Report on tuberculosis cases notified in 1996

EuroTB (CESES/KNCV) and the national coordinators for tuberculosis surveillance in the WHO European Region. Surveillance of tuberculosis in Europe. September 1998.

1. Summary

The EuroTB programme for the surveillance of tuberculosis in Europe was set up in 1996 to collect, analyse and disseminate data on tuberculosis cases notified in the WHO European Region. The programme is managed jointly by the European Centre for the Epidemiological Monitoring of AIDS (CESES) in Saint-Maurice, France, and the Royal Netherlands Tuberculosis Association (KNCV) in The Hague, The Netherlands. Information is collected yearly on cases notified in each country, based on consensus recommendations including common definitions and a common set of variables.

In 1996, 315 892 cases of tuberculosis were notified in 50 countries of the WHO European Region. The notification rate was :

- lower than 20 per 100 000 in 21 countries ("low incidence countries"), all situated in the western part of Europe except for the Czech Republic and Israel;
- 20 cases per 100 000 or over in 29 countries ("high incidence countries") located in the eastern part of Europe except for Portugal and Spain.

Between 1995 and 1996, the notification rate decreased in 18 countries, remained stable in five and increased in 24. The rate increased by more than 10% in 12 countries, including eight republics of the former USSR which reported over 50 cases per 100 000 in 1996.

In 1996, the age and sex specific tuberculosis notification rates varied across countries. The notification rates were highest in patients aged 65 or over in "low incidence countries" and in those aged 35-54 years in other countries. The rates were similar in males and females until the age of 15, but were higher in males in all age groups thereafter, with greater sex differences in "high incidence countries".

Patients of foreign origin accounted for more than 30% of the cases in 11 of the 23 countries providing information on geographic origin.

The median proportion of cases with a positive culture was 54% in the 18 countries reporting this information. In the 31 countries reporting sputum smear results, the median proportion of smear positive cases was 40% among pulmonary cases.

The results of this two-year surveillance show improvements in availability and completeness of data and provide a contrasting picture of the epidemiological situation of tuberculosis in Europe. Notification rates declined or stabilised in most "low incidence countries", but increased in many "high incidence countries", mostly located in the eastern part of Europe, confirming the changes observed in the late 1980s and early 1990s.

Several factors may have contributed to the recent increases in tuberculosis notifications; in particular, impoverishment of population subgroups and inadequacies or deterioration of tuberculosis control. Transient increases have been observed in several western European countries related to migration from countries with higher incidence of tuberculosis. The impact of HIV infection has been limited to a few countries but could be substantial in the future in some other countries with rapidly emerging HIV epidemics.

The heterogeneous epidemiological trends observed in Europe as well as recent reports of high prevalence of multi-drug resistance in some areas justify the continuation of the surveillance of tuberculosis in Europe including the monitoring of drug resistance and treatment outcome.

1. Résumé

Le programme Euro TB pour la surveillance de la tuberculose en Europe a été mis en place en 1996 afin de recueillir, analyser et diffuser des données sur les cas de tuberculose déclarés dans la Région Europe de l'OMS. Le programme est piloté conjointement par le Centre Européen pour la Surveillance Epidémiologique du SIDA (CESES) à Saint-Maurice (France) et l'Association Royale des Pays Bas contre la Tuberculose (KNCV) à La Haye (Pays-Bas). En s'appuyant sur des recommandations de consensus incluant des définitions communes et un ensemble commun de variables, des informations sont recueillies annuellement sur les cas déclarés dans chaque pays.

En 1996, 315 892 cas de tuberculose ont été déclarés dans 50 pays de la Région Europe de l'OMS. Le taux de déclaration est :

- inférieur à 20 pour 100 000 habitants dans 21 pays ("à faible incidence"), tous situés à l'ouest de l'Europe sauf la République Tchèque et Israël;
- égal ou supérieur à 20 pour 100 000 habitants dans 29 pays ("à haute incidence"), situés à l'est de l'Europe sauf l'Espagne et le Portugal.

Entre 1995 et 1996, le taux de déclaration a baissé dans 18 pays, s'est stabilisé dans 5 et a augmenté dans 24 pays. L'augmentation est supérieure à 10% dans 12 pays, dont huit républiques de l'ex URSS ayant déclaré plus de 50 cas pour 100 000 en 1996.

En 1996, les taux de déclaration de tuberculose par âge et sexe varient selon les pays. Ils sont les plus élevés chez les patients âgés de 65 ans et plus dans les pays "à faible incidence" et chez ceux âgés de 35 à 54 ans dans les autres pays. Les taux sont similaires chez les garçons et les filles jusqu'à l'âge de 15 ans, mais chez les adultes, ils sont plus élevés chez les hommes dans tous les groupes d'âge, avec des différences par sexe plus marquées dans les pays "à haute incidence".

Les personnes d'origine étrangère représentent plus de 30% des cas dans 11 des 23 pays ayant fourni des informations sur l'origine géographique.

La proportion médiane de cas ayant une culture positive est de 54% dans les 18 pays ayant fourni l'information. Dans les 31 pays ayant donné les résultats de frottis d'expectoration, la proportion médiane de cas ayant un frottis positif est de 40% pour les cas pulmonaires.

Les résultats de ces deux années de surveillance témoignent d'une amélioration de la disponibilité et de la complétude des données et donnent une image contrastée de la situation épidémiologique de la tuberculose en Europe. Les taux de déclaration ont baissé ou se sont stabilisés dans la plupart des pays "à faible incidence" et ont augmenté dans beaucoup de pays "à haute incidence" le plus souvent situés à l'est de l'Europe, confirmant ainsi les tendances observées à la fin des années 80 et au début des années 90.

Plusieurs facteurs ont pu contribuer aux augmentations récentes des cas de tuberculose déclarés, en particulier la paupérisation de certains groupes de population et les inadéquations ou la détérioration de la lutte antituberculeuse. Dans plusieurs pays d'Europe de l'Ouest, on a observé des augmentations temporaires liées aux migrations en provenance de pays ayant une incidence de tuberculose plus élevée. L'impact de l'infection à VIH a été jusqu'à présent limité à quelques pays mais pourrait devenir plus important dans certains autres pays où l'épidémie de VIH se développe rapidement.

Au vu des tendances épidémiologiques hétérogènes observées en Europe et des prévalences élevées de multi-résistance aux médicaments antituberculeux récemment signalées dans certaines régions, il est justifié de poursuivre la surveillance de la tuberculose en Europe en y incluant la surveillance des résistances et des résultats du traitement.

1. Резюме

Программа ЕвроТБ по эпиднадзору за туберкулезом в Европе была организованна в 1996 году для сбора, анализа и распостранения данных о случаях туберкулеза, зарегистрированных в Европейском регионе ВОЗ. Программа проводится под совместным руководством Европейского Центра по Эпидемиологическому Надзору за СПИДом (CESES) в Сент- Морисе (Франция) и Нидерландской Королевской Ассоциацией против Туберкулеза (KNCV) в Гааге (Нидерланды). С учетом рекомендуемых общепринятых определений, сведения собираются ежегодно по количеству зарегистрированных случаев в каждой стране.

В 1996г. было зарегистрированно 315 892 случая туберкулеза в 50 странах Европейского Региона ВОЗ. Процентное содержание данных:

- менее 20 на 100 000 жителей в 21 стране с "низкой степенью заболеваемости", все расположенны в западной части Европы, кроме Чехии и Израиля.
- равны или более 20 на 100 000 жителей в 29 стране с "высокой степенью заболеваемости", расположенны в восточной части Евпоры, кроме Испании и Португалии.

За период 1995- 1996гг., уровень зарегистрированных случаев снизился в 18ти странах, стабилизировался в 5ти и увеличился в 24ти странах. В 12ти странах, уровень заболевания повышен на 10%, из них, в 8ми бывших республиках СССР зарегистрированно более 50 случаев заболевания на 100 000 в 1996г.

В 1996г. процентное содержание зарегистрированных случаев туберкулеза по возрасту и полу варьировалось согласно странам ; оно более высокое в группе больных в возрасте 65 лет и старше в странах с "низкой степенью заболеваемости" и в группе больных в возрасте 35- 54 года в других странах. Процентные данные идентичны как у мальчиков, так и у девочек до 15 лет, но у взрослого населения они более повышенны среди мужчин всех возрастных групп, с наибольшей разницей по полу в странах с "высокой степенью заболеваемости".

В 11 из тех 23 стран, представивших информацию по географическому признаку, 30% случаев касается выходцев из зарубежных стран.

2. Technical note

The EuroTB programme for the surveillance of tuberculosis in Europe was set up in 1996 to collect, analyse and disseminate data on tuberculosis cases notified in the World Health Organization (WHO) European Region. The objective of the programme is to obtain valid and comparable information on the epidemiology of tuberculosis in order to improve tuberculosis control in this region.

Following a feasibility study performed on cases notified in 1995 [1,2], a routine system of data collection has been implemented since 1996. The programme is managed jointly by the European Centre for the Epidemiological Monitoring of AIDS (CESES) in Saint-Maurice, France and the Royal Netherlands Tuberculosis Association (KNCV) in The Hague, the Netherlands, and is financially supported by the commission of the European Communities (DG V).

Countries of the WHO European Region are invited to participate on a voluntary basis and requested to appoint a national correspondent. The principles and methods are those recommended by a working group set up by the WHO and the International Union against Tuberculosis and Lung Disease (IUATLD) and approved by European country representatives [3,4]. The European definition of a notifiable case of tuberculosis [3,4] is used (Box 1). Information is collected on cases notified in each country during the calendar year.

In order to take into account the time required by each country to validate and close the yearly notification, data are collected 10 to 12 months after the end of the calendar year. Figures from previous years of report are not updated.

Individual anonymous computerised data are requested (Box 2) The choice of the software is left to the country concerned.

When individual data cannot be provided, countries are requested to complete pre-defined tables including the distribution of cases by categories of the relevant variables (Box 3).

Material for data collection and correspondence are prepared in English and Russian.

National correspondents are responsible for the quality of the data provided.

Notification rates of incident tuberculosis cases are calculated per 100 000 population, using United Nations demographic estimates for the year of notification [5]. Notification rates may not fully reflect true tuberculosis incidence rates due to underreporting and other problems.

Figures may slightly differ from those published by WHO [6,7] because WHO figures are collected several months prior to those collected by EuroTB, and as such, are often provisional.

3. Data collection

Among the 51 countries of the WHO European Region, all but one (Turkey) sent data on tuberculosis cases notified in 1996:

- 47 countries reported all new and recurrent cases;
- 2 countries (Greece and Kazakstan) reported only new cases;
- 1 country (Spain) reported only new respiratory cases.

Complementary information on the characteristics of the national surveillance systems according to the European recommendations (case definition, population groups systematically excluded from the notification, definitions of recurrent cases included in the notification, of bacteriological confirmation and of smear positivity) was provided by 46 countries. There were some differences in the definition of recurrent cases included in the notification (Table 1) :

- 20 countries reported only the relapses, as defined by WHO [8] (cases in patients with a previous episode of tuberculosis who completed a full treatment with anti-tuberculosis drugs and were declared cured);
- 15 countries reported relapses and other patients previously treated with anti-tuberculosis drugs, such as patients returning after interruption of treatment or patients with a previous episode of tuberculosis failing to respond to anti- tuberculosis treatment;
- 7 countries reported cases in patients with a previous episode of tuberculosis who were not treated with anti-tuberculosis drugs (because anti-tuberculosis drugs were not available at that time) in addition to the cases mentioned above;
- 2 countries (Bosnia-Herzegovina, United Kingdom) used different definitions of recurrent cases in different parts of the country.

However, few countries specified how these definitions were applied. Moreover, information on previous history of tuberculosis is difficult to obtain and differences in inclusion of recurrent cases may also result from differences in the procedure used to retrieve previous information.Population groups included in the notification also differed (Table 2) :

- 8 countries included only nationals, excluding all categories of foreigners;
- 13 countries included nationals and legal immigrants, but excluded illegal immigrants and/or asylum seekers;
- 12 countries excluded prisoners.

This information concerned systematic exclusion from the notification and not underreporting, which may also exist in the groups included in the notification. Among the 50 countries reporting tuberculosis cases notified in 1996, 19 provided individual computerised data, 31 provided aggregate data. The availability of information varied between countries (Box 4).

Seven countries (Belarus, Greece, Kazakstan, Kyrgyzstan, Russian Federation, Tajikistan and Ukraine) provided information on the characteristics the new cases only. In order to present all the distributions on the total number of cases (new and recurrent), results for these countries are not included in the tables or country profiles presented further in this report.

4. Tuberculosis cases notified in 1996

In 1996, 315 892 cases of tuberculosis were notified in 50 countries of the WHO European Region (Table 3). The notification rate varied between countries from 0 in Monaco and San Marino to 195 in Georgia (Box 5) with a median of 26 cases per 100 000 population.The notification rate was lower than 20 per 100 000 in 21 countries, all of which are situated in the western part of Europe except for the Czech Republic and Israel. In 11 of these countries, the rate was less than 10 per 100 000. The rate was 20 cases per 100 000 or over in 29 countries located in the eastern part of Europe, except for Portugal and Spain (Map).Comparison of tuberculosis notification rates in 1995 and in 1996 was possible for all countries providing the number of cases notified in 1996, except for Andorra, Georgia and Ukraine (Table 3). The distribution of countries by notification rate (under 20 cases, 20 cases and over per 100 000 population) was similar in 1995 and in 1996. Between 1995 and 1996, the notification rate decreased in 18 countries, remained stable in five and increased in 24. The rate increased by more than 10% in 12 countries (Armenia, Azerbaijan, Belarus, Estonia, Kazakstan, Kyrgyzstan, Latvia, Lithuania, Luxembourg, Malta, Russian Federation, Uzbekistan), eight of which (all republics of the former USSR) reported over 50 cases per 100 000 in 1996. These trends should be interpreted with caution, particularly since they are based on two years only. Data on tuberculosis cases are dependent on the notification procedure of a country as well as on its health care system. Changes in notification rates may be related to the epidemiological context, but also to changes in patterns of reporting or in diagnostic procedures. For example, the decrease in Tajikistan between 1995 and 1996 may be explained by the reporting of cases in 1995 which had not been reported in previous years due to the disruption of the health services (Prof. Sirodjidinova, personal communication). Likewise, a similar overreporting of cases which had not been reported or diagnosed because of the disruption of the tuberculosis control programme in 1991-1995 may account for the particularly high 1996 notification rate in Georgia (Prof. Khechinachvili, personal communication).In the 37 countries with available information on previous tuberculosis history (Table 4), the overall proportion of new cases was 88%. The proportion of recurrent cases was 11% ranging from 0 to 35% (median 9%). Comparisons between countries should be made with caution however, considering the differences in the definition of recurrent cases.

Age and sex

Overall, among the 38 countries with information available on sex (Table 5), 1.8 times more male than female tuberculosis patients were reported. The sex ratio ranged from 0.8 to 2.9 (median 1.6). The age distribution of all new and recurrent cases could be described according to recommended age groups in 35 countries reporting a total of 122 799 cases (Box 6). Patients younger than 15 years of age accounted for 5% of the cases (children under 5 for 2%). About half of the cases (49%) were found in the 15-44 year age group, 28% in the 45-64 year age group and 18% in those aged over 64.

The age distribution varied across countries (country profiles). The proportion of patients in the 15-44 year age group was lower in countries with a lower notification rate (under 20 per 100 000) than in countries with notification rate of 20 and over (41% versus 53%) while the proportion of patients aged 65 years or more was higher (29% versus 13%).The age and sex-specific tuberculosis notification rate also varied across countries (Box 7, 8 & 9). The rate was similar in males and females until the age of 15, but was higher in males in all age groups thereafter, with larger sex differences in countries with a notification rate of 20 and over. In countries with a notification rate under 20 (Box 7), the rate increased with age for both sexes. Age-specific rates in males increased rapidly until age 25-34, remained stable until age 55-64 and increased again in the older age group. In females, the rate peaked at 25-34, decreased slightly until age 55-64 and then increased again. The peaks observed

for both sexes in the age group 25-34 were suppressed when age-specific rates were calculated using cases in nationals only as numerators (data not shown). In countries with a notification rate of 20 and over (Box 8 & 9), age-specific rate in males increased with age until age 35 - 44. Above age 44, the rate reached a plateau in countries with a notification rate from 20 to 49 (Box 8). In countries with a notification rate of 50 and over (Box 9), the age specific rate in females peaked earlier (at 25-34), but generally followed the male trend at a lower level. Children under 5 years of age have a much higher risk of developing tuberculosis after infection than older children [9]. The notification rate in children under 5 was higher than that in children aged 5 to 14 in countries with a notification rate under 20, but not in countries with a notification rate of 20 and over. This suggests possible underreporting of cases in children under 5 in some countries.

Geographic origin

Information on geographic origin was available in 23 countries, based on birth place (as recommended) in 18 and citizenship in eight, with three countries (France, Luxembourg and Switzerland) providing information on both birth place and citizenship (Table 8). The proportion of cases with missing information on birth place was greater than 20% in three countries (Croatia, France and Switzerland). The proportion of missing information on citizenship was 3% or less, except in France (12%).The proportion of cases in foreign-born patients ranged from 0% in Czech Republic to 83% in Israel. In countries providing information on geographic origin based on citizenship, the proportion of cases in foreigners varied from 24% in Austria and France to 61% in Luxembourg. Comparisons of the proportion of patients of foreign origin across countries should however be made with caution, because of differences in notification of some population groups (e.g. asylum seekers, illegal immigrants), various policies regarding immigration and acquisition of nationality, and potential differences in tuberculosis screening programmes for immigrants.The proportion of patients of foreign origin in 1995 and in 1996 was fairly stable in the 16 countries providing this information in both years using the same definition.

Data on the continent of origin of the patients are presented in Table 9 for 15 of the 16 countries which provided this information (Croatia is excluded because of a large proportion (41%) of cases with missing information on geographic origin). For France and Switzerland, which provided data both on birth place and citizenship, data on citizenship were used because this information was more complete. The distribution by continent of origin may be compared in 1995 and in 1996 for the 12 countries providing the information in both years using the same definition. In 1996, 27% of the patients of foreign origin originated from Europe, 26% from Asia and 39% from Africa, similar to the proportions observed in 1995 (29%, 26% and 40%, respectively). Because several non-European countries (Armenia, Azerbaijan, Georgia, Israel, Kazakstan, Kyrgyzstan, Tajikistan, Turkey, Turkmenistan and Uzbekistan) are part of the WHO European Region, the proportion of cases in immigrants from within the WHO European Region is higher than that of patients coming from the European continent only (34% compared with 27% in 1996).The specific country of origin of the patients was available in 14 countries in 1996: Austria, Belgium, Denmark, Estonia, Finland, Iceland, Italy, Luxembourg, Malta, Netherlands, Slovakia, Slovenia, Sweden and Switzerland. Among the 11 countries which had provided the same information in 1995 (all but Estonia, Slovakia and Sweden), the origin of the patients was diverse, but five countries together accounted for more than 45% of the patients of foreign origin each year:

- Somalia: 13% in 1995 and in 1996
- Morocco: 12% in 1995 and in 1996
- Yugoslavia: 11 % in 1995 and 10% in 1996
- Turkey: 7% in 1995 and 8% in 1996.
- Bosnia-Herzegovina: 6% in 1995 and 5% in 1996

Site of disease

Site of disease was reported in 38 countries for all new and recurrent cases (N= 138 951 cases): 11 countries provided detailed information on major and minor site of disease from which it was possible to classify cases as pulmonary or extra-pulmonary; 13 provided information based on the pulmonary classification; 14 provided information by classifying cases as respiratory or extra-respiratory (Table 10). In all 38 countries, the proportion of cases with unknown site of disease was at most 3%. Among

the countries providing information based on detailed site or on pulmonary classification, 77% of the cases were pulmonary. In the countries providing information based on respiratory classification, the proportion of respiratory tuberculosis was 90%.Pulmonary tuberculosis could be reported as a major site only, whereas extra-pulmonary localisations could be reported either as major sites (if not associated with pulmonary tuberculosis) or as minor sites (if associated with another localisation). Among the 11 countries (Austria, Belgium, Estonia, Iceland, Luxembourg, Malta, Norway, Romania, Slovakia, Slovenia and Switzerland) providing detailed information on major and minor site of disease (Box 10), 82% of the patients had pulmonary tuberculosis. Pleural tuberculosis was reported in 12% of the patients. All other sites were reported in less than 3% of the patients. A minor site of disease was reported for 1267 patients (4%), of which 1177 also had pulmonary tuberculosis. Among those 1177 patients, 605 (51%) had pleural tuberculosis, 251 (21%) had disseminated tuberculosis and 122 (10%) had intrathoracic lymphatic tuberculosis.Sites of disease were distributed differently according to age (Box 10). Extra- pulmonary tuberculosis without pulmonary tuberculosis was more frequent among children (less than 15 years of age) than in adults aged 15 years or more (52% versus16%). Several localisations, associated or not with pulmonary tuberculosis, were reported more frequently in children than in adults:

- intrathoracic lymphatic (34% versus < 1%);
- extrathoracic lymphatic (5% versus 2%);
- meningeal (4% versus < 1%);
- disseminated (3% versus < 1%).

All children with disseminated tuberculosis were reported with a pulmonary localisation, most probably corresponding to miliary tuberculosis.Pleural tuberculosis was rarely reported among children under 5 years of age (2%). The proportion of cases with pleural tuberculosis was the highest among children aged 5 to 14 (18%) and in the 15-24 year age group (20%). Above 24 years of age, the proportion of cases with pleural tuberculosis decreased with age (13% in patients aged 25-34, 11% in patients aged 35-44, 9% in patients aged 45 or more). The distribution of the sites of disease in 1995 and in 1996 was similar overall and by age group in the seven countries providing data in both years (Austria, Iceland, Luxembourg, Malta, Romania, Slovenia and Switzerland).

Bacteriological confirmation

Bacteriological confirmation of the cases was available in 34 countries (Table 11): based on positive culture, as recommended, in 12 countries, and based on positive culture or positive sputum smear in 22, including two countries (Armenia and Georgia) for which confirmation was based on sputum smear only. The median proportion of bacteriologically confirmed cases was 62% in the first group of countries (range 43% to 88%) and 50% in the second group (range 17% to 67%). In 12 countries, the proportion of cases without bacteriological confirmation (non confirmed or unknown) was over 50% regardless of the type of confirmation.

Culture

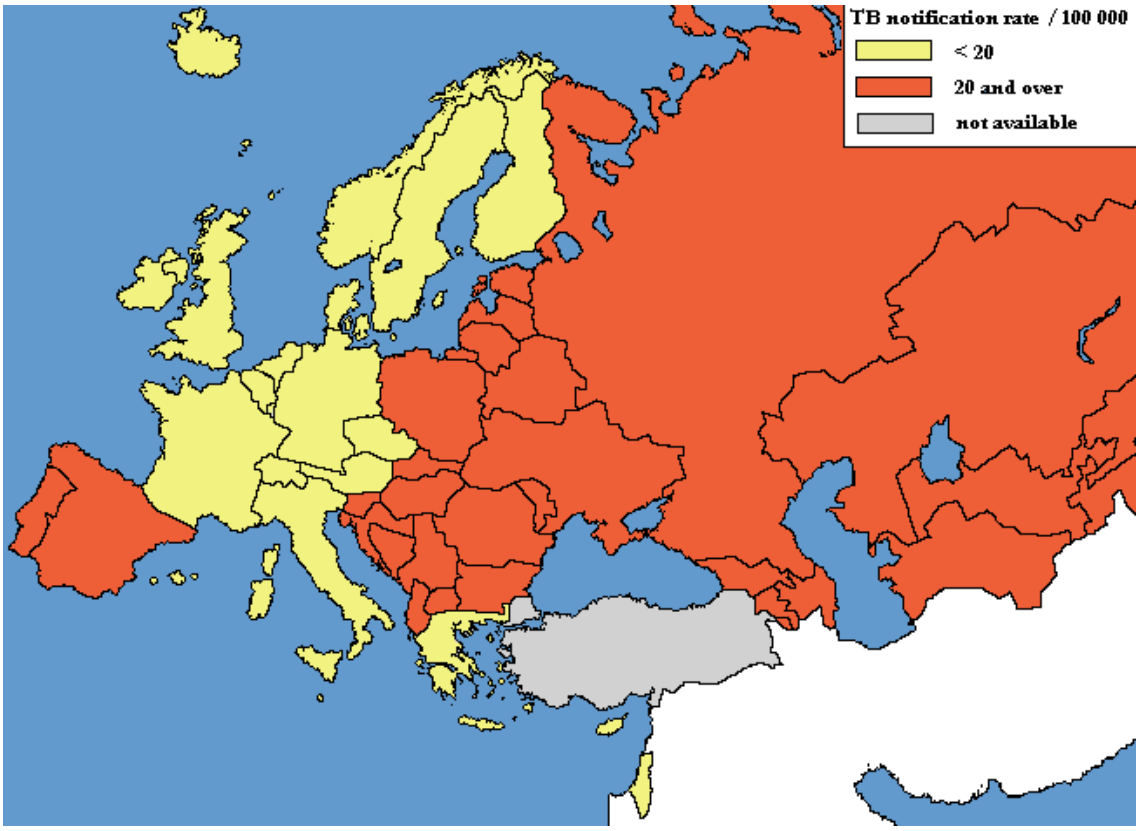
In 1996, information on culture was available in 18 countries providing individual data. The median proportion of cases with a positive culture was 54% (range 20% to 88%). The median proportion of cases for which culture was reported as performed was 80%. The proportion of cases with unknown culture results ranged from 2% to 76% and was mainly due to cases with no information about culture, except in some countries (e.g. France, Romania) where a substantial proportion of the cases had a culture done but the results were unknown.The average proportion of cases with a positive culture was higher among cases with pulmonary/respiratory tuberculosis than among cases with extra-pulmonary/extra-respiratory tuberculosis (37% versus 19%) and increased with age: 13% among children under 15, 31% among patients aged 15 to 44 years, 37% among patients aged 45 and over. Among the 14 countries providing information on culture both in 1995 and in 1996, the median proportion of cases with a positive culture was stable in both years (59% in 1995 and 60% in 1996). The average proportion of cases with a positive culture was lower in 1996 (34%) than in 1995 (41%), mainly because of a decrease in this proportion in Romania (23% versus 37% in 1995). As in 1995, large differences between countries were observed. All countries stated that culture was available for all suspect tuberculosis cases in the whole country in 1996. However, differences in diagnostic practices and in reporting patterns may exist between countries. For example, some

countries (Denmark, Finland, Norway) report information on positive cultures only. The countries stated that culture was available for all suspect tuberculosis cases in the whole country in 1996. However, differences in diagnostic practices and in reporting patterns may exist between countries. For example, some countries (Denmark, Finland, Norway) report information on positive cultures only. The completeness of information and the proportion of cases with positive culture was higher in countries where culture positivity is required to classify a case as definite.

Sputum smear results

Information on sputum smear results was available in 31 countries (Table 13). The European recommendations specify that only the results of smear examination performed on spontaneously produced or induced sputum should be reported [3,4]. Among the 31 countries reporting smear results, 7 followed this recommendation, 17 included also results of examination of broncho-alveolar or gastric lavage and 7 included results of smears performed on specimens not taken from the lung. The median proportion of smear positive cases was 40% (range 14% to 60%) among the pulmonary cases and 37% (range 9 to 58%) among the respiratory cases. In 17 countries, the proportion of pulmonary/respiratory cases with negative or unknown smear results was over 60%. Individual information on smears was provided by 16 countries. The median proportion of smear positive cases among pulmonary cases (among respiratory cases in the Czech Republic) was 37% (range 14% to 57%). The median proportion of pulmonary or respiratory cases for which smear examination was reported as performed was 90%. The proportion of pulmonary or respiratory cases with unknown smear results ranged from 0% to 49%. Unknown smear results could be due to the smear being reported as performed but results being unknown, to the smear not being performed, or to a complete absence of information. The average proportion of pulmonary/ respiratory tuberculosis cases with a positive smear was lower in children under 15 years of age (13%) than in adults (55% in patients aged 15 to 44 years, 47% in patients aged 45 years and over). Among the 14 countries providing individual information on smears both in 1995 and in 1996 (Austria, Belgium, Czech Republic, Estonia, Finland, France, Iceland, Italy, Malta, Netherlands, Romania, Slovenia, Sweden and Switzerland), the proportion of smear positive cases among pulmonary or respiratory cases was similar in both years.

Tuberculosis notification rate, 1996, WHO European Region (51 countries)



6. Conclusion

The results of this two-year surveillance provide an improved picture of the epidemiological situation of tuberculosis in Europe compared to previous reports. Since 1995, consensus recommendations on uniform reporting of tuberculosis [3,4], including a common case definition and a common set of variables to be collected, have been approved. In 1996, the European definition of a notifiable case of tuberculosis was almost universally used, but differential inclusion of some population groups (e.g. illegal immigrants, prisoners) and some categories of patients (e.g. recurrent cases), together with variable rates of underreporting, may have introduced some biases in the comparisons between countries. The availability and completeness of information differed between countries. In particular, the quality of the bacteriological information appeared to vary greatly [10]. Information on culture is essential in order to validate case reporting since culture is currently the gold standard for the diagnosis of tuberculosis in Europe. Information on smear results is also essential since sputum smear positivity is the best indicator of the infectiousness of a case. Inclusion of high quality bacteriological information would be best achieved by incorporating laboratories in the national notification schemes, as recommended [3,4].

So far, only a few countries have been able to implement all the European recommendations. Several countries have partially applied these recommendations and others are planning to do so in the near future. Substantial improvements in the number of variables collected and in the completeness of information can already be observed in 1996 compared with the previous year. Future changes in tuberculosis surveillance systems will further improve the quality and the comparability of data.Contrasting pictures emerge from data on tuberculosis cases notified in 1995 and 1996 in Europe, with large between-country variations. As in 1995, countries with a lower notification rate in 1996 are mostly situated in the western part of Europe (exceptions being Israel and the Czech Republic). Most countries reporting more than 20 cases per 100 000 in 1996 are situated in the eastern part of Europe with the notable exception of Spain and Portugal. Between 1995 and 1996, notification rates appear to have declined or to have stabilised in most countries with a lower notification rate, while increases were observed in many countries with a higher rate. This has resulted in a widening gap between the two groups. Moreover, the higher the notification rate in 1995, the larger the increase in 1996, as observed in many republics of the former USSR.It is difficult to interpret trends over only two years. However, these trends tend to confirm some of the changes already observed in the late 1980s and early 1990s after decades of continuing decreases in tuberculosis morbidity and mortality. In western Europe[11], the notification rate decreased regularly between 1974 and 1986, but stabilised or increased between 1986 and1990 in several countries (Austria, Denmark, Iceland, Ireland, Italy, Netherlands, Norway, Switzerland, United Kingdom). However, between 1990 and 1995, while increases were observed in some other countries, there was no confirmation of a clear increase in incidence in all western Europe: notifications increased only temporarily (over 2 to 5 years) or appeared to remain fairly stable in most countries. In eastern Europe [12], tuberculosis mortality and morbidity also declined regularly until 1985-1990. Substantial increases in notification rates were observed between 1990 and 1995 in Bulgaria, Hungary, Romania and in most republics of the former USSR, including the Baltic States. This reversal of trends was not confirmed in other countries (e.g. the Czech Republic, Poland, Slovakia), where notification rates continued to decline.HIV infection has not been a major factor in contributing to increases in tuberculosis notification rates, except for a few countries such as France, Portugal and Spain [13]. Since 1996, declining trends in AIDS incidence have resulted in a decreasing number of AIDS-associated tuberculosis cases in most western European countries, except in Portugal [14]. However, the rapidly emerging epidemic of HIV infections in countries such as Ukraine or the Russian Federation represents a serious threat since its impact on the incidence of tuberculosis could be substantial in the near future. Patients of foreign origin account for a highly variable proportion of tuberculosis patients in Europe. In 1996, they accounted for more than 50% of the cases in some western European countries. Although no significant variation in this proportion was observed between 1995 and 1996, the recent influx of immigrants from countries with a higher incidence of tuberculosis clearly had an important influence on the epidemiology of the disease. This is reflected by the substantial proportion of patients originating from Somalia, Yugoslavia or Bosnia-Herzegovina, who probably immigrated fairly recently.Impoverishment of subgroups of the population, particularly in big cities, may be an important factor in contributing to recent increases in tuberculosis incidence, particularly if access to health care is decreased for these subgroups. Disruption of health services due to war or economical and political difficulties is also likely to have a major influence on the epidemiology of tuberculosis. Indeed, delays in diagnosis and treatment and inadequacies or

interruptions of therapy result in increased transmission of tuberculosis infection and high rates of relapse. Deterioration of tuberculosis control programmes is probably also responsible for the high prevalences of multi-drug resistance which were recently reported in several European countries (e.g. Estonia, Latvia, Russian Federation) [15]. In the perspective of working towards the elimination of tuberculosis in Europe [16], the surveillance of tuberculosis notifications should be complemented by the surveillance of drug resistance and the monitoring of treatment outcome [17].EuroTB plans to extend the European surveillance system in the coming year to include the surveillance of anti-tuberculosis drug resistance.

Participants

Andorra	Ministry of Health and Welfare	Andorra La Vella
Albania	Ministry of Health and Environment University Hospital of Lung Diseases	Tirana
Armenia	Ministry of Health	Yerevan
Austria	Bundesministerium für Gesundheit	Vienna
Azerbaijan	Institute of Tuberculosis and Lung Diseases	Baku
Belarus	Scientific Research Institute of Pneumology and Phtisiology	Minsk
Belgium	Belgium Lung & Tuberculosis Association (BELTA)	Brussels
Bosnia Herzegovina	Clinic of Pulmonary Diseases and Tuberculosis Public Health Institute	Sarajevo Banja Luka
Bulgaria	Ministry of Health	Sofia
Croatia	Croatian National Institute of Public Health	Zagreb
Czech Republic	University Hospital Bulovka	Prague
Denmark	Statens Serum Institut	Copenhagen
Estonia	Kivimae Hospital Ministry of Health	Tallinn
Finland	National Public Health Institute	Helsinki
France	Direction Générale de la Santé Réseau National de Santé Publique	Paris Saint-Maurice
Georgia	Institute of Phthisiology and Pulmonology	Tbilissi
Germany	Robert Koch-Institut	Berlin
Greece	Ministry of Health & Welfare	Athens
Hungary	Koranyi National Institute Tuberculosis & Pulmonology	Budapest
Iceland	Reykjavik Health Care Centre	Reykjavik
Ireland	Department of Health	Dublin
Israel	Ministry of Health	Jerusalem
Italy	Ministry of Health Istituto Superiore di Sanita	Roma
Kazakstan	Kazakh Tuberculosis Research Institute	Almaty
Kyrgyzstan	National Tuberculosis & Lung Diseases Institute	Bishkek
Latvia	State Centre of Tuberculosis & Lung Diseases	Riga
Lithuania	Lithuanian Centre of Pneumology & Tuberculosis	Vilnius
Luxembourg	Direction de la Santé Publique	Luxembourg
Macedonia, Former Yugoslav Republic	Institute for Lung Diseases and Tuberculosis	Skopje
Malta	Department of Health	G'Mangia

	St Luke's Hospital	
Moldova, Republic of	The Republican Phtisiopulmonology Clinic	Chisinau
Monaco	Direction de l'Action Sanitaire et Sociale	Monaco
Netherlands	Royal Netherlands Tuberculosis Association (KNCV)	The Hague
Norway	National Health Screening Service	Oslo
Poland	National Tuberculosis & Lung Diseases Institute	Warsaw
Portugal	Ministério da Saude	Lisbon
Romania	Institute of Pneumophtisiology "Marius Nasta"	Bucharest
Russian Federation	Russian Research Institute of Pneumophtisiology Central Tuberculosis Research Institute	Moscow
San Marino	Ospedale di Stato di San Marino	Cailungo
Slovakia	Ministry of Health	Bratislava
Slovenia	University Institute of Diseases of the Chest	Ljubljana
Spain	Instituto de Salud “Carlos III”	Madrid
Switzerland	Federal Office of Public Health	Bern
Tajikistan	Tajikistan Medical University	Dushanbe
Turkey	Ministry of Health	Ankara
Turkmenistan	Republican Tuberculosis Control Centre	Ashkhabad
Ukraine	Institute of Tuberculosis & Pulmonology	Kiev
United Kingdom	PHLS Communicable Disease Surveillance Centre Scottish Centre for Infection & Environmental HealthDepartment of Health & Social Services	London Glasgow Belfast
Sweden	Swedish Institute for Infectious Disease Control	Stockholm
Uzbekistan	Ministry of Health	Tashkent
Yugoslavia, Federal Rep.	Institute of Pulmonology & Protection against Tuberculosis	Belgrad

9. List of tables

Table 1: Recurrent cases included in the notification in 1996 (46 countries)

Country	Relapses	Relapses and other retreatment cases*	Relapses other retreatment cases* and cases not previously treated †
Albania	yes		
Armenia	yes		
Austria		yes	
Azerbaijan	yes		
Belarus	yes		
Belgium	yes		
Bosnia-Herzegovina ‡			
Bulgaria		yes	
Croatia	yes		
Czech Republic	yes		
Denmark			yes

Estonia			yes
Finland			yes
France			yes
Georgia		yes	
Germany		yes	
Greece §			
Hungary	yes		
Iceland		yes	
Ireland		yes	
Italy		yes	
Kyrgyzstan	yes		
Latvia	yes		
Lithuania	yes		
Luxembourg		yes	
Macedonia		yes	
Malta	yes		
Moldova	yes		
Netherlands			yes
Norway		yes	
Poland	yes		
Portugal		yes	
Romania		yes	
Russian Federation	yes		
San Marino	yes		
Slovakia	yes		
Slovenia		yes	
Spain §			
Sweden			yes
Switzerland		yes	
Tajikistan		yes	
Turkmenistan	yes		
Ukraine	yes		
United Kingdom ||			
Uzbekistan	yes		
Yugoslavia			yes
Total	**20**	**15**	**7**

* Other retreatment cases include patients returning after interruption of treatment, failure cases or other cases previously treated

† Cases not previously treated are cases with a previous episode of tuberculosis who did not receive anti-tuberculosis drugs

‡ Federation of Bosnia-Herzegovina : relapses and other retreatment cases; Republic of Srpska : relapses only

§ Recurrent cases not reported

|| England and Wales, Scotland : no definition; Northern Ireland : relapses and other retreatment cases

Table 2: Population groups included in the notification in 1996 (46 countries)

	Foreign citizens					Other groups		
Country	**Legal residents**	**Asylum seekers**	**Illegal residents**	**Pris***	**Mil†**	**Hom ‡**	**HIV§**	**Inst||**
Albania	yes				yes	yes	yes	yes
Andorra	yes			yes	yes	yes	yes	yes
Armenia	yes				yes	yes	yes	yes
Austria	yes	yes	yes	yes	yes	yes	yes	yes
Azerbaijan							yes	yes
Belarus	yes				yes	yes	yes	yes
Belgium	yes	yes	yes	yes	yes	yes	yes	yes
Bosnia-Herzegovina				yes	yes	yes	(º)	yes
Bulgaria	yes	yes	yes	yes	yes	yes	yes	yes
Croatia	yes	yes	yes	yes	yes	yes	yes	yes
Czech Republic	yes	yes	yes	yes	yes	yes	yes	yes
Denmark	yes	yes	yes	yes	yes	yes	yes	yes
Estonia	yes	yes	yes			yes	yes	yes
Finland	yes	yes	yes	yes	yes	yes	yes	yes
France	yes	yes	yes	yes	yes	yes	yes	yes
Georgia	yes	yes	yes			yes	yes	yes
Germany	yes	yes	yes	yes	yes	yes	yes	yes
Greece	yes		yes	yes	yes	yes	yes	yes
Hungary	yes	yes	yes	yes	yes	yes	yes	yes
Iceland	yes	yes	yes	yes	yes	yes	yes	yes
Ireland	yes	yes	yes	yes	yes	yes	yes	yes
Italy	yes	yes	yes	yes	yes	yes	yes	yes
Kyrgyzstan							yes	yes
Latvia				yes	yes	yes	yes	yes
Luxembourg	yes	yes	yes	yes	yes	yes	yes	yes
Macedonia					yes	yes	yes	
Malta	yes	yes	yes	yes	yes	yes	yes	yes
Moldova	yes				yes	yes	yes	yes
Netherlands	yes	yes	yes	yes	yes	yes	yes	yes
Norway	yes	yes		yes	yes	yes	yes	yes
Poland	yes			yes	yes	yes	yes	yes
Portugal	yes	yes	yes	yes	yes	yes	yes	yes
Romania	yes					yes	yes	yes
Russian Fed.				yes	yes	yes	yes	yes

San Marino	yes			yes	yes	yes	yes	yes
Slovakia	yes	yes	yes	yes	yes	yes	yes	yes
Slovenia	yes	yes		yes	yes	yes	yes	yes
Spain	yes	yes	yes	yes	yes	yes	yes	yes
Sweden	yes	yes	yes	yes	yes	yes	yes	yes
Switzerland	yes	yes	yes	yes	yes	yes	yes	yes
Tajikistan	yes			yes	yes	yes	yes	yes
Turkmenistan				yes	yes	yes	yes	yes
United Kingdom	yes	yes	yes	yes	yes	yes	yes	yes
Ukraine	yes	yes	yes	yes	yes	yes	yes	yes
Uzbekistan								
Yugoslavia	yes	yes				yes		yes
Total	**38**	**28**	**25**	**34**	**39**	**43**	**43 (‖)**	**44**

* Pris = prisoners

† Mil = military personnel

‡ Hom = homeless people

§ HIV = persons with AIDS or HIV infection

‖ Inst = institutionalised people

º Included in Federation of Bosnia-Herzegovina, not in Republic Srpska

Table 3: Tuberculosis cases and tuberculosis notification rates, 1995 and 1996

	1995				1996			
Country	(49 countries)				(50 countries)			
	TB cases		**Rate (per 100 000)**		**TB cases**		**Rate (per 100 000)**	
Albania	664		19.3		707		20.4	
Andorra	-	*	-	*	17		23.9	
Armenia	836		23.2		935		25.6	
Austria	1383		17.4		1445		18.0	
Azerbaijan	3306		43.7		5006	‡	65.5	‡
Belarus	5092		50.2		5619		55.5	
Belgium	1380		13.6		1352		13.3	
Bosnia-Herzegovina	2132		61.6		2220		62.9	
Bulgaria	3245		37.0		3109		35.6	
Croatia	2114	†	47.0	†	2174		48.5	
Czech Republic	1851		18.0		1936		18.8	
Denmark	448		8.6		484		9.3	
Estonia	608		39.7		683		44.9	
Finland	662		13.0		644		12.6	

France	8723		14.7		7656		12.8	
Georgia	-	*	-	*	10641	‡	194.7	‡
Germany	12198		15.0		11814		14.4	
Greece	939	§	9.0	§	945	§	9.0	§
Hungary	4339		42.9		4278		42.5	
Iceland	12		4.5		11		4.1	
Ireland	458		12.9		434		12.2	
Israel	398		7.1		415		7.2	
Italy	5225		9.1		5152		9.0	
Kazakstan	11095	§	64.8	§	13559	§	78.8	§
Kyrgyzstan	3380		71.2		4086		84.7	
Latvia	1541		60.3		1761		69.4	
Lithuania	2362		63.8		2608		70.6	
Luxembourg	32		7.9		36		8.8	
Macedonia	786		36.3		724		33.2	
Malta	10		2.7		29		7.9	
Moldova	2753		62.1		2922		65.7	
Monaco	1		3.1		0		0.0	
Netherlands	1619		10.4		1678		10.8	
Norway	236		5.4		217		5.0	
Poland	15959		41.6		15358		39.9	
Portugal	5577		56.8		5248		53,5	
Romania	23271		101.9		24113		105.9	
Russian Federation	96828		65.9		110897		75.6	
San Marino	2		8.0		0		0.0	
Slovakia	1537		28.7		1498		27.9	
Slovenia	525		27.0		563		28.9	
Spain	8764	||	22.1	||	8331	||	21.0	||
Sweden	564		6.4		493		5.6	
Switzerland	830		11.5		764		10.5	
Tajikistan	2029	†	34.8	†	1647		26.3	
Turkey	23035		37.2		-	*	-	*
Turkmenistan	2009		49.0		2149		51.3	
Ukraine	21459	†	41.8	†	26834		52.3	
United Kingdom	6161		10.6		6240		10.7	
Uzbekistan	9866		43.2		11919		51.1	
Yugoslavia	4169		38.4		4541		41.8	

* Data not available

† Source: Global Tuberculosis Control, WHO Report 1998, WHO/TB/98.237

‡ Provisional data which are subject to revision

§ New cases only

|| New respiratory cases only

Table 4: Tuberculosis cases by case status, 1995 and 1996 (37 countries)

	New						Recurrent						Unknown status						Total		
Country	**1995**			**1996**			**1995**			**1996**			**1995**			**1996**			**1995**		**1996**	
	N	**(%)**		**N**	**(%)**		**N**	**(%)**		**N**	**(%)**		**N**	**(%)**		**N**	**(%)**		**N**		**N**	
Albania	611	**(92)**		676	**(96)**		53	**(8)**		31	**(4)**		0	**(0)**		0	**(0)**		**664**		**707**	
Andorra	-*	-	*	17	**(100)**		-*	-	*	0	**(0)**		-*	-	*	0	**(0)**		**-**		**17**	
Armenia	811	**(97)**		904	**(97)**		25	**(3)**		31	**(3)**		0	**(0)**		0	**(0)**		**836**		**935**	
Austria	1135	**(82)**		1215	**(84)**		203	**(15)**		226	**(16)**		45	**(3)**		4	**(0)**		**1383**		**1445**	
Belarus	4511	**(89)**		5008	**(89)**		581	**(11)**		611	**(11)**		0	**(0)**		0	**(0)**		**5092**		**5619**	
Belgium	1104	**(80)**		1104	**(82)**		150	**(11)**		122	**(9)**		126	**(9)**		126	**(9)**		**1380**		**1352**	
Bosnia-Herzegovina	1964	**(92)**		2031	**(91)**		167	**(8)**		189	**(9)**		1	**(0)**		0	**(0)**		**2132**		**2220**	
Croatia	-*	-	*	2039	**(94)**		-*	-	*	135	**(6)**		-*	-	*	0	**(0)**		-		**2174**	
Czech Republic	1793	**(97)**		1878	**(97)**		58	**(3)**		58	**(3)**		0	**(0)**		0	**(0)**		**1851**		**1936**	
Denmark	-*	-	*	440	**(91)**		-*	-	*	44	**(9)**		-*	-	*	0	**(0)**		-		**484**	
Estonia	516	**(85)**		593	**(87)**		92	**(15)**		90	**(13)**		0	**(0)**		0	**(0)**		**608**		**683**	
France	5312	**(61)**		4809	**(63)**		998	**(11)**		682	**(9)**		2413	**(28)**		2165	**(28)**		**8723**		**7656**	
Georgia	-*	-	*	6896	**(65)**	†	-*	-	*	3745	**(35)**	†	-*	-	*	0	**(0)**	†	-		**10641**	†
Hungary	3864	**(89)**		3736	**(87)**		475	**(11)**		542	**(13)**		0	**(0)**		0	**(0)**		**4339**		**4278**	
Iceland	12	**(100)**		11	**(100)**		0	**(0)**		0	**(0)**		0	**(0)**		0	**(0)**		**12**		**11**	
Israel	376	**(94)**		390	**(94)**		22	**(6)**		23	**(6)**		0	**(0)**		2	**(0)**		**398**		**415**	
Kyrgyzstan	3266	**(97)**		3974	**(97)**		114	**(3)**		112	**(3)**		0	**(0)**		0	**(0)**		**3380**		**4086**	
Latvia	1274	**(83)**		1476	**(84)**		267	**(17)**		285	**(16)**		0	**(0)**		0	**(0)**		**1541**		**1761**	
Lithuania	2123	**(90)**		2357	**(90)**		174	**(7)**		251	**(10)**		65	**(3)**		0	**(0)**		**2362**		**2608**	
Luxembourg	30	**(94)**		33	**(92)**		2	**(6)**		3	**(8)**		0	**(0)**		0	**(0)**		**32**		**36**	
Malta	10	**(100)**		28	**(97)**		0	**(0)**		1	**(3)**		0	**(0)**		0	**(0)**		**10**		**29**	
Moldova	2365	**(86)**		2546	**(87)**		388	**(1**		376	**(1**		0	**(0)**		0	**(0)**		**2753**		**2922**	

							4)			**3)**									
Netherlands	1466	**(91)**		1461	**(87)**		153	**(9)**		217	**(13)**		0	**(0)**		0	**(0)**		**1619**		**1678**
Norway	182	**(77)**		146	**(67)**		54	**(23)**		39	**(18)**		0	**(0)**		32	**(15)**		**236**		**217**
Poland	14236	**(89)**		13675	**(89)**		1723	**(11)**		1683	**(11)**		0	**(0)**		0	**(0)**		**15959**		**15358**
Portugal	4919	**(88)**		4656	**(89)**		658	**(12)**		592	**(11)**		0	**(0)**		0	**(0)**		**5577**		**5248**
Romania	21538	**(93)**		22250	**(92)**		1733	**(7)**		1863	**(8)**		0	**(0)**		0	**(0)**		**23271**		**24113**
Russian Federation	84980	**(88)**		99048	**(89)**		11848	**(12)**		11849	**(11)**		0	**(0)**		0	**(0)**		**96828**		**110897**
Slovakia	1506	**(98)**		1240	**(83)**		31	**(2)**		259	**(17)**		0	**(0)**		0	**(0)**		**1537**		**1499**
Slovenia	486	**(93)**		480	**(85)**		39	**(7)**		83	**(15)**		0	**(0)**		0	**(0)**		**525**		**563**
Sweden	505	**(90)**		401	**(81)**		59	**(10)**		60	**(12)**		0	**(0)**		32	**(6)**		**564**		**493**
Switzerland	-*	**-**	*****	485	**(63)**		-*	-	*	77	**(10)**		-*	-	*	202	**(26)**		-		**764**
Tajikistan	-*	**-**	*****	1621	**(98)**		-*	-	*	26	**(2)**		-*	-	*	0	**(0)**		-		**1647**
Turkmenistan	1940	**(97)**		2061	**(96)**		69	**(3)**		88	**(4)**		0	**(0)**		0	**(0)**		**2009**		**2149**
Ukraine	-*			23414	**(87)**		-*			3420	**(13)**		-*	-	*	0	**(0)**		-		**26834**
Uzkekistan	9564	**(97)**		11474	**(96)**		302	**(3)**		445	**(4)**		0	**(0)**		0	**(0)**		**9866**		**11919**
Yugoslavia	3841	**(92)**		4115	**(91)**		328	**(8)**		395	**(9)**		0	**(0)**		31	**(1)**		**4169**		**4541**
* Data not available																			
† Provisional data which are subject to revision																			

Table 5: Tuberculosis cases by sex, 1995 and 1996 (38 countries)

	Male					**Female**					**Unknown**					**Total**	
Country	**1995**			**1996**		**1995**			**1996**		**1995**			**1996**		**1995**	**1996**
	N	**(%)**		**N**	**(%)**	**N**	**(%)**		**N**	**(%)**	**N**	**(%)**		**N**	**(%)**	**N**	**N**
Albania	386	**(58)**		397	**(56)**	278	**(42)**		310	**(44)**	0	**(0)**		0	**(0)**	**664**	**707**
Andorra	-	-	*	12	**(71)**	-	-	*	5	**(29)**	-	-	*	0	**(0)**	-	**17**
Armenia	578	**(69)**		698	**(75)**	258	**(31)**		237	**(25)**	0	**(0)**		0	**(0)**	**836**	**935**
Austria	899	**(65)**		948	**(66)**	484	**(35)**		497	**(34)**	0	**(0)**		0	**(0)**	**1383**	**1445**

Belgium	896	**(65)**		896	**(66)**		480	**(35)**		456	**(34)**		4	**(0)**		0	**(0)**		**1380**		**1352**	
Bosnia-Herzegovina	1292	**(61)**		1338	**(60)**		839	**(39)**		882	**(40)**		1	**(0)**		0	**(0)**		**2132**		**2220**	
Croatia	-	-	*	1425	**(66)**		-	-	*	749	**(34)**		-	-	*	0	**(0)**		-		**2174**	
Czech Republic	1109	**(60)**		1154	**(60)**		742	**(40)**		782	**(40)**		0	**(0)**		0	**(0)**		**1851**		**1936**	
Denmark	250	**(56)**		291	**(60)**		198	**(44)**		193	**(40)**		0	**(0)**		0	**(0)**		**448**		**484**	
Estonia	441	**(73)**		476	**(70)**		167	**(27)**		207	**(30)**		0	**(0)**		0	**(0)**		**608**		**683**	
Finland	362	**(55)**		354	**(55)**		300	**(45)**		290	**(45)**		0	**(0)**		0	**(0)**		**662**		**644**	
France	5345	**(61)**		4659	**(61)**		3378	**(39)**		2971	**(39)**		0	**(0)**		26	**(0)**		**8723**		**7656**	
Georgia	-	-	*	6693	**(63)**	†	-	-	*	3948	**(37)**	†	-	-	*	0	**(0)**	†	-		**10641**	†
Germany	7619	**(62)**		7322	**(62)**		4579	**(38)**		4492	**(38)**		0	**(0)**		0	**(0)**		**12198**		**11814**	
Hungary	3011	**(69)**		2791	**(65)**		1328	**(31)**		1487	**(35)**		0	**(0)**		0	**(0)**		**4339**		**4278**	
Iceland	6	**(50)**		5	**(45)**		6	**(50)**		6	**(55)**		0	**(0)**		0	**(0)**		**12**		**11**	
Ireland	269	**(59)**		248	**(57)**		189	**(41)**		186	**(43)**		0	**(0)**		0	**(0)**		**458**		**434**	
Israel	250	**(63)**		259	**(62)**		148	**(37)**		156	**(38)**		0	**(0)**		0	**(0)**		**398**		**415**	
Italy	3215	**(62)**		3160	**(61)**		2000	**(38)**		1984	**(39)**		10	**(0)**		8	**(0)**		**5225**		**5152**	
Latvia	1039	**(67)**		1200	**(68)**		502	**(33)**		561	**(32)**		0	**(0)**		0	**(0)**		**1541**		**1761**	
Lithuania	1606	**(68)**		1728	**(66)**		691	**(29)**		880	**(34)**		65	**(3)**		0	**(0)**		**2362**		**2608**	
Luxembourg	20	**(63)**		22	**(61)**		12	**(38)**		14	**(39)**		0	**(0)**		0	**(0)**		**32**		**36**	
Macedonia	472	**(60)**		422	**(58)**		314	**(40)**		302	**(42)**		0	**(0)**		0	**(0)**		**786**		**724**	
Malta	6	**(60)**		18	**(62)**		4	**(40)**		11	**(38)**		0	**(0)**		0	**(0)**		**10**		**29**	
Moldova	1932	**(70)**		2032	**(70)**		821	**(30)**		890	**(30)**		0	**(0)**		0	**(0)**		**2753**		**2922**	
Netherlands	960	**(59)**		1014	**(60)**		659	**(41)**		664	**(40)**		0	**(0)**		0	**(0)**		**1619**		**1678**	
Norway	137	**(58)**		128	**(59)**		99	**(42)**		89	**(41)**		0	**(0)**		0	**(0)**		**236**		**217**	
Poland	10624	**(67)**		10320	**(67)**		5335	**(33)**		5038	**(33)**		0	**(0)**		0	**(0)**		**15959**		**15358**	
Portugal	3608	**(65**		3385	**(65**		196	**(35**		186	**(35**		0	**(0)**		0	**(0)**		**5577**		**5248**	

		)			)		9	)		3	)								
Romania	16443	(71)		16968	(70)		6828	(29)		7145	(30)		0	(0)		0	(0)		23271		24113
Slovakia	935	(61)		871	(58)		602	(39)		627	(42)		0	(0)		0	(0)		1537		1498
Slovenia	313	(60)		341	(61)		212	(40)		222	(39)		0	(0)		0	(0)		525		563
Sweden	281	(50)		245	(50)		283	(50)		248	(50)		0	(0)		0	(0)		564		493
Switzerland	488	(59)		467	(61)		342	(41)		297	(39)		0	(0)		0	(0)		830		764
Turkmenistan	1156	(58)		1209	(56)		853	(42)		940	(44)		0	(0)		0	(0)		2009		2149
United Kingdom	3493	(57)		3584	(57)		2668	(43)		2656	(43)		0	(0)		0	(0)		6161		6240
Uzkekistan	5599	(57)		6849	(57)		4267	(43)		5070	(43)		0	(0)		0	(0)		9866		11919
Yugoslavia	2445	(59)		2630	(58)		1724	(41)		1880	(41)		0	(0)		31	(1)		4169		4541
* Data not available																					
† Provisional data which are subject to revision																					

Table 8: Tuberculosis cases by geographic origin, 1995 and 1996

Geographic origin = place of birth (18 countries)																		
	Born in the country					Foreign-born					Unknown birth place					Total		
Country	**1995**			**1996**		**1995**			**1996**		**1995**			**1996**			**1995**	**1996**
	N	**(%)**		**N**	**(%)**	**N**	**(%)**		**N**	**(%)**	**N**	**(%)**		**N**	**(%)**		**N**	**N**
Andorra	-	-	*	5	**(29)**	-	-	*	12	**(71)**	-	-	*	0	**(0)**		**-**	**17**
Armenia	-	-	*	820	**(88)**	-	-	*	115	**(12)**	-	-	*	0	**(0)**		**-**	**935**
Czech Republic	1834	**(99)**		1936	**(100)**	17	**(1)**		0	**(0)**	0	**(0)**		0	**(0)**		**1851**	**1936**
Croatia	-	-	*	1052	**(48)**	-	-	*	222	**(10)**	-	-	*	900	**(41)**		**-**	**2174**
Denmark	190	**(42)**		195	**(40)**	246	**(55)**		283	**(58)**	12	**(3)**		6	**(1)**		**448**	**484**
Estonia	-	-	*	681	**(100)**	-	-	*	2	**(0)**	-	-	*	0	**(0)**		**-**	**683**
Finland	611	**(92)**		596	**(93)**	30	**(5)**		34	**(5)**	21	**(3)**		14	**(2)**		**662**	**644**
France	-	-	*	3075	**(40)**	-	-	*	1289	**(17)**	-	-	*	3292	**(43)**		**-**	**7656**
Hungary	-	-	‡	4236	**(99)**	-	-	‡	42	**(1)**	-	-	‡	0	**(0)**		**-**	**4278**

Iceland	11	**(92)**		7	**(64)**	1	**(8)**		4	**(36)**	0	**(0)**		0	**(0)**		**12**	**11**
Israel	-	-	‡	70	**(17)**	-	-	‡	345	**(83)**	-	-	‡	0	**(0)**		**-**	**415**
Luxembourg	15	**(47)**		13	**(36)**	16	**(50)**		23	**(64)**	1	**(3)**		0	**(0)**		**32**	**36**
Malta	6	**(60)**		19	**(66)**	4	**(40)**		10	**(34)**	0	**(0)**		0	**(0)**		**10**	**29**
Norway	139	**(59)**		115	**(53)**	97	**(41)**		102	**(47)**	0	**(0)**		0	**(0)**		**236**	**217**
Slovakia	-	-	‡	1497	**(100)**	-	-	‡	2	**(0)**	-	-	‡	0	**(0)**		**-**	**1499**
Slovenia	401	**(76)**		457	**(81)**	111	**(21)**		106	**(19)**	13	**(2)**		0	**(0)**		**525**	**563**
Sweden	249	**(44)**		198	**(40)**	315	**(56)**		295	**(60)**	0	**(0)**	‡	0	**(0)**		**564**	**493**
Switzerland	-	-	‡	227	**(30)**	-	-	‡	359	**(47)**	-	-	‡	178	**(23)**		**-**	**764**
Geographic origin = citizenship (8 countries)																		

	National citizen					**Foreign citizen**					**Unknown citizenship**					**Total**	
Country	**1995**			**1996**		**1995**			**1996**		**1995**			**1996**		**1995**	**1996**
	N	**(%)**		**N**	**(%)**	**N**	**(%)**		**N**	**(%)**	**N**	**(%)**		**N**	**(%)**		**N**	**N**
Austria	1037	**(75)**		1098	**(76)**	332	**(24)**		347	**(24)**	14	**(1)**		0	**(0)**		**1383**	**1445**
Belgium	919	**(67)**		906	**(67)**	454	**(33)**		435	**(32)**	7	**(1)**		11	**(1)**		**1380**	**1352**
France	5402	**(62)**		4929	**(64)**	2417	**(28)**		1845	**(24)**	904	**(10)**		882	**(12)**		**8723**	**7656**
Germany	8666	**(71)**		8340	**(71)**	3532	**(29)**		3474	**(29)**	0	**(0)**		0	**(0)**		**12198**	**11814**
Italy	4580	**(88)**		4377	**(85)**	525	**(10)**		572	**(11)**	120	**(2)**		203	**(4)**		**5225**	**5152**
Luxembourg	-	-	‡	14	**(39)**	-	-	‡	22	**(61)**	-	-	‡	0	**(0)**		-	**36**
Netherlands	905	**(56)**		808	**(48)**	706	**(44)**		816	**(49)**	8	**(0)**		54	**(3)**		**1619**	**1678**
Switzerland	389	**(47)**		348	**(46)**	441	**(53)**		416	**(54)**	0	**(0)**		0	**(0)**		**830**	**764**

* Data not available

† In 1995, only the distribution by citizenship was provided

‡ In 1995, only the distribution by place of birth was provided

Table 9: Continents of origin, tuberculosis patients of foreign origin, 1995 and 1996

Geographic origin = place of birth (10 countries)												
	Continent of origin										Total	
Country	Europe		Asia		Africa		Other		Unknown		foreign-born patients	
	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996
Denmark	86	31	86	92	133	145	2	15	0	6	**246**	**283**
Estonia	-*	2	-*	0	-*	0	-*	0	-*	0	**-**	**2**
Finland	4	7	6	10	19	17	1	0	0	0	**30**	**34**
Iceland	0	0	1	3	0	0	0	1	0	0	**1**	**4**
Luxembourg	14	16	1	4	1	2	0	1	0	0	**16**	**23**
Malta	0	2	3	4	1	4	0	0	0	0	**4**	**10**
Norway	13	18	50	52	31	30	3	2	0	0	**97**	**102**
Slovakia	-*	1	-*	1	-*	0	-*	0	-*	0	**-**	**2**
Slovenia	110	185	0	0	1	1	0	0	0	0	**111**	**106**
Sweden	-*	81	-*	64	-*	144	-*	11	-*	4	**-**	**295**
Geographic origin = citizenship (5 countries)												
	Continent of origin										Total	
Country	Europe		Asia		Africa		Other		Unknown		foreign patients	
	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996	1995	1996
Austria	240	222	76	83	10	15	6	6	0	21	**332**	**347**
Belgium	111	104	105	110	233	214	6	7	0	0	**455**	**435**
Italy	88	70	97	110	270	249	70	95	0	48	**525**	**572**
Netherlands	65	57	296	251	497	454	47	54	0	0	**905**	**816**
Switzerland	262	204	91	106	72	90	15	15	1	1	**441**	**416**
* Data not available												

Table 10: Tuberculosis cases by site of disease, 1995 and 1996 (38 countries)

Country	Pulmonary/Respiratory						Extra-pulmonary/Extra-respiratory				Unknown				Total	
	1995			1996			1995			1996			1996		1995	1996
	N	(%)		N	(%)		N	(%)		N	(%)		N	(%)	N	N
Pulmonary classification (24 countries)																

Albania	431	**(65)**	*	389	**(55)**		233	**(35)**	*	318	**(45)**		0	**(0)**	*	0	**(0)**		**664**	**707**
Austria	1159	**(84)**		1225	**(85)**		224	**(16)**		220	**(15)**		0	**(0)**		0	**(0)**		**1383**	**1445**
Belgium	1080	**(78)**		1072	**(79)**		294	**(21)**		278	**(21)**		6	**(0)**		2	**(0)**		**1380**	**1352**
Croatia	-	-	†	1995	**(92)**		-	-	†	179	**(8)**		**-**	**-**	†	0	**(0)**		**-**	**2174**
Denmark	333	**(74)**		326	**(67)**		115	**(26)**		158	**(33)**		0	**(0)**		0	**(0)**		**448**	**484**
Estonia	537	**(88)**		614	**(90)**		71	**(12)**		68	**(10)**		0	**(0)**		1	**(0)**		**608**	**683**
Finland	438	**(66)**		431	**(67)**		224	**(34)**		213	**(33)**		0	**(0)**		0	**(0)**		**662**	**644**
France	6415	**(74)**		5604	**(73)**		2305	**(26)**		1797	**(23)**		3	**(0)**		255	**(3)**		**8723**	**7656**
Georgia	-	-	†	7649	**(72)**	‡	-	-	†	2992	**(28)**	‡	**-**	**-**	†	0	**(0)**		**-**	**10641**
Hungary	4088	**(94)**	*	4005	**(94)**		251	**(6)**	*	273	**(6)**		0	**(0)**	*	0	**(0)**		**4339**	**4278**
Iceland	5	**(42)**		7	**(64)**		7	**(58)**		4	**(36)**		0	**(0)**		0	**(0)**		**12**	**11**
Israel	331	**(83)**		343	**(83)**		67	**(17)**		72	**(17)**		0	**(0)**		0	**(0)**		**398**	**415**
Italy	3757	**(72)**		3800	**(74)**		1404	**(27)**		1333	**(26)**		64	**(1)**		19	**(0)**		**5225**	**5152**
Luxemburg	25	**(78)**		29	**(81)**		6	**(19)**		6	**(17)**		1	**(3)**		1	**(3)**		**32**	**36**
Malta	8	**(80)**		18	**(62)**		2	**(20)**		11	**(38)**		0	**(0)**		0	**(0)**		**10**	**29**
Netherlands	1106	**(68)**		1134	**(68)**		513	**(32)**		544	**(32)**		0	**(0)**		0	**(0)**		**1619**	**1678**
Norway	146	**(62)**		149	**(69)**		90	**(38)**		68	**(31)**		0	**(0)**		0	**(0)**		**236**	**217**
Portugal	3818	**(68)**		3598	**(69)**		1759	**(32)**		1650	**(31)**		0	**(0)**		0	**(0)**		**5577**	**5248**
Romania	19537	**(84)**		19951	**(83)**		3730	**(16)**		4160	**(17)**		4	**(0)**		2	**(0)**		**23271**	**24113**
Slovakia	1360	**(88)**	*	1171	**(78)**		177	**(12)**	*	327	**(22)**		0	**(0)**	*	0	**(0)**		**1537**	**1498**
Slovenia	416	**(79)**		454	**(81)**		109	**(21)**		107	**(19)**		0	**(0)**		2	**(0)**		**525**	**563**
Sweden	348	**(62)**		309	**(63)**		216	**(38)**		184	**(37)**		0	**(0)**		0	**(0)**		**564**	**493**
Switzerland	632	**(76)**		594	**(78)**		198	**(24)**		170	**(22)**		0	**(0)**		0	**(0)**		**830**	**764**
United Kingdom	4144	**(67)**	§	4147	**(66)**	§	2017	**(33)**	§	2093	**(34)**	§	0	**(0)**	§	0	**(0)**	§	**6161**	**6240**
Respiratory classification (14 countries)																				

Armenia	-	-	†	862	**(92)**		-	-	†	73	**(8)**		-	-	†	0	**(0)**		**-**	**935**
Bosnia-Herzegovina	1867	**(88)**		2165	**(98)**		265	**(12)**		54	**(2)**		0	**(0)**		1	**(0)**		**2132**	**2220**
Bulgaria	2796	**(86)**		2581	**(83)**		449	**(14)**		528	**(17)**		0	**(0)**		0	**(0)**		**3245**	**3109**
Czech Republic	1485	**(80)**		1606	**(83)**		366	**(20)**		330	**(17)**		0	**(0)**		0	**(0)**		**1851**	**1936**
Germany	10325	**(85)**		9957	**(84)**		1873	**(15)**		1857	**(16)**		0	**(0)**		0	**(0)**		**12198**	**11814**
Ireland	354	**(77)**		339	**(78)**		104	**(23)**		95	**(22)**		0	**(0)**		0	**(0)**		**458**	**434**
Latvia	1448	**(94)**		1677	**(95)**		93	**(6)**		84	**(5)**		0	**(0)**		0	**(0)**		**1541**	**1761**
Lithuania	-	-	†	2331	**(89)**		-	-	†	277	**(11)**		-	-	†	0	**(0)**		-	**2608**
Macedonia	720	**(92)**		654	**(90)**		66	**(8)**		70	**(10)**		0	**(0)**		0	**(0)**		**786**	**724**
Moldova	-	-	†	2729	**(93)**		-	-	†	193	**(7)**		-	-	†	0	**(0)**			**2922**
Poland	14422	**(90)**	||	14761	**(96)**		1537	**(10)**	||	597	**(4)**	||	0	**(0)**	||	0	**(0)**		**15959**	**15358**
Turkmenistan	-	-	†	2061	**(96)**		-	-	†	88	**(4)**		-	-	†	0	**(0)**		-	**2149**
Uzkekistan	8438	**(86)**		10526	**(88)**		1428	**(14)**		1393	**(12)**		0	**(0)**		0	**(0)**		**9866**	**11919**
Yugoslavia	3933	**(94)**		4225	**(93)**		236	**(6)**		285	**(6)**		0	**(0)**		31	**(1)**		**4169**	**4541**

* Respiratory classification in 1995

† Data not available

‡ Provisional data which are subject to revision

§ England & Wales, Northern Ireland: pulmonary classification; Scotland: respiratory classification

|| Pulmonary classification in 1995

Table 11: Tuberculosis cases by bacteriological confirmation, 1995 and 1996 (34 countries)

	Confirmed						**Non confirmed or unknown**						**Total**	
Country	**1995**			**1996**			**1995**			**1996**			**1995**	**1996**
	N	**(%)**		**N**	**(%)**		**N**	**(%)**		**N**	**(%)**		**N**	**N**
Confirmation based on positive culture (12 countries)														
Czech Republic	-	**-**	*	1002	**(52)**		-	**-**	*	934	**(48)**		**-**	**1936**
Denmark	406	**(91)**		427	**(88)**		42	**(9)**		57	**(12)**		**448**	**484**
Finland	471	**(71)**		510	**(79)**		191	**(29)**		134	**(21)**		**662**	**644**

Germany	6871	**(56)**		6639	**(56)**		5327	**(44)**		5175	**(44)**		**12198**	**11814**
Hungary	1909	**(44)**		1830	**(43)**		2430	**(56)**		2448	**(57)**		**4339**	**4278**
Iceland	9	**(75)**		6	**(55)**		3	**(25)**		5	**(45)**		**12**	**11**
Israel	197	**(49)**		206	**(50)**		201	**(51)**		209	**(50)**		**398**	**415**
Norway	150	**(64)**		149	**(69)**		86	**(36)**		68	**(31)**		**236**	**217**
Slovakia	808	**(53)**		786	**(52)**		729	**(47)**		712	**(48)**		**1537**	**1498**
Slovenia	339	**(65)**	†	423	**(75)**		186	**(35)**	†	140	**(25)**		**525**	**563**
Sweden	460	**(82)**		417	**(85)**		104	**(18)**		76	**(15)**		**564**	**493**
Switzerland	652	**(79)**		588	**(77)**		178	**(21)**		176	**(23)**		**830**	**764**
Confirmation based on positive culture or positive sputum smear (22 countries)														
Albania	194	**(29)**		186	**(26)**		470	**(71)**		521	**(74)**		**664**	**707**
Armenia	-	-	*	385	**(41)**	‡	-	**-**	*	550	**(59)**	‡	**-**	**935**
Austria	812	**(59)**		914	**(63)**		571	**(41)**		531	**(37)**		**1383**	**1445**
Belgium	926	**(67)**		905	**(67)**		454	**(33)**		447	**(33)**		**1380**	**1352**
Bosnia-Herzegovina	1210	**(57)**		1131	**(51)**		922	**(43)**		1090	**(49)**		**2132**	**2220**
Croatia	-	-	*	816	**(38)**		-	**-**	*	1358	**(62)**		**-**	**2174**
Estonia	428	**(70)**		440	**(64)**		180	**(30)**		243	**(36)**		**608**	**683**
France	-	-	*	3993	**(52)**		-	**-**	*	3663	**(48)**		-	**7656**
Georgia	-	-	*	1801	**(17)**	‡	-	**-**	*	8840	**(83)**	‡	-	**10641**
Italy	3145	**(60)**		3296	**(64)**		2080	**(40)**		1856	**(36)**		**5225**	**5152**
Latvia	875	**(57)**		1015	**(58)**		666	**(43)**		746	**(42)**		**1541**	**1761**
Lithuania	-	-	*	1261	**(48)**		-	**-**	*	1347	**(52)**		-	**2608**
Luxembourg	24	**(75)**		22	**(61)**		8	**(25)**		14	**(39)**		**32**	**36**
Macedonia	-	-	*	242	**(33)**		-	**-**	*	482	**(67)**		**-**	**724**
Malta	5	**(50)**		9	**(31)**		5	**(50)**		20	**(69)**		**10**	**29**
Moldova	-	-	*	938	**(32)**		-	**-**	*	1984	**(68)**		-	**2922**
Poland	8323	**(52)**		8087	**(53)**		7636	**(48)**		7271	**(47)**		**15959**	**15358**
Portugal	2730	**(49)**		2761	**(53)**		2847	**(51)**		2487	**(47)**		**5577**	**5248**
Romania	14594	**(63)**		14202	**(59)**		8677	**(37)**		9911	**(41)**		**23271**	**24113**
Turkmenistan	-	**-**	*	557	**(26)**		-	**-**	*	1592	**(74)**		**-**	**2149**
Uzbekistan	2736	**(28)**		3350	**(28)**		7130	**(72)**		8569	**(72)**		**9866**	**11919**
Yugoslavia	1955	**(47)**		2157	**(48)**		2214	**(53)**		2384	**(52)**		**4169**	**4541**
* Data not available														
† Confirmation based on positive culture or positive sputum smear in 1995														
‡ Confirmation based on positive sputum smear														

Table 13: Pulmonary or respiratory tuberculosis cases by sputum smear results, 1995 and 1996 (31 countries)

	Smear positive		**Smear negative or**		**Total of**

								unknown						pulmonary / respiratory cases	
Country	**1995**			**1996**				**1995**			**1996**			**1995**	**1996**
	N	**(%)**		**N**	**(%)**			**N**	**(%)**		**N**	**(%)**		**N**	**N**
Pulmorary classification (21 countries)															
Albania	192	**(45)**	*	173	**(44)**			239	**(55)**	*	216	**(56)**		**431**	**389**
Austria	430	**(37)**		422	**(34)**			729	**(63)**		803	**(66)**		**1159**	**1225**
Belgium	488	**(45)**		493	**(46)**			592	**(55)**		579	**(54)**		**1080**	**1072**
Croatia	-	-	†	416	**(21)**			-	-	†	1579	**(79)**		**-**	**1995**
Denmark	153	**(46)**		129	**(40)**			180	**(54)**		197	**(60)**		**333**	**326**
Estonia	278	**(52)**		280	**(46)**			259	**(48)**		334	**(54)**		**537**	**614**
Finland	244	**(56)**		240	**(56)**			194	**(44)**		191	**(44)**		**438**	**431**
France	3449	**(54)**		3002	**(54)**			2966	**(46)**		2602	**(46)**		**6415**	**5604**
Georgia	-	-	†	1801	**(24)**	‡		-	-	†	5848	**(76)**	‡	**-**	**7649**
Hungary	796	**(19)**	*	881	**(22)**			3292	**(81)**	*	3124	**(78)**		**4088**	**4005**
Iceland	2	**(40)**		1	**(14)**			3	**(60)**		6	**(86)**		**5**	**7**
Israel	172	**(52)**		193	**(56)**			159	**(48)**		150	**(44)**		**331**	**343**
Italy	1933	**(51)**		2111	**(56)**			1824	**(49)**		1689	**(44)**		**3757**	**3800**
Malta	5	**(63)**		5	**(28)**			3	**(38)**		13	**(72)**		**8**	**18**
Netherlands	-	-	†	424	**(37)**			-	-	†	710	**(63)**		**-**	**1134**
Portugal	2287	**(60)**		2158	**(60)**			1531	**(40)**		1440	**(40)**		**3818**	**3598**
Romania	11520	**(59)**		11449	**(57)**			8017	**(41)**		8508	**(43)**		**19537**	**19957**
Slovakia	-	-	†	411	**(35)**			-	-	†	760	**(65)**		**-**	**1171**
Slovenia	233	**(56)**		257	**(57)**			183	**(44)**		197	**(43)**		**416**	**454**
Sweden	113	**(32)**		98	**(32)**			235	**(68)**		211	**(68)**		**348**	**309**
Switzerland	229	**(36)**		195	**(33)**			403	**(64)**		399	**(67)**		**632**	**594**
Respiratory classification (10 countries)															
Armenia	-	-	†	385	**(45)**			-	**-**	†	477	**(55)**		**-**	**862**
Czech Republic	515	**(35)**		587	**(37)**			970	**(65)**		1019	**(63)**		**1485**	**1606**
Germany	3852	**(37)**		3680	**(37)**			6473	**(63)**		6277	**(63)**		**10325**	**9957**
Latvia	861	**(59)**		978	**(58)**			587	**(41)**		699	**(42)**		**1448**	**1677**
Lithuania	-	-	†	1261	**(54)**			-	-	†	1070	**(46)**		**-**	**2331**
Macedonia	344	**(48)**		242	**(37)**			376	**(52)**		412	**(63)**		**720**	**654**
Moldova	-	-	†	250	**(9)**			-	-	†	2479	**(91)**		**-**	**2729**
Poland	4335	**(30)**	§	4137	**(28)**			10087	**(70)**	**§**	10624	**(72)**		**14422**	**14761**
Turkmenistan	-	-	†	557	**(27)**			-	-	†	1504	**(73)**		**-**	**2061**
Uzbekistan	-	-	†	3350	**(32)**			-	-	†	7176	**(68)**		**-**	**10526**
* Respiratory classification in 1995															

† Data not available
‡ Provisional data which are subject to revision
§ Pulmonary classification in 1995

Participants

Andorra	Ministry of Health and Welfare	Andorra La Vella
Albania	Ministry of Health and Environment University Hospital of Lung Diseases	Tirana
Armenia	Ministry of Health	Yerevan
Austria	Bundesministerium für Gesundheit	Vienna
Azerbaijan	Institute of Tuberculosis and Lung Diseases	Baku
Belarus	Scientific Research Institute of Pneumology and Phtisiology	Minsk
Belgium	Belgium Lung & Tuberculosis Association (BELTA)	Brussels
Bosnia Herzegovina	Clinic of Pulmonary Diseases and Tuberculosis Public Health Institute	Sarajevo Banja Luka
Bulgaria	Ministry of Health	Sofia
Croatia	Croatian National Institute of Public Health	Zagreb
Czech Republic	University Hospital Bulovka	Prague
Denmark	Statens Serum Institut	Copenhagen
Estonia	Kivimae Hospital Ministry of Health	Tallinn
Finland	National Public Health Institute	Helsinki
France	Direction Générale de la Santé Réseau National de Santé Publique	Paris Saint-Maurice
Georgia	Institute of Phthisiology and Pulmonology	Tbilissi
Germany	Robert Koch-Institut	Berlin
Greece	Ministry of Health & Welfare	Athens
Hungary	Koranyi National Institute Tuberculosis & Pulmonology	Budapest
Iceland	Reykjavik Health Care Centre	Reykjavik
Ireland	Department of Health	Dublin
Israel	Ministry of Health	Jerusalem
Italy	Ministry of Health Istituto Superiore di Sanita	Roma
Kazakstan	Kazakh Tuberculosis Research Institute	Almaty
Kyrgyzstan	National Tuberculosis & Lung Diseases Institute	Bishkek
Latvia	State Centre of Tuberculosis & Lung Diseases	Riga
Lithuania	Lithuanian Centre of Pneumology & Tuberculosis	Vilnius
Luxembourg	Direction de la Santé Publique	Luxembourg
Macedonia, Former Yugoslav Republic	Institute for Lung Diseases and Tuberculosis	Skopje
Malta	Department of Health St Luke's Hospital	G'Mangia
Moldova, Republic of	The Republican Phtisiopulmonology Clinic	Chisinau

Monaco	Direction de l'Action Sanitaire et Sociale	Monaco
Netherlands	Royal Netherlands Tuberculosis Association (KNCV)	The Hague
Norway	National Health Screening Service	Oslo
Poland	National Tuberculosis & Lung Diseases Institute	Warsaw
Portugal	Ministério da Saude	Lisbon
Romania	Institute of Pneumophtisiology "Marius Nasta"	Bucharest
Russian Federation	Russian Research Institute of Pneumophtisiology Central Tuberculosis Research Institute	Moscow
San Marino	Ospedale di Stato di San Marino	Cailungo
Slovakia	Ministry of Health	Bratislava
Slovenia	University Institute of Diseases of the Chest	Ljubljana
Spain	Instituto de Salud “Carlos III”	Madrid
Switzerland	Federal Office of Public Health	Bern
Tajikistan	Tajikistan Medical University	Dushanbe
Turkey	Ministry of Health	Ankara
Turkmenistan	Republican Tuberculosis Control Centre	Ashkhabad
Ukraine	Institute of Tuberculosis & Pulmonology	Kiev
United Kingdom	PHLS Communicable Disease Surveillance Centre Scottish Centre for Infection & Environmental HealthDepartment of Health & Social Services	London Glasgow Belfast
Sweden	Swedish Institute for Infectious Disease Control	Stockholm
Uzbekistan	Ministry of Health	Tashkent
Yugoslavia, Federal Rep.	Institute of Pulmonology & Protection against Tuberculosis	Belgrad