	
American Samoa	0								
Australia	3								
Brunei Darussalam	0								
Cambodia	4								
China	3								
China, Hong Kong SAR	1								
China, Macao SAR	4								
Cook Islands	3								
Fiji	4								
French Polynesia	4								
Guam	0								
Japan	1								
Kiribati	4								X
Lao People's Democratic Republic (the)	3								
Malaysia	1								
Marshall Islands (the)	3								X
Micronesia (Federated States of)	1								
Mongolia	4								
Nauru	0								
New Caledonia	0								
New Zealand	5								
Niue	5								
Northern Mariana Islands (Commonwealth of)	5								
Palau	0								
Papua New Guinea	2								
Philippines (the)	3								
Republic of Korea (the)	4								
Samoa	1								
Singapore	1								
Solomon Islands	4								
Tokelau	0								
Tonga	4								
Tuvalu	5								
Vanuatu	1								
Viet Nam	4								
Wallis and Futuna Islands	0								

1 Presence of national manual, or a document issued by the government or an authorized scientific body, including policy recommendations endorsed by WHO

2 "WHO standard" training course on management of TB control programmes has been carried out within the past two years; or training materials endorsed by WHO or IUATLD

3 Short course chemotherapy

4 Directly observed treatment

5 A regular supply system of all essential anti-tuberculosis drugs and diagnostic materials

6 Presence of WHO/IUATLD recommended recording and reporting system showing assessment of treatment results

dark pink fully implemented (more than 90% of country)

light pink implemented in part of country

grey not implemented

white unknown

Regional Profile - WPR

Countries	Country Information (1998)							WHO TB Control Strategy (DOTS)								
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Coverage						% new ss+ out of all new pulm. cases	
		All types		New ss+					Population		Notified cases		% cases out of all cases	New ss+ cases notified		
		No.	Rate	No.	Rate				No.	(%)	No.	Rate		No.		Rate
	a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n
Australia	18 520 306	899	4.9	203	1.1	664	30.6	3	6 852 513	37.0	424	6.2	47.2	116	1.7	47.5
Brunei Darussalam	315 120					81		0								
Cambodia	10 715 629	16 946	158.1	13 865	129.4	25 890	53.6	4	10 715 629	100.0	16 946	158.1	100.0	13 865	129.4	95.2
China	1 255 697 749	457 349	36.4	214 462	17.1	636 066	33.7	3	802 390 862	63.9	336 535	41.9	73.6	191 290	23.8	59.6
China, Hong Kong SAR	6 660 178	7 673	115.2			2 621		1								
China, Macao SAR	459 022	463	100.9	226	49.2	456	49.6	4	459 022	100.0	463	100.9	100.0	226	49.2	56.8
Cook Islands	20 000	2	10.0	1	5.0	8	12.5	3	14 000	70.0	2	14.3	100.0	1	7.1	50.0
Fiji	796 080	166	20.9	74	9.3	327	22.6	4	796 080	100.0	166	20.9	100.0	74	9.3	63.8
Japan	126 281 198	44 016	34.9	11 935	9.5	16 579	72.0	1								
Kiribati	83 000	276	332.5	50	60.2	33	152.4	4	83 000	100.0	276	332.5	100.0	50	60.2	34.5
Lao People's Democratic Republic (the)	5 163 084	2 165	41.9	1 508	29.2	3 997	37.7	3	3 665 790	71.0	2 149	58.6	99.3	1 494	40.8	77.1
Malaysia	21 409 576	14 115	65.9	7 802	36.4	10 752	72.6	1								
Marshall Islands (the)	61 000	49	80.3	11	18.0	24	46.2	3	28 060	46.0	49	174.6	100.0	11	39.2	34.4
Micronesia (Federated States of)	516 169	138	26.7	28	5.4	53	52.8	1								
Mongolia	2 579 051	2 915	113.0	1 356	52.6	2 412	56.2	4	2 496 521	96.8	2 725	109.2	93.5	1 213	48.6	63.4
Nauru	11 000					4		0								
New Zealand	3 795 875	367	9.7	81	2.1	84	96.4	5								
Niue	2 000	1	50.0					1								
Palau	17 000					6		0								
Papua New Guinea	4 599 690	11 291	245.5	2 107	45.8	5 154	40.9	2	413 972	9.0	2 845	687.2	25.2	418	101.0	23.4
Philippines (the)	72 944 489	159 866	219.2	71 663	98.2	100 609	71.2	3	12 327 619	16.9	18 286	148.3	11.4	10 292	83.5	59.7
Republic of Korea (the)	46 109 041	30 008	65.1	10 359	22.5	17 924	57.8	4	46 109 041	100.0	30 008	65.1	100.0	10 359	22.5	37.4
Samoa	174 461	22	12.6	7	4.0	68	10.3	1								
Singapore	3 475 759	2 120	61.0	480	13.8	758	63.3	1								
Solomon Islands	417 118	295	70.7	140	33.6	166	84.3	4	417 118	100.0	295	70.7	100.0	140	33.6	64.2
Tokelau	2 000							0								
Tonga	99 000	30	30.3	16	16.2	39	41.0	4	97 020	98.0	30	30.9	100.0	16	16.5	64.0
Tuvalu	10 000	18	180.0			4		1								
Vanuatu	181 518	178	98.1	38	20.9	73	52.1	1								
Viet Nam	77 562 453	87 449	112.7	54 873	70.7	66 066	83.1	4	74 459 955	96.0	84 599	113.6	96.7	53 147	71.4	76.2
Other Territories																
American Samoa	59 000					23		0								
French Polynesia	227 140	105	46.2	34	15.0	92	37.0	4	227 140	100.0	105	46.2	100.0	34	15.0	44.7

Regional Profile - WPR

Countries	Country Information (1998)							WHO TB Control Strategy (DOTS)								
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Population		Notified cases		% cases out of all cases	New ss+ cases notified		% new ss+ out of all new pulm. cases
		All types		New ss+					No.	Rate	No.	Rate		No.	Rate	
		No.	Rate	No.	Rate											
<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>d/f</i>	<i>g</i>	<i>h</i>	<i>h/a</i>	<i>i</i>	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>n</i>	
Guam	161 219					63		0								
New Caledonia	206 304					76		0								
Northern Mariana Islands (Commonwealth of)	51 000	97	190.2	26	51.0	20	131.3	1								
Wallis and Futuna Islands	15 000					6		0								
Regional Total	1 659 398 229	839 019	50.6	391 345	23.6	891 198	43.9		961 553 341	57.9	495 903	51.6	59.1	282 746	29.4	61.8

Regional Profile - WPR

Countries	Country Information (1998)								Other Strategy (non-DOTS)							
	Population	Notified Cases				New ss+ cases estimated	% case detection of new ss+ cases	Category	Population		Notified cases		% cases out of all cases	New ss+ cases notified		% new ss+ out of all new pulm. cases
		All types		New ss+					No.	Rate	No.	Rate		No.	Rate	
		No.	Rate	No.	Rate											
a	b	c	d	e	f	d/f	g	h	h/a	i	j	k	l	m	n	
Guam	161 219					63		0								
New Caledonia	206 304					76		0								
Northern Mariana Islands (Commonwealth of)	51 000	97	190.2	26	51.0	20	131.3	1	51 000	100.0	97	190.2	100.0	26	51.0	28.6
Wallis and Futuna Islands	15 000					6		0								
Regional Total	1 659 398 229	839 019	50.6	391 345	23.6	891 198	43.9		694 963 888	41.9	343 116	49.4	40.9	108 599	15.6	35.9

Regional Profile - WPR cont'd.

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Australia	126	23.8	15.9	50.0	0.8		6.3	3.2	65.9	14	21.4	7.1	64.3		7.1			71.4
Brunei Darussalam																		
Cambodia	12 278	3.7	86.2	4.5	2.5	0.4	2.2	0.6	90.7	650	1.7	85.1	5.4	2.5	1.2	3.8	0.3	90.5
China	166 279	0.5	96.3		0.6	1.0	1.3	0.3	96.3									
China, Hong Kong SAR																		
China, Macao SAR	325	0.0	80.6		8.0	4.6	5.2	1.5	80.6									
Cook Islands	2	50.0	50.0						50.0									
Fiji	46	0.0	84.8	2.2	6.5		6.5		87.0									
Japan																		
Kiribati																		
Lao People's Democratic Republic (the)	1 234	22.6	57.1	5.3	6.7	0.8	5.1	2.4	62.4	21	0.0	57.1	14.3	4.8	9.5	9.5	4.8	71.4
Malaysia																		
Marshall Islands (the)																		
Micronesia (Federated States of)																		
Mongolia	705	0.1	82.4	3.5	3.4	2.7	3.8	4.0	86.0	77	0.0	63.6	14.3	3.9	6.5	9.1	2.6	77.9
Nauru																		
New Zealand																		
Niue																		
Palau																		
Papua New Guinea	69	0.0	49.3	43.5	4.3		2.9		92.8	3	0.0	33.3	33.3		33.3			66.7
Philippines (the)	4 085	0.8	79.7	3.2	6.7	2.9	2.8	4.0	82.8	276	59.8	23.6	2.5	1.8	6.5	1.8	4.0	26.1
Republic of Korea (the)	7 487	0.0	79.4	2.2	3.6	2.4	1.4	11.0	81.6									
Samoa																		
Singapore																		
Solomon Islands	113	1.8	74.3	17.7		0.9	4.4	0.9	92.0	6	0.0	100.0						100.0
Tokelau																		
Tonga	12	8.3	25.0	50.0			8.3	8.3	75.0									
Tuvalu																		
Vanuatu																		
Viet Nam	50 016	7.1	81.9	3.0	2.1	1.1	2.7	2.1	84.9	4 866	7.5	74.4	5.2	2.4	4.1	3.8	2.6	79.6
Other Territories																		
American Samoa																		
French Polynesia	41	0.0	90.2	9.8					100.0	8	0.0	100.0						100.0

Regional Profile - WPR cont'd.

Countries	WHO TB Control Strategy (DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases									Retreatment cases								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Register-ed	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Guam																		
New Caledonia																		
Northern Mariana Islands (Commonwealth of)																		
Wallis and Futuna Islands																		
Regional Total	242 818	2.1	91.7	1.1	1.2	1.1	1.7	1.1	92.8	5 921	9.2	72.9	5.4	2.4	3.9	3.8	2.4	78.2

Regional Profile - WPR cont'd.

Countries	Other Strategy (non-DOTS)																	
	Treatment Outcomes in 1997																	
	New ss+ cases (Short Course)									New ss+ cases (Other Regimen)								
	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)	Registered	Not eval. (%)	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treat. Success (%)
<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	<i>ab</i>	<i>ac</i>	<i>ad</i>	<i>ae</i>	<i>af</i>	
Guam																		
New Caledonia																		
Northern Mariana Islands (Commonwealth of)	90	16.7	44.4	11.1				27.8	55.6									
Wallis and Futuna Islands																		
Regional Total	50 713	5.2	76.6	4.0	6.0	4.0	1.6	2.6	80.6									

WPR - Notification rates by age and sex, 1998.

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Australia	0.0	0.8	1.6	1.3	1.0	1.8	3.4	1.2	0.1	1.5	1.7	1.0	0.6	0.2	2.2	1.0	0.1	1.1	1.6	1.2	0.8	1.0	2.7	1.1
Cambodia	1.6	53.7	155.2	255.7	432.5	745.6	815.3	135.6	1.0	44.5	132.8	228.7	373.6	499.1	335.9	123.5	1.3	49.1	143.8	241.2	399.6	595.0	506.2	129.2
China	0.9	18.7	23.8	27.0	33.7	48.5	55.6	22.0	1.0	16.0	16.7	14.6	14.5	17.2	13.6	11.9	0.9	17.4	20.3	21.0	24.5	33.4	33.3	17.1
China, Hong Kong SAR								0.0								0.0								0.0
China, Macao SAR	0.0	36.8	75.6	88.7	74.5	230.6	461.7	83.1	1.8	30.9	28.1	44.1	23.4	28.0	123.7	32.2	0.9	33.9	48.3	65.8	51.3	135.7	264.6	56.9
Cook Islands	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	111.6	0.0	0.0	0.0	10.2	0.0	0.0	0.0	54.9	0.0	0.0	0.0	5.0
Fiji		8.0	19.0	13.7	22.8	17.1	12.6	9.6	1.6	12.2	18.0	7.9	11.5	12.6	11.6	9.0		10.0	18.5	10.8	17.2	14.8	12.1	9.3
French Polynesia	0.0	19.4	20.0	19.2	9.8	73.1	95.8	18.0	8.0	4.9	11.0	34.5	10.9	0.0	22.6	11.8	3.9	12.2	15.7	26.5	10.3	39.0	58.2	15.0
Japan	0.0	3.5	6.5	9.0	15.8	21.4	44.9	13.7	0.1	2.9	4.7	2.9	3.3	5.1	17.9	5.6	0.0	3.2	5.6	6.0	9.6	13.1	29.5	9.5
Kiribati	5.6	66.7	166.7	50.0	150.0	100.0	100.0	59.5	11.1	87.5	83.3	75.0	250.0	50.0	100.0	58.5	8.3	76.5	125.0	62.5	200.0	75.0	100.0	59.0
Lao People's Democratic Republic (the)	0.3	16.2	44.2	60.4	102.2	188.6	201.6	35.8	0.6	12.9	36.3	48.6	62.9	78.0	75.4	22.6	0.5	14.6	40.3	54.6	82.7	132.7	134.0	29.2
Malaysia	0.8	32.6	66.2	73.7	92.4	76.8	340.7	50.0	1.2	26.3	32.1	28.5	36.4	28.6	93.0	22.6	1.0	29.5	49.2	51.3	64.9	52.8	207.7	36.4
Marshall Islands (the)	0.0	32.8	0.0	32.8	49.2	98.4	0.0	16.4	0.0	16.4	73.8	32.8	0.0	98.4	0.0	19.7	0.0	24.6	36.9	32.8	24.6	98.4	0.0	18.0
Micronesia (Federated States of)	3.9	9.3	6.8	13.5	5.4	0.0	61.8	8.2	2.0	2.0	0.0	3.7	12.3	0.0	0.0	2.4	3.0	5.7	3.6	8.8	8.6	0.0	30.1	5.4
Mongolia	3.6	77.9	115.1	104.7	87.8	59.0	52.1	58.7	6.9	60.4	101.9	74.9	42.7	38.0	27.9	46.6	5.2	69.2	108.5	89.7	65.1	48.4	38.5	52.6
New Zealand	0.2	2.9	3.6	2.8	3.0	4.5	2.2	2.4	0.0	4.1	2.0	2.7	0.8	2.5	2.3	1.9	0.1	3.5	2.8	2.8	1.9	3.5	2.3	2.1
Niue								0.0								0.0								0.0
Northern Mariana Islands (Commonwealth of)	0.0	0.0	147.1	147.1	245.1	196.1	196.1	67.9	0.0	58.8	130.7	49.0	0.0	0.0	0.0	32.7	0.0	29.4	140.1	98.0	163.4	98.0	98.0	51.0
Papua New Guinea	1.0	14.6	14.7	11.9	14.7	14.0	6.2	8.8	1.3	21.2	14.7	12.2	12.3	3.0	1.4	9.3	1.1	17.8	14.7	12.0	13.5	8.5	3.7	9.0
Philippines (the)	0.0	2.1	5.2	8.3	9.3	12.7	7.2	3.7	0.0	1.0	1.9	2.9	3.9	4.1	4.2	1.5	0.0	1.6	3.6	5.6	6.7	8.3	5.6	2.6
Republic of Korea (the)	0.4	23.7	30.3	33.4	40.4	60.4	106.5	29.5	0.8	19.7	16.9	11.8	9.8	20.6	53.5	15.4	0.5	21.7	23.7	22.8	25.3	39.8	73.8	22.5
Samoa	2.9	4.9	6.9	0.0	19.8	25.7	0.0	5.5	0.0	5.5	8.7	0.0	0.0	0.0	0.0	2.4	1.5	5.2	7.7	0.0	9.8	12.5	0.0	4.0
Singapore	0.2	3.9	11.5	20.1	27.1	68.3	103.5	20.9	0.5	2.8	5.7	3.2	8.8	20.8	28.9	6.8	0.4	3.4	8.6	11.7	18.1	44.4	63.3	13.8
Solomon Islands	3.2	33.8	29.8	71.3	139.6	86.0	204.0	36.4	2.3	33.9	56.7	53.8	89.6	89.1	32.9	30.6	2.8	33.8	42.8	62.8	115.2	87.5	117.0	33.6
Tonga	0.0	18.5	43.7	20.4	68.0	51.0	204.0	22.0	4.6	10.2	0.0	0.0	0.0	51.0	204.0	10.2	2.3	14.6	21.9	10.2	34.0	51.0	204.0	16.2
Tuvalu	45.1		422.5	431.5		533.7	724.3	157.5	279.1		147.0	220.4	338.0		676.0	203.2	160.2		287.7	327.1			699.3	180.0
Vanuatu	5.1	22.3	42.9	11.4	0.0	53.9	66.0	17.6	5.3	29.5	67.7	38.9	16.2	0.0	36.4	24.4	5.2	25.8	56.1	26.2	8.0	28.2	51.9	20.9
Viet Nam	0.4	30.3	98.0	202.0	283.9	372.4	476.2	97.3	0.5	17.4	42.4	61.6	99.5	169.7	203.0	45.2	0.4	24.0	70.6	126.6	183.5	261.0	313.4	70.7
WPR	0.7	17.9	26.4	32.9	38.7	54.6	69.3	25.0	0.9	14.7	17.3	16.6	17.2	22.5	23.8	13.5	0.8	16.4	21.9	25.0	28.3	38.9	44.6	19.3

WPR - Age and sex distribution of smear-positive TB cases in DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Australia	0	7	15	9	2	8	19	60	1	9	15	11	5	0	15	56	1	16	30	20	7	8	34	116
Cambodia	36	446	1330	1477	1521	1293	924	7 027	23	367	1184	1531	1667	1359	691	6 822	59	813	2 514	3 008	3 188	2 652	1 615	13 849
China	1292	17736	26691	22200	20979	19444	18047	126 389	1441	14253	18095	11148	8405	6376	5125	64 843	2 733	31 989	44 786	33 348	29 384	25 820	23 172	191 232
China, Macao SAR	0	11	26	42	23	28	56	186	1	9	13	22	6	3	21	75	1	20	39	64	29	31	77	261
Cook Islands	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1
Fiji		7	11	7	8	4	2	39	2	10	10	4	4	3	2	35	2	17	21	11	12	7	4	74
French Polynesia	0	4	4	3	1	5	4	21	3	1	2	5	1	0	1	13	3	5	6	8	2	5	5	34
Kiribati	1	6	10	2	3	2	1	25	2	7	5	3	5	1	1	24	3	13	15	5	8	3	2	49
Lao People's Democratic Republic (the)	4	77	152	150	177	211	152	923	6	59	121	122	108	90	65	571	10	136	273	272	285	301	217	1 494
Marshall Islands (the)	0	2	0	1	1	1	0	5	0	1	3	1	0	1	0	6	0	3	3	2	1	2	0	11
Mongolia	17	179	190	124	55	30	22	617	32	161	221	114	32	21	15	596	49	340	411	238	87	51	37	1 213
Papua New Guinea	9	69	57	30	25	14	4	208	11	94	51	27	21	3	1	208	20	163	108	57	46	17	5	416
Philippines (the)	2	157	292	356	256	206	81	1 350	4	76	109	119	106	69	56	539	6	233	401	475	362	275	137	1 889
Republic of Korea (the)	19	977	1334	1329	999	1074	1119	6 851	37	765	708	455	238	393	912	3 508	56	1 742	2 042	1 784	1 237	1 467	2 031	10 359
Solomon Islands	3	15	9	14	18	7	12	78	2	14	16	10	11	7	2	62	5	29	25	24	29	14	14	140
Tonga	0	2	3	1	2	1	2	11	1	1	0	0	0	1	2	5	1	3	3	1	2	2	4	16
Viet Nam	53	2375	6402	8477	5943	5700	7058	36 008	58	1301	2658	2980	2482	3186	4474	17 139	111	3 676	9 060	11 457	8 425	8 886	11 532	53 147
WPR	1 436	22 070	36 526	34 222	30 013	28 028	27 503	179 798	1 624	17 128	23 211	16 553	13 091	11 513	11 383	94 503	3 060	39 198	59 737	50 775	43 104	39 541	38 886	274 301
%	0.8	12.3	20.3	19.0	16.7	15.6	15.3	100	1.7	18.1	24.6	17.5	13.9	12.2	12.0	100	1.1	14.3	21.8	18.5	15.7	14.4	14.2	100

WPR - Age and sex distribution of smear-positive TB cases in non-DOTS areas, 1998 (absolute numbers).

Age groups	MALE								FEMALE								ALL							
	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total	0-14	15-24	25-34	35-44	45-54	55-64	≥65	Total
Australia	0	4	7	9	11	7	12	50	1	10	9	4	3	2	9	38	1	14	16	13	14	9	21	88
China	189	1963	3402	2888	2504	2207	2454	15 607	117	1473	2108	1524	994	746	603	7 565	306	3 436	5 510	4 412	3 498	2 953	3 057	23 172
China, Hong Kong SAR																								
Japan	2	306	597	724	1571	1660	3545	8 405	6	243	418	233	329	417	1884	3 530	8	549	1 015	957	1 900	2 077	5 429	11 935
Lao People's Democratic Republic (the)	0	0	0	4	0	2	1	7	1	1	3	1	0	0	1	7	1	1	3	5	0	2	2	14
Malaysia	31	670	1090	1050	872	426	1282	5 421	45	519	526	398	330	157	406	2 381	76	1 189	1 616	1 448	1 202	583	1 688	7 802
Micronesia (Federated States of)	4	5	3	4	1	0	5	22	2	1	0	1	2	0	0	6	6	6	3	5	3	0	5	28
Mongolia	0	34	61	34	10	2	0	141	0	1	0	1	0	0	0	2	0	35	61	35	10	2	0	143
New Zealand	1	8	10	8	7	7	4	45	0	11	6	8	2	4	5	36	1	19	16	16	9	11	9	81
Niue																								
Northern Mariana Islands (Commonwealth of)	0	0	6	3	5	2	2	18	0	3	4	1	0	0	0	8	0	3	10	4	5	2	2	26
Papua New Guinea																								
Philippines (the)																								
Samoa	1	1	1	0	1	1	0	5	0	1	1	0	0	0	0	2	1	2	2	0	1	1	0	7
Singapore	1	9	36	70	63	81	104	364	2	6	18	11	20	25	34	116	3	15	54	81	83	106	138	480
Tuvalu	1		3	2		1	1	8	6		1	1	1		1	10	7	0	4	3	1	1	2	18
Vanuatu	2	4	5	1	0	2	2	16	2	5	9	4	1	0	1	22	4	9	14	5	1	2	3	38
Viet Nam	3	66	165	288	200	225	216	1 163	2	43	91	122	94	110	101	563	5	109	256	410	294	335	317	1 726
WPR	235	3 070	5 386	5 085	5 245	4 623	7 628	31 272	184	2 317	3 194	2 309	1 776	1 461	3 045	14 286	419	5 387	8 580	7 394	7 021	6 084	10 673	45 558
%	0.8	9.8	17.2	16.3	16.8	14.8	24.4	100	1.3	16.2	22.4	16.2	12.4	10.2	21.3	100	0.9	11.8	18.8	16.2	15.4	13.4	23.4	100

WPR Number of tuberculosis cases notified, 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Australia	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
Brunei Darussalam	285	245	276	256	238	212	189	126	128	143		180	160				160	
Cambodia	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
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
Cook Islands	10	19	29	20	36	17	16	20	1	1	8	12	6	4	0	0	0	2
Fiji	180	163	185	165	230	199	173	162	218	226	247	240	183	280	203	200	171	166
Japan	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
Kiribati	187	193	127	111	103	129	110	208	121	68	91	100	99	253		327	32	276
Lao People's Democratic Republic (the)		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	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
Marshall Islands (the)	7	12	15	12	15	37	32	11	7		26	52	61			56		49
Micronesia (Federated States of)		67	73	75	66	60	98	77	68	367	350	111	151	173	115	94	108	138
Mongolia	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
Nauru	2	8	0	0	0	8	6	8	0	7				4				
New Zealand	448	437	415	404	359	320	296	295	303	348	335	317	274	352	307	356	328	367
Niue	0	2	3	1	0	5		3		0		2	1	2	2	2	0	1
Palau	10	17	14	20	26	13	38	17	3		6	4	25	41	19	5	15	
Papua New Guinea	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
Philippines (the)	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
Republic of Korea (the)	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
Samoa	49	43	41	37	43	65	29	29	37	44	44	26	49	45	51	37	32	22
Singapore	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
Solomon Islands	313	324	302	337	377	292	334	372	488	382	309	364	367	332	352	299	318	295
Tokelau	1	0	0	0	2	0	9	1	0	1	1	1		0	2	0		
Tonga	49	45	50	54	49	35	24	14	36	23	20	29	33	23	20	22	21	30
Tuvalu	18	12	23	9	32	27	22	24	26	23	30	30	28	19	36			18
Vanuatu	92	173	196	188	124	131	90	118	144	140	230	193	114	152	79	126	184	178
Viet Nam	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
Other territories																		
American Samoa	6	6	8	12	5	8	9	13	5	9	3	1	4	4		0	6	
China, Hong Kong SAR	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
China, Macao SAR	585	233	455	671	571	420	389	320	274	343	329	294	285		354	455	589	463
French Polynesia	66	65	78	80	78	85	80	63	73	59	49	83	82	89		86	91	105
Guam	41	49	48	54	37	49	34	41	75			60	70	94				
New Caledonia	128	120	171	144	104	98	74	111	128	143	140	140	149	132	114	205		
Northern Mariana Islands (Commonwealth of)	26	75	74	58	64	16	56	27	28	28		67		46	48	51	93	97
Wallis and Futuna Islands	24	5	17	14	14		34	1	30		22	4	11	11	6	8	14	
Total	355 345	461 572	462 193	541 001	615 179	651 853	655 019	716 450	741 916	893 992	760 870	754 466	718 848	724 380	978 700	941 923	834 972	839 019
<i>No. of countries reporting</i>	33	36	36	36	36	35	35	36	35	32	31	35	33	33	29	31	30	28
<i>% of countries reporting</i>	92	100	100	100	100	97	97	100	97	89	86	97	92	92	81	86	83	78

WPR - Case notification rates (per 100 000 population), 1981-1998

Country	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Australia	9.4	8.5	8.0	8.4	7.0	5.7	5.6	5.8	5.7	6.0	5.5	5.8	5.6	6.0	6.0		6.2	4.9
Brunei Darussalam	143.1	119.5	130.9	118.1	106.7	92.4	80.1	51.9	51.2	55.6		66.2	57.2					51.9
Cambodia	30.2	121.8	109.7	143.4	137.4	135.4	115.6	131.5	94.3	75.1	122.2	175.7	140.3	156.0	146.3	145.2	149.2	158.1
China		9.6	11.3	14.4	21.2	24.4	22.8	27.2	27.3	32.5	29.5	27.1	28.8	30.1	42.3	38.1	33.7	36.4
Cook Islands	55.6	111.8	170.6	117.6	211.8	100.0	94.1	111.1	5.6	5.6	42.1	63.2	31.6	21.1				10.0
Fiji	27.8	24.6	27.4	24.0	32.9	28.1	24.3	22.6	30.2	31.1	33.7	32.4	24.4	36.9	26.4	25.7	21.7	20.9
Japan	56.0	53.9	52.0	51.2	48.5	46.7	46.3	44.3	43.2	41.9	40.8	39.4	38.8	35.5	34.3	33.5	33.5	34.9
Kiribati	301.6	306.3	198.4	168.2	153.7	189.7	159.4	297.1	170.4	94.4	124.7	133.3	130.3	328.6		408.8	39.5	332.5
Lao People's Democratic Republic (the)		141.2	137.7	186.5	118.5	41.0	91.2	185.9	73.2	44.0	45.7	22.6	46.3	24.4	25.7	29.4	38.2	41.9
Malaysia	77.7	82.5	78.2	69.3	67.4	66.7	67.0	64.5	61.4	65.6	60.4	60.9	64.0	59.6	59.6	62.8	64.5	65.9
Marshall Islands (the)	19.4	32.4	39.5	30.8	37.5	90.2	76.2	25.0	15.6		54.2	106.1	119.6			98.2		80.3
Micronesia (Federated States of)		19.9	21.2	21.2	18.2	16.1	25.6	19.5	16.8	88.0	81.6	25.2	33.4	37.2	24.1	19.2	21.5	26.7
Mongolia	64.0	76.4	83.9	89.1	156.7	143.2	119.7	121.3	103.7	71.2	71.0	64.8	60.6	71.8	132.2	119.7	117.7	113.0
Nauru	25.0	100.0				88.9	66.7	88.9		70.0				40.0				
New Zealand	14.3	13.8	13.0	12.5	11.1	9.8	9.0	8.9	9.1	10.4	9.8	9.1	7.7	9.7	8.4	9.6	8.7	9.7
Niue		66.7	100.0	33.3		250.0		150.0				100.0	50.0	100.0	100.0	100.0		50.0
Palau	83.3	130.8	107.7	153.8	185.7	92.9	271.4	113.3	20.0		40.0	25.0	156.3	256.3	111.8	29.4	88.2	
Papua New Guinea	79.4	85.0	89.6	104.0	100.3	81.8	62.6	116.0	90.4	65.0	86.6	63.2	181.3	126.9	186.9	115.9	177.3	245.5
Philippines (the)	235.9	206.1	204.0	284.3	276.3	274.1	287.2	314.8	365.9	522.4	333.9	371.3	273.3	269.6	346.0	395.3	291.6	219.2
Republic of Korea (the)	254.7	257.1	230.1	212.5	213.6	215.2	209.8	177.0	164.9	149.1	133.7	110.0	106.5	85.7	110.8	71.9	57.3	65.1
Samoa	31.5	27.6	26.2	23.6	27.4	41.3	18.4	18.3	23.3	27.5	27.3	16.0	29.9	27.2	30.4	21.8	18.6	12.6
Singapore	98.5	86.5	80.0	81.0	72.1	63.5	57.1	57.6	54.7	52.7	59.8	56.6	57.1	51.4	56.9	21.8	57.7	61.0
Solomon Islands	133.4	133.3	120.0	129.3	139.7	104.4	115.4	124.1	157.3	119.0	93.0	106.0	103.3	90.5	92.8	76.4	78.7	70.7
Tokelau	50.0				100.0		450.0	50.0		50.0	50.0	50.0			100.0			
Tonga	53.3	49.5	54.9	59.3	53.8	38.0	25.8	14.9	37.9	24.0	20.6	29.9	33.7	23.5	20.4	22.4	21.2	30.3
Tuvalu	225.0	150.0	287.5	112.5	400.0	337.5	275.0	300.0	288.9	255.6	333.3	333.3	311.1	211.1	360.0			180.0
Vanuatu	76.5	140.4	155.3	145.5	93.7	96.6	64.8	82.9	98.7	93.7	150.2	123.0	70.9	92.2	46.8	72.8	103.8	98.1
Viet Nam	79.2	91.2	75.3	74.9	78.4	77.7	88.8	82.1	80.1	75.3	87.7	81.3	74.6	71.4	113.2	99.4	111.2	112.7
Other territories																		
American Samoa	18.2	17.1	22.2	31.6	12.8	19.5	21.4	29.5	11.1	19.1	6.3	2.0	7.8	7.5			10.3	
China, Hong Kong SAR	150.2	143.7	137.2	145.4	138.3	134.9	130.9	125.5	118.8	114.1	108.7	111.4	109.3	103.7	99.8	102.2	108.6	115.2
China, Macao SAR	226.1	86.8	162.4	229.0	186.5	131.5	116.9	92.5	76.3	92.2	85.5	74.1	69.9		82.4	103.4	130.9	100.9
French Polynesia	42.4	40.6	47.3	47.2	44.8	47.6	43.7	33.6	38.1	30.1	24.5	40.8	39.5	42.1		39.2	40.8	46.2
Guam	37.6	43.9	42.1	46.2	31.0	40.1	27.2	32.1	57.3			42.7	48.6	63.7				
New Caledonia	88.2	81.4	114.0	94.5	67.2	62.4	46.5	68.8	78.0	85.4	81.5	79.1	81.7	70.3	59.1	103.7		
Northern Mariana Islands (Commonwealth of)	162.5	468.8	462.5	341.2	336.8	69.6	200.0	79.4	71.8	65.1		142.6		95.8	100.0	104.1	189.8	190.2
Wallis and Futuna Islands	218.2	41.7	141.7	116.7	116.7		261.5	7.7	230.8		157.1	28.6	78.6	78.6	42.9	53.3	93.3	
WPR	26.7	34.2	33.8	39.0	43.7	45.6	45.1	48.6	49.6	58.9	49.5	48.5	45.6	45.5	60.8	57.9	50.8	50.6

WPR - New smear-positive cases

Country	Number of cases						Rate (per 100 000 population)					
	1993	1994	1995	1996	1997	1998	1993	1994	1995	1996	1997	1998
Australia	557				226	203	3.2				1.2	1.1
Brunei Darussalam	68						24.3					
Cambodia		11 058	11 101	12 065	12 686	13 865		113.7	111.2	117.9	121.1	129.4
China	84 898	104 729	134 488	168 270	188 530	214 462	7.1	8.7	11.0	13.7	15.2	17.1
Cook Islands	4	1				1	21.1	5.3				5.0
Fiji	58	60	68	69	66	74	7.7	7.9	8.9	8.9	8.4	9.3
Japan	17 890	16 770	14 367	12 867	13 571	11 935	14.3	13.4	11.5	10.2	10.8	9.5
Kiribati	99	184		29	11	50	130.3	239.0		36.3	13.6	60.2
Lao People's Democratic Republic (the)			726	886	1 234	1 508			15.2	18.1	24.5	29.2
Malaysia	6 954	6 861	6 688	7 271	7 596	7 802	36.2	34.9	33.3	35.4	36.2	36.4
Marshall Islands (the)	12			17		11	23.5			29.8		18.0
Micronesia (Federated States of)			7	10	11	28			1.5	2.0	2.2	5.4
Mongolia	86	145	622	1 171	1 171	1 356	3.6	6.0	25.4	46.9	46.2	52.6
Nauru		2						20.0				
New Zealand	91	61	47	76	57	81	2.6	1.7	1.3	2.0	1.5	2.1
Niue			1	1					50.0	50.0		
Palau	8	11	9	4	7		50.0	68.8	52.9	23.5	41.2	
Papua New Guinea			1 652	652	1 195	2 107			38.4	14.8	26.6	45.8
Philippines (the)	92 279	87 401	94 788	86 895	83 353	71 663	141.6	130.9	138.6	124.0	116.7	98.2
Republic of Korea (the)	16 630	13 266	11 754	11 420	9 957	10 359	37.7	29.8	26.1	25.2	21.8	22.5
Samoa	21	18	15	10	14	7	12.8	10.9	8.9	5.9	8.1	4.0
Singapore	513	861	455	208	432	480	16.0	26.4	13.7	6.2	12.6	13.8
Solomon Islands	155	114	109	90	113	140	43.6	31.1	28.7	23.0	28.0	33.6
Tokelau			1						50.0			
Tonga	16	17	9	16	12	16	16.3	17.3	9.2	16.3	12.1	16.2
Tuvalu	2	1	6				22.2	11.1	60.0			
Vanuatu		62	30	50	66	38		37.6	17.8	28.9	37.2	20.9
Viet Nam			37 550	48 911	53 647	54 873			50.8	65.1	70.2	70.7
Other territories												
American Samoa	1	4			6		2.0	7.5			10.3	
China, Hong Kong SAR	2 429			2 116	1 536		40.6			33.3	23.6	
China, Macao SAR	108		141	204	304	226	26.5		32.8	46.4	67.6	49.2
French Polynesia	39	38		37	41	34	18.8	18.0		16.9	18.4	15.0
Guam		40						27.1				
New Caledonia		42	26	26				22.4	13.5	13.1		
Northern Mariana Islands (Commonwealth of)			14	26	21	26			29.2	53.1	42.9	51.0
Wallis and Futuna Islands			3	3	1				21.4	20.0	6.7	
Total	222 918	241 746	314 657	353 200	375 864	391 345	14.2	15.2	19.5	21.7	22.9	23.6

Notes

China, Hong Kong SAR The distribution of notifications by site of disease and by microscopy reported to WHO are estimates based on a sample of clinics, so only total number of notifications used.

Fiji Treatment outcomes are from 2/4 quarters only.

Kiribati DOTS started in 4th quarter 1997, so treatment outcomes for DOTS areas are not yet available.

Marshall Islands DOTS started in 1998, so treatment outcomes for DOTS areas are not yet available.

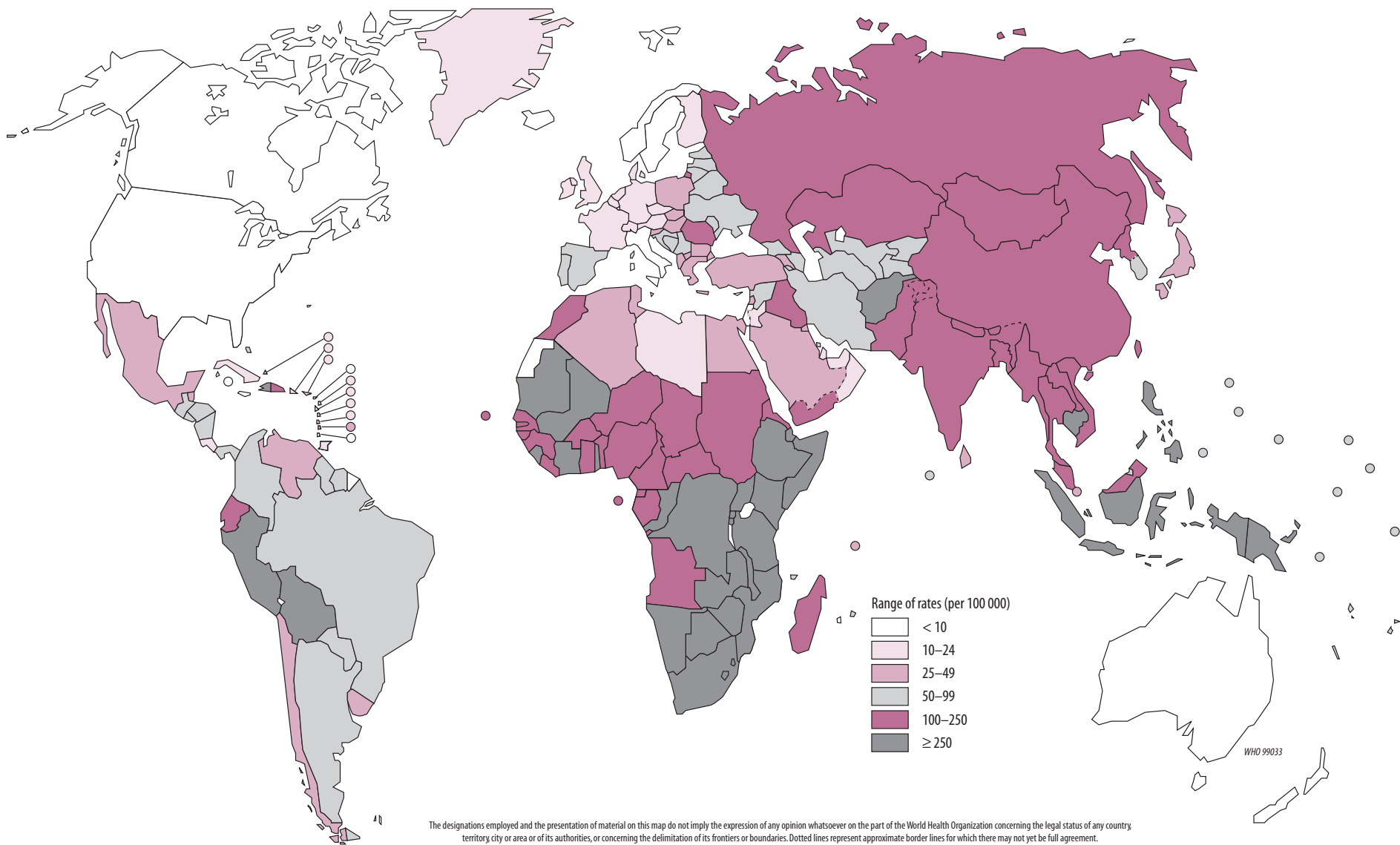
Niue No report submitted; minimal official notification data obtained by other means.

Philippines (the) Extra-pulmonary cases are not reported to the NTP. Relapse data include relapses and failures.

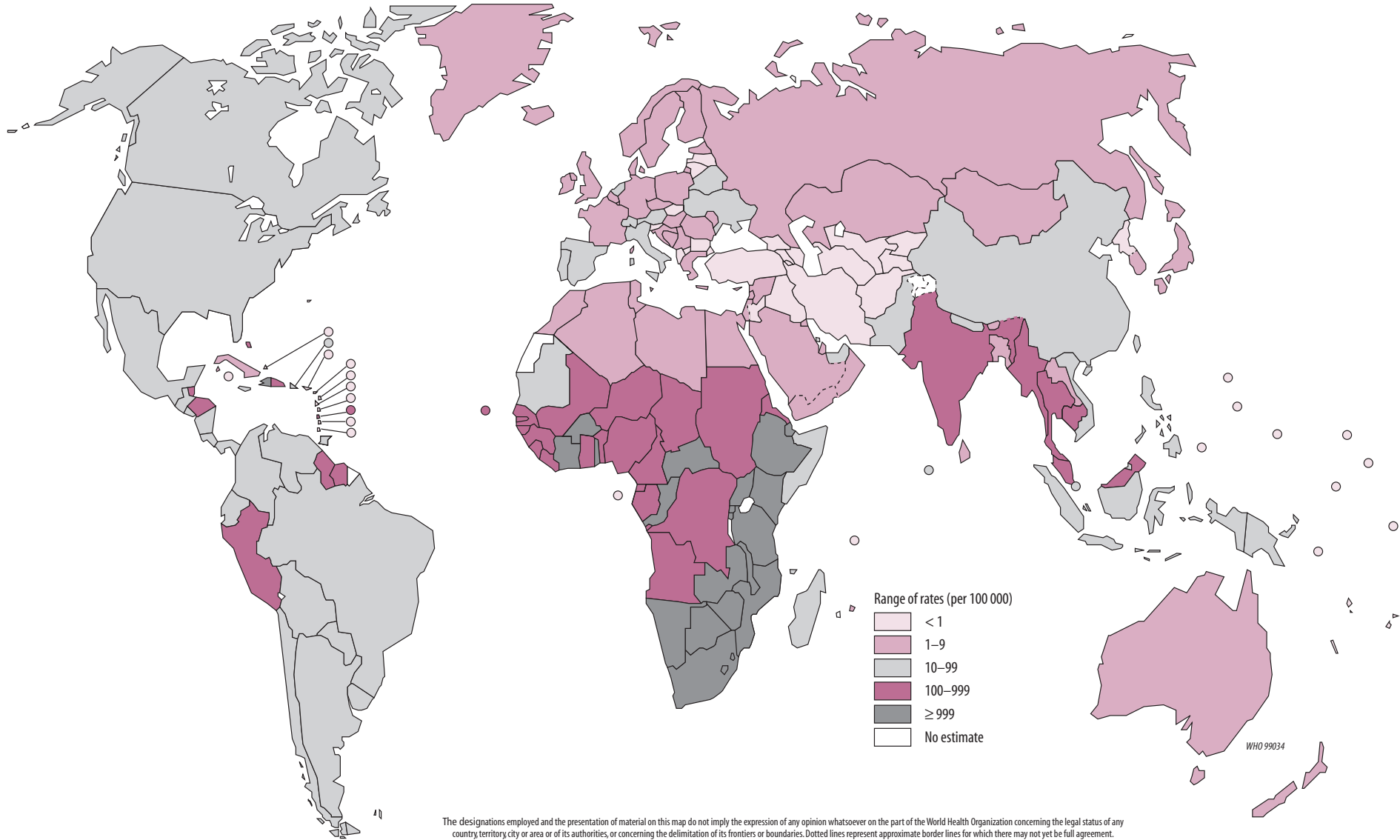
World maps

1. Estimated TB incidence rates, 1997
2. Estimated TB/HIV co-infection rates, 1997
3. Implementation of DOTS, 1998
4. Tuberculosis notification rates, 1998

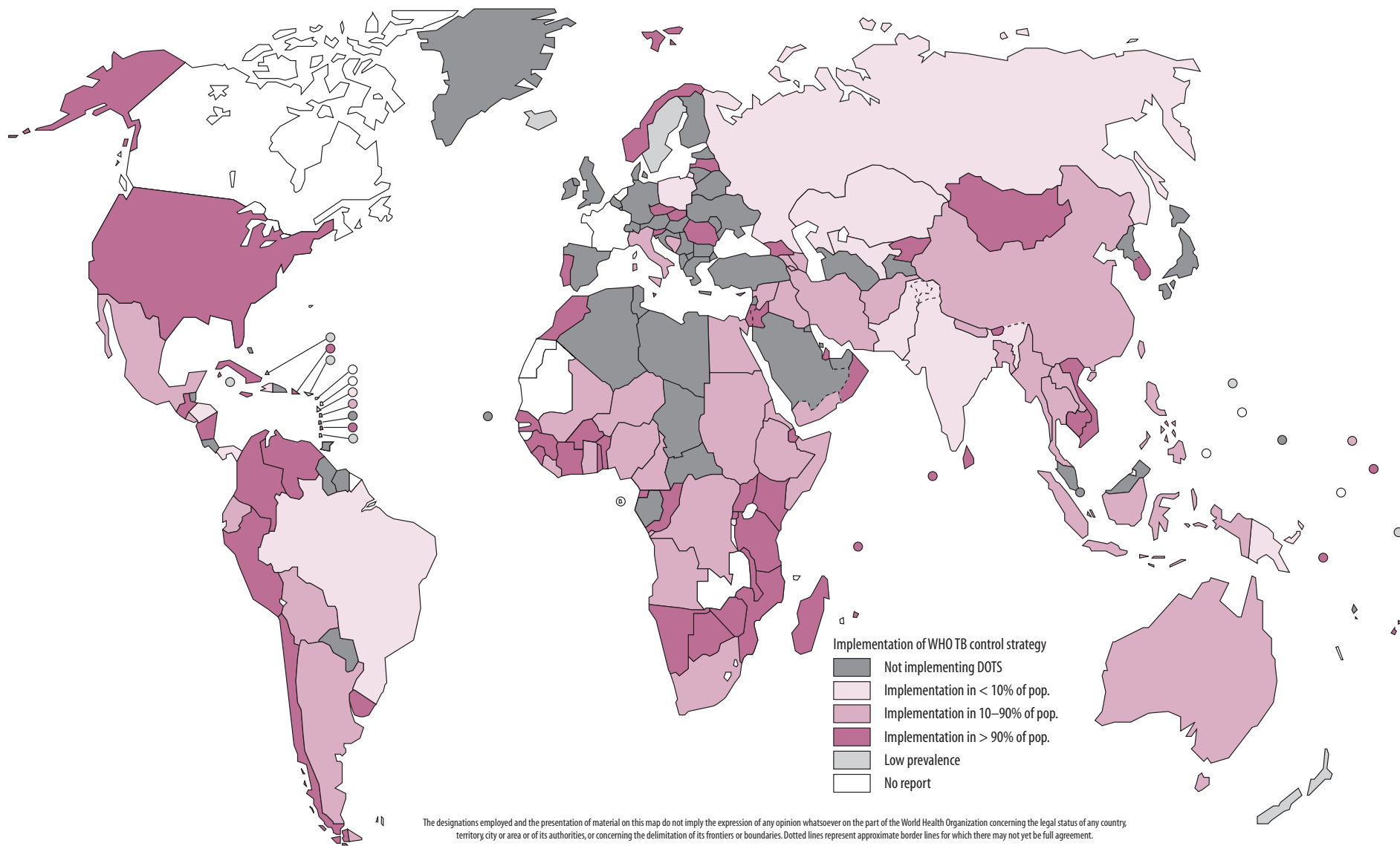
1. Estimated TB incidence rates, 1997



2. Estimated TB/HIV co-infection rates, 1997

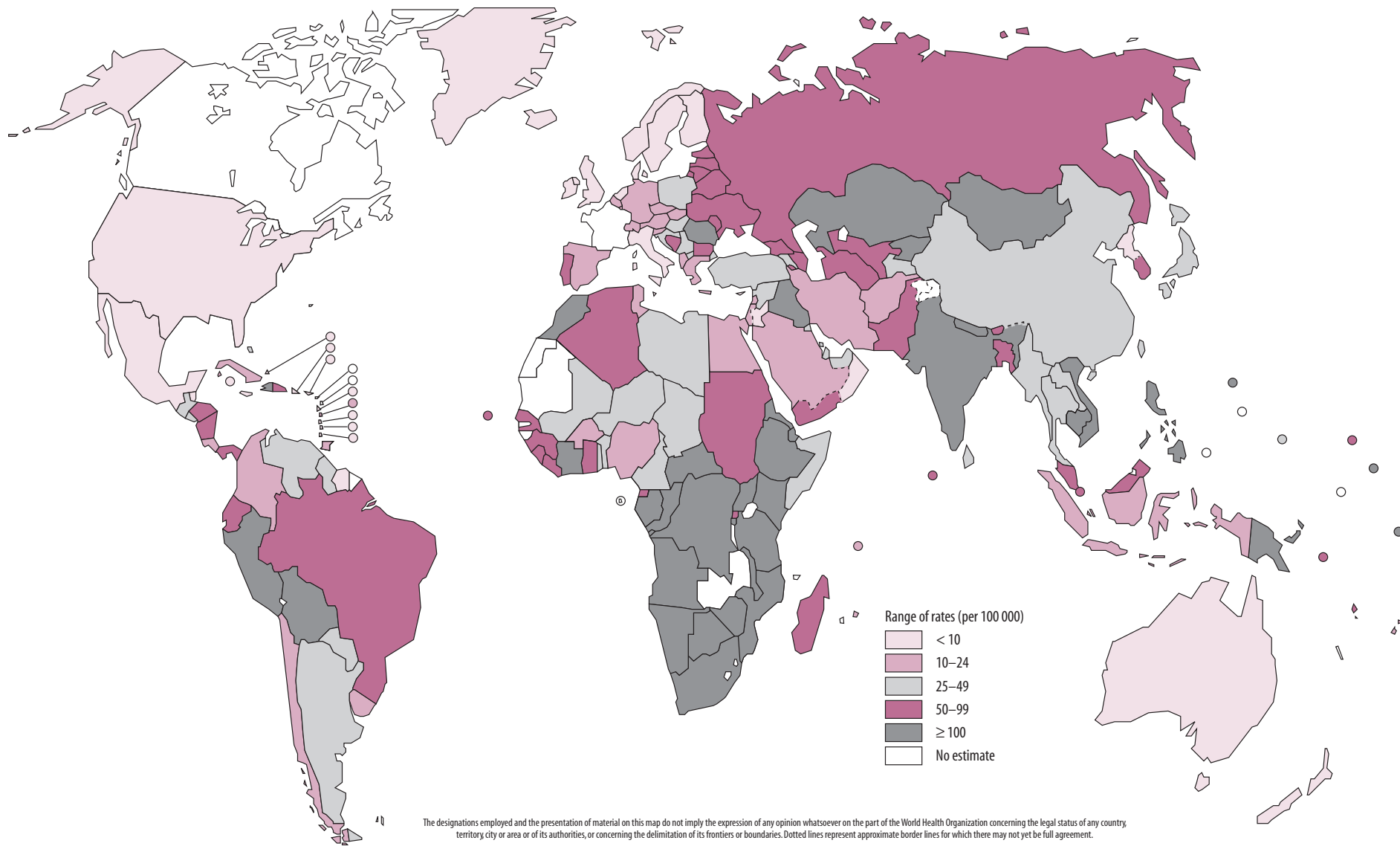


3. Implementation of DOTS, 1998



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, 1998



Comparison of cases notified and registered for treatment in 1997

Comparison of ss+ notifications in 1997 (as reported in 1998) and ss+ cases registered for treatment in 1997 (as reported in 1999)

	No. cases notified	No. cases registered	% registered		No. cases notified	No. cases registered	% registered
Afghanistan	618	2001	324	Liberia		1139	-
Albania	241	-	-	Libyan Arab Jamahiriya (the)		-	-
Algeria	7740	5860	89	Lithuania			
American Samoa	6	-	-	Luxembourg	1200	943	79
Andorra	17	-	-	Madagascar	31	31	100
Angola	8201	8246	101	Malawi		9229	-
Anguilla	0	-	-	Malaysia	7587	7587	100
Antigua and Barbuda	-	-	-	Maldives	7596	-	-
Argentina	5307	5234	99	Maldives	94	94	100
Armenia	400	359	90	Malta	3178	812	26
Australia	226	226	100	Malta	3	3	100
Austria	370	-	-	Marshall Islands (the)			
Azerbaijan	981	392	40	Mauritania	2519	-	-
Bahamas (the)	57	48	84	Mauritius	40	-	-
Bahrain	110	-	-	Mexico	15440	17537	114
Bangladesh	33117	33784	102	Micronesia (Federated States of)	11	-	-
Barbados	5	6	120	Monaco	0	-	-
Belarus	2273	-	-	Mongolia	1171	1171	100
Belgium	434	-	-	Montserrat		0	-
Belize	48	-	-	Morocco	14134	14134	100
Berlin	1939	1854	96	Mozambique	11116	11158	100
Bermuda	-	-	-	Myanmar	9695	9232	95
Bhutan	284	284	100	Namibia	2674	3223	121
Bolivia	6458	6458	100	Nauru			
Bosnia and Herzegovina	803	813	101	Nepal	11323	10622	94
Botswana	2442	2635	108	Netherlands (the)	312	308	99
Brazil	43490	43490	100	Netherlands Antilles			
British Virgin Islands	0	-	-	New Caledonia			
Brunei Darussalam	0	-	-	New Zealand	57	-	-
Bulgaria	1037	-	-	Nicaragua	1670	1655	99
Burkina Faso	1126	-	-	Niger (the)	2779	734	26
Burundi	2022	2189	108	Nigeria	11235	11253	100
Cambodia	12686	12278	97	Niue	0	-	-
Cameroon	3548	-	-	Northern Mariana Islands (Commonwealth of)	21	90	429
Canada	-	-	-	Norway	100	9	9
Cape Verde	103	-	-	Oman	120	120	100
Cayman Islands	0	-	-	Pakistan		2805	-
Central African Republic (the)	2267	-	-	Palau	7	-	-
Chad	-	-	-	Panama	592	669	113
Chile	1524	1640	108	Papua New Guinea	1195	69	6
China	18530	189289	100	Paraguay	895	-	-
China, Hong Kong SAR	1536	-	-	Paraguay	895	-	-
China, Macao SAR	304	325	107	Peru	27498	24428	89
Colombia	6090	-	-	Philippines (the)	83353	27481	33
Comoros (the)	-	-	-	Poland	3497	-	-
Congo (the)	1984	1984	100	Portugal	1628	1876	115
Cook Islands	0	2	-	Puerto Rico	126	126	100
Costa Rica	578	-	-	Qatar	39	39	100
Côte d'Ivoire	9093	8083	89	Republic of Korea (the)	9957	7487	75
Croatia	1073	-	-	Republic of Moldova (the)	397	-	-
Cuba	765	765	100	Romania	11666	8872	76
Cyprus	19	-	-	Russian Federation (the)	42094	661	2
Czech Republic (the)	481	451	94	Rwanda	2820	2922	104
Democratic People's Republic of Korea (the)	3980	302	8	Saint Kitts and Nevis			
Democratic Republic of the Congo (the)	25183	25183	100	Saint Lucia	11	12	109
Denmark	114	-	-	Saint Vincent and the Grenadines		7	-
Djibouti	1905	1904	100	Samoa	14	-	-
Dominica	5	6	120	San Marino	1	1	100
Dominican Republic (the)	2682	2682	100	Sao Tome and Principe			
Ecuador	7329	5470	75	Saudi Arabia	1568	1431	91
Egypt	5469	3467	63	Senegal	5340	5340	100
El Salvador	882	771	87	Seychelles	11	11	100
Equatorial Guinea	226	226	100	Sierra Leone	2296	1958	85
Eritrea	109	128	117	Singapore	432	-	-
Estonia	269	-	-	Slovakia	283	283	100
Ethiopia	15957	11592	73	Slovenia	156	156	100
Fiji	66	46	70	Solomon Islands	113	113	100
Finland	186	-	-	Somalia	3097	2779	90
France	2430	-	-	South Africa	55000	55000	100
French Polynesia	41	41	100	Spain	6970	-	-
Gabon	577	577	100	Sri Lanka	3506	3617	103
Gambia (the)	820	-	-	St. Helena			
Georgia	595	595	100	Sudan (the)	6095	3600	59
Germany	3346	-	-	Suriname	27	-	-
Ghana	7287	5596	77	Swaziland			
Greece	285	-	-	Sweden	94	-	-
Grenada	2	4	200	Switzerland	144	-	-
Guam	-	-	-	Syrian Arab Republic (the)	1402	1421	101
Guatemala	2224	3164	142	Tajikistan	373	373	100
Guinea	2981	2981	100	Thailand	13214	3697	28
Guinea-Bissau	-	-	-	The former Yugoslav Republic of Macedonia	192	-	-
Guyana	105	363	346	Togo	0	931	-
Haiti	5497	5497	100	Tokelau			
Honduras	1579	1928	122	Tonga	12	12	100
Hungary	702	702	100	Trinidad and Tobago	52	52	100
Iceland	4	4	100	Tunisia		1099	-
India	273519	293483	107	Turkey	3439	-	-
Indonesia	19492	21365	110	Turkmenistan	764	557	73
Iran (Islamic Republic of)	5253	4751	90	Turks and Caicos Islands			
Iraq	8001	8164	102	Tuvalu		20	-
Ireland	123	-	-	Uganda	17268	17500	101
Israel	207	-	-	Ukraine	9533	-	-
Italy	1903	222	12	United Arab Emirates (the)			
Jamaica	71	71	100	United Kingdom of Great Britain and N. Ireland (the)	844	-	-
Japan	13571	-	-	United Republic of Tanzania (the)	22010	22064	100
Jordan	126	136	108	United States of America (the)	6882	6925	101
Kazakhstan	4332	4332	100	United States Virgin Islands			
Kenya	19040	19040	100	Uruguay	423	422	100
Kiribati	11	-	-	Uzbekistan	3388	-	-
Kuwait	201	-	-	Vanuatu	66	-	-
Kyrgyzstan	1538	82	5	Venezuela	3234	3194	99
Laos People's Democratic Republic (the)	1234	1234	100	Viet Nam	53647	53647	100
Latvia	634	580	91	Wallis and Futuna Islands	1	-	-
Lebanon	206	206	100	West Bank and Gaza			
Lesotho	2398	-	-	Yaman	4717	4365	93
				Yugoslavia	1702	-	-
				Zambia			
				Zimbabwe	14512	12410	86

Changes in treatment success and DOTS detection rate 1995–98

	Treatment success				DOTS detection			
	1995	1996	1997	1998	1995	1996	1997	1998
French Polynesia	-	67	95	100	-	41.6	45.6	37.0
Gabon	-	-	-	-	-	-	-	-
Gambia (the)	74	76	80	-	75.0	69.7	75.1	-
Georgia	-	58	-	65	13.4	29.3	-	33.7
Germany	-	-	-	-	-	-	-	-
Ghana	-	54	51	48	16.7	14.9	33.5	33.7
Greece	-	-	-	-	-	-	-	-
Grenada	-	-	-	-	-	-	-	-
Guam	-	-	-	-	-	-	-	-
Guatemala	62	61	81	73	41.0	55.5	52.0	51.3
Guinea	78	78	75	74	40.8	50.2	51.9	58.5
Guinea-Bissau	-	-	-	-	-	-	-	-
Guyana	-	-	-	-	-	-	-	-
Haiti	-	-	-	73	-	-	1.7	12.2
Honduras	-	-	-	-	-	-	-	2.1
Hungary	-	-	-	-	-	-	-	-
Iceland	-	-	-	-	-	-	-	-
India	83	79	79	82	0.3	0.8	1.0	1.5
Indonesia	94	91	81	54	1.4	4.6	7.4	12.2
Iran (Islamic Republic of)	-	-	87	84	27.8	-	6.9	18.5
Iraq	-	-	-	-	-	-	-	1.9
Ireland	-	-	-	-	-	-	-	-
Israel	-	-	-	-	-	-	99.5	104.2
Italy	-	80	82	69	-	14.5	8.6	12.7
Jamaica	-	67	72	79	-	86.2	80.7	89.9
Japan	-	-	-	-	-	-	-	-
Jordan	90	-	-	-	71.4	-	-	37.9
Kazakhstan	-	-	-	-	-	-	-	4.0
Kenya	73	75	77	65	42.1	50.1	55.0	68.1
Kiribati	-	-	-	-	-	-	34.4	152.4
Kuwait	-	-	-	-	-	-	-	-
Kyrgyzstan	-	-	88	76	-	2.9	4.1	41.4
Lao People's Democratic Republic (the)	-	70	55	62	-	23.5	31.7	37.4
Latvia	-	61	64	65	-	61.9	69.1	74.0
Lebanon	89	-	-	-	55.6	-	-	-
Lesotho	56	47	71	-	38.8	49.7	65.0	-
Liberia	-	79	-	75	-	30.0	-	43.8
Libyan Arab Jamahiriya (the)	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-
Madagascar	51	55	-	64	46.8	60.0	-	64.3
Malawi	22	71	68	71	43.3	45.3	50.0	56.8
Malaysia	-	69	-	-	66.2	70.5	-	-
Maldives	95	97	93	95	117.5	106.0	90.4	82.2
Mali	68	59	65	62	13.3	15.0	16.6	16.2
Malta	-	100	100	100	-	38.5	23.1	46.2
Marshall Islands (the)	-	-	-	-	-	-	-	46.2
Mauritania	-	-	-	-	-	-	-	-
Mauritius	96	-	-	-	40.2	-	-	32.2
Mexico	-	-	75	70	-	-	15.3	33.4
Micronesia (Federated States of)	64	80	-	-	14.3	20.0	-	-
Monaco	-	-	-	-	-	-	-	-
Mongolia	59	78	78	86	7.3	30.3	29.7	50.3
Montserrat	-	-	-	-	-	-	-	-
Morocco	86	90	88	83	97.7	96.6	93.9	87.6
Mozambique	67	39	54	67	57.4	55.2	57.1	60.8
Myanmar	-	66	79	82	-	24.9	25.1	27.7
Namibia	-	-	54	58	20.3	79.9	74.0	94.4
Nauru	-	-	-	-	-	-	-	-
Nepal	-	-	85	87	-	5.4	10.7	15.6
Netherlands (the)	81	72	81	80	83.6	51.7	44.8	36.3
Netherlands Antilles	-	-	-	-	-	-	-	-
New Caledonia	62	75	-	-	36.1	35.6	-	-
New Zealand	-	-	-	-	-	-	-	-
Nicaragua	81	80	79	81	89.1	95.2	90.0	86.4
Niger (the)	-	-	57	66	-	-	21.0	17.6
Nigeria	65	49	32	73	9.1	14.7	10.2	11.7
Niue	-	-	-	-	-	-	-	-
Northern Mariana Islands (Commonwealth of)	-	-	-	-	-	-	-	-
Norway	-	77	80	44	-	92.8	90.1	43.8
Oman	-	84	87	91	-	78.3	83.3	73.2

Global Profile (updated)

This **Global Profile** is an updated version of the **1998 Global Profile** published in *Global TB Control WHO Report 1999*.

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

Global Profile

Case Finding (1997)

	Population Covered		Notified Cases				Estimated cases	Case detection	New ss+ / all pulm. cases		
	No.	%	All types			New ss+		No.	%	%	
			No.	Rate	%	No.	Rate				
	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>	<i>g</i>	<i>h</i>	<i>f/h</i>	<i>i</i>	
AFR	DOTS	337 858 944	57.5	394 260	116.7	70.0	197 519	58.5			64.2
	non-DOTS	219 806 433	37.4	168 714	76.8	30.0	77 869	35.4			53.0
	no report	29 585 195	5.0								
	Total	587 250 572	100.0	562 974	101.0	100.0	275 388	49.4	660 946	41.7	
AMR	DOTS	396 899 958	49.8	93 144	23.5	37.2	55 090	13.9			75.2
	non-DOTS	368 927 794	46.3	157 313	42.6	62.8	86 458	23.4			66.1
	no report	31 046 199	3.9								
	Total	796 873 951	100.0	250 457	32.7	100.0	141 548	18.5	182 466	77.6	
EMR	DOTS	81 265 167	17.5	49 556	61.0	39.1	25 269	31.1			78.7
	non-DOTS	220 150 661	47.5	77 093	35.0	60.9	27 811	12.6			49.1
	no report	161 770 431	34.9								
	Total	463 186 259	100.0	126 649	42.0	100.0	53 080	17.6	274 798	19.3	
EUR	DOTS	75 778 132	8.7	16 892	22.3	4.7	5 284	7.0			42.6
	non-DOTS	792 525 337	91.3	340 688	43.0	95.3	108 303	13.7			38.8
	no report	32 000	0.0								
	Total	868 335 469	100.0	357 580	41.2	100.0	113 587	13.1	196 827	57.7	
SEAR	DOTS	229 830 329	15.7	112 480	48.9	8.6	70 145	30.5			69.8
	non-DOTS	1 231 844 797	84.3	1 199 611	97.4	91.4	298 079	24.2			26.5
	no report	0	0.0								
	Total	1 461 675 126	100.0	1 312 091	89.8	100.0	368 224	25.2	1 320 555	27.9	
WPR	DOTS	942 439 557	57.4	386 281	41.0	46.3	226 316	24.0			63.8
	non-DOTS	700 274 797	42.6	448 691	64.1	53.7	149 548	21.4			36.7
	no report	442 094	0.0								
	Total	1 643 156 448	100.0	834 972	50.8	100.0	375 864	22.9	880 956	42.7	
GLOBAL	DOTS	2 064 072 088	35.5	1 052 613	51.0	30.6	579 623	28.1			65.8
	non-DOTS	3 533 529 818	60.7	2 392 110	67.7	69.1	748 068	21.2			34.8
	no report	222 875 919	3.8								
	Total	5 820 477 825	100.0	3 444 723	61.5	99.6	1 327 691	23.7	3 516 548	37.8	

This is not the most recent Global Profile (see pages 60-62).

Global Profile - cont'd.

Treatment Outcomes (1996)

	New ss+ cases									Retreatment cases									
	Registered	% not eval.	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treatm. success (%)	Registered	% not eval.	Cured (%)	Comp. (%)	Def. (%)	Failed (%)	Dead (%)	Trans. (%)	Treatm. success (%)	
	<i>j</i>	<i>k</i>	<i>l</i>	<i>m</i>	<i>n</i>	<i>o</i>	<i>p</i>	<i>q</i>	<i>r</i>	<i>s</i>	<i>t</i>	<i>u</i>	<i>v</i>	<i>w</i>	<i>x</i>	<i>y</i>	<i>z</i>	<i>aa</i>	
AFR	DOTS	169 459	21.7	46.5	9.9	9.7	1.2	6.0	5.1	56.4	15 796	17.8	45.5	10.9	9.9	2.7	8.4	4.8	56.4
	non-DOTS	64 412	9.5	42.8	12.5	13.4	2.3	5.7	13.8	55.4									
AMR	DOTS	49 859	5.1	76.9	4.5	5.5	0.9	4.4	2.6	81.5	5 266	6.0	69.0	5.1	9.7	3.2	5.1	1.9	74.0
	non-DOTS	84 129	56.2	23.9	8.5	5.5	0.7	2.7	2.6	32.4									
EMR	DOTS	19 571	1.0	75.5	10.2	7.7	1.5	2.8	1.4	85.7	2 502	2.5	63.0	8.8	12.3	4.0	4.6	4.8	71.8
	non-DOTS	32 080	27.0	42.2	12.1	10.7	3.2	1.0	3.9	54.3									
EUR	DOTS	5 857	12.5	54.2	17.3	5.3	3.7	5.2	1.8	71.5	512	7.8	48.2	19.5	7.2	6.3	8.0	2.9	67.8
	non-DOTS	88 093	6.4	54.9	2.1	9.8	11.7	11.3	3.8	57.0									
SEAR	DOTS	50 952	6.5	70.2	7.1	8.4	1.8	3.7	2.4	77.3	5 269	6.2	64.2	4.0	10.5	5.3	5.4	4.5	68.2
	non-DOTS	309 284	74.9	3.2	19.7	1.4	0.3	0.1	0.3	22.9									
WPR	DOTS	190 500	1.2	88.2	4.9	1.4	1.2	1.7	1.3	93.1	58 310	1.0	89.8	2.3	1.5	2.3	2.2	1.0	92.1
	non-DOTS	181 042	41.7	4.6	46.0	3.1	1.9	1.1	1.5	50.6									
GLOBAL	DOTS	486 198	9.5	69.7	7.2	5.7	1.2	3.8	2.9	76.9	87 655	5	78.0	4.4	4.4	2.7	3.8	2.1	82.4
	non-DOTS	759 040	49.4	16.9	21.7	4.7	2.4	2.4	2.6	38.6									

This is not the most recent Global Profile (see pages 60-62).

Global Profile - cont'd.

WHO TB Control Categories (1997)

Regions	No. of countries	No. of countries	No. of countries in category						Proportion of population in category (%)					
			0	1	2	3	4	5	0	1	2	3	4	5
AFR	47	38	9	6		14	18		5.0	6.6		58.1	30.3	
AMR	44	35	9	12	2	2	17	2	3.9	29.1	12.8	6.0	48.2	
EMR	23	18	5	6	1	6	4	1	34.9	11.3	6.0	41.1	6.6	0.2
EUR	51	51		32	2	3	11	3		67.0	17.5	7.9	6.5	1.1
SEAR	10	10		1	2	4	3			1.6	70.2	26.8	1.4	
WPR	36	30	6	10	1	7	10	2		9.6	0.3	81.2	7.6	1.3
GLOBAL	211	182	29	67	8	36	63	8	3.8	18.7	22.6	40.8	13.6	0.6

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