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Surveillance of **Tuberculosis** in Europe - EuroTB 2006

Surveillance of **Tuberculosis** in Europe - **EuroTB**

Report on tuberculosis cases notified in 2006

European Commission

WHO Collaborating Centre for the Surveillance of Tuberculosis in Europe

FRENCH INSTITUTE
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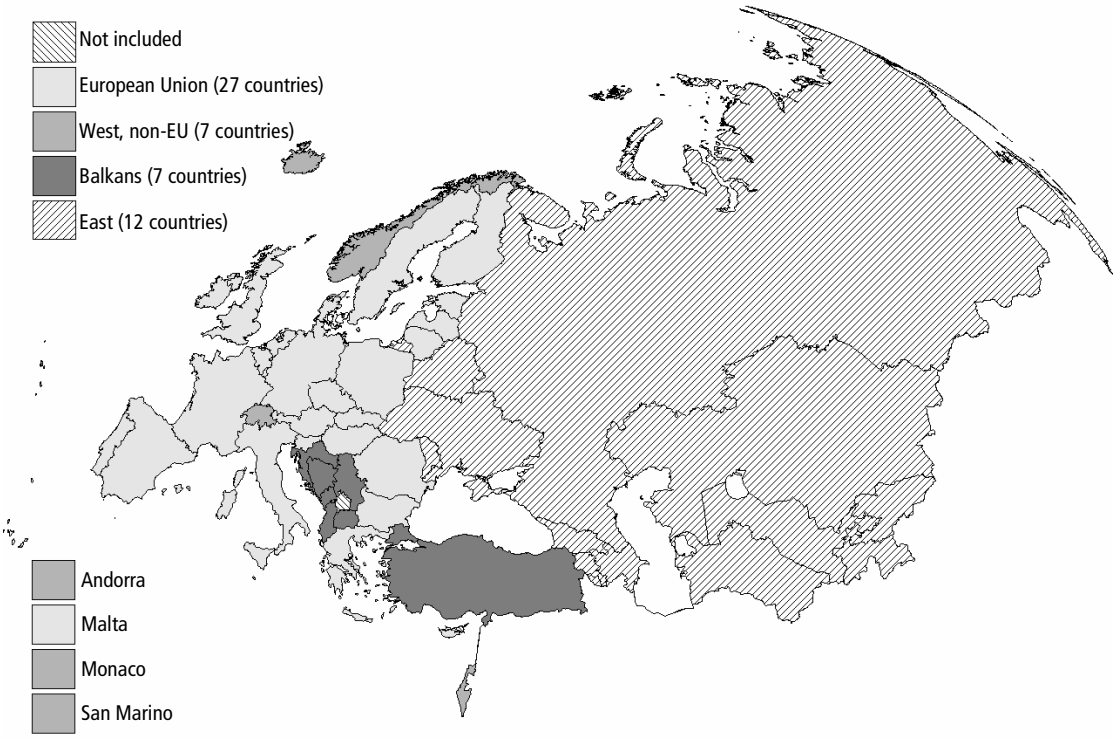
SURVEILLANCE OF TUBERCULOSIS IN EUROPE

Report on tuberculosis cases notified in 2006



EuroTB

European Commission

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Surveillance of Tuberculosis in Europe

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The EuroTB project was set up in 1996 to develop and coordinate a European network of national tuberculosis surveillance institutions in the 53 countries of the WHO European Region. The project was based at the Institut de veille sanitaire (InVS), France, and was financially supported by the European Commission (DG-SANCO) until the end of 2007. The mission statement of EuroTB was to improve the contribution of surveillance to tuberculosis control in the WHO European Region.

A central activity of EuroTB was the collection and validation of national epidemiological information on tuberculosis. The most recent data are presented in this report. The EuroTB reports and other material are available on www.eurotb.org.

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ii) Russian (Русский)

ЕвроТБ и национальные координаторы по эпиднадзору за туберкулезом в Европейском регионе ВОЗ. Эпиднадзор за туберкулезом в Европе. Отчёт о случаях туберкулеза зарегистрированных в 2006 г. Институт общественного здравоохранения и эпидемиологического надзора, Сен Морис, Франция. Март 2008 г.

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1.1 Summary

In 2006, 422,830 cases of tuberculosis (TB) were notified in the WHO European Region. The overall notification rate averaged 48 cases per 100,000, with large variability between countries and an incremental west-to-east gradient in recent years. In general, TB mortality rates in recent years mirrored notification rates in their geographical distribution across the Region (median overall rate: 0.8/100,000, country range: 0.0-25.4).

European Union (EU) and West (34 countries)
The 27 countries of the EU, and Andorra, Iceland, Israel, Norway and Switzerland (West, no data from Monaco and San Marino), reported 89,032 TB cases in 2006. TB notification rates (17/100,000 overall) were highest in Romania (127) and Bulgaria (42) – which joined the EU in 2007 – and in the Baltic States (34-75). Between 2002 and 2006, overall notification rates decreased by 4% yearly, reflecting a decline in previously untreated TB cases. However, substantial increases were observed in Greece (+5%, improved reporting), and in Sweden and United Kingdom (+5% and +4% respectively, mostly in foreign-born cases). In 2006, 20% of cases (country range: 0-100%) were of foreign origin, two-thirds of whom were from Asia or Africa and 7% from the former Soviet Union (FSU). HIV prevalence among TB cases increased in 2000-2006 in Estonia and Latvia (from <1 to 9% and 3% respectively) and doubled in the United Kingdom in 2000-2003 (from 4% to 8%). In the rest of the countries, it was 1% or less in 9 countries, 2-7% in 9 others, 15% in Iceland (2 cases), and 14% in Portugal. Multi-drug resistance (MDR) remained more frequent in the Baltic States (combined MDR: 15-19%) than in the other countries (0-2%; 7% in Israel, 14% in Malta – 2 cases), in which it was generally more common in cases of foreign origin. In 25 countries with complete outcome data (2005), success was reported in 79% of new culture-positive pulmonary cases. Loss to follow up was more frequent among foreign pulmonary cases than nationals (19% vs. 12% respectively) while death was less frequently reported (5% vs. 7%). TB mortality rates ranged from 0.0-9.6/100,000 (29 countries, latest available data 2001-2005).

Balkans (7 countries)
The Balkan countries notified 26,911 cases in 2006, of which 76% by Turkey alone (an additional 1,122 cases were reported by Kosovo). The overall TB notification rate in 2006 was 28/100,000, and higher in Bosnia & Herzegovina (46) than in Albania, Croatia, F.Y.R. of Macedonia, Montenegro, Serbia and Turkey (16 to 31). Notification rates have stabilised in Turkey in recent years, as a result of improved case detection, but they decreased in other countries since 2002 by 4% to 11% yearly. HIV prevalence among TB cases was 0.0-0.6% in the four countries with data. Combined MDR was 0.4-1.9% in the 3 countries with representative data. Success ratios among new definite pulmonary cases in 2005 were 85-97% in three countries, and lower in three others (46-84%; excluding Montenegro pilot programme). TB mortality rates ranged between 2.5 and 3.8/100,000 (4 countries, latest available complete data 2002-2005).

East (12 FSU countries)
In 2006, 306,887 TB cases were reported in the East, 50% of them by the Russian Federation. TB notification rates in 2006 (110/100,000 overall) were highest in Kazakhstan (282), Moldova (160), Georgia (142) and Kyrgyzstan (127), and lower in Armenia, Azerbaijan, Belarus, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan (62-106). The mean annual increase in 2002-2006 was lower than that observed in 1998-2002 (+3% vs +6%). The number of new cases decreased between 2005 and 2006 in 9 countries. HIV prevalence among TB cases was 1% or lower in 7 countries in recent years, but was higher in the Russian Federation and Ukraine (1.7% and 5.1% respectively among new cases in 2006). Nationwide and regional drug resistance data from a number of countries attest to a widespread, high prevalence of MDR (e.g. 7-16% primary MDR in surveys in Georgia, Russian Federation and Ukraine in 2005-2006). In countries reporting outcomes of new smear-positive pulmonary cases (2005), 85% success was reported by two countries but was less in another nine countries (59-82%). Low success associated with high failures (4-14%) may reflect the frequency of 1^{ary} MDR. TB mortality rates ranged from 10.4 to 25.4/100,000 (5 countries with complete data, latest available 2003-2006).

In the European Region, FSU countries have high TB notification and mortality rates, as well as a high burden of TB cases and MDR-TB. The FSU remains the regional priority for TB control, which is often complicated by inadequate information and resources necessary to mount the best-suited response. Further west, recent political changes have influenced the diversity of TB patterns in today's European Union. Industrialized countries anticipating TB elimination, should prioritize control in vulnerable sub-groups. The Baltic States should target MDR, as well as HIV which increasingly contributes to their TB case-load. Central European countries should be vigilant to a possible re-emergence of TB as the one in Western Europe in the early 1990s. EU-candidate states should continue efforts to achieve effective TB surveillance throughout their territories.

1.2 Резюме на русском языке

В 2006 г. в Европейском регионе ВОЗ было зарегистрированно 422 830 случаев туберкулеза (ТБ). Общий показатель зарегистрированных случаев составлял 48 случаев на 100 000 человек, причем в последние годы значительно различался между странами, с последовательным градиентом с Запада на Восток. Показатели смертности от ТБ в последние годы, в общем, отражали показатели сообщенных случаев в их географическом градиенте по региону (общий средний показатель: 0,8/100 000, величина разности: 0,0 – 25,4).

Европейский Союз (ЕС) и Запад (34 страны)
В 2006 г., 27 стран ЕС и Андорра, Исландия, Израиль, Норвегия, и Швейцария (Запад, данные из Монако и Сан Марино отсутствуют) сообщили о 89 032 случаях ТБ. Показатели зарегистрированных случаев ТБ (17/100 000 в общем) были самыми высокими в Румынии (127) и в Болгарии (42) – которые присоединились к ЕС в 2007 г. – а также в прибалтийских странах (34-75). На протяжении с 2002 по 2006 г. показатели снижались на 4 % ежегодно, отражая снижение в ранее нелеченных случаях туберкулеза. Тем не менее, значительное повышение наблюдалось в Греции (+5 %, улучшенная отчетность), а также в Швеции и в Соединенном Королевстве (+5% и +4% соответственно, в большинстве случаев у больных родившихся за рубежом). В 2006 г., 20 % случаев (величина разности : 0–100 %) было иностранного происхождения, из которых, две трети были из Азии или Африки и 7 % из стран бывшего Советского Союза (бывший СССР). Превалентность ВИЧ у случаев ТБ в 2000–2006 годах в Эстонии и Латвии увеличилась (от <1 % до 9% и 3% соответственно), а в Соединенном Королевстве в 2000-2003 годах увеличилась вдвое (от 4% до 8%). В остальных странах она составила 1% или менее в 9 странах, 2 – 7% в 9 других, 15% в Исландии (2 случая), 14 % в Португалии. Множественная лекарственная устойчивость (МЛУ) остается выше в прибалтийских странах (комбинированная МЛУ: 15-19 %) по сравнению с другими странами (0 - 2 %; 7 % в Израиле, 14 % на Мальте – 2 случая), в которых МЛУ наблюдалась, в основном, у лиц иностранного происхождения. В 25 странах предоставивших полные данные по исходам лечения (2005 г.), благоприятный исход сообщался у 79 % новых случаев легочного ТБ с положительной культурой. Прерванное лечение наблюдалось чаще у иностранцев чем у коренных жителей (19 % по сравнению с 12 %, все случаи с легочным ТБ), но менее часто сообщалось о летальных исходах (5 % против 7 %). Показатели смертности от ТБ колебались от 0,0 – 9,6/100 000 (29 стран, последние доступные данные с 2001 до 2005 гг.)

Балканы (7 стран)
В балканских странах было зарегистрированно 26 911 случаев в 2006 г., из которых 76 % только в Турции (а также 1 122 случая в Косово). Общие показатели случаев ТБ в 2006 г. достигли 28/100 000 и были выше в Боснии и Герцеговине (46) чем в Албании, Хорватии, бывшей Югославской республике Македонии, Черногории, Сербии и Турции (16–31). Показатели случаев ТБ в Турции стабилизировались в последние годы в результате улучшения выявления случаев ТБ, но снизились в других странах с 2002 г. (-4 до -11 % ежегодно). Превалентность ВИЧ среди случаев ТБ была <0,0-0,6 % в 4 странах предоставивших данные. Комбинированная МЛУ достигла 0.4-1.9 % в 3 странах предоставивших репрезентативные данные. Пропорция удачного лечения среди новых конкретных легочных случаев (2005 г.) достигла 85-97% в 3 странах, но была более низкой в 3 странах (46–84 %; исключая пилотную программу в Черногории). Показатели смертности от ТБ колебались от 2,5 до 3,8/100 000 (4 страны, последние доступные полные данные с 2002 до 2005 гг).

Восток (12 стран бывшего СССР)
В 2006 г. в Восточной Европе было зарегистрированно 306 887 случаев ТБ, из которых 50 % в Российской Федерации. Показатели случаев ТБ в 2006 г. (110/100 000 в общем) были самые высокие в Казахстане (282), Молдове (160), Грузии (142) и Кыргызстане (127), а более низкие в Армении, Азербайджане, Беларуси, Российской Федерации, Таджикистане, Туркменистане, Украине и Узбекистане (62 – 106). Среднее годовое повышение с 2002 по 2006 гг. было ниже, чем это наблюдалось в 1998-2002 гг. (+3 против +6 %). Количество новых случаев уменьшилось между 2005 и 2006 годом в 9 странах. Превалентность ВИЧ среди случаев ТБ колебалась в пределах 1 % или ниже в 7 странах в последние годы, но была выше в Российской Федерации и в Украине (1.7% и 5.1% соответственно среди новых случаев в 2006 г.) Общенациональные и региональные данные по лекарственной устойчивости из многих стран показывают распространенную превалентность МЛУ (напр: 7-16 % первичной МЛУ в Грузии, Российской Федерации и Украине в 2005-2006 гг.). В странах предоставивших исходы лечения у полных когорт новых легочных случаев с положительным мазком мокроты (2005), 85 % успешного лечения наблюдалось в 2-х странах, но эта пропорция была ниже в остальных 9 странах (59-82 %). Низкий уровень успешного лечения в связи с высокой степенью неудач (неблагоприятного исхода)(4-14 %) возможно отражает частоту первичной МЛУ. Показатели смертности колебались от 10,4 до 25,4/100 000 (5 стран, последние доступные полные данные с 2003 по 2006 гг.).

В Европейском регионе, страны бывшего СССР имеют высокие показатели сообщенных случаев ТБ и смертности, а также высокий уровнь случаев ТБ и МЛУ ТБ. Бывший СССР остается региональным приоритетом для контроля ТБ, что часто усложняется неадекватной информацией и средствами, необходимых для подготовки необходимых мер. Далее на Западе, недавние политические изменения повлияли на многообразие форм ТБ в сегодняшнем ЕС. Промышленно развитые страны, предусматривающие устранение ТБ, должны направить контроль в первую очередь на уязвимые подгруппы. Прибалтийские государства должны направить усилие на борьбу с МЛУ, а также на ВИЧ, которые в возрастающей мере содействуют бремени случаев ТБ. Страны центральной Европы, должны наблюдать за возможным повторным появлением ТБ, как это случилось в Западной Европе в начале 90-х. Страны-кандидаты на вступление в ЕС должны в дальнейшем приложить усилие для осуществления эффективного эпиднадзора за ТБ на своих территориях.

2. Commentary

In 2006, 422,830 tuberculosis (TB) cases were reported by 51 of the 53 countries of the WHO European Region (no data from Monaco and San Marino; Tables 1, 2), representing 7% of TB cases reported to WHO worldwide in the same year [1]. Seventy-three percent of all TB notifications in the Region were reported from the East, 21% from the European Union & West and 6% from the remaining countries in the Balkans (Map 1).

The incidence of TB (overall notification rate 48/100,000) increased progressively when moving from West to East, mirroring also the geographical gradient in TB mortality (Maps 2, 3). Total notification rates (new and previously treated cases) have continued to diverge between the West and East in recent years (Figure 1).

2.1 European Union and West (EU & West)

TB case notification

In 2006, of the 89,032 TB cases reported by the 32 EU & West countries sending data (Table 2), over two-thirds occurred in the six countries which reported more than 5,000 cases each (France, Germany, Poland, Romania, Spain, and United Kingdom). The overall notification rate was 17/100,000, with rates lower than 10/100,000 in 15 countries and higher than 25/100,000 in Romania (127), the Baltic States - Lithuania (75), Latvia (58), Estonia (34) – Bulgaria (42), and Portugal (32). The overall rate in the 12 countries joining the EU since 2004 was over 4 times higher than in the 15 original member states. Despite the increased burden, the overall notification rate in the EU & West in 2006 was 15% lower than that in 2002, reflecting a net downward trend in 21 countries. Overall, the average annual decrease in rates between 2002 and 2006 was larger than that observed between 1998 and 2002 (mean -4.0% versus -1.3% respectively). Nearly all countries experienced a decline in notification rates or stabilisation at low levels in paediatric cases (under 15 years) in recent years suggesting decreasing or low levels of transmission in the general population (Country Profiles). In Bulgaria, Latvia, Lithuania and Romania, however, rates in children are high (19-32/100,000). In Ireland and Italy, an increase in rates in young adults in recent years was compensated by a decrease in the elderly resulting in stabilisation overall. A decrease in the elderly in Norway was accompanied by increases in all other age groups leading to a net increase in rates. Greece, Sweden, and the United Kingdom experienced increases in all age-groups between 2002 and 2006, with a levelling off in the latter years in Greece and Sweden. In Greece, this may be a result of more complete reporting. In Sweden, increases occurred among both native and foreign-born cases until 2005, while in the United Kingdom the increase was largely restricted to foreign-born cases. In Western Europe, TB case rates in the population of foreign origin were much higher than in nationals reflecting a greater predisposition of this sub-population to develop TB (57 vs. 5/100,000 in 13 countries in 2004) [2].

Males predominate among TB cases in nearly all countries, and this feature is more marked among nationals than among cases of foreign origin (overall M:F ratio 1.9 in nationals versus 1.3 in foreign cases, Table 3). This difference remains significant even when excluding Romania. Total M:F ratios were generally lower in countries with < 10 cases/100,000 than those with > 25/100,000 (median: 1.4 vs. 2.2 respectively).

Paediatric cases represented 4% of notifications, in both cases of national and foreign origin (Tables 4, 5). In contrast, the middle-aged (45-64 years) and the elderly (>64 years) together represented more than half the national cases, but only 27% of foreign cases. Most cases of foreign origin were concentrated among younger adults, especially in the 25-34 year age-group (32%). In 29 countries with case-based information, the median age of cases in 2006 was much higher in nationals than in cases of foreign origin (47 and 34 years respectively overall).

In 2006, 20% of TB cases reported were of foreign origin. This proportion was much higher when excluding Bulgaria and Romania (31%), and it ranged from 40 to 100% in 16 countries (Map 4). Overall, 35% of cases of foreign origin were from Asia, 32% from Africa, 20% from another country of the EU & West or Balkans and 7% from Former Soviet Union (FSU) countries other than the Baltic States (data from 27 countries, no cases in Romania; Table 6). Between 2000 and 2006, notifications among nationals decreased in nearly all countries but increased in cases of foreign origin up to 2005 and then decreased in 2006 (Table 7, Figure 2). A sharp drop in foreign cases was observed in Austria, Denmark and Sweden between 2005 and 2006 after an increase in previous years, while a steadier decline occurred since at least 2003 in France, Germany, Israel, The Netherlands, Portugal and Switzerland. Cases in foreigners increased progressively and substantially in Italy and the United Kingdom since at least 2002.

Pulmonary TB was reported in 80% of cases and 20% had exclusive extra-pulmonary disease (Table 8). Mixed sites were present in 5% so that 22% of all TB cases in 27 countries with data had an extra-pulmonary localisation, with a wide range between countries reflecting differences in reporting practices and the ethnic profile of cases. The proportion of pulmonary TB has decreased in the United Kingdom (Table 9), concurrent with recent increments in imported TB cases. In Italy, the proportion of native and foreign-born cases with pulmonary TB decreased, as well as the absolute number of pulmonary cases among natives. A slight increase was also noted in the Baltic States since 2002. Severe forms of extra-pulmonary TB accounted for only 2% of all TB cases reported (range: 0-6% in 22 countries with data, Table 10). Most cases were reported in indigenous adults. In 2002-2006, the rate of TB meningitis in children under 5 years remained < 1.0/10 million general population in most of these countries (Table 11). Rates ≥1.0 on two years or more were reported by Belgium and Ireland (total TB case rates 11/100,000 in 2006), as well as Lithuania, Portugal and Romania (total TB rates >30).

Sputum smear positive rates were lower than 5 cases /100,000 in 21 countries in the last three years (Table 12). They were consistently higher than 10.0 in the Baltic States, Portugal and Romania. Where rates were < 2 cases /100,000, the proportion of pulmonary cases with positive sputum smear was < 45% (except Iceland 2006) suggesting under-reporting. Sputum smear positive rates increased slightly in Italy and Poland in 2004-2006, in parallel with the proportion of pulmonary TB cases reported as sputum smear positive.

In 2006, 80% of the cases had not previously received anti-TB treatment, with wide variation between countries (Table 13, Map 5). This proportion has not changed markedly in the past years but the total number of new cases has decreased progressively and is the main reason for the decline of TB in the EU & West (Figure 1). Wide fluctuations in the proportion of previously-treated cases may result from changes in definition or in patient access (e.g. Estonia, Romania).

When excluding Romania (incomplete results at time of reporting), 56% of cases reported in 2006 were culture-confirmed, but the level differed widely across countries (range: 31-100%, Table 14, Map 6). The overall proportion has remained quite steady in 2003-2006 but substantial improvement in culture confirmation has occurred in France and Lithuania. It has been high - 75% or more – throughout the period in Belgium, Denmark, Estonia, Finland, Luxembourg, Slovenia, Sweden, Norway and Switzerland. Species identification showed *M. tuberculosis* in 93.6% of culture positive cases in 2006 (25 countries, Table 15). *M. bovis* (0.5%) was reported by 12 countries and *M. africanum* (0.3%) by 7 countries. Most *M. bovis* cases (84/124) were indigenous, while half of the *M. africanum* cases were African.

In 14 countries reporting individual data, most or all of the cases satisfied the clinical criteria in terms of the revised European TB case definition (data for the United Kingdom refer only to Scotland, where 384/385 cases met the criteria, Table 16). Diagnosis was made post-mortem in 0-4% of cases. Four countries provided results of histology testing, five for nucleic acid testing and another four for both, with varying completeness. In no country did additional testing increase the fraction of confirmed cases as determined by culture alone (except Germany, 1% more). It did however increase the proportion of cases with laboratory criteria for 'probable' - by up to 8% in some countries - than would have been possible based solely on a positive sputum smear.

Tuberculosis and HIV infection

Aggregated data on HIV sero-status of TB cases reported in 2003 or later were available for 23 countries (Table 17). Completeness of information varied widely due to differences in testing policies and in data collection (only HIV-positive results being reported in some countries). The proportion of TB cases with positive HIV sero-status (for the latest available year 2003-2006) was highest in Iceland (15%, 2 cases) and Portugal (14%), was 2-9% in 12 countries and 0-1% in 9 countries. This proportion increased since 2000 in Estonia (from 0.1% to 9.0%) and Latvia (from 0.7% to 3.4%), both countries which experienced a sharp increase in HIV infection in the early years of this decade **[3]**. In England & Wales, the number of HIV/TB cases and the proportion of TB cases with HIV increased steadily between 2000 and 2003, reflecting trends among recent immigrants from various countries to the United Kingdom **[4]**. In Spain, in contrast, the number of new HIV/TB cases has reportedly decreased since 2002.

TB was initial AIDS-indicative disease in 1,742 (21%) of 8,170 AIDS cases reported in 2006 (33 countries, Table 18). No data on AIDS-indicative TB were available in the Netherlands, Norway and Romania. AIDS cases with TB as initial AIDS-indicative disease represented 2.9% of all TB cases notified in 2006, but countries with some of the highest estimated HIV

prevalence among adults had higher proportions - Portugal (9%), Spain (7%), and Switzerland (5%) **[5]**. When adjusted for reporting delays, annual numbers of AIDS cases with TB as initial AIDS-indicative disease decreased by about 40% overall between 2000 and 2006 (26 countries with data, Table 19).

Anti-tuberculosis drug resistance

Data on anti-TB drug resistance surveillance (DRS) in 2006 were made available by 30 countries, and by Poland and Romania for 2003-2004 (Table 20).

Among 24 countries having more than one laboratory performing drug susceptibility testing (DST), national external quality assurance schemes existed in 15 (Table 21). Apart from Bulgaria, Greece and Luxembourg, all national reference laboratories (NRL) had participated in international quality assurance for DST since 2003. Concordance with the supranational laboratories was 100% for both isoniazid and rifampicin in 17 countries, and 90-98% for one or both drugs in seven countries.

Data from 21 countries performing culture and DST routinely in 2006, and providing DST results as part of a national case-linked dataset, were considered representative (Table 22). Nationwide aggregated data from France and Israel were also included with this group. DST data from another seven countries were considered non-representative. Three of these countries reported DST results in case-based format but the use of culture and/or DST was not routine or results incomplete. Cases resistant to one or more first-line anti-TB drug were reported by all countries except Andorra and Luxembourg. The Baltic States, Bulgaria, Germany, Spain and the United Kingdom had 50 or more multidrug resistant (MDR) cases (Table 23). The proportion of new cases with MDR ranged from 0-7% (Table 24, Map 7), but was higher in Malta (14%, 2 cases) and in the Baltic States (9-13%). Drug resistance was commonly higher in cases of foreign origin compared to nationals (Tables 25, 26, Country Profiles). Between 2001 and 2006, the proportion of foreign-born cases with MDR in Israel was highest in 2006 (8.0%), while in Austria it peaked in 2004 (7.8%, Table 27). The proportion of combined MDR cases decreased in Estonia (since 2001), Latvia (2004-2006, not significantly) and Lithuania (2003-2006), but these trends were not significant for primary MDR cases. This suggests that retreated cases are decreasing faster than incident ones in these countries.

Treatment outcome

Twenty-five countries reported treatment outcome monitoring data for definite pulmonary TB cases in 2005 (Table 28). Complete cohorts of pulmonary culture positive cases were available in all countries except Bulgaria (smear or culture) and Italy (incomplete national coverage, smear or culture). These two countries, as well as Israel, did not report outcomes in case-linked format.

Among previously untreated cases (Table 29), 79% had a successful outcome, 6% died, 4% failed or continued treatment beyond 12 months and 10% were lost to follow up (defaulted, transferred or no known outcome). Among countries with > 20 new cases, success ratios ranged very widely from 50% in Hungary to 90% in Norway and Slovakia. Seven countries (two with < 10 new cases) achieved 85% success or more. Success ratios < 75% were associated with high loss to follow-up (10-35%). In Estonia and Lithuania this was also associated with protracted treatment necessary for a larger case-load of drug-resistant cases. A reduction in cases lost to follow up has led to improvements in success ratios over time, particularly in countries like Portugal and Romania (Figure 3, Country Profiles).

Among previously treated cases (Table 30), the overall success ratio was lower than among new cases (51%; range: 28-93%). Death (10%) and failure or still on treatment (18%) were more frequently reported than among new cases, due to the higher prevalence of drug resistance in this group and to the longer duration of re-treatment regimens. High proportions of loss to follow up (21%) also lowered success ratios.

In the 23 countries reporting comprehensive case-linked data, success was marginally higher in nationals than in cases of foreign origin (74% versus 72%, Table 31), but also deaths (7% versus 5%). In contrast, nationals were less likely to be lost to follow up (12% versus 19%). Cases with pulmonary TB were less likely to succeed treatment and more likely to die than extra-pulmonary cases (74% and 7% versus 81% and 4% respectively, Table 32). This attests to the more serious nature of pulmonary disease, with serious forms of extra-pulmonary disease being rare in the EU & West (see above).

2.2 Balkans

TB case notification

In 2006 TB patients from Turkey accounted for 76% of the 26,911 cases[1] reported by the seven Balkan countries (Table 2). The overall TB notification rate was 28/100,000, with rates higher in Bosnia & Herzegovina (46) than in the other countries (16-31).

[1] Not including 1,122 cases from Kosovo (rate ca. 53/100,000)

Between 2002 and 2006, rates decreased by 4-11% yearly in all countries except Turkey, where a stabilisation in rates – as well as an increase in sputum smear-positive rates since 2005 - followed efforts at improving case detection. In 2006 and before, age-specific notification rates increased progressively from childhood to old age in all countries (excluding elderly in Montenegro in 2006). Over the last few years, rates have been low and stable in children and decreasing in most age-groups in Albania (elderly excluded), Bosnia & Herzegovina, Croatia and Serbia (Country Profiles). In Macedonia F.Y.R., rates are high in children but decreasing or fluctuating in adults.

Only 1% of cases overall were of foreign origin (10% in Croatia), half being from another Balkan country (Tables 3, 6). Two-thirds of total notifications were males. Paediatric cases represented 5% of reported cases in 2006 but reached 13% in Macedonia F.Y.R., suggesting over-notification in children in this country (Table 4).

Pulmonary cases represented 75% of notifications (range: 64-89%), including also cases with mixed disease (3% overall, excluding Montenegro, Tables 8, 9). The proportion of cases with an extra-pulmonary site has been high in Albania (36% in 2006) and Turkey (31%, of which 3% mixed). TB meningitis or disseminated TB represented 0.5% of all TB cases and no paediatric cases of meningitis were reported in 2006 in 5 countries with individual data (Tables 10, 11). More than half of the pulmonary TB cases were smear positive, with an overall rate of smear-positive TB cases of 12.2/100,000 population (Table 12). In none of the countries were rates lower than 5.0/100,000 in recent years although both smear positive cases and rates have decreased progressively in Albania, Bosnia & Herzegovina and Macedonia F.Y.R. since 2004, as well as rates in Croatia.

Only 10% of cases reported in 2006 had been previously treated (range: 6-16%, Table 13). All countries reported culture results in 2006, in contrast to only four in 2003. The proportion of cases confirmed by culture increased since 2005 in all countries except Albania (mean: 38% in 2006, range 33-70%, Table 14). In 3 countries with data, 31% of cases could be classified as confirmed, 16% probable, 40% possible and 7% confirmed only by laboratory as per the new European case definition (Table 16).

Tuberculosis and HIV infection

HIV sero-prevalence among TB cases was reported by four countries and was low (range: 0.0-0.6%, Table 17). While HIV patients may be subject to under-notification (Table 1), this finding is in keeping with the low HIV prevalence and AIDS incidence observed in the general population and in injecting drug users in particular in the Balkan sub-region **[3, 5]**. Among the 141 AIDS cases notified, 34 (24%) had TB as first AIDS indicative disease (Table 18). These represented 0.1% of all TB notifications made by the 7 countries. Total numbers of AIDS cases with initial TB showed no particular trends between 2000 and 2006 (Table 19).

Anti-tuberculosis drug resistance

All countries reported DRS data for 2006, five of which participated in international EQA for DST (Table 20, 21). Case-linked data on DST results were provided by all countries except Montenegro (in this report aggregate data for Bosnia & Herzegovina were used being more complete than case-linked data). Four countries reported no primary MDR cases. Three had complete, nationwide data and reported combined MDR in 0.4-1.9%, while in the other countries combined MDR was higher in Macedonia F.Y.R. and Turkey (3.7% and 5.1% respectively, Table 23). The increase in MDR cases and MDR prevalence in Bosnia & Herzegovina between 2001 and 2005 (from 2 to 11 cases yearly, 0.2% to 1.0%, Table 27) was followed by a decrease in 2006.

Treatment outcome

Outcomes for definite pulmonary TB cases notified in 2005 were reported by all countries, with Croatia and Montenegro providing incomplete data (Table 28). In countries with complete data, success ratios for new definite pulmonary cases averaged 89% (range: 79-97%, Table 29). Deaths were reported in 3% of cases and loss to follow up in 6%. Since 2002, the success ratio has remained stable among new cases in Bosnia & Herzegovina and Macedonia F.Y.R, and improved in Turkey (Country Profiles). Success among retreated cases in 2005 was 72% (range: 70-92%) while deaths (5%) and loss to follow-up (13%) were higher than in new cases (Table 30).

2.3 East

TB case notification

In 2006, the overall TB notification rate in the 12 former Soviet Union countries in the East was 110/100,000 (306,887 cases, Table 2). Rates were higher than the mean in Kazakhstan (282), Moldova (160), Georgia (142) and Kyrgyzstan (127). Half of the cases in the East were reported by the Russian Federation, the only European country on the WHO list of 22 high TB-burden countries in the world **[1]**.

Notification rates increased on average by 3.2% yearly between 2002 and 2006, but this ranged widely between countries (-8% to +13%). It was much lower than that observed between 1998 and 2002 (5.8%). The overall increase was largely attributed to increasing inclusion of previously treated cases (Figure 1), as the number of new cases has been stable and, in 9 countries, actually decreased between 2005 and 2006. In the last 5 years annual increases in excess of 10% were reported by countries where TB control programmes have recently expanded and may therefore be explained by increased detection and patient access to care rather than a true increase in incidence. TB surveillance data and trends in the East have to be interpreted with caution, as in several countries TB notification has been variably affected by global changes in health and in TB control systems since the early 1990s. TB cases diagnosed in specific population groups (e.g. prisoners in the Russian Federation since 1998), and retreated cases other than relapses (e.g. Uzbekistan since 2002) were increasingly included in TB statistics.

In 2006 the male-to-female ratio of cases was 1.4 to 2.0 in the five central Asian republics, and 2.4 to 4.0 in the other countries (Table 3). This wide variation suggests sex-related differences in TB transmission, care and reporting between countries. Nearly all cases reported in the East were autochthonous and only Moldova and the Russian Federation reported foreign citizens, which however represented less than 1% of notified cases.

Paediatric TB cases represented 5% of cases overall, but reached 12% in Kyrgyzstan (new cases only) and Uzbekistan (Table 4). The age group 15-44 years accounted for 63% of cases notified (79% among foreigners in the Russian Fed, Table 5), while only 7% of cases were aged over 64 years. The high case-load in young and middle-aged adults indicates intense transmission in recent years.

In 2006, 87% (country range: 70-94%) of TB cases had pulmonary localisation, of which 39% (31-60%) were sputum smear positive (Tables 8, 12). Rates of pulmonary smear-positive TB were high (mean: 38/100,000, range: 27-117). More countries have reported data on smear-confirmation over time. In 2006, the proportion of retreated cases ranged widely from 6% to 46% (mean: 20%), reflecting differences in the definition of a notifiable case, even between neighbouring countries (Table 13). Compared to 2001, as national treatment programmes expanded, the proportion of retreated cases has increased in all countries except Belarus (no data in 2001), Georgia (stable and high), Turkmenistan and Ukraine.

Culture confirmation has improved since 2003 but still remains infrequent (6 countries reporting in 2006, mean: 34%, range: 1-47%, Table 14, Map 6).

Tuberculosis and HIV infection

Seven countries reported HIV sero-status of notified TB cases (Table 17), and HIV prevalence was 1% or lower in Armenia, Azerbaijan (2003), Belarus (2005), Georgia, Kazakhstan, Tajikistan (Dushanbe) and Uzbekistan. It was higher among new cases in the Russian Federation (1.7%) and Ukraine (5.1%). Azerbaijan and Uzbekistan did not report case-based AIDS data to EuroHIV for 2006, while the other 10 countries together reported 3,485 AIDS cases with initial TB diagnosis, of which 2,836 (81%) from Ukraine alone (Table 18). TB as initial AIDS indicative disease represented 6.9% of total TB cases notified in this country but less than 2.0% in the others. In 5 countries, including the Russian Federation and Ukraine, the number of AIDS-TB cases has clearly increased since 2000 (Table 19).

Low numbers of AIDS cases reported with TB may be due to AIDS underreporting in the East. On the other hand, high TB morbidity among AIDS cases may be influenced by the ease of diagnosis of TB over other AIDS-indicative diseases. However, it may also reflect associated risks for both HIV infection and TB disease in sub-populations like injecting drug-users. Surveillance data currently available in the East are insufficient to monitor the overlap between the HIV and TB epidemics, which are expected to increase both the TB and the MDR-TB case load in the coming years **[6]**.

Anti-tuberculosis drug resistance

In the East, all countries except Belarus and Tajikistan provided DRS data for 2006, albeit only Georgia's were nationwide and representative (Table 20, **[7]**). Results from Kazakhstan in 2006 and previous years were comparable to the findings of a nationwide DST survey in 2001 (Country Profiles). Five countries had participated in international EQA activities since 2005 (Table 21). Levels of primary MDR were 7% in Georgia, 9-16% in Armenia, Kazakhstan, Russian Federation (3 regions), Ukraine (Donetsk region) and Uzbekistan, and 19-26% in Azerbaijan, Kyrgyzstan and Moldova. Prevalence in retreated cases was much higher (16-61%, Table 20). Despite the variable quality of data, this reinforces evidence from elsewhere indicating high prevalence of drug resistance in most countries of the former Soviet Union **[8-10]**.

Treatment outcome

All countries except Ukraine reported TOM data on 2005 cohorts of sputum smear positive pulmonary cases (smear or culture positive cases in Belarus, Table 28). Eight countries had complete nationwide cohorts, while Azerbaijan had a large proportion of cases lost to follow up and reports for the Russian Federation and Uzbekistan were restricted to DOTS units. In countries with complete data, the overall success ratio among previously untreated cases was 74% (range: 62-85%, Table 29). This low success was explained by a combination of high levels of failures (mean: 9%, range: 4-12%) and loss to follow up (9%, range: 6-20%). The proportion of cases lost to follow up precludes certain countries from attaining the 85% treatment success target (Country Profiles). Tajikistan (82% success in new cases) improved data completeness between 2004 and 2005. High failures indicate low effectiveness of initial regimens due to primary MDR and also poor treatment adherence. The proportion of failures among new cases was close to the proportion of primary MDR reported in countrywide surveys in Georgia (5% and 7% respectively, Tables 24, 29) and Kazakhstan (12% and 13%), although case-based data were not available to confirm any links.

Among retreated cases (Table 30), success was lower than 70% in all countries except Kyrgyzstan, while deaths, failures and loss to follow up (12%, 14%, 17% respectively in countries with complete data) were higher than among previously untreated cases.

2.4 TB mortality

Thirty-nine countries reported TB mortality data with complete nationwide coverage for at least one year between 2001 and 2006 (data from Serbia including Montenegro, Table 33). There was a wide regional gradient in the distribution of TB mortality rates (median rate for latest available year: 0.8/100,000, Table 34, Map 3), being 22.0/100,000 population in the East (range: 10.4-25.4), 3.3 in the Balkans (2.5-3.8) and 0.7 in the EU & West (0.0-9.6). Throughout much of the EU & West, TB mortality rates have decreased or remained stable of late. A net decrease in TB mortality rates over 4 to 5 consecutive years in excess of 10% a year was observed in the Czech Republic, Estonia, Finland, Hungary, Ireland, and Switzerland, while rates increased by more than 10% yearly in Belarus.

Across the Region, most TB deaths were from respiratory or miliary disease. Reporting practices may explain certain differences between countries, as for instance, a much larger proportion of TB deaths attributed to miliary disease in Lithuania than in neighbouring Estonia and Latvia. Codes for sequelae of TB and pneumoconiosis associated with TB - shown in Table 33 of this Report but otherwise excluded from TB mortality - were practically never recorded in the East. On the other hand, they were used to varying degrees by nearly all countries in the EU & West and Balkans. Their inclusion would increase TB deaths by about 18% in these two sub-regions. In places like Iceland, Norway and Sweden, codes for late effects were more often used than the standard disease codes for underlying cause of TB death.

TB deaths would be expected to occur among both the incident TB cases and the prevalent pool of patients. Under stable conditions, the relationship between reported TB cases in a country and TB deaths for a given year would be expected to reflect the lethality of the disease. However, under- or over-reporting of TB notifications (reported by national surveillance agencies) or TB deaths (from vital registration systems) would influence any association between these two indicators. In the European Region, the ratio of TB deaths to TB notifications showed no particular geographical pattern. Nonetheless, low death-to-notification ratios (<0.10) were restricted to Western countries, while all Former Soviet Union countries with comprehensive data had high ratios (0.1 or more). This may be due to MDR, which is commonly high in these countries (Table 20), but may also be the effect of high HIV co-morbidity, as in Ukraine (ratio 0.27, Tables 17, 18). The mean age of autochthonous TB cases is higher than that of foreign cases (Tables 4, 5), and death among cases in the EU & West is higher in nationals and known to increase with advancing age (Table 31, **[2]**). Low death-to-notification ratios in countries like Denmark, Israel, The Netherlands, Switzerland and the United Kingdom (0.03-0.05, up to 0.09 if including TB deaths from late effects) may be the result of a lower risk of dying among cases of foreign origin - currently representing more than half the TB notifications in these countries – compared to nationals. In contrast, Finland for instance, where most cases are autochthonous and mean age of the TB patient population is high, the ratio is also high (0.11, and 0.21 if including TB deaths from late effects). These observations suggest differences in risk of dying in the notified case, even if data collection practices may differ.

2.5 Conclusions and recommendations

Surveillance data for tuberculosis portray a diverse epidemiological situation in Europe. Countries of the former Soviet Union remain of concern, with high TB case burden even if the number of new cases has stabilised or is on the decrease. More information has become available attesting to the widespread presence of drug resistance, as well as a high frequency of HIV among new TB cases in Ukraine.

Most countries of the EU & West have continued to experience a steady decrease in overall TB incidence for a number of decades, even if briefly reversed in certain countries in the early 1990s [11]. This decline has been more marked in the autochthonous populations than in immigrants. However, cases in persons of foreign-origin appear to have stabilised in 2005-2006, albeit not in all countries.

Three broad TB epidemiological patterns can be discerned in the EU & West. In western, industrialised countries TB rates are low and disease increasingly aggregates in immigrants and in sub-groups and settings associated with poverty and lowered immunity. Drug-resistance is low but usually higher in cases of foreign origin. HIV-TB varies from low to high. In the Baltic States, TB rates are high, migrant TB is low, drug resistance is high and levels of HIV are increasing among TB patients. In central European states joining the EU since 2004 - several of which border FSU countries - TB incidence is moderate to high but on the decline, and cases of foreign origin, HIV co-morbidity and drug resistance are as yet uncommon.

While TB mortality rates are low in the EU & West, TB still contributes heavily to mortality from infectious diseases in the European Union and a study showed that total TB deaths exceeded those attributed to HIV-infection [12].

Most low incidence countries with data did not exceed the threshold frequencies for TB meningitis in under-5 year olds and for pulmonary sputum smear positive case rates above which continuation of universal BCG vaccination is recommended [13].

The TB case definition for surveillance was revised in 2006 by the European Centre for Disease Prevention and Control (ECDC) to enhance its utility in surveillance. Additional data collected in 2007 to permit classification of cases by the new definition, while very incomplete, did shed light on aspects like post-mortem detection and the use of laboratory testing other than culture and smear in surveillance.

Despite the progress, more effort is needed to improve the uptake of European surveillance recommendations and to ensure comparability of data between countries and over time, particularly in the East. This can be achieved by:

- increasing laboratory reporting of confirmatory TB test results to the surveillance authorities in parallel with case notification so as to improve completeness;
- increasing coverage of TB case-based reporting and adherence by countries to the case definition;
- implementing drug resistance surveillance more widely, either by collecting initial DST results for all cases or via periodic prevalence surveys [14];
- implementing treatment outcome monitoring and developing additional targets for treatment results, including outcome after 12-months;
- as in most countries TB patients represent a useful sentinel for the progression of the HIV epidemic, surveillance of HIV among TB cases using national TB and HIV/AIDS case reporting, or by conducting HIV prevalence surveys in areas with high or increasing HIV prevalence, is important [15];
- developing indicators to monitor TB control in risk groups, including TB screening, contact investigation and outbreak management, all crucial in low incidence countries [16].

Improved tuberculosis surveillance would be expected to contribute to public health action by:

- describing the TB situation in a more complete, accurate and timely way as a means to inform better the decision-makers on priorities in TB control across the different parts of the European Region;
- targeting high incidence zones (e.g. metropolitan areas [17]) and sub-populations (e.g. recent immigrants, prisoners) at increased risk of TB infection, drug-resistance or unfavourable outcome of disease in order to prioritise preventive measures. These groups may also be subject to under-reporting (Table 1);
- advocating for the joint case management of HIV/TB patients;
- putting laboratories on the fore front of public-health action, giving due importance to their role in confirmatory testing, detection of cases with directly transmissible disease, and drug-susceptibility testing;
- preventing the emergence of drug resistance by ensuring better case holding and management;
- sensitizing public health workers and clinicians to risk factors – particularly those modifiable - associated with unfavourable treatment outcome, to permit timely action on the individual patient level.

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3. TABLES

Summary Table

Tuberculosis surveillance data by area, WHO European Region, 2006

	Table showing data by country	Geographic area *						Total	
		European Union & West		Balkans		East			
		N†		N†		N†		N†	
Total population (millions)	-	34	513.1	7	95.6	12	278.3	53	887.0
Demographic and clinical features of TB cases, 2006									
Total number of cases	2	32	89 032	7	26 911	12	306 887	51	422 830
TB cases / 100 000 population	2	32	17.4	7	28.1	12	110.3	51	47.7
Mean annual % change in notification rate (2002-2006)	2	32	-4.0%	7	-1.4%	12	+3.2%	51	+0.9%
Foreign origin	3	32	20%	7	1%	12	0%	51	4%
Sex ratio (male to female), nationals	3	32	1.9	7	1.7	12	2.1	51	2.0
Sex ratio (male to female), foreign born / citizens	3	32	1.3	7	1.6	3	3.5	42	1.4
Age over 64 years, nationals	4	32	20%	7	15%	11	7%	50	10%
Age over 64 years, foreign born / citizens	5	32	9%	7	22%	2	2%	41	9%
Pulmonary disease	8	31	80%	7	75%	11	87%	49	85%
Pulmonary sputum smear positive cases / 100 000 population	12	31	6.6	7	12.2	11	38.0	49	16.9
Not previous treated (diagnosed) for TB	13	32	80%	7	90%	12	75%	51	77%
Culture positive	14	32	45%	7	38%	6	34%	45	37%
HIV infection among TB cases (latest available data 2003-2006)	17	23	2.5%	4	0.3%	9	1.9%	36	2.0%
TB deaths / 100 000 (median, latest available rates 2002-2006) ‡	34	28	0.7	4	3.3 §	5	22.0	37	0.8
Multidrug resistance (MDR), 2006 ‡									
Primary MDR (median)	24	23	1.1%	3	0.0%	1	6.8%	27	0.9%
Nationals, combined MDR (median)	25	23	0.5%	3	0.6%	1	15.4%	27	0.6%
Foreign-born/citizens, combined MDR (median)	26	23	1.8%	1	1.0%	0	-	24	1.7%
Outcome, new definite pulmonary cases, 2005 ‡‖									
Success (cure or treatment completion)	29	25	79%	5	89%	8	74%	38	79%
Death	29	25	6%	5	3%	8	6%	38	5%
Failure	29	25	2%	5	1%	8	9%	38	4%
Still on treatment	29	25	2%	5	1%	8	2%	38	2%
Loss to follow up (default, transfer, unknown)	29	25	10%	5	6%	8	9%	38	9%

* Mean value unless otherwise indicated; for definition of geographic areas see Technical Note

† Number of countries with available data and included in the statistics

‡ Including only countries with complete/representative nationwide data (see Technical Note)

§ Data from Serbia including Montenegro, counting as 2 countries

‖ Among culture positive pulmonary cases in 26 EU & West and Balkan countries; in other countries defined by smear or combination of smear and culture

Primary MDR: among previously untreated cases; Combined MDR: among all cases tested (see Technical Note)

Table 1. Data format and completeness of tuberculosis reporting, WHO European Region, 2006

Geographic area / Country	Format of TB notification data reported to European surveillance	Parallel reporting by laboratories	Under-reporting (2006 or as indicated)							
			Estimated % of notifiable TB cases reported	Method of estimation	Sub-groups considered particularly subject to under-notification					
					Immigrants	Prisoners	Children	AIDS-patients	Elderly	Certain regions*
EU-15 (pre-2004)										
Austria	Case-based	all	-	-	X	X	X	X	X	X
Belgium	Case-based	all	-	-						
Denmark	Case-based	all	99%	Not stated	X					
Finland	Case-based	all	95%	Survey in the late 90s						
France	Case-based	all	70%	Use of anti-TB drugs (2003)						
			~70%	Capture-recapture (TB mening., 2000)						
Germany	Case-based	all	-	-						
Greece	Case-based	all	-	-						
Ireland	Case-based	all	-	-	X			X		
Italy	Case-based	no	-	-	X	X	X	X	X	
Luxembourg	Case-based	all	100%	Not stated						
Netherlands	Case-based	no	93%	Capture-recapture (1998)						
Portugal	Case-based	some	92%	Capture-recapture (2003)	X				X	X
Spain	Aggregate	no	-	-						
Sweden	Case-based	all†	-	-						
United Kingdom	Case-based	some	>85% ‡	Capture-recapture (2001-2)		X	X	X		
New EU countries (since 2004)										
Bulgaria	Aggregate	all	98% §	Not stated	X					
Cyprus	Case-based	all	100%	Surveillance vs. lab data						
Czech Republic	Case-based	all	98%	Surveillance vs. lab data	X					
Estonia	Case-based	all	80%	Not stated	X	X	X	X	X	X
Hungary	Case-based	all	95%	Not stated					X	
Latvia	Case-based	some	100%	Surveillance vs. lab data						
Lithuania	Case-based	all	100%	Not stated						
Malta	Case-based	all	100%	Surveillance vs. lab data						
Poland	Case-based	all	95%	Not stated	X			X	X	
Romania	Case-based	some	80%	Compared to WHO estimates (2005)						
Slovakia	Case-based	all	99%	Surveillance vs. clinical data	X					
Slovenia	Case-based	all	96%	Capture-recapture	X				X	
West, non-EU										
Andorra	Case-based	all	100%	Not stated						
Iceland	Case-based	all	-	-						
Israel	Aggregate	all	100%	Compared to patient expenditure						
Monaco	Not reporting	-	-	-						
Norway	Case-based	all	95%	Compare data from diff. sources						
San Marino	Not reporting	-	-	-						
Switzerland	Case-based	all	95%	Not stated						
Balkans										
Albania	Case-based	some	-	-		X	X	X	X	X
Bosnia & Herzegovina	Case-based	some	-	-						
Croatia	Case-based	all	-	-						
Macedonia, F.Y.R.	Case-based	all	-	-	X	X	X	X	X	
Montenegro	Aggregate	some	90%	Not stated		X	X	X	X	X
Serbia	Case-based	all	98%	Compare data from diff. sources		X		X		
Turkey	Case-based	some	-	-				X		
East										
Armenia	Aggregate	no	100%	Not stated						
Azerbaijan	Aggregate	no	- ‖	-						
Belarus	Aggregate	all	100% ‖	Not stated	X					
Georgia	Case-based	no	96% ‖	Compared to WHO estimates						X
Kazakhstan	Aggregate	all	100% ‖	Not stated	X					
Kyrgyzstan	Aggregate	all	100% ‖	Not stated						
Moldova	Aggregate	no	-	-						
Russian Federation	Aggregate	no	79%	Compared to national estimate	X					X
Tajikistan	Aggregate	some	48% ‖	Compared to WHO estimates	X	X	X	X		X
Turkmenistan	Aggregate	all	- ‖	-		X				
Ukraine	Aggregate	all	- ‖	-		X		X		
Uzbekistan	Aggregate	all	80% ‖	Not stated	X	X	X	X		

* See also Technical Note for places and regions which are not included in this Report

† Not including histology or nucleic-acid testing results

‡ In Scotland estimated at 100% in 2006

§ Under-reporting only among immigrants

‖ Cases of foreign origin not included in reporting system

Table 2. Tuberculosis cases, case rates per 100,000 population and mean annual change in rates, WHO European Region, 2002-2006

Geographic area / Country	2002 N	2002 Rate	2003 N	2003 Rate	2004 N	2004 Rate	2005 N	2005 Rate	2006 N	2006 Rate	Mean annual % change in rate, 2002-2006
EU-15 (pre-2004)											
Austria	1 076	13.2	980	11.9	1 061	12.9	999	12.0	873	10.5	-5.2%
Belgium	1 294	12.6	1 117	10.8	1 198	11.6	1 107	10.6	1 127	10.8	-3.4%
Denmark *	419	7.8	393	7.3	385	7.1	422	7.8	377	6.9	-2.6%
Finland	473	9.1	412	7.9	331	6.3	361	6.9	299	5.7	-10.4%
France	6 322	10.3	6 098	9.8	5 514	8.8	5 374	8.6	5 336	8.4	-4.7%
Germany	7 701	9.3	7 166	8.7	6 542	7.9	6 020	7.3	5 402	6.5	-8.5%
Greece	582	5.3	620	5.6	774	7.0	769	6.9	681	6.1	4.6%
Ireland	408	10.4	407	10.2	432	10.6	450	10.9	458	10.8	1.1%
Italy	4 212	7.3	4 518	7.8	4 220	7.2	4 137	7.1	4 387	7.5	0.9%
Luxembourg	32	7.2	54	12.0	31	6.9	37	8.1	33	7.2	7.7%
Netherlands	1 401	8.7	1 321	8.2	1 344	8.3	1 155	7.1	1 021	6.2	-7.8%
Portugal	4 501	43.5	4 148	39.8	3 854	36.8	3 573	33.9	3 423	32.4	-7.1%
Spain	7 626 †	18.4	7 467 †	17.7	7 766	18.1	7 820	18.0	8 029	18.3	-0.1%
Sweden	407	4.6	408	4.6	461	5.1	559	6.2	497	5.5	5.4%
United Kingdom	7 263	12.2	7 220	12.1	7 609	12.7	8 317	13.8	8 498	14.0	3.6%
Subtotal EU-15	**43 717**	**11.4**	**42 329**	**11.0**	**41 522**	**10.7**	**41 100**	**10.6**	**40 441**	**10.4**	**-2.4%**
New EU countries (since 2004)											
Bulgaria	3 335	42.2	3 263	41.6	3 232	41.5	3 302	42.6	3 232	42.0	-0.1%
Cyprus	20	2.5	35	4.3	30	3.6	37	4.4	37	4.4	19.6%
Czech Republic	1 200	11.8	1 162	11.4	1 057	10.4	1 007	9.9	973	9.5	-5.0%
Estonia	713	52.5	623	46.1	594	44.1	519	38.6	455	34.0	-10.3%
Hungary	2 838	27.9	2 582	25.5	2 340	23.1	1 964	19.5	1 894	18.8	-9.3%
Latvia	1 855	79.1	1 726	74.1	1 610	69.5	1 443	62.7	1 328	58.0	-7.4%
Lithuania	2 844	82.0	2 821	81.7	2 514	73.1	2 574	75.2	2 559	75.1	-2.0%
Malta	24	6.1	7	1.8	19	4.7	25	6.2	30	7.4	37.2%
Poland	10 475	27.3	10 124	26.4	9 493	24.8	9 280	24.3	8 593	22.5	-4.7%
Romania	33 595	153.2	31 039	142.2	31 034	142.8	29 289	135.4	27 319	126.9	-4.6%
Slovakia	1 053	19.5	983	18.2	705	13.1	760	14.1	730	13.5	-7.8%
Slovenia	350	17.6	293	14.7	263	13.2	278	13.9	215	10.7	-11.0%
Subtotal New EU countries	**58 302**	**55.9**	**54 658**	**52.5**	**52 891**	**51.0**	**50 478**	**48.8**	**47 365**	**45.9**	**-4.8%**
Subtotal all EU ('EU-27')	**102 019**	**20.9**	**96 987**	**19.8**	**94 413**	**19.2**	**91 578**	**18.6**	**87 806**	**17.8**	**-4.0%**
West, non-EU											
Andorra	5	7.2	11	15.6	7	9.7	10	13.6	13	17.5	36.6%
Iceland	8	2.8	5	1.7	12	4.1	11	3.7	13	4.4	26.8%
Israel	511	8.1	529	8.2	519	7.9	406	6.1	386	5.7	-7.9%
Monaco	0	0.0	1	3.1	-	-	-	-	-	-	-
Norway	251	5.5	337	7.4	302	6.6	288	6.2	294	6.3	4.6%
San Marino	1	3.5	1	3.5	0	0.0	-	-	-	-	-
Switzerland	658	9.0	623	8.5	593	8.0	567	7.6	520	7.0	-6.1%
Total EU & West	**103 453**	**20.5**	**98 494**	**19.4**	**95 846**	**18.8**	**92 860**	**18.2**	**89 032**	**17.4**	**-4.0%**
Balkans											
Albania	612	19.8	561	18.0	581	18.5	540	17.1	502	15.8	-5.3%
Bosnia & Herzegovina	2 551	65.7	1 780 ‡	45.7	2 382	61.0	2 160	55.2	1 800	45.8	-11.2%
Croatia	1 470	32.6	1 493	33.0	1 297	28.6	1 141	25.1	1 135	24.9	-6.3%
Macedonia, F.Y.R.	730	36.1	697	34.4	680	33.5	658	32.4	627	30.8	-3.9%
Montenegro	-	-	-	-	-	-	170	28.0	171	28.5	-
Serbia §	3 033 ‖	37.4	2 949 ‖	36.2	2 824 ‖	34.7	2 378	32.0	2 150	29.0	-6.1%
Turkey	19 028	27.1	18 590	26.2	19 799	27.5	20 535	28.1	20 526	27.8	0.6%
Total Balkans	**27 424**	**29.9**	**26 070**	**28.1**	**27 563**	**29.4**	**27 582**	**29.1**	**26 911**	**28.1**	**-1.4%**
East											
Armenia	1 455	47.7	1 570	51.7	1 701	56.2	2 322	76.9	2 155	71.6	11.8%
Azerbaijan	5 348	65.0	3 931	47.6	6 501	78.3	7 920	94.8	7 498	89.2	13.2%
Belarus	5 139	51.6	5 963	60.2	6 490	65.9	6 357	64.9	6 065	62.3	5.1%
Georgia ¶	6 345	137.5	5 993	131.3	5 967	132.1	6 448	144.1	6 311	142.4	1.0%
Kazakhstan	32 936	220.6	32 169	214.3	32 131	212.7	31 187	205.0	43 204	282.1	7.6%
Kyrgyzstan	6 794	134.3	7 025	137.6	6 641	128.9	6 765	130.0	6 656	126.6	-1.4%
Moldova	4 149	102.9	5 027	126.4	6 008	153.1	6 278	161.9	6 118	159.6	12.1%
Russian Federation	134 812	92.2	152 244	104.7	152 438	105.4	156 047	108.4	152 265	106.3	3.8%
Tajikistan	4 052	64.1	4 883	76.4	5 122	79.2	7 142	109.0	6 671	100.5	13.2%
Turkmenistan	4 635	100.1	4 759	101.3	4 172	87.5	3 291	68.1	3 369	68.8	-8.4%
Ukraine	40 175	83.7	40 659	85.3	38 403	81.2	43 367	92.4	41 265	88.6	1.7%
Uzbekistan	27 009	106.1	26 172	101.3	25 714	98.1	28 891	108.6	25 310	93.8	-2.7%
Total East	**272 849**	**97.3**	**290 395**	**103.8**	**291 288**	**104.3**	**306 015**	**109.8**	**306 887**	**110.3**	**3.2%**
Total WHO European Region	**403 726**	**46.0**	**414 959**	**47.1**	**414 697**	**47.0**	**426 457**	**48.2**	**422 830**	**47.7**	**0.9%**

Note: for TB cases and case rates by country and year for the whole period 1995-2006 please see www.eurotb.org

* Excluding Greenland (73 cases in 2006, see Technical Note)

† New and recurrent respiratory and meningeal cases

‡ Excluding Republika Srpska

§ Excluding Kosovo (1 122 cases in 2006, see Technical Note)

‖ Including cases from Montenegro

¶ Excluding cases from Abkhazia and Southern Ossetia

Table 3. Tuberculosis cases by geographic origin and sex ratio, WHO European Region, 2006

Geographic area	Criterion	Origin										
		National			Foreign			Unknown			Total	
Country		N	(%)	Sex ratio (M:F)*	N	(%)	Sex ratio (M:F)*	N	(%)	Sex ratio (M:F)*	N	Sex ratio (M:F)*
EU & West												
Austria	**citizenship**	540	(62)	1.9	333	(38)	1.7	0	(0)	-	873	1.8
Belgium	**citizenship**	552	(49)	1.8	575	(51)	1.6	0	(0)	-	1 127	1.7
Bulgaria	**citizenship**	3 232	(100)	1.9	0	(0)	-	0	(0)	-	3 232	1.9
Cyprus	birthplace	9	(24)	1.3	28	(76)	0.2	0	(0)	-	37	0.3
Czech Republic	birthplace	843	(87)	1.6	130	(13)	2.0	0	(0)	-	973	1.7
Denmark	birthplace †	160	(42)	2.4	216	(57)	1.1	1	(0)	N/F	377	1.5
Estonia	birthplace	382	(84)	2.2	70	(15)	2.5	3	(1)	0.5	455	2.3
Finland	birthplace	244	(82)	1.5	37	(12)	1.6	18	(6)	1.0	299	1.5
France	birthplace	2 830	(53)	1.4	2 308	(43)	1.6	198	(4)	1.3	5 336	1.4
Germany	birthplace	2 930	(54)	1.6	2 237	(41)	1.2	235	(4)	1.5	5 402	1.4
Greece	birthplace	453	(67)	1.6	215	(32)	2.7	13	(2)	2.3	681	1.9
Hungary	birthplace	1 799	(95)	2.0	42	(2)	1.8	53	(3)	1.5	1 894	2.0
Ireland	birthplace	288	(63)	1.6	151	(33)	1.3	19	(4)	2.0	458	1.5
Italy	birthplace	2 320	(53)	1.4	2 026	(46)	1.5	41	(1)	1.1	4 387	1.5
Latvia	birthplace	1 232	(93)	2.3	69	(5)	1.8	27	(2)	1.5	1 328	2.2
Lithuania	birthplace	2 486	(97)	2.4	73	(3)	2.3	0	(0)	-	2 559	2.4
Luxembourg	birthplace	11	(33)	0.8	20	(61)	1.5	2	(6)	1.0	33	1.2
Malta	**citizenship**	13	(43)	3.3	17	(57)	16.0	0	(0)	-	30	6.5
Netherlands	birthplace	357	(35)	1.3	642	(63)	1.4	22	(2)	1.2	1 021	1.4
Poland	**citizenship**	8 546	(99)	2.0	47	(1)	2.1	0	(0)	-	8 593	2.0
Portugal	birthplace	3 036	(89)	2.1	387	(11)	2.0	0	(0)	-	3 423	2.1
Romania	birthplace	27 319	(100)	2.2	0	(0)	-	0	(0)	-	27 319	2.2
Slovakia	birthplace	719	(98)	1.8	11	(2)	10.0	0	(0)	-	730	1.8
Slovenia	birthplace	181	(84)	1.0	34	(16)	2.4	0	(0)	-	215	1.2
Spain	birthplace	4 513	(56)	1.8	1 552	(19)	1.5	1 964	(24)	1.8	8 029	1.8
Sweden	birthplace	140	(28)	1.5	357	(72)	1.0	0	(0)	-	497	1.1
United Kingdom	birthplace	2 137	(25)	1.4	5 430	(64)	1.1	931	(11)	1.3	8 498	1.2
Subtotal EU		**67 272**	**(77)**	**1.9**	**17 007**	**(19)**	**1.4**	**3 527**	**(4)**	**1.6**	**87 806**	**1.8**
Andorra	birthplace	0	(0)	-	13	(100)	1.6	0	(0)	-	13	1.6
Iceland	birthplace	3	(23)	N/F	10	(77)	0.7	0	(0)	-	13	1.2
Israel	birthplace	70	(18)	1.4	316	(82)	1.3	0	(0)	-	386	1.4
Monaco	-	-	-	-	-	-	-	-	-	-	-	-
Norway	birthplace	56	(19)	1.3	238	(81)	0.9	0	(0)	-	294	1.0
San Marino	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	birthplace	80	(15)	2.0	308	(59)	1.0	132	(25)	1.3	520	1.2
Total EU & West		**67 481**	**(76)**	**1.9**	**17 892**	**(20)**	**1.3**	**3 659**	**(4)**	**1.6**	**89 032**	**1.8**
Balkans												
Albania	**citizenship**	501	(100)	1.8	1	(0)	N/M	0	(0)	-	502	1.8
Bosnia & Herzegovina	**citizenship**	1 800	(100)	1.1	0	(0)	-	0	(0)	-	1 800	1.1
Croatia	birthplace	543	(48)	1.9	119	(10)	1.5	473	(42)	1.5	1 135	1.7
Macedonia, F.Y.R.	birthplace	622	(99)	1.4	5	(1)	0.7	0	(0)	-	627	1.4
Montenegro	**citizenship**	170	(99)	1.8	1	(1)	N/F	0	(0)	-	171	1.8
Serbia	**citizenship**	2 113	(98)	1.6	20	(1)	1.9	17	(1)	4.3	2 150	1.6
Turkey	birthplace	20 408	(99)	1.8	118	(1)	1.8	0	(0)	-	20 526	1.8
Total Balkans		**26 157**	**(97)**	**1.7**	**264**	**(1)**	**1.6**	**490**	**(2)**	**1.6**	**26 911**	**1.7**
East												
Armenia	**citizenship**	2 155	(100)	4.0	0	(0)	-	0	(0)	-	2 155	4.0
Azerbaijan	birthplace	7 498	(100)	3.6	0	(0) ‡	-	0	(0)	-	7 498	3.6
Belarus §	**citizenship**	6 065	(100)	2.5	0	(0) ‡	-	0	(0)	-	6 065	2.5
Georgia	**citizenship**	6 311	(100)	2.6	0	(0) ‡	-	0	(0)	-	6 311	2.6
Kazakhstan	**citizenship**	43 204	(100)	1.6	0	(0) ‡	-	0	(0)	-	43 204	1.6
Kyrgyzstan §	**citizenship**	6 656	(100)	1.4	0	(0) ‡	-	0	(0)	-	6 656	1.4
Moldova	**citizenship**	6 091	(100)	2.8	27	(0)	3.5	0	(0)	-	6 118	2.8
Russian Federation §	**citizenship**	130 263	(86)	2.4	554	(0)	3.5	21 448	(14)	-	152 265	2.4
Tajikistan	**citizenship**	6 671	(100)	1.5	0	(0) ‡	-	0	(0)	-	6 671	1.5
Turkmenistan	birthplace	3 369	(100)	2.0	0	(0) ‡	-	0	(0)	-	3 369	2.0
Ukraine §	**citizenship**	41 265	(100)	2.4	0	(0) ‡	-	0	(0)	-	41 265	2.4
Uzbekistan	**citizenship**	25 310	(100)	1.4	0	(0) ‡	-	0	(0)	-	25 310	1.4
Total East		**284 858**	**(93)**	**2.1**	**581**	**(0)**	**3.5**	**21 448**	**(7)**	**-**	**306 887**	**2.1**
Total WHO European Region		**378 496**	**(90)**	**2.0**	**18 737**	**(4)**	**1.4**	**25 597**	**(6)**	**1.6**	**422 830**	**2.0**

* Ratio calculated on cases with available information on sex. N/F = no females in sub-group; N/M = no males in sub-group.

† By birthplace of parents for Danish-born cases under 26 years of age

‡ Cases of foreign origin not included in reporting system

§ Sex ratio calculated on cases not previously treated for TB

Table 4. Tuberculosis cases of national origin, by age group, WHO European Region, 2006

NATIONAL ORIGIN (age-groups in years)

Geographic area	0-4		5-14		15-44		45-64		>64		Unknown		Total
Country	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	
EU & West													
Austria	9	(2)	12	(2)	144	(27)	198	(37)	177	(33)	0	(0)	540
Belgium	18	(3)	18	(3)	168	(30)	187	(34)	161	(29)	0	(0)	552
Bulgaria	64	(2)	133	(4)	1 386	(43)	1 062	(33)	587	(18)	0	(0)	3 232
Cyprus	3	(33)	0	(0)	1	(11)	1	(11)	4	(44)	0	(0)	9
Czech Republic	1	(0)	2	(0)	152	(18)	340	(40)	348	(41)	0	(0)	843
Denmark *	2	(1)	2	(1)	63	(39)	63	(39)	30	(19)	0	(0)	160
Estonia	1	(0)	6	(2)	187	(49)	150	(39)	38	(10)	0	(0)	382
Finland	0	(0)	0	(0)	24	(10)	70	(29)	150	(61)	0	(0)	244
France	79	(3)	110	(4)	980	(35)	693	(24)	966	(34)	2	(0)	2 830
Germany	81	(3)	52	(2)	771	(26)	860	(29)	1 165	(40)	1	(0)	2 930
Greece	4	(1)	23	(5)	92	(20)	142	(31)	191	(42)	1	(0)	453
Hungary	2	(0)	6	(0)	510	(28)	867	(48)	414	(23)	0	(0)	1 799
Ireland	8	(3)	6	(2)	127	(44)	79	(27)	67	(23)	1	(0)	288
Italy	71	(3)	47	(2)	552	(24)	571	(25)	1 007	(43)	72	(3)	2 320
Latvia	43	(3)	41	(3)	627	(51)	408	(33)	113	(9)	0	(0)	1 232
Lithuania	35	(1)	71	(3)	1 074	(43)	972	(39)	334	(13)	0	(0)	2 486
Luxembourg	0	(0)	0	(0)	3	(27)	4	(36)	4	(36)	0	(0)	11
Malta	0	(0)	1	(8)	1	(8)	3	(23)	8	(62)	0	(0)	13
Netherlands	12	(3)	17	(5)	132	(37)	76	(21)	120	(34)	0	(0)	357
Poland	10	(0)	55	(1)	2 653	(31)	3 650	(43)	2 178	(25)	0	(0)	8 546
Portugal	37	(1)	55	(2)	1 560	(51)	774	(25)	601	(20)	9	(0)	3 036
Romania	424	(2)	644	(2)	14 168	(52)	9 060	(33)	3 021	(11)	2	(0)	27 319
Slovakia	11	(2)	12	(2)	160	(22)	288	(40)	248	(34)	0	(0)	719
Slovenia	5	(3)	2	(1)	52	(29)	40	(22)	82	(45)	0	(0)	181
Spain	169	(4)	126	(3)	2 140	(47)	1 049	(23)	1 002	(22)	27	(1)	4 513
Sweden	1	(1)	8	(6)	27	(19)	19	(14)	85	(61)	0	(0)	140
United Kingdom	100	(5)	128	(6)	852	(40)	503	(24)	554	(26)	0	(0)	2 137
Subtotal EU	**1 190**	**(2)**	**1 577**	**(2)**	**28 606**	**(43)**	**22 129**	**(33)**	**13 655**	**(20)**	**115**	**(0)**	**67 272**
Andorra	0	-	0	-	0	-	0	-	0	-	0	-	0
Iceland	0	(0)	0	(0)	1	(33)	1	(33)	1	(33)	0	(0)	3
Israel	12	(17)	3	(4)	26	(37)	18	(26)	11	(16)	0	(0)	70
Monaco	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	0	(0)	7	(13)	10	(18)	14	(25)	25	(45)	0	(0)	56
San Marino	-	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	5	(6)	2	(3)	17	(21)	18	(23)	38	(48)	0	(0)	80
Total EU & West	**1 207**	**(2)**	**1 589**	**(2)**	**28 660**	**(42)**	**22 180**	**(33)**	**13 730**	**(20)**	**115**	**(0)**	**67 481**
Balkans													
Albania	11	(2)	32	(6)	200	(40)	142	(28)	116	(23)	0	(0)	501
Bosnia & Herzegovina	4	(0)	20	(1)	559	(31)	503	(28)	708	(39)	6	(0)	1 800
Croatia	5	(1)	16	(3)	186	(34)	168	(31)	168	(31)	0	(0)	543
Macedonia, F.Y.R.	24	(4)	56	(9)	261	(42)	180	(29)	101	(16)	0	(0)	622
Montenegro	0	(0)	1	(1)	64	(38)	73	(43)	28	(16)	4	(2)	170
Serbia	7	(0)	16	(1)	665	(31)	712	(34)	712	(34)	1	(0)	2 113
Turkey	272	(1)	869	(4)	12 423	(61)	4 778	(23)	2 066	(10)	0	(0)	20 408
Total Balkans	**323**	**(1)**	**1 010**	**(4)**	**14 358**	**(55)**	**6 556**	**(25)**	**3 899**	**(15)**	**11**	**(0)**	**26 157**
East													
Armenia	36	(2)	70	(3)	1 282	(59)	580	(27)	187	(9)	0	(0)	2 155
Azerbaijan	58	(1)	372	(5)	5 692	(76)	1 168	(16)	208	(3)	0	(0)	7 498
Belarus †	10	(0)	51	(1)	2 740	(53)	1 814	(35)	527	(10)	0	(0)	5 142
Georgia	69	(1)	291	(5)	3 831	(61)	1 556	(25)	555	(9)	9	(0)	6 311
Kazakhstan	638	(1)	2 746	(6)	28 761	(67)	9 149	(21)	1 910	(4)	0	(0)	43 204
Kyrgyzstan †	113	(2)	586	(10)	3 636	(63)	964	(17)	427	(7)	0	(0)	5 726
Moldova	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian Federation †	1 172	(1)	2 214	(2)	72 987	(62)	33 466	(29)	7 253	(6)	0	(0)	117 092
Tajikistan †	85	(2)	385	(7)	3 736	(71)	746	(14)	274	(5)	0	(0)	5 226
Turkmenistan	18	(1)	168	(5)	2 456	(73)	621	(18)	106	(3)	0	(0)	3 369
Ukraine †	180	(0)	472	(1)	23 554	(61)	11 520	(30)	3 158	(8)	0	(0)	38 884
Uzbekistan	377	(1)	2 572	(10)	14 078	(56)	5 624	(22)	2 659	(11)	0	(0)	25 310
Total East	**2 756**	**(1)**	**9 927**	**(4)**	**162 753**	**(63)**	**67 208**	**(26)**	**17 264**	**(7)**	**9**	**(0)**	**259 917**
Total WHO European Region	**4 286**	**(1)**	**12 526**	**(4)**	**205 771**	**(58)**	**95 944**	**(27)**	**34 893**	**(10)**	**135**	**(0)**	**353 555**

* Excluding native cases < 26 years old whose parents were born outside Denmark

† Restricted to previously untreated cases

Table 5. Tuberculosis cases of foreign origin, by age group, WHO European Region, 2006

FOREIGN ORIGIN (age-groups in years)

Geographic area	0-4		5-14		15-44		45-64		>64		Unknown		Total
Country	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	
EU & West													
Austria	20	(6)	18	(5)	212	(64)	60	(18)	23	(7)	0	(0)	333
Belgium	12	(2)	15	(3)	418	(73)	91	(16)	39	(7)	0	(0)	575
Bulgaria	0	-	0	-	0	-	0	-	0	-	0	-	0
Cyprus	0	(0)	0	(0)	25	(89)	3	(11)	0	(0)	0	(0)	28
Czech Republic	0	(0)	1	(1)	96	(74)	28	(22)	5	(4)	0	(0)	130
Denmark *	7	(3)	11	(5)	144	(67)	35	(16)	19	(9)	0	(0)	216
Estonia	0	(0)	0	(0)	23	(33)	28	(40)	19	(27)	0	(0)	70
Finland	0	(0)	1	(3)	33	(89)	1	(3)	2	(5)	0	(0)	37
France	32	(1)	65	(3)	1 439	(62)	533	(23)	239	(10)	0	(0)	2 308
Germany	12	(1)	44	(2)	1 338	(60)	519	(23)	324	(14)	0	(0)	2 237
Greece	7	(3)	10	(5)	154	(72)	28	(13)	11	(5)	5	(2)	215
Hungary	0	(0)	0	(0)	30	(71)	8	(19)	4	(10)	0	(0)	42
Ireland	1	(1)	5	(3)	122	(81)	14	(9)	9	(6)	0	(0)	151
Italy	11	(1)	36	(2)	1 671	(82)	244	(12)	35	(2)	29	(1)	2 026
Latvia	0	(0)	0	(0)	19	(28)	38	(55)	12	(17)	0	(0)	69
Lithuania	0	(0)	0	(0)	21	(29)	36	(49)	16	(22)	0	(0)	73
Luxembourg	0	(0)	0	(0)	12	(60)	4	(20)	4	(20)	0	(0)	20
Malta	0	(0)	0	(0)	17	(100)	0	(0)	0	(0)	0	(0)	17
Netherlands	5	(1)	12	(2)	424	(66)	144	(22)	57	(9)	0	(0)	642
Poland	1	(2)	3	(6)	35	(74)	8	(17)	0	(0)	0	(0)	47
Portugal	2	(1)	2	(1)	283	(73)	89	(23)	9	(2)	2	(1)	387
Romania	0	-	0	-	0	-	0	-	0	-	0	-	0
Slovakia	0	(0)	0	(0)	10	(91)	1	(9)	0	(0)	0	(0)	11
Slovenia	0	(0)	1	(3)	16	(47)	14	(41)	3	(9)	0	(0)	34
Spain	46	(3)	59	(4)	1 251	(81)	165	(11)	30	(2)	1	(0)	1 552
Sweden	4	(1)	16	(4)	254	(71)	45	(13)	38	(11)	0	(0)	357
United Kingdom	15	(0)	113	(2)	3 829	(71)	936	(17)	537	(10)	0	(0)	5 430
Subtotal EU	**175**	**(1)**	**412**	**(2)**	**11 876**	**(70)**	**3 072**	**(18)**	**1 435**	**(8)**	**37**	**(0)**	**17 007**
Andorra	0	(0)	0	(0)	6	(46)	4	(31)	3	(23)	0	(0)	13
Iceland	0	(0)	0	(0)	9	(90)	0	(0)	1	(10)	0	(0)	10
Israel	7	(2)	17	(5)	126	(40)	68	(22)	98	(31)	0	(0)	316
Monaco	-	-	-	-	-	-	-	-	-	-	-	-	-
Norway	5	(2)	11	(5)	179	(75)	35	(15)	8	(3)	0	(0)	238
San Marino	-	-	-	-	-	-	-	-	-	-	-	-	-
Switzerland	2	(1)	4	(1)	214	(69)	60	(19)	28	(9)	0	(0)	308
Total EU & West	**189**	**(1)**	**444**	**(2)**	**12 410**	**(69)**	**3 239**	**(18)**	**1 573**	**(9)**	**37**	**(0)**	**17 892**
Balkans													
Albania	0	(0)	0	(0)	0	(0)	1	(100)	0	(0)	0	(0)	1
Bosnia & Herzegovina	0	-	0	-	0	-	0	-	0	-	0	-	0
Croatia	0	(0)	0	(0)	32	(27)	39	(33)	48	(40)	0	(0)	119
Macedonia, F.Y.R.	0	(0)	0	(0)	5	(100)	0	(0)	0	(0)	0	(0)	5
Montenegro	0	(0)	0	(0)	1	(100)	0	(0)	0	(0)	0	(0)	1
Serbia	0	(0)	0	(0)	9	(45)	5	(25)	6	(30)	0	(0)	20
Turkey	2	(2)	2	(2)	103	(87)	8	(7)	3	(3)	0	(0)	118
Total Balkans	**2**	**(1)**	**2**	**(1)**	**150**	**(57)**	**53**	**(20)**	**57**	**(22)**	**0**	**(0)**	**264**
East													
Armenia	0	-	0	-	0	-	0	-	0	-	0	-	0
Azerbaijan †	-	-	-	-	-	-	-	-	-	-	-	-	-
Belarus †	-	-	-	-	-	-	-	-	-	-	-	-	-
Georgia †	-	-	-	-	-	-	-	-	-	-	-	-	-
Kazakhstan †	-	-	-	-	-	-	-	-	-	-	-	-	-
Kyrgyzstan †	-	-	-	-	-	-	-	-	-	-	-	-	-
Moldova	-	-	-	-	-	-	-	-	-	-	-	-	-
Russian Federation ‡	3	(1)	34	(6)	435	(79)	72	(13)	10	(2)	0	(0)	554
Tajikistan †	-	-	-	-	-	-	-	-	-	-	-	-	-
Turkmenistan †	-	-	-	-	-	-	-	-	-	-	-	-	-
Ukraine †	-	-	-	-	-	-	-	-	-	-	-	-	-
Uzbekistan †	-	-	-	-	-	-	-	-	-	-	-	-	-
Total East	**3**	**(1)**	**34**	**(6)**	**435**	**(79)**	**72**	**(13)**	**10**	**(2)**	**0**	**(0)**	**554**
Total WHO European Region	**194**	**(1)**	**480**	**(3)**	**12 995**	**(69)**	**3 364**	**(18)**	**1 640**	**(9)**	**37**	**(0)**	**18 710**

* Including native cases < 26 years old whose parents were born outside Denmark

† Cases of foreign origin not included in reporting system

‡ Restricted to previously untreated cases

Table 6. Tuberculosis cases of foreign origin by area of origin, EU & West and Balkans*, 2006

Geographic area		Area of origin												
		WHO European Region												
		EU & West		Balkans		East		Rest of Asia		Africa		Other † / unknown		Total
Country	Criterion	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	
EU & West														
Austria	**citizenship**	30	(9)	151	(45)	57	(17)	61	(18)	32	(10)	2	(1)	333
Belgium	**citizenship**	75	(13)	32	(6)	36	(6)	97	(17)	321	(56)	14	(2)	575
Cyprus	birthplace	8	(29)	0	(0)	8	(29)	12	(43)	0	(0)	0	(0)	28
Czech Republic	birthplace	27	(21)	5	(4)	51	(39)	43	(33)	4	(3)	0	(0)	130
Denmark	birthplace ‡	6	(3)	9	(4)	2	(1)	84	(39)	89	(41)	26	(12)	216
Estonia	birthplace	3	(4)	0	(0)	67	(96)	0	(0)	0	(0)	0	(0)	70
Finland	birthplace	1	(3)	0	(0)	0	(0)	20	(54)	16	(43)	0	(0)	37
Germany	birthplace	301	(13)	576	(26)	413	(18)	554	(25)	348	(16)	45	(2)	2 237
Greece	birthplace	43	(20)	26	(12)	45	(21)	62	(29)	19	(9)	20	(9)	215
Hungary	birthplace	30	(71)	1	(2)	3	(7)	3	(7)	2	(5)	3	(7)	42
Ireland	birthplace	31	(21)	2	(1)	3	(2)	46	(30)	52	(34)	17	(11)	151
Italy	birthplace	528	(26)	87	(4)	78	(4)	439	(22)	637	(31)	257	(13)	2 026
Latvia	birthplace	4	(6)	0	(0)	64	(93)	1	(1)	0	(0)	0	(0)	69
Lithuania	birthplace	4	(5)	0	(0)	65	(89)	3	(4)	0	(0)	1	(1)	73
Luxembourg	birthplace	14	(70)	1	(5)	0	(0)	2	(10)	2	(10)	1	(5)	20
Malta	**citizenship**	0	(0)	0	(0)	0	(0)	1	(6)	16	(94)	0	(0)	17
Netherlands	birthplace	25	(4)	62	(10)	17	(3)	164	(26)	289	(45)	85	(13)	642
Poland	**citizenship**	1	(2)	0	(0)	25	(53)	17	(36)	4	(9)	0	(0)	47
Portugal	birthplace	43	(11)	0	(0)	19	(5)	25	(6)	271	(70)	29	(7)	387
Romania	birthplace	0	-	0	-	0	-	0	-	0	-	0	-	0
Slovakia	birthplace	0	(0)	1	(9)	1	(9)	9	(82)	0	(0)	0	(0)	11
Slovenia	birthplace	0	(0)	30	(88)	0	(0)	3	(9)	0	(0)	1	(3)	34
Sweden	birthplace	20	(6)	48	(13)	3	(1)	113	(32)	156	(44)	17	(5)	357
United Kingdom	birthplace	217	(4)	45	(1)	12	(0)	2 827	(52)	1 975	(36)	354	(7)	5 430
Subtotal EU		**1 411**	**(11)**	**1 076**	**(8)**	**969**	**(7)**	**4 586**	**(35)**	**4 233**	**(32)**	**872**	**(7)**	**13 147**
Andorra	birthplace	12	(92)	0	(0)	0	(0)	0	(0)	1	(8)	0	(0)	13
Iceland	birthplace	1	(10)	0	(0)	0	(0)	6	(60)	3	(30)	0	(0)	10
Switzerland	birthplace	70	(23)	60	(19)	3	(1)	86	(28)	76	(25)	13	(4)	308
Total EU & West		**1 494**	**(11)**	**1 136**	**(8)**	**972**	**(7)**	**4 678**	**(35)**	**4 313**	**(32)**	**885**	**(7)**	**13 478**
Balkans														
Albania	**citizenship**	0	(0)	1	(100)	0	(0)	0	(0)	0	(0)	0	(0)	1
Bosnia & Herzegovina	**citizenship**	0	-	0	-	0	-	0	-	0	-	0	-	0
Croatia	birthplace	5	(4)	114	(96)	0	(0)	0	(0)	0	(0)	0	(0)	119
Macedonia, F.Y.R.	birthplace	1	(20)	3	(60)	0	(0)	1	(20)	0	(0)	0	(0)	5
Serbia	**citizenship**	2	(10)	15	(75)	0	(0)	3	(15)	0	(0)	0	(0)	20
Turkey	birthplace	14	(12)	5	(4)	59	(50)	16	(14)	23	(19)	1	(1)	118
Total Balkans		**22**	**(8)**	**138**	**(52)**	**59**	**(22)**	**20**	**(8)**	**23**	**(9)**	**1**	**(0)**	**263**

* Countries with case-based data on country of origin

† Of these 589 cases were from the Americas and 14 from Australasia and Oceania

‡ Including native cases < 26 years old whose parents were born outside Denmark

Table 7. Tuberculosis cases by geographic origin, EU & West*, 2000-2006

Country	Criterion	2000	2001	2002	2003	2004	2005	2006
A. National origin								
Austria	**citizenship**	890	804	770	640	624	564	540
Belgium	**citizenship**	758	714	637	512	564	536	552
Bulgaria	**citizenship**	-	-	3 335	3 263	3 232	3 302	3 232
Cyprus	birthplace	-	-	13	13	7	12	9
Czech Republic	birthplace	1 299	1 157	1 036	1 036	908	877	843
Denmark	birthplace †	198	174	154	158	148	166	160
Estonia	birthplace	608	630	573	493	454	435	382
Finland	birthplace	490	427	422	359	287	308	244
France	birthplace	3 198	2 870	2 657	2 815	2 668	2 607	2 830
Germany	birthplace	-	3 781	4 140	3 851	3 421	3 174	2 930
Greece	birthplace	-	-	-	458	587	493	453
Hungary	birthplace	3 521	3 077	2 781	2 509	2 268	1 857	1 799
Ireland	birthplace	354	328	270	300	290	297	288
Italy	birthplace	3 511	3 063	2 890	2 846	2 520	2 285	2 320
Latvia	birthplace	1 893	1 931	1 713	1 605	1 465	1 333	1 232
Lithuania	birthplace	2 821	2 815	2 711	2 693	2 427	2 486	2 486
Luxembourg	birthplace	-	-	19	13	6	9	11
Malta	**citizenship**	13	13	15	3	7	8	13
Netherlands	birthplace ‡	367	381	344	349	364	314	244
Portugal	birthplace	4 047	3 903	3 928	3 641	3 392	3 127	3 036
Romania	birthplace	-	-	33 588	31 039	31 032	29 287	27 319
Slovakia	birthplace	1 103	1 063	1 041	967	690	733	719
Slovenia	birthplace	286	287	273	250	209	230	181
Sweden	birthplace	151	142	114	103	115	149	140
United Kingdom	birthplace	2 369	2 368	1 999	2 011	2 157	2 142	2 137
Subtotal EU					**61 927**	**59 842**	**56 731**	**54 100**
Andorra	birthplace	-	-	3	1	0	2	0
Iceland	birthplace	8	6	5	2	4	4	3
Israel	birthplace	91	87	79	94	99	74	70
Norway	birthplace	70	82	60	70	63	63	56
Switzerland	**citizenship**	279	249	237	206	212	207	190
Total EU & West					**62 300**	**60 220**	**57 081**	**54 419**
B. Foreign origin								
Austria	**citizenship**	335	271	306	340	437	435	333
Belgium	**citizenship**	508	604	657	605	634	571	575
Bulgaria	**citizenship**	-	-	0	0	0	0	0
Cyprus	birthplace	-	-	7	22	23	25	28
Czech Republic	birthplace	143	193	164	126	149	130	130
Denmark	birthplace †	350	334	265	235	237	256	216
Estonia	birthplace	183	182	140	130	138	83	70
Finland	birthplace	47	58	43	38	29	37	37
France	birthplace	2 193	2 305	2 564	2 572	2 488	2 433	2 308
Germany	birthplace	-	2 741	2 991	3 014	2 884	2 637	2 237
Greece	birthplace	-	-	-	155	180	219	215
Hungary	birthplace	56	57	47	51	44	62	42
Ireland	birthplace	49	65	123	89	129	152	151
Italy	birthplace	1 201	1 391	1 293	1 459	1 664	1 809	2 026
Latvia	birthplace	147	122	115	93	119	84	69
Lithuania	birthplace	160	174	133	128	87	88	73
Luxembourg	birthplace	-	-	13	36	25	25	20
Malta	**citizenship**	5	3	9	4	12	17	17
Netherlands	birthplace ‡	1 057	1 097	1 064	961	932	826	730
Portugal	birthplace	434	491	567	503	455	420	387
Romania	birthplace	-	-	7	0	2	2	0
Slovakia	birthplace	8	13	12	16	15	27	11
Slovenia	birthplace	94	84	77	43	54	48	34
Sweden	birthplace	305	286	293	305	343	410	357
United Kingdom	birthplace	3 384	3 610	4 084	4 497	4 782	5 393	5 430
Subtotal EU					**15 422**	**15 862**	**16 189**	**15 496**
Andorra	birthplace	-	-	2	10	6	8	13
Iceland	birthplace	5	7	3	3	8	7	10
Israel	birthplace	500	477	432	435	420	332	316
Norway	birthplace	167	206	191	267	239	225	238
Switzerland	**citizenship**	319	301	370	360	312	306	257
Total EU & West					**16 497**	**16 847**	**17 067**	**16 330**

* Countries with at least 80% of cases with information on origin in all years and data for 4 consecutive years or more using the same criterion of origin

† By birthplace of parents for Danish-born cases under 26 years of age

‡ Considered native if both case and mother (or father since 2005) born in the Netherlands, otherwise foreign; data as shown in the Country Profile but differ from those used elsewhere in this report

Table 8. Tuberculosis cases by site of disease, WHO European Region, 2006

Geographic area	Pulmonary						Extrapulmonary only		No site reported		Total
	Pulmonary only		Pulmonary + extrapulmonary		Total Pulmonary						
Country	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	
EU & West											
Austria	644	(74)	90	(10)	734	**(84)**	139	(16)	0	(0)	873
Belgium	651	(58)	126	(11)	777	**(69)**	350	(31)	0	(0)	1 127
Bulgaria *†	-	-	-	-	2 905	**(90)**	327	(10)	0	(0)	3 232
Cyprus	29	(78)	2	(5)	31	**(84)**	6	(16)	0	(0)	37
Czech Republic	736	(76)	28	(3)	764	**(79)**	209	(21)	0	(0)	973
Denmark	259	(69)	15	(4)	274	**(73)**	102	(27)	1	(0)	377
Estonia	404	(89)	14	(3)	418	**(92)**	37	(8)	0	(0)	455
Finland †	-	-	-	-	212	**(71)**	87	(29)	0	(0)	299
France	3 168	(59)	654	(12)	3 822	**(72)**	1 344	(25)	170	(3)	5 336
Germany	3 772	(70)	417	(8)	4 189	**(78)**	1 091	(20)	122	(2)	5 402
Greece	467	(69)	85	(12)	552	**(81)**	91	(13)	38	(6)	681
Hungary	1 785	(94)	13	(1)	1 798	**(95)**	96	(5)	0	(0)	1 894
Ireland	298	(65)	33	(7)	331	**(72)**	102	(22)	25	(5)	458
Italy	2 990	(68)	30	(1)	3 020	**(69)**	1 367	(31)	0	(0)	4 387
Latvia	1 144	(86)	60	(5)	1 204	**(91)**	124	(9)	0	(0)	1 328
Lithuania	2 239	(87)	0	(0)	2 239	**(87)**	320	(13)	0	(0)	2 559
Luxembourg	32	(97)	0	(0)	32	**(97)**	1	(3)	0	(0)	33
Malta	21	(70)	3	(10)	24	**(80)**	6	(20)	0	(0)	30
Netherlands	558	(55)	110	(11)	668	**(65)**	353	(35)	0	(0)	1 021
Poland	7 832	(91)	52	(1)	7 884	**(92)**	709	(8)	0	(0)	8 593
Portugal	2 293	(67)	239	(7)	2 532	**(74)**	885	(26)	6	(0)	3 423
Romania	22 029	(81)	1 421	(5)	23 450	**(86)**	3 869	(14)	0	(0)	27 319
Slovakia	548	(75)	49	(7)	597	**(82)**	133	(18)	0	(0)	730
Slovenia	149	(69)	25	(12)	174	**(81)**	41	(19)	0	(0)	215
Spain †	-	-	-	-	6 599	**(82)**	1 430	(18)	0	(0)	8 029
Sweden	258	(52)	60	(12)	318	**(64)**	178	(36)	1	(0)	497
United Kingdom †	-	-	-	-	4 743	**(56)**	3 651	(43)	104	(1)	8 498
Subtotal EU	**-**	**-**	**-**	**-**	**70 291**	**(80)**	**17 048**	**(19)**	**467**	**(1)**	**87 806**
Andorra	10	(77)	0	(0)	10	**(77)**	3	(23)	0	(0)	13
Iceland	6	(46)	1	(8)	7	**(54)**	6	(46)	0	(0)	13
Israel †	-	-	-	-	311	**(81)**	75	(19)	0	(0)	386
Monaco	-	-	-	-	-	**-**	-	-	-	-	-
Norway	175	(60)	13	(4)	188	**(64)**	105	(36)	1	(0)	294
San Marino	-	-	-	-	-	**-**	-	-	-	-	-
Switzerland	314	(60)	63	(12)	377	**(73)**	130	(25)	13	(3)	520
Total EU & West	**-**	**-**	**-**	**-**	**71 184**	**(80)**	**17 367**	**(20)**	**481**	**(1)**	**89 032**
Balkans											
Albania	321	(64)	0	(0)	321	**(64)**	181	(36)	0	(0)	502
Bosnia & Herzegovina	1 526	(85)	51	(3)	1 577	**(88)**	223	(12)	0	(0)	1 800
Croatia	956	(84)	59	(5)	1 015	**(89)**	120	(11)	0	(0)	1 135
Macedonia, F.Y.R.	454	(72)	29	(5)	483	**(77)**	144	(23)	0	(0)	627
Montenegro †	-	-	-	-	150	**(88)**	21	(12)	0	(0)	171
Serbia	1 826	(85)	27	(1)	1 853	**(86)**	297	(14)	0	(0)	2 150
Turkey	14 092	(69)	648	(3)	14 740	**(72)**	5 786	(28)	0	(0)	20 526
Total Balkans	**-**	**-**	**-**	**-**	**20 139**	**(75)**	**6 772**	**(25)**	**0**	**(0)**	**26 911**
East †											
Armenia	-	-	-	-	1 779	**(83)**	376	(17)	0	(0)	2 155
Azerbaijan	-	-	-	-	6 801	**(91)**	697	(9)	0	(0)	7 498
Belarus *	-	-	-	-	5 679	**(94)**	386	(6)	0	(0)	6 065
Georgia	-	-	-	-	4 934	**(78)**	1 376	(22)	1	(0)	6 311
Kazakhstan	-	-	-	-	35 971	**(83)**	4 627	(11)	2 606	(6)	43 204
Kyrgyzstan	-	-	-	-	4 895	**(74)**	1 761	(26)	0	(0)	6 656
Moldova	-	-	-	-	5 475	**(89)**	643	(11)	0	(0)	6 118
Russian Federation	-	-	-	-	139 159	**(91)**	13 106	(9)	0	(0)	152 265
Tajikistan	-	-	-	-	4 683	**(70)**	1 985	(30)	3	(0)	6 671
Turkmenistan	-	-	-	-	2 734	**(81)**	635	(19)	0	(0)	3 369
Ukraine	-	-	-	-	36 813	**(89)**	4 452	(11)	0	(0)	41 265
Uzbekistan	-	-	-	-	19 549	**(77)**	5 761	(23)	0	(0)	25 310
Total East	**-**	**-**	**-**	**-**	**268 472**	**(87)**	**35 805**	**(12)**	**2 610**	**(1)**	**306 887**
Total WHO European Region	**-**	**-**	**-**	**-**	**359 795**	**(85)**	**59 944**	**(14)**	**3 091**	**(1)**	**422 830**

* Cases classified by respiratory rather than pulmonary classification

† Reporting does not distinguish cases with pulmonary site alone from cases with both pulmonary and extrapulmonary disease

Table 9. Extrapulmonary tuberculosis cases and pulmonary-to-extrapulmonary ratio, WHO European Region, 2000-2006*

Geographic area Country	2000		2002		2004		2006	
	Extrapulmonary cases	P:E ratio†	Extrapulmonary cases	P:E ratio†	Extrapulmonary cases	P:E ratio†	Extrapulmonary cases	P:E ratio†
EU & West								
Austria	217	4.6	213	4.1	174	5.1	139	5.3
Belgium	339	2.8	316	3.1	319	2.8	350	2.2
Bulgaria	-	-	-	-	-	-	-	-
Cyprus	-	-	6	2.3	3	9.0	6	5.2
Czech Republic	-	-	283	3.2	233	3.5	209	3.7
Denmark	150	2.6	111	2.8	96	3.0	102	2.7
Estonia	70	10.3	85	7.4	62	8.6	37	11.3
Finland	163	2.3	178	1.7	101	2.3	87	2.4
France	1 796	2.7	1 686	2.7	1 452	2.7	1 344	2.8
Germany	-	-	1 437	4.2	1 299	3.9	1 091	3.8
Greece	81	7.7	78	6.5	-	-	-	-
Hungary	244	13.7	207	12.7	140	15.7	96	18.7
Ireland	107	2.7	93	3.3	118	2.6	-	-
Italy	1 134	3.2	991	3.3	1 193	2.5	1 367	2.2
Latvia	312	5.6	231	7.0	205	6.9	124	9.7
Lithuania	566	4.3	493	4.8	389	5.5	320	7.0
Luxembourg	2	21.0	4	7.0	2	14.5	1	32.0
Malta	3	5.0	5	3.8	5	2.8	6	4.0
Netherlands	477	1.9	501	1.8	547	1.5	353	1.9
Poland	-	-	1 031	9.2	802	10.8	709	11.1
Portugal	1 242	2.6	1 192	2.8	984	2.9	885	2.9
Romania	3 961	6.0	3 699	8.1	4 027	6.7	3 869	6.1
Slovakia	207	4.4	209	4.0	141	4.0	133	4.5
Slovenia	61	5.2	55	5.4	51	4.2	41	4.2
Spain	-	-	-	-	1 006	6.7	1 430	4.6
Sweden	154	2.0	146	1.8	149	2.0	178	1.8
United Kingdom	2 547	1.5	‡ 2 737	1.5	‡ 3 134	1.4	3 651	1.3
All EU		**3.9**		**4.6**		**4.4**		**4.0**
Andorra	3	2.7	1	4.0	2	2.5	3	3.3
Iceland	4	2.3	2	3.0	7	0.7	6	1.2
Israel	113	4.2	119	3.3	125	3.2	75	4.1
Monaco	0	-	0	-	-	-	-	-
Norway	88	1.7	98	1.6	102	1.9	105	1.8
San Marino	-	-	-	-	-	-	-	-
Switzerland	152	3.1	154	3.3	156	2.8	130	2.9
All EU & West		**3.9**		**4.6**		**4.4**		**4.0**
Balkans								
Albania	239	1.6	202	2.0	224	1.6	181	1.8
Bosnia & Herzegovina	269	8.7	283	8.0	197	11.1	223	7.1
Croatia	155	9.5	147	9.0	157	7.3	120	8.5
Macedonia, F.Y.R.	-	-	173	3.2	171	3.0	144	3.4
Montenegro	-	-	-	-	-	-	§ 21	7.1
Serbia	-	-	-	-	273	9.1	§ 297	6.2
Turkey	-	-	-	-	-	-	5 786	2.5
All Balkans		**6.3**		**5.7**		**6.5**		**3.0**
East								
Armenia	153	7.8	181	7.0	297	4.7	376	4.7
Azerbaijan	245	20.2	738	6.2	640	9.2	697	9.8
Belarus	-	-	-	-	-	-	-	-
Georgia	1 473	3.4	1 335	3.8	1 154	4.2	1 376	3.6
Kazakhstan	-	-	1 191	26.7	1 139	27.2	-	-
Kyrgyzstan	-	-	2 460	1.8	-	-	1 761	2.8
Moldova	-	-	607	5.8	727	7.3	643	8.5
Russian Federation	-	-	-	-	4 960	29.7	13 106	10.6
Tajikistan	-	-	-	-	1 488	2.4	1 985	2.4
Turkmenistan	-	-	518	7.9	774	4.4	635	4.3
Ukraine	-	-	-	-	-	-	4 452	8.3
Uzbekistan	-	-	3 317	7.1	6 695	2.8	5 761	3.4
All East		**5.9**		**7.6**		**12.4**		**7.4**
All WHO European Region		**4.2**		**5.7**		**8.4**		**5.8**

* Data not included if site of disease was reported for less than 97% of cases notified or if respiratory classification of disease was used

† Pulmonary cases may include patients having concomitant extrapulmonary disease (for 2006 data see also Table 8)

‡ Excluding cases from Scotland

§ Cases from Montenegro included with Serbia

Table 10. TB meningitis or disseminated TB, paediatric and adult cases by origin, EU & West and Balkans*, 2006.

Geographic area	Origin								
	National			Foreign			Total†		
Country	0-14	>14	Total	0-14	>14	Total	N†	% of all TB cases	/ 100,000 population
EU & West									
Austria	2	13	15	3	6	9	24	2.7%	0.3
Belgium	1	32	33	3	35	38	71	6.3%	0.7
Cyprus	0	0	0	0	1	1	1	2.7%	0.1
Czech Republic	0	21	21	1	5	6	27	2.8%	0.3
Denmark	0	1	1	2	7	9	10	2.7%	0.2
Estonia	0	3	3	0	0	0	3	0.7%	0.2
Germany	7	56	63	4	54	58	123	2.3%	0.1
Hungary	0	9	9	0	0	0	9	0.5%	0.1
Ireland	2	2	4	1	3	4	10	2.2%	0.2
Italy	5	58	63	1	57	58	124	2.8%	0.2
Latvia	2	5	7	0	0	0	7	0.5%	0.3
Lithuania	2	1	3	0	1	1	4	0.2%	0.1
Luxembourg	0	0	0	0	0	0	0	0.0%	0.0
Malta	0	1	1	0	0	0	1	3.3%	0.2
Portugal	3	100	103	0	22	22	125	3.7%	1.2
Romania	78	353	431	0	0	0	431	1.6%	2.0
Slovakia	0	6	6	0	2	2	8	1.1%	0.1
Slovenia	0	8	8	0	0	0	8	3.7%	0.4
Subtotal EU	**102**	**669**	**771**	**15**	**193**	**208**	**986**	**1.9%**	**0.4**
Andorra	0	0	0	0	0	0	0	0.0%	0.0
Iceland	0	0	0	0	0	0	0	0.0%	0.0
Norway	0	0	0	0	2	2	2	0.7%	0.0
Switzerland	2	4	6	0	14	14	28	5.4%	0.4
Total EU & West	**104**	**673**	**777**	**15**	**209**	**224**	**1 016**	**1.9%**	**0.4**
Balkans									
Albania	1	6	7	0	0	0	7	1.4%	0.2
Bosnia & Herzegovina	1	6	7	0	0	0	7	0.4%	0.2
Croatia	0	6	6	0	0	0	11	1.0%	0.2
Macedonia, F.Y.R.	0	4	4	0	0	0	4	0.6%	0.2
Serbia	0	3	3	0	1	1	4	0.2%	0.1
Total Balkans	**2**	**25**	**27**	**0**	**1**	**1**	**33**	**0.5%**	**0.2**

* Including only data from countries reporting case-based information on localisation of extrapulmonary disease

† Including cases with origin unknown

Table 11. TB meningitis, total cases at all ages and cases & rates in children under 5 years, EU & West and Balkans*, 2002-2006

Geographic area	2002			2003			2004			2005			2006		
	All ages	Under 5 yrs		All ages	Under 5 yrs		All ages	Under 5 yrs		All ages	Under 5 yrs		All ages	Under 5 yrs	
Country	N	N	/ 10 million pop.†	N	N	/ 10 million pop.†	N	N	/ 10 million pop.†	N	N	/ 10 million pop.†	N	N	/ 10 million pop.†
EU & West															
Austria	4	0	0.0	4	0	0.0	4	0	0.0	2	0	0.0	15	2	2.4
Belgium	6	1	1.0	13	0	0.0	13	1	1.0	10	2	1.9	10	1	1.0
Cyprus	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	1	0	0.0
Czech Republic	3	0	0.0	2	0	0.0	0	0	0.0	2	0	0.0	1	0	0.0
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	5	0	0.0
Estonia	1	0	0.0	0	0	0.0	0	0	0.0	2	0	0.0	3	0	0.0
Germany	56	3	0.4	72	7	0.8	60	4	0.5	50	5	0.6	56	6	0.7
Hungary	4	0	0.0	0	0	0.0	1	0	0.0	1	0	0.0	3	0	0.0
Ireland	6	1	2.5	8	2	5.0	6	0	0.0	9	0	0.0	6	1	2.4
Italy	25	1	0.2	19	1	0.2	3	0	0.0	31	2	0.3	33	3	0.5
Latvia	-	-	-	-	-	-	4	0	0.0	4	0	0.0	3	0	0.0
Lithuania	-	-	-	2	2	5.8	5	0	0.0	4	0	0.0	4	1	2.9
Luxembourg	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Malta	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Portugal	53	3	2.9	37	0	0.0	30	1	1.0	45	1	0.9	34	1	0.9
Romania	145	27	12.3	205	34	15.6	194	33	15.2	185	18	8.3	193	35	16.3
Slovakia	2	0	0.0	2	1	1.9	6	0	0.0	4	0	0.0	4	0	0.0
Slovenia	6	0	0.0	3	0	0.0	3	0	0.0	2	0	0.0	2	0	0.0
Andorra	0	0	0.0	0	0	0.0	1	0	0.0	0	0	0.0	0	0	0.0
Iceland	0	0	0.0	0	0	0.0	1	0	0.0	0	0	0.0	0	0	0.0
Norway	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0
Switzerland	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	7	1	1.3
Balkans															
Albania	-	-	-	-	-	-	7	0	0.0	1	0	0.0	7	0	0.0
Bosnia & Herzegovina	1	0	0.0 ‡	1	0	0.0 ‡	2	0	0.0 ‡	1	0	0.0	3	0	0.0
Croatia	6	1	2.2	2	0	0.0	4	0	0.0	3	0	0.0	6	0	0.0
Macedonia, F.Y.R.	-	-	-	-	-	-	-	-	-	2	1	4.9	4	0	0.0
Serbia	-	-	-	-	-	-	-	-	-	4	0	0.0	1	0	0.0

* Including only data from countries reporting case-based information on localisation of extrapulmonary disease; cases with disseminated disease not included (see also Table 10).

† Rate calculated for cases in children under 5 years per 10 million *general* population in the country

‡ Excluding Republika Srpska

Table 12. Pulmonary sputum smear positive tuberculosis cases, WHO European Region, 2004-2006*

Geographic area	2004			2005			2006		
Country	N	% of all pulmonary cases	/ 100 000 population	N	% of all pulmonary cases	/ 100 000 population	N	% of all pulmonary cases	/ 100 000 population
EU & West									
Austria	259	(29)	3.1	252	(31)	3.0	217	(30)	2.6
Belgium †	427	(49)	4.1	392	(49)	3.8	377	(49)	3.6
Bulgaria	-	-	-	-	-	-	-	-	-
Cyprus	10	(37)	1.2	9	(38)	1.1	9	(29)	1.1
Czech Republic	317	(38)	3.1	328	(41)	3.2	265	(35)	2.6
Denmark	162	(56)	3.0	135	(46)	2.5	136	(50)	2.5
Estonia	254	(48)	18.8	201	(43)	15.0	187	(45)	14.0
Finland	127	(55)	2.4	135	(51)	2.6	99	(47)	1.9
France	2 089	(53)	3.3	2 119	(56)	3.4	2 091	(55)	3.3
Germany	1 712	(34)	2.1	1 494	(32)	1.8	1 396	(33)	1.7
Greece	-	-	-	226	(39)	2.0	240	(43)	2.2
Hungary	679	(31)	6.7	509	(28)	5.0	509	(28)	5.1
Ireland	140	(45)	3.4	145	(45)	3.5	145	(44)	3.4
Italy	1 136	(38)	1.9	1 371	(46)	2.3	1 450	(48)	2.5
Latvia	742	(53)	32.0	673	(52)	29.2	631	(52)	27.6
Lithuania	1 249	(59)	36.3	1 324	(60)	38.7	1 379	(62)	40.5
Luxembourg	20	(69)	4.4	14	(41)	3.1	22	(69)	4.8
Malta	2	(14)	0.5	5	(28)	1.2	4	(17)	1.0
Netherlands	369	(46)	2.3	252	(33)	1.5	213	(32)	1.3
Poland	3 219	(37)	8.4	3 258	(39)	8.5	3 310	(42)	8.7
Portugal	1 741	(61)	16.6	1 572	(60)	14.9	1 471	(58)	13.9
Romania	15 861	(59)	73.0	16 170	(63)	74.8	14 591	(62)	67.8
Slovakia	180	(32)	3.3	186	(30)	3.5	193	(32)	3.6
Slovenia	106	(50)	5.3	127	(52)	6.4	85	(49)	4.2
Spain	2 402	(36)	5.6	2 686	(39)	6.2	2 129	(32)	4.9
Sweden	126	(42)	1.4	142	(40)	1.6	110	(35)	1.2
United Kingdom	1 836	(42)	3.1	1 866	(40)	3.1	1 830	(39)	3.0
Subtotal EU	**35 165**	**(48)**	**7.5**	**35 591**	**(50)**	**7.3**	**33 089**	**(49)**	**6.8**
Andorra	3	(60)	4.1	5	(83)	6.8	8	(80)	10.8
Iceland	2	(40)	0.7	2	(40)	0.7	4	(57)	1.3
Israel	102	(26)	1.6	98	(32)	1.5	72	(23)	1.1
Monaco	-	-	-	-	-	-	-	-	-
Norway	52	(27)	1.1	51	(29)	1.1	51	(27)	1.1
San Marino	-	-	-	-	-	-	-	-	-
Switzerland	128	(29)	1.7	117	(29)	1.6	121	(32)	1.6
Total EU & West	**35 452**	**(48)**	**7.2**	**35 864**	**(50)**	**7.1**	**33 345**	**(49)**	**6.6**
Balkans									
Albania	220	(62)	7.0	213	(59)	6.8	199	(62)	6.3
Bosnia & Herzegovina	939	(43)	24.0	700	(37)	17.9	598	(38)	15.2
Croatia	480	(42)	10.6	437	(42)	9.6	448	(44)	9.8
Macedonia, F.Y.R.	248	(49)	12.2	224	(44)	11.0	216	(45)	10.6
Montenegro	-	-	- ‡	74	(47)	12.2	68	(45)	11.3
Serbia	1 125	(45)	13.8 ‡	1 051	(50)	14.1	984	(53)	13.3
Turkey	-	-	-	8 505	(57)	11.7	9 132	(62)	12.4
Total Balkans	**3 012**	**(45)**	**13.8**	**11 204**	**(53)**	**11.8**	**11 645**	**(58)**	**12.2**
East									
Armenia	745	(53)	24.6	908	(46)	30.1	884	(50)	29.4
Azerbaijan	2 563	(44)	30.9	2 875	(40)	34.4	2 730	(40)	32.5
Belarus	-	-	-	-	-	-	-	-	-
Georgia	2 293	(48)	50.8	2 597	(51)	58.1	2 984	(60)	67.3
Kazakhstan	13 836	(45)	91.6	12 501	(42)	82.2	17 936	(50)	117.1
Kyrgyzstan	-	-	-	2 526	(51)	48.5	2 428	(50)	46.2
Moldova	2 898	(55)	73.8	2 878	(51)	74.2	2 737	(50)	71.4
Russian Federation	33 078	(22)	22.9	39 278	(30)	27.3	43 264	(31)	30.2
Tajikistan	1 414	(39)	21.9	2 534	(44)	38.7	2 790	(60)	42.0
Turkmenistan	1 491	(44)	31.3	1 104	(42)	22.8	1 334	(49)	27.2
Ukraine	-	-	-	-	-	-	16 587	(45)	35.6
Uzbekistan	8 512	(45)	32.5	9 262	(42)	34.8	8 488	(43)	31.5
Total East	**66 830**	**(30)**	**30.8**	**76 463**	**(35)**	**34.4**	**102 162**	**(39)**	**38.0**
Total WHO European Region	**105 294**	**(35)**	**14.4**	**123 531**	**(40)**	**15.1**	**147 152**	**(42)**	**16.9**

* Data for countries using respiratory classification of disease not included.

† Including smear of specimens other than sputum

‡ Cases from Montenegro included with Serbia

Table 13. Tuberculosis cases by history of previous TB treatment*, WHO European Region, 2001 & 2006

Geographic area	2001						2006					
	Never treated		Previously treated		Unknown TB history		Never treated		Previously treated		Unknown TB history	
Country	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
EU & West												
Austria	986	(92)	28	(3)	61	(6)	825	(95)	18	(2)	30	(3)
Belgium	*977*	*(74)*	*136*	*(10)*	*208*	*(16)*	*831*	*(74)*	*84*	*(7)*	*212*	*(19)*
Bulgaria	*3 436*	*(89)*	*426*	*(11)*	*0*	*(0)*	3 011	(93)	221	(7)	0	(0)
Cyprus	-	-	-	-	-	-	35	(95)	1	(3)	1	(3)
Czech Republic	1 291	(96)	59	(4)	0	(0)	941	(97)	32	(3)	0	(0)
Denmark	*475*	*(93)*	*36*	*(7)*	*0*	*(0)*	*341*	*(90)*	*36*	*(10)*	*0*	*(0)*
Estonia	570	(70)	242	(30)	0	(0)	373	(82)	82	(18)	0	(0)
Finland	*421*	*(85)*	*34*	*(7)*	*39*	*(8)*	*191*	*(64)*	*19*	*(6)*	*89*	*(30)*
France	4 268	(66)	603	(9)	1 594	(25)	4 238	(79)	352	(7)	746	(14)
Germany	4 677	(62)	631	(8)	2 231	(30)	4 218	(78)	414	(8)	770	(14)
Greece	503	(82)	114	(18)	0	(0)	567	(83)	65	(10)	49	(7)
Hungary	2 563	(81)	539	(17)	48	(2)	1 563	(83)	319	(17)	12	(1)
Ireland	*248*	*(61)*	*41*	*(10)*	*117*	*(29)*	*413*	*(90)*	*45*	*(10)*	*0*	*(0)*
Italy	*3 110*	*(69)*	*605*	*(13)*	*790*	*(18)*	3 177	(72)	242	(6)	968	(22)
Latvia	1 729	(83)	353	(17)	0	(0)	1 144	(86)	184	(14)	0	(0)
Lithuania	2 225	(74)	764	(26)	0	(0)	2 097	(82)	460	(18)	2	(0)
Luxembourg	31	(97)	1	(3)	0	(0)	33	(100)	0	(0)	0	(0)
Malta	15	(94)	0	(0)	1	(6)	30	(100)	0	(0)	0	(0)
Netherlands	*1 382*	*(96)*	*41*	*(3)*	*13*	*(1)*	840	(82)	36	(4)	145	(14)
Poland	9 429	(88)	1 238	(12)	5	(0)	7 585	(88)	966	(11)	42	(0)
Portugal	3 889	(88)	510	(12)	0	(0)	3 077	(90)	346	(10)	0	(0)
Romania	26 164	(86)	4 276	(14)	0	(0)	20 726	(76)	6 586	(24)	7	(0)
Slovakia	878	(82)	198	(18)	0	(0)	601	(82)	104	(14)	25	(3)
Slovenia	341	(92)	30	(8)	0	(0)	202	(94)	13	(6)	0	(0)
Spain	4 410	(59) †	349	(5) †	2 694	(36) †	6 101	(76)	413	(5)	1 515	(19)
Sweden	394	(92)	34	(8)	0	(0)	469	(94)	11	(2)	17	(3)
United Kingdom	*4 895*	*(74)* ‡	*449*	*(7)* ‡	*1 308*	*(20)* ‡	*6 339*	*(75)*	*541*	*(6)*	*1 618*	*(19)*
Subtotal EU	**79 307**	**(79)**	**11 737**	**(12)**	**9 109**	**(9)**	**69 968**	**(80)**	**11 590**	**(13)**	**6 248**	**(7)**
Andorra	4	(80)	1	(20)	0	(0)	10	(77)	1	(8)	2	(15)
Iceland	12	(92)	1	(8)	0	(0)	13	(100)	0	(0)	0	(0)
Israel	530	(94)	34	(6)	0	(0)	382	(99)	3	(1)	1	(0)
Monaco	0	-	0	-	0	-	-	-	-	-	-	-
Norway	*245*	*(85)*	*43*	*(15)*	*0*	*(0)*	241	(82)	17	(6)	36	(12)
San Marino	0	-	0	-	0	-	-	-	-	-	-	-
Switzerland	414	(68)	72	(12)	125	(20)	352	(68)	47	(9)	121	(23)
Total EU & West	**80 512**	**(79)**	**11 888**	**(12)**	**9 234**	**(9)**	**70 966**	**(80)**	**11 658**	**(13)**	**6 408**	**(7)**
Balkans												
Albania	*531*	*(93)*	*41*	*(7)*	*0*	*(0)*	467	(93)	35	(7)	0	(0)
Bosnia & Herzegovina	2 288	(90)	260	(10)	3	(0)	1 687	(94)	113	(6)	0	(0)
Croatia	1 364	(91)	129	(9)	12	(1)	1 023	(90)	106	(9)	6	(1)
Macedonia, F.Y.R.	622	(89)	75	(11)	0	(0)	529	(84)	98	(16)	0	(0)
Montenegro	-	- §	-	- §	-	- §	151	(88)	18	(11)	2	(1)
Serbia	*2 645*	*(92)* §	*238*	*(8)* §	*5*	*(0)* §	1 868	(87)	282	(13)	0	(0)
Turkey	17 263	(91)	1 627	(9)	0	-	18 544	(90)	1 982	(10)	0	(0)
Total Balkans	**24 713**	**(91)**	**2 370**	**(9)**	**20**	**(0)**	**24 269**	**(90)**	**2 634**	**(10)**	**8**	**(0)**
East												
Armenia	1 343	(96)	58	(4)	0	(0)	1 598	(74)	557	(26)	0	(0)
Azerbaijan	4 877	(99)	46	(1)	0	(0)	4 429	(59)	3 069	(41)	0	(0)
Belarus	-	-	-	-	-	-	5 142	(85)	923	(15)	0	(0)
Georgia	3 886	(66)	1 990	(34)	0	(0)	4 283	(68)	1 987	(31)	41	(1)
Kazakhstan	23 126	(74)	8 128	(26)	0	(0)	20 262	(47)	19 724	(46)	3 218	(7)
Kyrgyzstan	6 274	(91)	545	(8)	82	(1)	5 726	(86)	930	(14)	0	(0)
Moldova	3 418	(89)	402	(11)	0	(0)	4 388	(72)	1 730	(28)	0	(0)
Russian Federation	127 192	(92)	11 240	(8)	0	(0)	117 646	(77)	22 504	(15)	12 115	(8)
Tajikistan	3 446	(98)	62	(2)	0	(0)	5 226	(78)	1 442	(22)	3	(0)
Turkmenistan	3 833	(78)	1 089	(22)	0	(0)	3 124	(93)	245	(7)	0	(0)
Ukraine	33 634	(91)	3 150	(9)	0	(0)	38 884	(94)	2 381	(6)	0	(0)
Uzbekistan	15 718	(87)	2 388	(13)	0	(0)	18 574	(73)	6 736	(27)	0	(0)
Total East	**226 747**	**(89)**	**29 098**	**(11)**	**82**	**(0)**	**229 282**	**(75)**	**62 228**	**(20)**	**15 377**	**(5)**
Total WHO European Region	**331 972**	**(86)**	**43 356**	**(11)**	**9 336**	**(2)**	**324 517**	**(77)**	**76 520**	**(18)**	**21 793**	**(5)**

* Distribution of cases by previous anti-TB treatment, except where italicised (previous diagnosis).

† New and recurrent respiratory and meningeal cases only

‡ Excluding Scotland

§ Cases from Montenegro included with Serbia

Table 14. Tuberculosis cases confirmed by culture, WHO European Region, 2003-2006*

Geographic area	2003		2004		2005		2006†	
Country*	Culture confirmed cases	% of all TB cases reported	Culture confirmed cases	% of all TB cases reported	Culture confirmed cases	% of all TB cases reported	Culture confirmed cases	% of all TB cases reported
EU & West								
Austria	631	(64)	673	(63)	652	(65)	547	(63)
Belgium	868	(78)	937	(78)	834	(75)	889	(79)
Bulgaria	1 377	(42)	1 283	(40)	1 254	(38)	1 360	(42)
Cyprus	23	(66)	19	(63)	19	(51)	23	(62)
Czech Republic	756	(65)	666	(63)	645	(64)	619	(64)
Denmark	299	(76)	291	(76)	326	(77)	301	(80)
Estonia	466	(75)	452	(76)	390	(75)	347	(76)
Finland	347	(84)	286	(86)	316	(88)	273	(91)
France	2 076	(34)	2 007	(36)	2 163	(40)	2 369	(44)
Germany	4 704	(66)	4 362	(67)	4 102	(68)	3 705	(69)
Greece	229	(37)	206	(27)	214	(28)	210	(31)
Hungary	929	(36)	990	(42)	777	(40)	735	(39)
Ireland	261	(64)	279	(65)	283	(63)	220	(48)
Italy	2 554	(57)	1 954	(46)	1 594	(39)	1 593	(36)
Latvia	1 263	(73)	1 157	(72)	1 109	(77)	994	(75)
Lithuania	1 680	(60)	1 598	(64)	1 739	(68)	1 786	(70)
Luxembourg	54	(100)	31	(100)	37	(100)	33	(100)
Malta	3	(43)	8	(42)	11	(44)	15	(50)
Netherlands	756	(57)	759	(56)	847	(73)	701	(69)
Poland	5 553	(55)	5 049	(53)	5 409	(58)	5 233	(61)
Portugal	2 296	(55)	2 317	(60)	2 171	(61)	1 924	(56)
Romania	17 012	(55)	18 605	(60)	18 311	(63)	5 373	(20)
Slovakia	406	(41)	357	(51)	357	(47)	401	(55)
Slovenia	259	(88)	231	(88)	245	(88)	184	(86)
Spain	3 572	(48) ‡	3 457	(45)	3 686	(47)	3 651	(45)
Sweden	349	(86)	370	(80)	444	(79)	397	(80)
United Kingdom	4 396	(61)	4 688	(62)	5 063	(61)	5 307	(62)
Subtotal EU	**53 119**	**(55)**	**53 032**	**(56)**	**52 998**	**(58)**	**39 190**	**(45)**
Andorra	6	(55)	6	(86)	9	(90)	8	(62)
Iceland	4	(80)	8	(67)	8	(73)	12	(92)
Israel	316	(60)	265	(51)	217	(53)	267	(69)
Monaco	-	-	-	-	-	-	-	-
Norway	273	(81)	246	(81)	214	(74)	226	(77)
San Marino	1	(100)	0	-	-	-	-	-
Switzerland	483	(78)	478	(81)	463	(82)	449	(86)
Total EU & West	**54 202**	**(55)**	**54 035**	**(56)**	**53 909**	**(58)**	**40 152**	**(45)**
Balkans								
Albania	237	(42)	201	(35)	196	(36)	166	(33)
Bosnia & Herzegovina	1 052	(59) §	1 676	(70)	1 142	(53)	1 086	(60)
Croatia	837	(56)	758	(58)	647	(57)	696	(61)
Macedonia, F.Y.R.	88	(13)	143	(21)	160	(24)	208	(33)
Montenegro	-	-	-	- ‖	107	(63)	119	(70)
Serbia	-	-	1 258	(45) ‖	1 365	(57)	1 271	(59)
Turkey	-	-	-	-	5 793	(28)	6 786	(33)
Total Balkans	**2 214**	**(49)**	**4 036**	**(52)**	**9 410**	**(34)**	**10 332**	**(38)**
East								
Armenia	-	-	-	-	-	-	-	-
Azerbaijan	-	-	1 115	(17)	-	-	-	-
Belarus	-	-	2 340	(36)	2 295	(36)	2 126	(35)
Georgia	-	-	-	-	257	(4)	94	(1)
Kazakhstan	4 362	(14)	4 835	(15)	5 955	(19)	8 470	(20)
Kyrgyzstan	-	-	1 098	(17)	993	(15)	1 117	(17)
Moldova	-	-	-	-	1 881	(30)	2 879	(47)
Russian Federation	2 990	(2)	6 538	(4)	31 224	(20)	60 240	(40)
Tajikistan	-	-	-	-	-	-	-	-
Turkmenistan	-	-	-	-	-	-	-	-
Ukraine	-	-	-	-	-	-	-	-
Uzbekistan	-	-	-	-	-	-	-	-
Total East	**7 352**	**(4)**	**15 926**	**(8)**	**42 605**	**(20)**	**74 926**	**(34)**
Total WHO European Region	**63 768**	**(22)**	**73 997**	**(24)**	**105 924**	**(32)**	**125 410**	**(37)**

* Countries reported routine use of culture in diagnosis of pulmonary TB in 2006, except where shown in italics (not routine or unknown)

† In certain countries (particularly Ireland and Romania), reporting of culture results for 2006 was incomplete at the time of data collection

‡ New and recurrent respiratory and meningeal cases only

§ Excluding Republika Srpska

‖ Cases from Montenegro included with Serbia

Table 15. Tuberculosis cases by *M. tuberculosis* complex species, EU & West and Balkans, 2006*

Geographic area	*M. tuberculosis*		*M. bovis*		*M. africanum*		Unknown or not done		Total culture
Country	N	(%)	N	(%)	N	(%)	N	(%)	positive
EU & West									
Austria	129	(23.6)	4	(0.7)	0	(0.0)	414	(75.7)	547
Belgium	887	(99.8)	2	(0.2)	0	(0.0)	0	(0.0)	889
Cyprus	23	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	23
Czech Republic	587	(94.8)	0	(0.0)	0	(0.0)	32	(5.2)	619
Denmark	295	(98.0)	3	(1.0)	2	(0.7)	1	(0.3)	301
Estonia	134	(38.6)	0	(0.0)	0	(0.0)	213	(61.4)	347
Finland	273	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	273
Germany	3 158	(85.2)	50	(1.3)	20	(0.5)	477	(12.9)	3 705
Hungary	735	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	735
Ireland	202	(91.8)	2	(0.9)	0	(0.0)	16	(7.3)	220
Italy	1 496	(93.9)	9	(0.6)	10	(0.6)	78	(4.9)	1 593
Latvia	994	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	994
Lithuania	1 786	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	1 786
Luxembourg	32	(97.0)	1	(3.0)	0	(0.0)	0	(0.0)	33
Malta	12	(80.0)	0	(0.0)	0	(0.0)	3	(20.0)	15
Netherlands	666	(95.0)	13	(1.9)	19	(2.7)	3	(0.4)	701
Romania	5 373	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	5 373
Slovakia	401	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	401
Slovenia	184	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	184
Sweden	394	(99.2)	2	(0.5)	0	(0.0)	1	(0.3)	397
United Kingdom	5 154	(97.1)	31	(0.6)	30	(0.6)	92	(1.7)	5 307
Subtotal EU	**22 915**	**(93.7)**	**117**	**(0.5)**	**81**	**(0.3)**	**1 330**	**(5.4)**	**24 443**
Andorra	8	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	8
Iceland	11	(91.7)	1	(8.3)	0	(0.0)	0	(0.0)	12
Norway	225	(99.6)	0	(0.0)	1	(0.4)	0	(0.0)	226
Switzerland	366	(81.5)	6	(1.3)	5	(1.1)	72	(16.0)	449
Total EU & West	**23 525**	**(93.6)**	**124**	**(0.5)**	**87**	**(0.3)**	**1 402**	**(5.6)**	**25 138**
Balkans									
Albania	166	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	166
Bosnia & Herzegovina	1 086	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)	1 086
Macedonia, F.Y.R.	28	(13.5)	0	(0.0)	0	(0.0)	180	(86.5)	208
Turkey	877	(12.9)	0	(0.0)	0	(0.0)	5 909	(87.1)	6 786
Total Balkans	**2 157**	**(26.2)**	**0**	**(0.0)**	**0**	**(0.0)**	**6 089**	**(73.8)**	**8 246**

* Including only countries reporting case-based data on characterisation of species for >10% of culture positive cases

Table 16. Classification of tuberculosis cases according to the European TB case definition (as revised), using clinical and laboratory information provided on case-based datasets, WHO European Region, 2006*

	CLINICAL CRITERIA*						LABORATORY CRITERIA*						CASE CLASSIFICATION*										
Geographic area	Criteria met (diagnosed alive)		Postmortem detection		Not reported or criteria not met		Confirmatory		Probable		None		Confirmed		Probable		Possible		Laboratory confirmed only		Not classifiable		Total Cases
Country	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	N	(%)	
EU & West																							
Austria	-	-	-	-	873	(100)	547	(63)	17	(2)	309	(35)	-	-	-	-	-	-	547	(63)	326	(37)	873
Belgium †	-	-	-	-	1 127	(100)	889	(79)	78	(7)	160	(14)	-	-	-	-	-	-	889	(79)	238	(21)	1 127
Cyprus	-	-	-	-	37	(100)	23	(62)	2	(5)	12	(32)	-	-	-	-	-	-	23	(62)	14	(38)	37
Czech Republic	-	-	-	-	973	(100)	619	(64)	0	(0)	354	(36)	-	-	-	-	-	-	619	(64)	354	(36)	973
Denmark ‡	-	-	-	-	377	(100)	301	(80)	19	(5)	57	(15)	-	-	-	-	-	-	301	(80)	76	(20)	377
Estonia †	450	(99)	3	(1)	2	(0)	347	(76)	6	(1)	102	(22)	346	(76)	6	(1)	101	(22)	1	(0)	1	(0)	455
Finland	-	-	-	-	299	(100)	273	(91)	5	(2)	21	(7)	-	-	-	-	-	-	273	(91)	26	(9)	299
France	5 259	(95)	77	(1)	0	(0)	2 369	(44)	1 082	(20)	1 885	(35)	2 369	(44)	1 082	(20)	1 885	(35)	0	(0)	0	(0)	5 336
Germany ‡	5 135	(95)	32	(1)	235	(4)	3 759	(70)	366	(7)	1 277	(24)	3 621	(67)	354	(7)	1 192	(22)	138	(3)	97	(2)	5 402
Greece	-	-	-	-	681	(100)	210	(31)	182	(27)	289	(42)	-	-	-	-	-	-	210	(31)	471	(69)	681
Hungary	-	-	-	-	1 894	(100)	735	(39)	129	(7)	1 030	(54)	-	-	-	-	-	-	735	(39)	1 159	(61)	1 894
Ireland † ‡	453	(99)	5	(1)	0	(0)	220	(48)	93	(20)	145	(32)	220	(48)	93	(20)	145	(32)	0	(0)	0	(0)	458
Italy	4 387	(100)	0	(0)	0	(0)	1 593	(36)	466	(11)	2 328	(53)	1 593	(36)	466	(11)	2 328	(53)	0	(0)	0	(0)	4 387
Latvia †	1 301	(98)	27	(2)	0	(0)	994	(75)	110	(8)	224	(17)	994	(75)	110	(8)	224	(17)	0	(0)	0	(0)	1 328
Lithuania	-	-	-	-	2 559	(100)	1 786	(70)	10	(0)	763	(30)	-	-	-	-	-	-	1 786	(70)	773	(30)	2 559
Luxembourg ‡	-	-	-	-	33	(100)	33	(100)	0	(0)	0	(0)	-	-	-	-	-	-	33	(100)	0	(0)	33
Malta	-	-	-	-	30	(100)	15	(50)	0	(0)	15	(50)	-	-	-	-	-	-	15	(50)	15	(50)	30
Netherlands	-	-	-	-	1 021	(100)	701	(69)	21	(2)	299	(29)	-	-	-	-	-	-	701	(69)	320	(31)	1 021
Poland	8 556	(100)	37	(0)	0	(0)	5 233	(61)	0	(0)	3 360	(39)	5 233	(61)	0	(0)	3 360	(39)	0	(0)	0	(0)	8 593
Portugal	-	-	-	-	3 423	(100)	1 924	(56)	366	(11)	1 133	(33)	-	-	-	-	-	-	1 924	(56)	1 499	(44)	3 423
Romania	-	-	-	-	27 319	(100)	5 373	(20)	11 292	(41)	10 654	(39)	-	-	-	-	-	-	5 373	(20)	21 946	(80)	27 319
Slovakia † ‡	626	(86)	3	(0)	101	(14)	401	(55)	53	(7)	276	(38)	352	(48)	45	(6)	232	(32)	49	(7)	52	(7)	730
Slovenia † ‡	189	(88)	8	(4)	18	(8)	184	(86)	14	(7)	17	(8)	168	(78)	14	(7)	15	(7)	16	(7)	2	(1)	215
Sweden	-	-	-	-	497	(100)	397	(80)	1	(0)	99	(20)	-	-	-	-	-	-	397	(80)	100	(20)	497
United Kingdom † ‡	380	(4) §	4	(0) §	8 114	(95)	5 308	(62)	402	(5)	2 788	(33)	281	(3)	3	(0)	100	(1)	5 027	(59)	3 087	(36)	8 498
Subtotal EU	**26 736**	**(35)**	**196**	**(0)**	**49 613**	**(65)**	**34 234**	**(45)**	**14 714**	**(19)**	**27 597**	**(36)**	**15 177**	**(20)**	**2 173**	**(3)**	**9 582**	**(13)**	**19 057**	**(25)**	**30 556**	**(40)**	**76 545**
Andorra ‡	13	(100)	0	(0)	0	(0)	8	(62)	2	(15)	3	(23)	8	(62)	2	(15)	3	(23)	0	(0)	0	(0)	13
Iceland †	13	(100)	0	(0)	0	(0)	12	(92)	0	(0)	1	(8)	12	(92)	0	(0)	1	(8)	0	(0)	0	(0)	13
Norway	293	(100)	1	(0)	0	(0)	226	(77)	2	(1)	66	(22)	226	(77)	2	(1)	66	(22)	0	(0)	0	(0)	294
Switzerland ‡	509	(98)	11	(2)	0	(0)	449	(86)	7	(1)	64	(12)	449	(86)	7	(1)	64	(12)	0	(0)	0	(0)	520
Total EU & West	**27 564**	**(36)**	**208**	**(0)**	**49 613**	**(64)**	**34 929**	**(45)**	**14 725**	**(19)**	**27 731**	**(36)**	**15 872**	**(21)**	**2 184**	**(3)**	**9 716**	**(13)**	**19 057**	**(25)**	**30 556**	**(39)**	**77 385**
Balkans																							
Albania	-	-	-	-	502	(100)	166	(33)	52	(10)	284	(57)	-	-	-	-	-	-	166	(33)	336	(67)	502
Bosnia & Herzegovina	-	-	-	-	1 800	(100)	1 086	(60)	0	(0)	714	(40)	-	-	-	-	-	-	1 086	(60)	714	(40)	1 800
Croatia	-	-	-	-	1 135	(100)	696	(61)	16	(1)	423	(37)	-	-	-	-	-	-	696	(61)	439	(39)	1 135
Macedonia, F.Y.R. †	600	(96)	2	(0)	25	(4)	208	(33)	74	(12)	345	(55)	208	(33)	70	(11)	324	(52)	0	(0)	25	(4)	627
Serbia † ‡	2 150	(100)	0	(0)	0	(0)	1 271	(59)	354	(16)	525	(24)	1 271	(59)	354	(16)	525	(24)	0	(0)	0	(0)	2 150
Turkey	20 526	(100)	0	(0)	0	(0)	6 786	(33)	3 939	(19)	9 801	(48)	6 786	(33)	3 939	(19)	9 801	(48)	0	(0)	0	(0)	20 526
Total Balkans	**23 276**	**(87)**	**2**	**(0)**	**3 462**	**(13)**	**10 213**	**(38)**	**4 435**	**(17)**	**12 092**	**(45)**	**8 265**	**(31)**	**4 363**	**(16)**	**10 650**	**(40)**	**1 948**	**(7)**	**1 514**	**(6)**	**26 740**
East																							
Georgia	-	-	-	-	6 311	(100)	-	-	2 984	(47)	3 327	(53)	-	-	-	-	-	-	-	-	6 311	(100)	6 311

* Criteria and classification as per the European TB case definition as revised up to 2007 (see Technical Note). Countries reporting only aggregated data are not included

† Reporting data on histological appearance of granulomata (completeness of information varies between countries)

‡ Reporting data on testing for *M.tuberculosis* complex nucleic acid (completeness of information varies between countries)

§ Information only provided for cases from Scotland (385 cases)

Table 17. Tuberculosis cases with HIV infection, WHO European Region*, 2000-2006

Geographic area / Country	% unknown HIV status (latest year with data)	2000			2001			2002			2003			2004			2005			2006		
		TB cases	HIV positive		TB cases	HIV positive		TB cases	HIV positive		TB cases	HIV positive		TB cases	HIV positive		TB cases	HIV positive		TB cases	HIV positive	
			N	(%)		N	(%)		N	(%)		N	(%)		N	(%)		N	(%)		N	(%)
EU & West																						
Belgium	Unknown	1 313	52	(4.0)	1 321	60	(4.5)	1 320	51	(3.9)	1 117	70	(6.3)	1 198	55	(4.6)	1 144	52	(4.5)	1 127	55	(4.9)
Bulgaria	>99%	-	-	-	-	-	-	-	-	-	-	-	-	3 232	10	(0.3)	-	-	-	3 232	6	(0.2)
Cyprus	11%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	37	0	(0.0)
Czech Rep.	83%	1 200	2	(0.2)	1 350	2	(0.1)	1 200	0	(0.0)	1 147	5	(0.4)	-	-	-	-	-	-	973	4	(0.4)
Denmark	97%	548	11	(2.0)	511	11	(2.2)	-	-	-	393	11	(2.8)	385	7	(1.8)	424	9	(2.1)	377	11	(2.9)
Estonia	10%	791	1	(0.1)	812	7	(0.9)	713	20	(2.8)	623	18	(2.9)	594	26	(4.4)	519	33	(6.4)	455	41	(9.0)
Finland	98%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	361	3	(0.8)	299	6	(2.0)
France	59%	6 714	327	(4.9)	6 465	364	(5.6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	94%	395	7	(1.8)	381	7	(1.8)	408	19	(4.7)	407	2	(0.5)	431	13	(3.0)	450	11	(2.4)	458	7	(1.5)
Italy	0%	-	-	-	-	-	-	-	-	-	-	-	-	404	11	(2.7) †	-	-		-	-	
Latvia	97%	2 009	14	(0.7)	2 022	27	(1.3)	1 818	25	(1.4)	1 726	40	(2.3)	1 610	40	(2.5)	1 443	51	(3.5)	1 328	45	(3.4)
Lithuania	Unknown	2 668	2	(0.1)	2 606	3	(0.1)	2 420	1	(0.0)	-	-	-	2 514	8	(0.3)	2 574	7	(0.3)	2 559	13	(0.5)
Malta	0%	18	0	(0.0)	16	0	(0.0)	24	0	(0.0)	7	1	(14.3)	19	1	(5.3)	23	0	(0.0)	30	2	(6.7)
Netherlands	82%	1 404	66	(4.7)	1 436	67	(4.7)	1 401	62	(4.4)	1 321	65	(4.9)	1 344	46	(3.4)	1 157	61	(5.3)	1 021	41	(4.0)
Poland	>99%	-	-	-	-	-	-	-	-	-	10 124	15	(0.1)	-	-	-	-	-	-	-	-	-
Portugal	47%	4 494	700	(15.6)	4 387	680	(15.5)	4 431	727	(16.4)	4 148	669	(16.1)	3 854	607	(15.7)	3 536	546	(15.4)	3 423	474	(13.8)
Romania	76%	-	-	-	-	-	-	-	-	-	31 039	161	(0.5)	31 034	144	(0.5)	29 289	160	(0.5)	27 319	60	(0.2)
Slovakia	Unknown	1 111	0	(0.0)	1 076	0	(0.0)	1 053	0	(0.0)	983	1	(0.1)	705	0	(0.0)	760	1	(0.1)	730	0	(0.0)
Slovenia	78%	380	2	(0.5)	372	2	(0.5)	349	1	(0.3)	293	1	(0.3)	263	3	(1.1)	278	0	(0.0)	215	1	(0.5)
Spain	56%	8 395	815	(9.7) ‡	7 453	599	(8.0) ‡	7 626	926	(12.1) ‡	7 467	714	(9.6) ‡	7 766	436	(5.6)	7 820	394	(5.0)	8 029	354	(4.4)
United Kingdom §	Unknown	5 990	253	(4.2)	6 211	314	(5.1)	6 497	459	(7.1)	6 584	548	(8.3)	-	-	-	-	-	-	-	-	-
Andorra	31%	-	-	-	-	-	-	-	-	-	11	0	(0.0)	7	0	(0.0)	10	0	(0.0)	13	0	(0.0)
Iceland	23%	13	0	(0.0)	13	0	(0.0)	8	1	(12.5)	5	1	(20.0)	12	1	(8.3)	11	1	(9.1)	13	2	(15.4)
Israel	Unknown	591	28	(4.7)	564	25	(4.4)	511	24	(4.7)	529	36	(6.8)	519	13	(2.5)	406	22	(5.4)	386	15	(3.9)
Balkans																						
Albania	90%	631	1	(0.2)	572	3	(0.5)	612	3	(0.5)	-	-	-	581	1	(0.2)	540	1	(0.2)	502	3	(0.6)
Macedonia, F.Y.R.	85%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	658	2	(0.3)	627	0	(0.0)
Montenegro	90%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	170	0	(0.0)	171	1	(0.6)
Serbia	>99%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2 366	3	(0.1)	2 150	5	(0.2)
East																						
Armenia	85%	-	-	-	1 343	0	(0.0)	1 393	3	(0.2)	1 570	1	(0.1)	269	8	(3.0) †	2 322	46	(2.0)	2 155	25	(1.2)
Azerbaijan	Unknown	5 113	5	(0.1)	4 877	12	(0.2)	4 428	7	(0.2)	3 931	8	(0.2)	-	-	-	-	-	-	-	-	-
Belarus	Unknown	-	-	-	5 505	33	(0.6) ‖	5 139	36	(0.7)	-	-	-	5 410	25	(0.5) ‖	5 276	32	(0.6) ‖	-	-	-
Georgia	90%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6 448	13	(0.2)	6 311	17	(0.3)
Kazakhstan	99%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43 204	234	(0.5)
Russian Federation	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	119 226	1 544	(1.3) ‖	117 646	1 979	(1.7) ‖
Tajikistan	0%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1 148	3	(0.3) †
Ukraine	Unknown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38 884	1 987	(5.1) ‖
Uzbekistan	Unknown	-	-	-	-	-	-	-	-	-	26 172	160	(0.6)	25 714	138	(0.5)	28 891	147	(0.5)	25 310	238	(0.9)

* Aggregate data; totals of TB cases may differ from those presented elsewhere in this Report; HIV prevalence may be underestimated due to incomplete HIV testing and/or reporting of HIV serostatus

† Selected cases (DOTS patients in Italy; testing on a sample of cases in Armenia; patients in Dushanbe city in Tajikistan)

‡ Among new and recurrent respiratory and meningeal cases only

§ Data for England and Wales only

‖ Among new TB cases only

Table 18. AIDS cases with tuberculosis as initial AIDS indicative disease, WHO European Region, 2006 *

	Total AIDS cases		AIDS-indicative opportunistic infection, unspecified		TB as initial AIDS-indicative disease: Pulmonary TB †		Extrapulmonary TB ‡		Total		AIDS cases with initial AIDS-indicative TB / total TB cases
	N	Cases / 100 000	N	(%)	N	(%)	N	(%)	N	(%)	(%)
EU & West											
Austria	47	0.6	7	(15)	3	(6)	0	(0)	3	(6)	0.3 %
Belgium	136	1.3	2	(1)	29	(21)	16	(12)	45	(33)	4.0 %
Bulgaria	16	0.2	0	(0)	6	(38)	0	(0)	6	(38)	0.2 %
Cyprus	3	0.4	0	(0)	0	(0)	0	(0)	0	(0)	0.0 %
Czech Republic	13	0.1	0	(0)	1	(8)	0	(0)	1	(8)	0.1 %
Denmark	47	0.9	0	(0)	7	(15)	3	(6)	10	(21)	2.7 %
Estonia	34	2.5	0	(0)	12	(35)	2	(6)	14	(41)	3.1 %
Finland	33	0.6	0	(0)	4	(12)	4	(12)	8	(24)	2.7 %
France	1 226	1.9	2	(0)	128	(10)	109	(9)	237	(19)	4.4 %
Germany	620	0.8	0	(0)	23	(4)	17	(3)	40	(6)	0.7 %
Greece	90	0.8	0	(0)	7	(8)	2	(2)	9	(10)	1.3 %
Hungary	22	0.2	1	(5)	3	(14)	0	(0)	3	(14)	0.2 %
Ireland	33	0.8	2	(6)	3	(9)	2	(6)	5	(15)	1.1 %
Italy	1 299	2.2	0	(0)	71	(5)	63	(5)	134	(10)	3.1 %
Latvia	53	2.3	18	(34)	17	(32)	1	(2)	18	(34)	1.4 %
Lithuania	27	0.8	0	(0)	14	(52)	2	(7)	16	(59)	0.6 %
Luxembourg	9	2.0	0	(0)	1	(11)	1	(11)	2	(22)	6.1 %
Malta	4	1.0	2	(50)	1	(25)	0	(0)	1	(25)	3.3 %
Netherlands	189	1.2	189	(100)	-	-	-	-	-	-	-
Poland	122	0.3	4	(3)	27	(22)	7	(6)	34	(28)	0.4 %
Portugal	813	7.7	73	(9)	161	(20)	162	(20)	323	(40)	9.4 %
Romania	211	1.0	211	(100)	-	-	-	-	-	-	-
Slovakia	4	0.1	0	(0)	0	(0)	0	(0)	0	(0)	0.0 %
Slovenia	5	0.2	0	(0)	1	(20)	0	(0)	1	(20)	0.5 %
Spain	1 908	4.3	0	(0)	282	(15)	260	(14)	542	(28)	6.8 %
Sweden	60	0.7	9	(15)	13	(22)	4	(7)	17	(28)	3.4 %
United Kingdom	847	1.4	0	(0)	151	(18)	76	(9)	227	(27)	2.7 %
Subtotal EU	**7 871**	**1.6**	**520**	**(7)**	**965**	**(12)**	**731**	**(9)**	**1 696**	**(22)**	**2.9 %**
Andorra	0	0.0	0	-	0	-	0	-	0	-	0.0 %
Iceland	3	1.0	0	(0)	1	(33)	0	(0)	1	(33)	7.7 %
Israel	56	0.8	1	(2)	13	(23)	4	(7)	17	(30)	4.4 %
Monaco	-	-	-	-	-	-	-	-	-	-	-
Norway	74	1.6	74	(100)	-	-	-	-	-	-	-
San Marino	1	3.3	0	(0)	0	(0)	0	(0)	0	(0)	-
Switzerland	165	2.2	0	(0)	20	(12)	8	(5)	28	(17)	5.4 %
Total EU & West	**8 170**	**1.6**	**595**	**(7)**	**999**	**(12)**	**743**	**(9)**	**1 742**	**(21)**	**2.9 %**
Balkans											
Albania	15	0.5	6	(40)	1	(7)	0	(0)	1	(7)	0.2 %
Bosnia & Herzegovina	8	0.2	1	(13)	1	(13)	0	(0)	1	(13)	0.1 %
Croatia	24	0.5	0	(0)	3	(13)	1	(4)	4	(17)	0.4 %
Macedonia, F.Y.R.	6	0.3	0	(0)	0	(0)	0	(0)	0	(0)	0.0 %
Montenegro	2	0.3	0	(0)	0	(0)	0	(0)	0	(0)	0.0 %
Serbia	51	0.7	2	(4)	7	(14)	10	(20)	17	(33)	0.8 %
Turkey	35	0.0	0	(0)	11	(31)	0	(0)	11	(31)	0.1 %
Total Balkans	**141**	**0.1**	**9**	**(6)**	**23**	**(16)**	**11**	**(8)**	**34**	**(24)**	**0.1 %**
East											
Armenia	46	1.5	11	(24)	23	(50)	1	(2)	24	(52)	1.1 %
Azerbaijan	-	-	-	-	-	-	-	-	-	-	-
Belarus	274	2.8	5	(2)	95	(35)	7	(3)	102	(37)	1.7 %
Georgia	133	3.0	24	(18)	59	(44)	4	(3)	63	(47)	1.0 %
Kazakhstan	132	0.9	5	(4)	83	(63)	4	(3)	87	(66)	0.2 %
Kyrgyzstan	24	0.5	3	(13)	9	(38)	1	(4)	10	(42)	0.2 %
Moldova	94	2.5	0	(0)	51	(54)	0	(0)	51	(54)	0.8 %
Russian Federation §	842	0.6	346	(41)	303	(36)	9	(1)	312	(37)	0.2 %
Tajikistan	0	-	0	-	0	-	0	-	0	-	0.0 %
Turkmenistan	0	-	0	-	0	-	0	-	0	-	0.0 %
Ukraine	4 580	9.8	393	(9)	2 569	(56)	267	(6)	2 836	(62)	6.9 %
Uzbekistan	-	-	-	-	-	-	-	-	-	-	-
Total East	**6 125**	**2.5**	**787**	**(13)**	**3 192**	**(52)**	**293**	**(5)**	**3 485**	**(57)**	**1.3 %**
Total WHO European Region	**14 436**	**1.7**	**1 391**	**(10)**	**4 214**	**(29)**	**1 047**	**(7)**	**5 261**	**(36)**	**1.5 %**

* Source: EuroHIV, European Non Aggregate AIDS Data Set (ENAADS), updated December 2006. By year of report (by year of diagnosis for Russian Fed), without adjustment for reporting delay.

† In persons over 12 years of age; includes cases with concomitant pulmonary and extrapulmonary TB

‡ At all ages

§ Showing cases diagnosed in 2006

Table 19. AIDS cases with TB as initial AIDS-indicative disease, WHO European Region, 2000-2006*

Geographic area	Year of diagnosis						
Country	2000	2001	2002	2003	2004	2005	2006
EU & West							
Austria	6	15	15	7	8	10	4
Belgium	47	46	55	50	39	49	31
Bulgaria	9	5	3	5	10	12	6
Cyprus	1	-	-	-	-	-	0
Czech Republic	1	0	0	0	1	1	1
Denmark	11	16	10	11	11	4	13
Estonia	0	1	2	7	10	9	13
Finland	3	3	9	3	6	3	13
France	297	319	343	327	272	231	219
Germany	61	46	55	51	65	50	13
Greece	22	16	8	22	14	11	10
Hungary	3	0	1	3	-	4	3
Ireland	0	2	7	3	10	6	5
Italy	171	181	169	173	178	163	109
Latvia	-	23	-	-	-	-	-
Lithuania	1	3	-	2	4	4	16
Luxembourg	1	1	0	-	0	2	2
Malta	0	-	0	0	-	-	-
Netherlands	-	-	-	-	-	-	-
Poland	29	33	28	29	33	28	32
Portugal	546	499	470	382	321	293	249
Romania	-	-	-	-	-	-	-
Slovakia	0	0	0	0	0	1	0
Slovenia	2	1	1	1	1	1	1
Spain	923	742	650	680	530	470	388
Sweden	9	8	13	6	9	11	16
United Kingdom	152	186	263	294	276	239	225
Andorra	-	-	-	-	-	-	-
Iceland	0	0	0	1	1	0	1
Israel	30	27	27	34	16	23	28
Monaco	0	0	0	0	-	-	-
Norway	-	-	-	-	-	-	-
San Marino	0	0	0	-	-	-	0
Switzerland	21	25	26	16	27	28	19
Balkans							
Albania	-	-	-	0	-	0	-
Bosnia & Herzegovina	3	-	-	1	2	1	1
Croatia	0	2	6	0	1	5	3
Macedonia, F.Y.R.	0	0	0	0	1	5	0
Montenegro †	-	-	-	-	-	-	0
Serbia †	11	8	9	12	8	15	20
Turkey	9	9	13	14	15	9	10
East							
Armenia	1	0	-	6	11	-	-
Azerbaijan	8	10	12	17	14	-	-
Belarus	0	1	7	11	31	43	104
Georgia	8	-	26	20	-	49	63
Kazakhstan	7	15	24	62	44	66	87
Kyrgyzstan	0	1	8	9	10	11	10
Moldova	0	7	2	31	47	35	54
Russian Federation	33	64	71	123	171	224	312
Tajikistan	0	1	0	0	0	0	0
Turkmenistan	0	0	1	0	0	0	0
Ukraine	533	-	-	1 079	1 497	2 324	2 807
Uzbekistan	1	4	0	6	10	3	-

* Source: EuroHIV, European Non Aggregate AIDS Data Set (ENAADS), updated December 2006. By year of diagnosis with adjustment for reporting delays (see EuroHIV reports. www.eurohiv.org). Excluding data for years for which specific diagnoses were reported for <80% of AIDS cases.

† Montenegro included with Serbia until 2005

Table 20. Multidrug resistance (MDR) by previous history of TB treatment, WHO European Region, latest available data

Geographic area / Country	Source of data / coverage *	Year	Cases never treated: Cases with DST results	Cases never treated: Multidrug resistant N	Cases never treated: Multidrug resistant (%)	Cases previously treated: Cases with DST results	Cases previously treated: Multidrug resistant N	Cases previously treated: Multidrug resistant (%)
Group A) Culture and DST done routinely; DST results complete or nationwide sample of TB cases								
EU & West								
Austria	Case-linked data	2006	481	7	(1.5)	11	2	(18.2)
Belgium	Case-linked data	2006	606 †	8	(1.3)	57 †	8	(14.0)
Cyprus	Case-linked data	2006	22	0	(0.0)	0	0	-
Czech Republic	Case-linked data	2006	552	6	(1.1)	15	3	(20.0)
Denmark	Case-linked data	2006	268 †	3	(1.1)	28 †	0	(0.0)
Estonia	Case-linked data	2006	279	36	(12.9)	68	16	(23.5)
Finland	Case-linked data	2006	167 †	1	(0.6)	15 †	1	(6.7)
France	Sentinel hospital network	2006	1 226	17	(1.4)	110	11	(10.0)
Germany	Case-linked data	2006	2 856	57	(2.0)	215	12	(5.6)
Latvia	Case-linked data	2006	796	85	(10.7)	171	57	(33.3)
Lithuania	Case-linked data	2006	1 344	127	(9.4)	440	204	(46.4)
Luxembourg	Case-linked data	2006	33	0	(0.0)	0	0	-
Malta	Case-linked data	2006	14	2	(14.3)	0	0	-
Netherlands	Case-linked data	2006	500	2	(0.4)	25	2	(8.0)
Poland	Survey	2004	2 716	8	(0.3)	522	43	(8.2)
Romania	Survey	2003-2004	869	25	(2.9)	382	41	(10.7)
Slovakia	Case-linked data	2006	321	3	(0.9)	61	4	(6.6)
Slovenia	Case-linked data	2006	176	1	(0.6)	8	0	(0.0)
Sweden	Case-linked data	2006	376	2	(0.5)	6	1	(16.7)
United Kingdom	Case-linked data	2006	3 805 †	29	(0.8)	255 †	13	(5.1)
Andorra	Case-linked data	2006	8	0	(0.0)	0	0	-
Iceland	Case-linked data	2006	12	0	(0.0)	0	0	-
Israel	NRL	2006	263	18	(6.8)	2	1	(50.0)
Norway	Case-linked data	2006	188	0	(0.0)	8	2	(25.0)
Switzerland	Case-linked data	2006	291	4	(1.4)	32	0	(0.0)
Balkans								
Bosnia & Herzegovina	All labs doing DST	2006	993	3	(0.3)	93	4	(4.3)
Croatia	Case-linked data	2006	613	0	(0.0)	82	2	(2.4)
Montenegro	NRL	2006	88 †	0	(0.0)	15 †	2	(13.3)
East								
Georgia	Survey	2005-2006	799	54	(6.8)	515	141	(27.4)
Kazakhstan	Survey ‡	2001	359	51	(14.2)	319	180	(56.4)
Group B) Culture or DST not routinely performed; DST results incomplete (selected cases / areas)								
EU & West								
Bulgaria	All labs doing DST (partial coverage)	2006	1 108	24	(2.2)	221	29	(13.1)
Greece	NRL	2006	507	13	(2.6)	-	-	-
Hungary	Case-linked data	2006	475	11	(2.3)	77	3	(3.9)
Ireland	Case-linked data	2006	145	2	(1.4)	6	1	(16.7)
Italy	NRL + regional labs	2005 §	485	8	(1.6)	79	14	(17.7)
Portugal	Case-linked data	2006	1 093	13	(1.2)	119	4	(3.4)
Spain	NRL (partial coverage)	2006	259	2	(0.8)	54	14	(25.9)
	Survey, Aragon ‖	2005	200	0	(0.0)	26	4	(15.4)
	Barcelona‡	2001	133	1	(0.8)	32	4	(12.5)
	Galicia ‖	2005	566	1	(0.2)	68	1	(1.5)
Balkans								
Albania	Case-linked data (partial coverage)	2006	140	1	(0.7)	5	0	(0.0)
Macedonia, F.Y.R.	Case-linked data	2006	133	0	(0.0)	29	6	(20.7)
Serbia	Case-linked data (partial coverage)	2006	1 103	0	(0.0)	166	11	(6.6)
Turkey	Case-linked data	2006	4 135	131	(3.2)	711	118	(16.6)
East								
Armenia	NRL	2006	524	65	(12.4)	346	150	(43.4)
Azerbaijan	All labs doing DST (partial coverage)	2006	253	61	(24.1)	260	151	(58.1)
Belarus	Coverage unknown	2000	2 060	220	(10.7)	-	-	-
Georgia	NRL	2006	1 135	77	(6.8)	587	155	(26.4)
Kazakhstan	All labs doing DST	2006	7 835	1 028	(13.1)	7 898	3 089	(39.1)
Kyrgyzstan	NRL (partial coverage)	2006	962	248	(25.8)	155	88	(56.8)
Moldova	All labs doing DST	2006	825	160	(19.4)	2 054	1 044	(50.8)
Russian Federation	Mary El region ‖	2006	304	38	(12.5)	-	-	-
	Orel region ‖	2006	317	28	(8.8)	30	5	(16.7)
	Tomsk region ‖	2005	515	77	(15.0)	-	-	-
Turkmenistan	Survey, Dashoguz Velayat ‡	2001-2002	105	4	(3.8)	98	18	(18.4)
	Ashgabat city	2006	-	-	-	103	16	(15.5)
Ukraine	Survey, Donetsk region ‖	2006	1 003	160	(16.0)	494	219	(44.3)
Uzbekistan	Tashkent city (survey)	2006	206 †	29	(14.1)	89 †	54	(60.7)

DST=Drug Susceptibility Testing NRL=National Reference Laboratory

* Nationwide unless otherwise specified (see also Table 22). Case-linked data means DST results provided to EuroTB as part of a case-based individual dataset

† Cases classified according to previous history of tuberculosis (see Technical Note)

‡ Source: "Anti-TB drug resistance in the world", N° 3 (WHO/HTM/TB/2004.343)

§ Latest year with DST data stratified by previous TB history; data from 2006 shown in Tables 22, 23 and Country Profile.

‖ Source: "Anti-TB drug resistance in the world", N° 4 (WHO/HTM/TB/2008.394); drug resistance patterns for Russian Fed and Ukraine shown in Country Profiles

Table 21. Laboratory practices and quality assurance for anti-TB Drug Susceptibility Testing (DST), WHO European Region, 2006

Geographic area / Country	No. of labs performing:		DST methodology					External quality assurance for DST					
								National *		International			
	Culture	DST	Non-radiometric proportion	Radiometric proportion	Resistance ratio	Absolute concentr.	Other		No. labs		Year	% agreement of results for:	
												Isoniazid	Rifampicin
EU & West													
Austria	11†	9 †	●	-	-	-	-	no	-	yes	2003	100	100
Belgium	160	17	●	●	-	-	●	yes	17	yes	2006	100	100
Bulgaria	31	21	-	-	-	-	●	no	-	no	-	-	-
Cyprus	1	0 ‡	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	45	14	●	-	-	-	●	yes	14	yes	2006	100	100
Denmark	1	1	-	●	-	-	-	-	-	yes	2006	100	100
Estonia	3	2	-	-	-	-	●	no	-	yes	2006	90	90
Finland	12	2	●	-	-	-	●	no	-	yes	2006	100	90
France	310	100	●	●	-	-	●	yes	30	yes	2007	100†	100†
Germany	185	75	-	-	-	-	●	yes	75	yes	2006	100	100
Greece	25	3	●	-	-	-	●	no	-	no	-	-	-
Hungary	18	11	●	●	-	-	●	yes	10	yes	2005	100	100
Ireland	13	3	-	●	-	-	●	no	-	yes	2004/5	100	100
Italy	>200	>200	●	●	●	●	●	yes	26	yes	2006	100	100
Latvia	8	1	-	-	-	●	●	-	-	yes	2006	95	90
Lithuania	5	5	●	-	-	-	-	yes	4	yes	2006	96	98
Luxembourg	1	1	●	●	-	-	-	-	-	no	-	-	-
Malta	1	0 ‡	-	-	-	-	-	-	-	-	-	-	-
Netherlands	50	15	-	-	-	●	-	no	-	yes	2006	100	100
Poland †	124	79	●	●	-	-	●	yes	79	yes	2004	-	-
Portugal	60	16	●	-	-	-	●	no	-	yes	2006	100	100
Romania	109	62	-	-	-	●	-	yes	20	yes	2006	100	90
Slovakia	11	4	●	-	-	-	-	yes	4	yes	2006	94	94
Slovenia	4	1	●	-	-	-	●	-	-	yes	2005	100	100
Spain	-	~200	●	-	-	-	-	-	-	yes	2005	100	100
Sweden	5	5	-	●	-	-	●	yes	5	yes	2006	93	100
United Kingdom	200	9	-	●	●	-	●	yes	6	yes	2007	100	100
Andorra	8	0 ‡	-	-	-	-	-	-	-	-	-	-	-
Iceland	1	0 ‡	-	-	-	-	-	-	-	-	-	-	-
Israel	19	2	-	-	●	-	●	yes	2	yes	2005	100	100
Norway	13	3	-	●	-	-	●	yes	2	yes	2005	100	100
Switzerland	~35	~15	-	●	-	-	●	yes	11	yes	2006	100	100
Balkans													
Albania	3	1	●	-	-	-	-	-	-	yes	2005	100	100
Bosnia & Herzegovina	8	8	●	-	-	-	●	yes	8	yes	2006	-	-
Croatia	15	7	●	-	-	-	●	yes	7	yes	2006	100	100
Macedonia, F.Y.R.	3	1	●	-	-	-	-	-	-	no	-	-	-
Montenegro	1	1	●	-	-	-	-	-	-	no	-	-	-
Serbia	44	9	●	-	-	-	●	yes	4	yes	2006	100	100
Turkey	22	7	●	-	-	-	●	yes	2	yes	2003	100	100
East													
Armenia	2	1	●	-	-	-	-	-	-	yes	2005	100	100
Azerbaijan	8	8	-	-	-	●	-	no	-	no	-	-	-
Georgia	2	1	●	-	-	-	-	-	-	yes	2005	100	100
Kazakhstan	22	22	-	-	-	●	-	yes	21	yes	2002	100	100
Kyrgyzstan	1	1	-	-	-	●	-	-	-	yes	2007	89	100
Moldova	4	4	-	-	-	●	●	yes	3	yes	2005	95	95
Turkmenistan	1	1	●	-	-	-	-	-	-	no	-	-	-
Uzbekistan	-	2	●	-	-	-	-	yes	1	yes	2005	97	97

* For countries with more than one DST laboratory
† Information from 2004
‡ DST done in a laboratory in a EU country abroad

Table 22. Characteristics of anti-TB drug resistance surveillance, WHO European Region, 2006

Geographic area				Cases included				
Country	Source of data *	Geographic coverage	Culture confirmed cases (%) †	Total culture positive †	DST results (Isoniazid & Rifampicin)		Cases resistant to any anti-TB drug ‡	
					N	(%)	N	(%)
Group A) Culture and DST done routinely; DST results complete or nationwide sample of TB cases								
EU & West								
Austria	Case-linked data	national	63%	547	511	(93)	49	(10)
Belgium	Case-linked data	national	79%	889	818	(92)	62	(8)
Cyprus	Case-linked data	national	62%	23	23	(100)	5	(22)
Czech Republic	Case-linked data	national	64%	619	567	(92)	47	(8)
Denmark	Case-linked data	national	80%	301	296	(98)	17	(6)
Estonia	Case-linked data	national	76%	347	347	(100)	111	(32)
Finland	Case-linked data	national	91%	273	265	(97)	25	(9)
France	Sentinel hospital network	national	-	1 482	1 478	(100)	139	(9)
Germany	Case-linked data	national	69%	3 705	3 501	(94)	396	(11)
Latvia	Case-linked data	national	75%	994	967	(97)	345	(36)
Lithuania	Case-linked data	national	70%	1 786	1 786	(100)	600	(34)
Luxembourg	Case-linked data	national	100%	33	33	(100)	0	(0)
Malta	Case-linked data	national	50%	15	14	(93)	4	(29)
Netherlands	Case-linked data	national	69%	701	594	(85)	60	(10)
Slovakia	Case-linked data	national	55%	401	401	(100)	19	(5)
Slovenia	Case-linked data	national	86%	184	184	(100)	3	(2)
Sweden	Case-linked data	national	80%	397	396	(100)	40	(10)
United Kingdom	Case-linked data	national	62%	5 307	4 932	(93)	366	(7)
Andorra	Case-linked data	national	62%	8	8	(100)	0	(0)
Iceland	Case-linked data	national	92%	12	12	(100)	2	(17)
Israel	NRL	national	69%	267	266	(100)	61	(23)
Norway	Case-linked data	national	77%	226	225	(100)	43	(19)
Switzerland	Case-linked data	national	86%	449	423	(94)	29	(7)
Balkans								
Bosnia & Herzegovina	All labs doing DST	national	60%	1 086	1 086	(100)	35	(3)
Croatia	Case-linked data	national	61%	696	696	(100)	11	(2)
Montenegro	NRL	national	70%	119	105	(88)	4	(4)
East								
Georgia	Survey (2005-2006)	national	-	1 422	1 422	(100)	805	(57)
Group B) Culture or DST not routinely performed; DST results incomplete (selected cases / areas)								
EU & West								
Bulgaria	All labs doing DST	partial	59%	1 329	1 329	(100)	230	(17)
Greece	NRL	partial	-	507	507	(100)	58	(11)
Hungary	Case-linked data	national	39%	735	555	(76)	67	(12)
Ireland	Case-linked data	national	48%	220	151	(69)	12	(8)
Italy	NRL + regional labs	partial	-	847	847	(100)	129	(15)
Portugal	Case-linked data	national	56%	1 924	1 212	(63)	156	(13)
Spain	NRL	partial	-	1 319	1 319	(100)	162	(12)
Balkans								
Albania	Case-linked data	partial	-	166	145	(87)	23	(16)
Macedonia, F.Y.R.	Case-linked data	national	33%	208	162	(78)	24	(15)
Serbia	Case-linked data	partial	66%	1 271	1 269	(100)	45	(4)
Turkey	Case-linked data	national	33%	6 786	4 846	(71)	939	(19)
East								
Armenia	NRL	national	40%	870	870	(100)	455	(52)
Azerbaijan	All labs doing DST	partial	-	513	513	(100)	361	(70)
Kazakhstan	All labs doing DST	national	48%	20 596	15 733	(76)	9 407	(60)
Kyrgyzstan	NRL	partial	-	1 117	1 117	(100)	733	(66)
Moldova	All labs doing DST	national	47%	2 879	2 879	(100)	1 803	(63)
Turkmenistan	NRL	partial (Ashgabat)	-	103	103	(100)	42	(41)
Uzbekistan	NRL	partial (Tashkent)	17%	295	295	(100)	176	(60)

DST=Drug Susceptibility Testing NRL=National Reference Laboratory

* Case-linked data means DST results provided to EuroTB as part of a case-based individual dataset; otherwise submitted as aggregate tables

† In areas included in drug-resistance surveillance; may differ from data shown elsewhere in this report

‡ Any resistance to Isoniazid, Rifampicin, Ethambutol or Streptomycin; expressed as a percentage of cases with DST results available. Testing for Ethambutol and Streptomycin not routine in all countries (see Tables 23-26)

Table 23. Anti-TB drug resistance, all tuberculosis cases (combined resistance), WHO European Region, 2006

Geographic area Country	Cases with DST results	Cases resistant to at least: Isoniazid N	(%)	Rifampicin N	(%)	Isoniazid & Rifampicin (multidrug resistant) N	(%)	Ethambutol * N	(%)	Streptomycin * N	(%)
Group A) Culture and DST done routinely; DST results complete or nationwide sample of TB cases											
EU & West											
Austria	511	34	(6.7)	10	(2.0)	10	(2.0)	4	(0.8)	34	(6.7)
Belgium	818	56	(6.8)	23	(2.8)	18	(2.2)	13	(1.6)	-	-
Cyprus	23	4	(17.4)	0	(0.0)	0	(0.0)	0	(0.0)	1	(4.3)
Czech Republic	567	26	(4.6)	19	(3.4)	9	(1.6)	10	(1.8)	28	(4.9)
Denmark	296	14	(4.7)	3	(1.0)	3	(1.0)	5	(1.7)	-	-
Estonia	347	84	(24.2)	55	(15.9)	52	(15.0)	52	(15.0)	96	(27.7)
Finland	265	13	(4.9)	5	(1.9)	2	(0.8)	9	(3.4)	8	(3.0)
France	1 478	96	(6.5)	31	(2.1)	30	(2.0)	15	(1.0)	84	(5.7)
Germany	3 501	284	(8.1)	83	(2.4)	78	(2.2)	80	(2.3)	261	(7.5)
Latvia	967	306	(31.6)	143	(14.8)	142	(14.7)	122	(12.6)	302	(31.2)
Lithuania	1 786	525	(29.4)	333	(18.6)	332	(18.6)	211	(11.8)	500	(28.0)
Luxembourg	33	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Malta	14	2	(14.3)	2	(14.3)	2	(14.3)	0	(0.0)	4	(28.6)
Netherlands	594	42	(7.1)	5	(0.8)	5	(0.8)	0	(0.0)	38	(6.4)
Slovakia	401	18	(4.5)	7	(1.7)	7	(1.7)	3	(0.7)	5	(1.2)
Slovenia	184	1	(0.5)	1	(0.5)	1	(0.5)	1	(0.5)	3	(1.6)
Sweden	396	38	(9.6)	5	(1.3)	3	(0.8)	2	(0.5)	-	-
United Kingdom	4 932	340	(6.9)	72	(1.5)	52	(1.1)	29	(0.6)	-	-
Andorra	8	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Iceland	12	2	(16.7)	0	(0.0)	0	(0.0)	0	(0.0)	-	-
Israel	266	38	(14.3)	22	(8.3)	19	(7.1)	13	(4.9)	56	(21.1)
Norway	225	27	(12.0)	3	(1.3)	3	(1.3)	5	(2.2)	34	(15.1)
Switzerland	423	25	(5.9)	5	(1.2)	4	(0.9)	3	(0.7)	-	-
Balkans											
Bosnia & Herzegovina	1 086	13	(1.2)	18	(1.7)	7	(0.6)	9	(0.8)	18	(1.7)
Croatia	696	7	(1.0)	3	(0.4)	3	(0.4)	3	(0.4)	5	(0.7)
Montenegro	105	2	(1.9)	3	(2.9)	2	(1.9)	1	(1.0)	1	(1.0)
East											
Georgia	1 422	474	(33.3)	233	(16.4)	219	(15.4)	106	(7.5)	691	(48.6)
Group B) Culture or DST not routinely performed; DST results incomplete (selected cases / areas)											
EU & West											
Bulgaria	1 329	142	(10.7)	100	(7.5)	53	(4.0)	81	(6.1)	72	(5.4)
Greece	507	26	(5.1)	18	(3.6)	13	(2.6)	16	(3.2)	44	(8.7)
Hungary	555	52	(9.4)	19	(3.4)	14	(2.5)	-	-	29	(5.2)
Ireland	151	8	(5.3)	4	(2.6)	3	(2.0)	3	(2.0)	-	-
Italy	847	76	(9.0)	35	(4.1)	28	(3.3)	25	(3.0)	74	(8.7)
Portugal	1 212	92	(7.6)	18	(1.5)	17	(1.4)	17	(1.4)	103	(8.5)
Spain	1 319	132	(10.0)	58	(4.4)	50	(3.8)	15	(1.1)	56	(4.2)
Balkans											
Albania	145	8	(5.5)	2	(1.4)	1	(0.7)	4	(2.8)	15	(10.3)
Macedonia, F.Y.R.	162	19	(11.7)	6	(3.7)	6	(3.7)	3	(1.9)	7	(4.3)
Serbia	1 269	21	(1.7)	11	(0.9)	11	(0.9)	6	(0.5)	31	(2.4)
Turkey	4 846	613	(12.6)	326	(6.7)	249	(5.1)	241	(5.0)	469	(9.7)
East											
Armenia	870	370	(42.5)	234	(26.9)	215	(24.7)	133	(15.3)	383	(44.0)
Azerbaijan	513	316	(61.6)	213	(41.5)	212	(41.3)	151	(29.4)	322	(62.8)
Kazakhstan	15 733	7 602	(48.3)	4 796	(30.5)	4 117	(26.2)	4 471	(28.4)	8 542	(54.3)
Kyrgyzstan	1 117	578	(51.7)	351	(31.4)	336	(30.1)	-	-	-	-
Moldova	2 879	1 490	(51.8)	1 302	(45.2)	1 204	(41.8)	733	(25.5)	1 417	(49.2)
Turkmenistan†	103	26	(25.2)	23	(22.3)	16	(15.5)	-	-	-	-
Uzbekistan	295	156	(52.9)	84	(28.5)	83	(28.1)	51	(17.3)	159	(53.9)

DST=Drug Susceptibility Testing

* Data shown only if DST results were available for > 90% of cases tested for isoniazid and rifampicin

† Only retreated cases reported

Table 24. Anti-TB drug resistance, previously untreated tuberculosis cases (primary resistance), WHO European Region, 2006

Geographic area	Cases with DST results	Cases resistant to at least: Isoniazid		Rifampicin		Isoniazid & Rifampicin (multidrug resistant)		Ethambutol *		Streptomycin *	
Country		N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Group A) Culture and DST done routinely; DST results complete or nationwide sample of TB cases											
EU & West											
Austria	481	30	(6.2)	7	(1.5)	7	(1.5)	3	(0.6)	29	(6.0)
Belgium †	606	32	(5.3)	11	(1.8)	8	(1.3)	7	(1.2)	-	-
Cyprus	22	4	(18.2)	0	(0.0)	0	(0.0)	0	(0.0)	1	(4.5)
Czech Republic	552	22	(4.0)	16	(2.9)	6	(1.1)	7	(1.3)	24	(4.3)
Denmark †	268	13	(4.9)	3	(1.1)	3	(1.1)	4	(1.5)	-	-
Estonia	279	55	(19.7)	37	(13.3)	36	(12.9)	36	(12.9)	70	(25.1)
Finland †	167	9	(5.4)	4	(2.4)	1	(0.6)	3	(1.8)	4	(2.4)
France	1 226	73	(6.0)	17	(1.4)	17	(1.4)	8	(0.7)	62	(5.1)
Germany	2 856	214	(7.5)	61	(2.1)	57	(2.0)	54	(1.9)	202	(7.1)
Latvia	796	221	(27.8)	85	(10.7)	85	(10.7)	72	(9.0)	215	(27.0)
Lithuania	1 344	264	(19.6)	127	(9.4)	127	(9.4)	75	(5.6)	261	(19.4)
Luxembourg	33	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Malta	14	2	(14.3)	2	(14.3)	2	(14.3)	0	(0.0)	4	(28.6)
Netherlands	500	33	(6.6)	2	(0.4)	2	(0.4)	0	(0.0)	27	(5.4)
Slovakia	321	11	(3.4)	3	(0.9)	3	(0.9)	3	(0.9)	3	(0.9)
Slovenia	176	1	(0.6)	1	(0.6)	1	(0.6)	1	(0.6)	3	(1.7)
Sweden	376	34	(9.0)	3	(0.8)	2	(0.5)	2	(0.5)	-	-
United Kingdom †	3 805	244	(6.4)	41	(1.1)	29	(0.8)	17	(0.4)	-	-
Andorra	8	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Iceland	12	2	(16.7)	0	(0.0)	0	(0.0)	0	(0.0)	-	-
Israel	263	37	(14.1)	20	(7.6)	18	(6.8)	12	(4.6)	54	(20.5)
Norway	188	20	(10.6)	0	(0.0)	0	(0.0)	3	(1.6)	22	(11.7)
Switzerland	291	21	(7.2)	5	(1.7)	4	(1.4)	3	(1.0)	-	-
Balkans											
Bosnia & Herzegovina	993	6	(0.6)	7	(0.7)	3	(0.3)	3	(0.3)	7	(0.7)
Croatia	613	4	(0.7)	0	(0.0)	0	(0.0)	0	(0.0)	4	(0.7)
Montenegro †	88	0	(0.0)	1	(1.1)	0	(0.0)	0	(0.0)	1	(1.1)
East											
Georgia	799	187	(23.4)	61	(7.6)	54	(6.8)	33	(4.1)	330	(41.3)
Group B) Culture or DST not routinely performed; DST results incomplete (selected cases / areas)											
EU & West											
Bulgaria	1 108	94	(8.5)	58	(5.2)	24	(2.2)	59	(5.3)	48	(4.3)
Greece	507	26	(5.1)	18	(3.6)	13	(2.6)	16	(3.2)	44	(8.7)
Hungary	475	42	(8.8)	14	(2.9)	11	(2.3)	-	-	24	(5.1)
Ireland	145	7	(4.8)	2	(1.4)	2	(1.4)	3	(2.1)	-	-
Italy	-	-	-	-	-	-	-	-	-	-	-
Portugal	1 093	77	(7.0)	14	(1.3)	13	(1.2)	14	(1.3)	88	(8.1)
Spain	259	18	(6.9)	3	(1.2)	2	(0.8)	1	(0.4)	15	(5.8)
Balkans											
Albania	140	6	(4.3)	2	(1.4)	1	(0.7)	3	(2.1)	15	(10.7)
Macedonia, F.Y.R.	133	9	(6.8)	0	(0.0)	0	(0.0)	2	(1.5)	4	(3.0)
Serbia	1 103	7	(0.6)	0	(0.0)	0	(0.0)	0	(0.0)	20	(1.8)
Turkey	4135	444	(10.7)	185	(4.5)	131	(3.2)	147	(3.6)	348	(8.4)
East											
Armenia	524	158	(30.2)	75	(14.3)	65	(12.4)	36	(6.9)	177	(33.8)
Azerbaijan	253	107	(42.3)	61	(24.1)	61	(24.1)	43	(17.0)	127	(50.2)
Kazakhstan	7 835	2 665	(34.0)	1 310	(16.7)	1 028	(13.1)	1 289	(16.5)	3 093	(39.5)
Kyrgyzstan	962	467	(48.5)	259	(26.9)	248	(25.8)	-	-	-	-
Moldova	825	257	(31.2)	171	(20.7)	160	(19.4)	107	(13.0)	280	(33.9)
Turkmenistan	-	-	-	-	-	-	-	-	-	-	-
Uzbekistan †	206	84	(40.8)	30	(14.6)	29	(14.1)	24	(11.7)	85	(41.3)

DST=Drug Susceptibility Testing

* Data shown only if DST results were available for > 90% of cases tested for isoniazid and rifampicin

† Cases classified according to TB history (see Technical Note)

Table 25. Combined anti-TB drug resistance, tuberculosis cases of national origin, WHO European Region, 2006

Geographic area	Criterion	Cases with DST results	Cases resistant to at least:									
			Isoniazid		Rifampicin		Isoniazid & Rifampicin (multidrug resistant)		Ethambutol *		Streptomycin *	
Country			N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Group A) Culture and DST done routinely; DST results complete or nationwide sample of TB cases												
EU & West												
Austria	**citizenship**	329	15	(4.6)	1	(0.3)	1	(0.3)	1	(0.3)	10	(3.0)
Belgium	**citizenship**	384	13	(3.4)	2	(0.5)	2	(0.5)	2	(0.5)	-	-
Cyprus	birthplace	5	1	(20.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Czech Republic	birthplace	485	12	(2.5)	11	(2.3)	3	(0.6)	6	(1.2)	12	(2.5)
Denmark †	birthplace	126	2	(1.6)	0	(0.0)	0	(0.0)	1	(0.8)	-	-
Estonia	birthplace	294	71	(24.1)	48	(16.3)	45	(15.3)	47	(16.0)	84	(28.6)
Finland	birthplace	215	5	(2.3)	3	(1.4)	1	(0.5)	2	(0.9)	2	(0.9)
France	birthplace	595	23	(3.9)	7	(1.2)	6	(1.0)	4	(0.7)	24	(4.0)
Germany	birthplace	1 876	90	(4.8)	12	(0.6)	12	(0.6)	22	(1.2)	78	(4.2)
Latvia	birthplace	910	287	(31.5)	133	(14.6)	132	(14.5)	113	(12.4)	284	(31.2)
Lithuania	birthplace	1 735	505	(29.1)	321	(18.5)	320	(18.4)	199	(11.5)	484	(27.9)
Luxembourg	birthplace	11	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Malta	**citizenship**	6	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	2	(33.3)
Netherlands	birthplace	189	7	(3.7)	0	(0.0)	0	(0.0)	0	(0.0)	7	(3.7)
Slovakia	birthplace	395	17	(4.3)	7	(1.8)	7	(1.8)	3	(0.8)	5	(1.3)
Slovenia	birthplace	154	1	(0.6)	1	(0.6)	1	(0.6)	1	(0.6)	3	(1.9)
Sweden	birthplace	110	8	(7.3)	1	(0.9)	0	(0.0)	0	(0.0)	-	-
United Kingdom	birthplace	1 159	67	(5.8)	10	(0.9)	5	(0.4)	5	(0.4)	-	-
Andorra	birthplace	0	-	-	-	-	-	-	-	-	-	-
Iceland	birthplace	3	1	(33.3)	0	(0.0)	0	(0.0)	0	(0.0)	-	-
Israel	birthplace	42	4	(9.5)	1	(2.4)	1	(2.4)	0	(0.0)	10	(23.8)
Norway	birthplace	39	1	(2.6)	1	(2.6)	1	(2.6)	1	(2.6)	2	(5.1)
Switzerland	birthplace	63	1	(1.6)	0	(0.0)	0	(0.0)	1	(1.6)	-	-
Balkans												
Bosnia & Herzegovina	**citizenship**	1 086	13	(1.2)	18	(1.7)	7	(0.6)	9	(0.8)	18	(1.7)
Croatia	birthplace	420	5	(1.2)	2	(0.5)	2	(0.5)	3	(0.7)	3	(0.7)
Montenegro	**citizenship**	105	2	(1.9)	3	(2.9)	2	(1.9)	1	(1.0)	1	(1.0)
East												
Georgia	**citizenship**	1 422	474	(33.3)	233	(16.4)	219	(15.4)	106	(7.5)	691	(48.6)
Group B) Culture or DST not routinely performed; DST results incomplete (selected cases / areas)												
EU & West												
Bulgaria	**citizenship**	1 329	142	(10.7)	100	(7.5)	53	(4.0)	81	(6.1)	72	(5.4)
Greece	birthplace	343	17	(5.0)	8	(2.3)	5	(1.5)	10	(2.9)	26	(7.6)
Hungary	birthplace	532	49	(9.2)	18	(3.4)	13	(2.4)	-	-	28	(5.3)
Ireland	birthplace	93	5	(5.4)	2	(2.2)	1	(1.1)	1	(1.1)	-	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	birthplace	1 066	65	(6.1)	10	(0.9)	10	(0.9)	12	(1.1)	80	(7.5)
Spain	birthplace	913	82	(9.0)	28	(3.1)	22	(2.4)	7	(0.8)	33	(3.6)
Balkans												
Albania	birthplace	144	8	(5.6)	2	(1.4)	1	(0.7)	4	(2.8)	15	(10.4)
Macedonia, F.Y.R.	birthplace	160	19	(11.9)	6	(3.8)	6	(3.8)	3	(1.9)	7	(4.4)
Serbia	**citizenship**	1 249	20	(1.6)	11	(0.9)	11	(0.9)	6	(0.5)	31	(2.5)
Turkey	birthplace	4 795	602	(12.6)	318	(6.6)	241	(5.0)	234	(4.9)	460	(9.6)
East												
Armenia	**citizenship**	861	369	(42.9)	234	(27.2)	215	(25.0)	132	(15.3)	382	(44.4)
Azerbaijan	birthplace	513	316	(61.6)	213	(41.5)	212	(41.3)	151	(29.4)	322	(62.8)
Kazakhstan	**citizenship**	15 733	7 602	(48.3)	4 796	(30.5)	4 117	(26.2)	4 471	(28.4)	8 542	(54.3)
Kyrgyzstan	**citizenship**	1 117	578	(51.7)	351	(31.4)	336	(30.1)	-	-	-	-
Moldova	**citizenship**	2 879	1 490	(51.8)	1 302	(45.2)	1 204	(41.8)	733	(25.5)	1 417	(49.2)
Turkmenistan ‡	birthplace	103	26	(25.2)	23	(22.3)	16	(15.5)	-	-	-	-
Uzbekistan	**citizenship**	295	156	(52.9)	84	(28.5)	83	(28.1)	51	(17.3)	159	(53.9)

DST=Drug Susceptibility Testing

* Data shown only if DST results were available for > 90% of cases tested for isoniazid and rifampicin

† By birthplace of parents for Danish born cases < 26 years of age

‡ Only retreated cases reported

Table 26. Combined anti-TB drug resistance, tuberculosis cases of foreign origin, WHO European Region, 2006

Geographic area	Criterion	Cases with DST results	Cases resistant to at least:									
			Isoniazid		Rifampicin		Isoniazid & Rifampicin (multidrug resistant)		Ethambutol *		Streptomycin *	
Country			N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Group A) Culture and DST done routinely; DST results complete or nationwide sample of TB cases												
EU & West												
Austria	**citizenship**	182	19	(10.4)	9	(4.9)	9	(4.9)	3	(1.6)	24	(13.2)
Belgium	**citizenship**	434	43	(9.9)	21	(4.8)	16	(3.7)	11	(2.5)	-	-
Cyprus	birthplace	18	3	(16.7)	0	(0.0)	0	(0.0)	0	(0.0)	1	(5.6)
Czech Republic	birthplace	82	14	(17.1)	8	(9.8)	6	(7.3)	4	(4.9)	16	(19.5)
Denmark †	birthplace	169	12	(7.1)	3	(1.8)	3	(1.8)	4	(2.4)	-	-
Estonia	birthplace	50	13	(26.0)	7	(14.0)	7	(14.0)	5	(10.0)	12	(24.0)
Finland	birthplace	33	5	(15.2)	1	(3.0)	1	(3.0)	4	(12.1)	3	(9.1)
France	birthplace	831	72	(8.7)	24	(2.9)	24	(2.9)	11	(1.3)	58	(7.0)
Germany	birthplace	1 507	190	(12.6)	68	(4.5)	64	(4.2)	56	(3.7)	175	(11.6)
Latvia	birthplace	57	19	(33.3)	10	(17.5)	10	(17.5)	9	(15.8)	18	(31.6)
Lithuania	birthplace	51	20	(39.2)	12	(23.5)	12	(23.5)	12	(23.5)	16	(31.4)
Luxembourg	birthplace	20	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Malta	**citizenship**	8	2	(25.0)	2	(25.0)	2	(25.0)	0	(0.0)	2	(25.0)
Netherlands	birthplace	400	34	(8.5)	5	(1.3)	5	(1.3)	0	(0.0)	31	(7.8)
Slovakia	birthplace	6	1	(16.7)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Slovenia	birthplace	30	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Sweden	birthplace	286	30	(10.5)	4	(1.4)	3	(1.0)	2	(0.7)	-	-
United Kingdom	birthplace	3 315	248	(7.5)	59	(1.8)	45	(1.4)	23	(0.7)	-	-
Andorra	birthplace	8	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Iceland	birthplace	9	1	(11.1)	0	(0.0)	0	(0.0)	0	(0.0)	-	-
Israel	birthplace	224	34	(15.2)	21	(9.4)	18	(8.0)	13	(5.8)	46	(20.5)
Norway	birthplace	186	26	(14.0)	2	(1.1)	2	(1.1)	4	(2.2)	32	(17.2)
Switzerland	birthplace	260	19	(7.3)	5	(1.9)	4	(1.5)	2	(0.8)	-	-
Balkans												
Bosnia & Herzegovina	**citizenship**	0	-	-	-	-	-	-	-	-	-	-
Croatia	birthplace	100	2	(2.0)	1	(1.0)	1	(1.0)	0	(0.0)	1	(1.0)
Montenegro	**citizenship**	0	-	-	-	-	-	-	-	-	-	-
East												
Georgia	**citizenship**	0	-	-	-	-	-	-	-	-	-	-
Group B) Culture or DST not routinely performed; DST results incomplete (selected cases / areas)												
EU & West												
Bulgaria	**citizenship**	0	-	-	-	-	-	-	-	-	-	-
Greece	birthplace	164	9	(5.5)	10	(6.1)	8	(4.9)	6	(3.7)	18	(11.0)
Hungary	birthplace	12	2	(16.7)	1	(8.3)	1	(8.3)	-	-	1	(8.3)
Ireland	birthplace	50	3	(6.0)	2	(4.0)	2	(4.0)	2	(4.0)	-	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	birthplace	146	27	(18.5)	8	(5.5)	7	(4.8)	5	(3.4)	23	(15.8)
Spain	birthplace	406	50	(12.3)	30	(7.4)	28	(6.9)	8	(2.0)	23	(5.7)
Balkans												
Albania	birthplace	1	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Macedonia, F.Y.R.	birthplace	2	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Serbia	**citizenship**	7	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Turkey	birthplace	51	11	(21.6)	8	(15.7)	8	(15.7)	7	(13.7)	9	(17.6)
East												
Armenia	**citizenship**	9	1	(11.1)	0	(0.0)	0	(0.0)	1	(11.1)	1	(11.1)
Azerbaijan	birthplace	0	-	-	-	-	-	-	-	-	-	-
Kazakhstan	**citizenship**	0	-	-	-	-	-	-	-	-	-	-
Kyrgyzstan	**citizenship**	0	-	-	-	-	-	-	-	-	-	-
Moldova	**citizenship**	0	-	-	-	-	-	-	-	-	-	-
Turkmenistan	birthplace	0	-	-	-	-	-	-	-	-	-	-
Uzbekistan	**citizenship**	0	-	-	-	-	-	-	-	-	-	-

DST=Drug Susceptibility Testing

* Data shown only if DST results were available for > 90% of cases tested for isoniazid and rifampicin

† By birthplace of parents for Danish born cases < 26 years of age

Table 27. Combined multidrug resistance (MDR) by geographic origin, EU & West and Balkans, 2001-2006 *

Geographic area / Country	2001 N	2001 (%)†	2002 N	2002 (%)†	2003 N	2003 (%)†	2004 N	2004 (%)†	2005 N	2005 (%)†	2006 N	2006 (%)†
A. National origin												
EU & West												
Austria	2	(0.4)	0	(0.0)	2	(0.5)	0	(0.0)	1	(0.3)	1	(0.3)
Belgium	5	(1.3)	3	(0.8)	2	(0.6)	1	(0.2)	5	(1.3)	2	(0.5)
Cyprus	-	-	-	-	-	-	0	(0.0)	0	(0.0)	0	(0.0)
Czech Republic	5	(0.8)	8	(1.8)	1	(0.2)	-	-	7	(1.4)	3	(0.6)
Denmark	0	(0.0)	1	(0.9)	0	(0.0)	0	(0.0)	2	(1.5)	0	(0.0)
Estonia	125	(27.6)	116	(27.3)	82	(22.2)	70	(20.4)	64	(19.9)	45	(15.3)
Finland	0	(0.0)	1	(0.3)	1	(0.3)	0	(0.0)	1	(0.4)	1	(0.5)
Germany	20	(1.0)	17	(0.7)	13	(0.5)	10	(0.5)	18	(0.9)	12	(0.6)
Ireland	1	(1.2)	0	(0.0)	0	(0.0)	1	(0.6)	1	(0.5)	-	-
Latvia	141	(13.8)	216	(18.7)	163	(14.6)	179	(17.7)	149	(15.1)	132	(14.5)
Lithuania	251	(18.3)	282	(22.0)	285	(21.5)	300	(19.6)	324	(19.2)	320	(18.4)
Luxembourg	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Malta	0	(0.0)	0	(0.0)	-	-	-	-	-	-	0	(0.0)
Netherlands	0	(0.0)	1	(0.3)	3	(1.2)	0	(0.0)	1	(0.4)	0	(0.0)
Slovakia	5	(0.9)	3	(0.6)	-	-	1	(0.3)	-	-	7	(1.8)
Slovenia	2	(0.9)	1	(0.4)	1	(0.5)	0	(0.0)	0	(0.0)	1	(0.6)
Sweden	2	(1.8)	1	(1.0)	1	(1.1)	0	(0.0)	0	(0.0)	0	(0.0)
United Kingdom	5	(0.5) ‡	3	(0.3) ‡	6	(0.6)	9	(0.8)	7	(0.6)	5	(0.4)
Andorra	0	-	0	(0.0)	-	-	0	-	0	(0.0)	0	-
Iceland	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
Israel	1	(3.1)	3	(6.8)	1	(2.5)	0	(0.0)	1	(4.3)	1	(2.4)
Norway	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	1	(2.6)
Switzerland	0	(0.0)	0	(0.0)	0	(0.0)	1	(0.9)	1	(0.8)	0	(0.0)
Balkans												
Bosnia & Herzegovina	2	(0.2)	4	(0.4) §	2	(0.2) §	10	(0.9) §	11	(1.0)	7	(0.6)
Croatia	4	(0.7)	5	(0.9)	5	(0.9)	-	-	3	(0.8)	2	(0.5)
Montenegro	-	-	-	-	-	-	-	-	2	(2.0)	2	(1.9)

	2001 N	2001 (%)†	2002 N	2002 (%)†	2003 N	2003 (%)†	2004 N	2004 (%)†	2005 N	2005 (%)†	2006 N	2006 (%)†
B. Foreign origin												
EU & West												
Austria	3	(1.9)	3	(1.6)	10	(4.9)	19	(7.8)	12	(4.7)	9	(4.9)
Belgium	13	(3.6)	18	(4.4)	7	(1.6)	11	(2.4)	6	(1.6)	16	(3.7)
Cyprus	-	-	-	-	-	-	0	(0.0)	1	(7.1)	0	(0.0)
Czech Republic	4	(6.1)	2	(3.8)	1	(2.1)	-	-	6	(9.0)	6	(7.3)
Denmark	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)	3	(1.6)	3	(1.8)
Estonia	33	(26.0)	22	(20.6)	24	(25.3)	20	(18.7)	14	(21.5)	7	(14.0)
Finland	2	(3.7)	2	(5.1)	1	(2.8)	0	(0.0)	0	(0.0)	1	(3.0)
Germany	77	(5.2)	76	(4.0)	77	(4.0)	91	(4.8)	85	(4.7)	64	(4.2)
Ireland	0	(0.0)	0	(0.0)	1	(1.8)	1	(1.2)	2	(2.2)	-	-
Latvia	9	(12.3)	10	(12.0)	11	(15.1)	16	(18.4)	11	(16.7)	10	(17.5)
Lithuania	15	(19.0)	15	(25.0)	27	(36.5)	18	(30.0)	14	(25.5)	12	(23.5)
Luxembourg	0	(0.0)	0	(0.0)	1	(2.8)	1	(4.0)	0	(0.0)	0	(0.0)
Malta	0	(0.0)	0	(0.0)	-	-	-	-	-	-	2	(25.0)
Netherlands	2	(0.6)	1	(0.2)	5	(1.4)	3	(0.7)	6	(1.0)	5	(1.3)
Slovakia	1	(12.5)	0	(0.0)	-	-	0	(0.0)	-	-	0	(0.0)
Slovenia	1	(1.3)	1	(1.6)	0	(0.0)	0	(0.0)	1	(2.2)	0	(0.0)
Sweden	2	(0.8)	3	(1.2)	6	(2.3)	6	(2.2)	4	(1.2)	3	(1.0)
United Kingdom	18	(1.0) ‡	24	(1.0) ‡	38	(1.5)	30	(1.1)	30	(0.9)	45	(1.4)
Andorra	0	-	0	(0.0)	-	-	0	(0.0)	0	(0.0)	0	(0.0)
Iceland	0	(0.0)	0	(0.0)	1	(50.0)	0	(0.0)	0	(0.0)	0	(0.0)
Israel	21	(7.4)	14	(4.7)	19	(6.9)	12	(5.3)	11	(5.7)	18	(8.0)
Norway	5	(3.2)	7	(4.7)	3	(1.3)	4	(2.1)	3	(1.8)	2	(1.1)
Switzerland	7	(2.5)	10	(3.2)	11	(3.7)	4	(1.4)	3	(1.1)	4	(1.5)
Balkans												
Bosnia & Herzegovina	0	(0.0)	0	(0.0) §	0	- §	0	- §	0	-	0	-
Croatia	0	(0.0)	1	(0.7)	0	(0.0)	-	-	0	(0.0)	1	(1.0)
Montenegro	-	-	-	-	-	-	-	-	0	-	0	-

* Including only data for countries with nationwide, representative information for two years or more.

† As a proportion of cases in the same category of origin with susceptibility results available for isoniazid and rifampicin

‡ Excluding Scotland

§ Federation of Bosnia only

Table 28. Characteristics of treatment outcome monitoring (TOM) and treatment success, WHO European Region, 2005

Geographic area				Total definite pulmonary cases			
Country	Geographic coverage	Type of data *	Type of cohort	Notified in TOM areas †	Included in TOM cohorts		Overall treatment success
					N	(%) ‡	
Group A. Complete cohorts with nationwide coverage							
EU & West							
Austria	national	case-linked	culture	545	545	-	72%
Belgium	national	case-linked	culture	658	658	-	66%
Bulgaria	national	aggregate	smear or culture	1 254	1 464	117%	84%
Cyprus	national	case-linked	culture	18	18	-	61%
Czech Republic	national	case-linked	culture	570	570	-	69%
Denmark	national	case-linked	culture	233	233	-	84%
Estonia	national	case-linked	culture	363	363	-	65%
Germany	national	case-linked	culture	3 295	3 295	-	68%
Hungary	national	case-linked	culture	743	743	-	48%
Ireland	national	case-linked	culture	224	224	-	71%
Latvia	national	case-linked	culture	1 049	1 049	-	71%
Lithuania	national	case-linked	culture	1 689	1 689	-	61%
Malta	national	case-linked	culture	9	9	-	89%
Netherlands	national	case-linked	culture	592	592	-	84%
Poland	national	case-linked	culture	5 178	5 178	-	73%
Portugal	national	case-linked	culture	1 971	1 971	-	87%
Romania	national	case-linked	culture	18 311	18 311	-	74%
Slovakia	national	case-linked	culture	330	330	-	89%
Slovenia	national	case-linked	culture	223	223	-	81%
Sweden	national	case-linked	culture	287	287	-	69%
United Kingdom	national	case-linked	culture	3 253	3 253	-	68%
Andorra	national	case-linked	culture	6	6	-	67%
Iceland	national	case-linked	culture	5	5	-	100%
Israel	national	aggregate	culture	175	234	134%	77%
Norway	national	case-linked	culture	132	132	-	89%
Balkans							
Albania	national	case-linked	smear	213	213	-	78%
Bosnia & Herzegovina	national	aggregate	new/relapse culture	1 142	1 141	100%	96%
Macedonia, F.Y.R.	national	case-linked	smear	224	224	-	81%
Serbia	national	case-linked	culture	1 338	1 338	-	84%
Turkey	national	case-linked	smear	8 505	8 505	-	87%
East							
Armenia	national	aggregate	smear	908	908	100%	61%
Belarus	national	aggregate	new smear or culture	2 249	2 247	100%	73%
Georgia	national	aggregate	smear	2 597	2 589	100%	62%
Kazakhstan	national	aggregate	new/relapse smear	10 076	10 029	100%	65%
Kyrgyzstan	national	aggregate	new/relapse smear	2 312	2 308	100%	83%
Moldova	national	aggregate	smear	2 878	3 015	105%	51%
Tajikistan	national	aggregate	smear	2 526	2 525	100%	78%
Turkmenistan	national	aggregate	smear	1 104	1 104	100%	83%
Group B. Incomplete cohorts or partial geographic coverage							
EU & West							
Italy	5 / 21 regions	aggregate	smear or culture	-	343	-	64%
Balkans							
Croatia	national	case-linked	culture	616	616	-	45%
Montenegro	pilot project	aggregate	smear	74	73	99%	29%
East							
Azerbaijan	national	aggregate	new/relapse smear	2 875	2 875	100%	49%
Russian Federation	DOTS areas	aggregate	new/relapse smear	26 685	29 786	112%	56%
Uzbekistan	DOTS areas	aggregate	smear	8 826	7 756	88%	75%

DOTS areas = units following the WHO-recommended TB control strategy

* Case-linked data means outcome results provided to EuroTB as part of a case-based individual dataset

† All cases notified in corresponding cohort in 2005; may differ from figures shown elsewhere in this report

‡ Not shown for countries with complete case-based outcome data; >100% in some countries with aggregate data due to updates of culture or smear results

Table 29. Treatment outcome, new definite pulmonary tuberculosis cases, WHO European Region, 2005

Geographic area / Country	Cohort	Total included	Success		Died		Failed		Still on treatment		Defaulted, transferred or unknown	
			N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Group A) Complete cohorts with nationwide coverage												
EU & West												
Austria	culture	509	368	(72)	46	(9)	0	(0)	32	(6)	63	(12)
Belgium *	culture	505	351	(70)	49	(10)	1	(0)	12	(2)	92	(18)
Bulgaria	smear/culture	1 342	1 152	(86)	55	(4)	29	(2)	0	(0)	106	(8)
Cyprus	culture	17	11	(65)	0	(0)	0	(0)	0	(0)	6	(35)
Czech Republic	culture	550	383	(70)	32	(6)	0	(0)	41	(7)	94	(17)
Denmark *	culture	219	183	(84)	15	(7)	1	(0)	6	(3)	14	(6)
Estonia	culture	292	214	(73)	20	(7)	1	(0)	28	(10)	29	(10)
Germany	culture	2 620	1 860	(71)	290	(11)	2	(0)	146	(6)	322	(12)
Hungary	culture	607	306	(50)	74	(12)	64	(11)	85	(14)	78	(13)
Ireland *	culture	158	116	(73)	13	(8)	3	(2)	5	(3)	21	(13)
Latvia	culture	849	648	(76)	61	(7)	8	(1)	79	(9)	53	(6)
Lithuania	culture	1 248	905	(73)	109	(9)	31	(2)	73	(6)	130	(10)
Malta	culture	9	8	(89)	1	(11)	0	(0)	0	(0)	0	(0)
Netherlands	culture	496	428	(86)	31	(6)	0	(0)	3	(1)	34	(7)
Poland *	culture	4 514	3 485	(77)	244	(5)	29	(1)	18	(0)	738	(16)
Portugal	culture	1 749	1 548	(89)	91	(5)	1	(0)	25	(1)	84	(5)
Romania	culture	12 537	10 591	(84)	534	(4)	459	(4)	95	(1)	858	(7)
Slovakia	culture	263	237	(90)	14	(5)	1	(0)	4	(2)	7	(3)
Slovenia	culture	197	158	(80)	26	(13)	0	(0)	0	(0)	13	(7)
Sweden	culture	276	192	(70)	21	(8)	1	(0)	8	(3)	54	(20)
United Kingdom *	culture	2 333	1 669	(72)	145	(6)	0	(0)	103	(4)	416	(18)
Andorra	culture	6	4	(67)	0	(0)	0	(0)	1	(17)	1	(17)
Iceland	culture	5	5	(100)	0	(0)	0	(0)	0	(0)	0	(0)
Israel	culture	216	167	(77)	26	(12)	3	(1)	3	(1)	17	(8)
Norway	culture	122	110	(90)	4	(3)	0	(0)	1	(1)	7	(6)
Total EU & West		**31 639**	**25 099**	**(79)**	**1 901**	**(6)**	**634**	**(2)**	**768**	**(2)**	**3 237**	**(10)**
Balkans												
Albania	smear	196	154	(79)	8	(4)	3	(2)	0	(0)	31	(16)
Bosnia & Herzegovina	culture	1 035	999	(97)	10	(1)	5	(0)	7	(1)	14	(1)
Macedonia, F.Y.R.	smear	179	151	(84)	3	(2)	0	(0)	0	(0)	25	(14)
Serbia	culture	1 193	1 013	(85)	58	(5)	11	(1)	1	(0)	110	(9)
Turkey	smear	7 450	6 653	(89)	174	(2)	36	(0)	123	(2)	464	(6)
Total Balkans		**10 053**	**8 970**	**(89)**	**253**	**(3)**	**55**	**(1)**	**131**	**(1)**	**644**	**(6)**
East												
Armenia	smear	581	421	(72)	20	(3)	30	(5)	0	(0)	110	(19)
Belarus	smear/culture	2 247	1 642	(73)	228	(10)	237	(11)	0	(0)	140	(6)
Georgia	smear	1 489	1 081	(73)	38	(3)	77	(5)	0	(0)	293	(20)
Kazakhstan	smear	6 884	4 894	(71)	338	(5)	806	(12)	358	(5)	488	(7)
Kyrgyzstan	smear	1 897	1 607	(85)	60	(3)	88	(5)	0	(0)	142	(7)
Moldova	smear	1 690	1 048	(62)	156	(9)	185	(11)	27	(2)	274	(16)
Tajikistan	smear	1 729	1 422	(82)	70	(4)	110	(6)	0	(0)	127	(7)
Turkmenistan	smear	995	844	(85)	55	(6)	40	(4)	0	(0)	56	(6)
Total East		**17 512**	**12 959**	**(74)**	**965**	**(6)**	**1 573**	**(9)**	**385**	**(2)**	**1 630**	**(9)**
Group B) Incomplete cohorts or partial geographic coverage												
EU & West												
Italy	smear/culture	290	195	(67)	23	(8)	1	(0)	5	(2)	66	(23)
Balkans												
Croatia	culture	558	258	(46)	50	(9)	1	(0)	9	(2)	240	(43)
Montenegro	smear	63	19	(30)	0	(0)	0	(0)	0	(0)	44	(70)
East												
Azerbaijan	smear	1 561	922	(59)	57	(4)	58	(4)	0	(0)	524	(34)
Russian Federation	smear	25 692	14 805	(58)	3 402	(13)	3 682	(14)	0	(0)	3 803	(15)
Uzbekistan	smear	5 336	4 296	(81)	298	(6)	310	(6)	0	(0)	432	(8)

* No previous diagnosis of tuberculosis

Table 30. Treatment outcome, retreated definite pulmonary tuberculosis cases, WHO European Region, 2005

Geographic area / Country	Cohort	Total included	Success		Died		Failed		Still on treatment		Defaulted, transferred or unknown	
			N	(%)	N	(%)	N	(%)	N	(%)	N	(%)
Group A) Complete cohorts with nationwide coverage												
EU & West												
Austria	culture	16	11	(69)	1	(6)	0	(0)	1	(6)	3	(19)
Belgium *	culture	34	18	(53)	9	(26)	0	(0)	2	(6)	5	(15)
Bulgaria	smear/culture	122	81	(66)	6	(5)	15	(12)	0	(0)	20	(16)
Cyprus	culture	0	0	-	0	-	0	-	0	-	0	-
Czech Republic	culture	20	8	(40)	1	(5)	0	(0)	9	(45)	2	(10)
Denmark *	culture	14	13	(93)	1	(7)	0	(0)	0	(0)	0	(0)
Estonia	culture	71	21	(30)	3	(4)	4	(6)	21	(30)	22	(31)
Germany	culture	230	146	(63)	26	(11)	1	(0)	21	(9)	36	(16)
Hungary	culture	129	47	(36)	15	(12)	26	(20)	18	(14)	23	(18)
Ireland *	culture	21	16	(76)	2	(10)	0	(0)	0	(0)	3	(14)
Latvia	culture	200	100	(50)	19	(10)	2	(1)	59	(30)	20	(10)
Lithuania	culture	435	123	(28)	111	(26)	19	(4)	80	(18)	102	(23)
Malta	culture	0	0	-	0	-	0	-	0	-	0	-
Netherlands	culture	25	21	(84)	1	(4)	0	(0)	1	(4)	2	(8)
Poland *	culture	664	275	(41)	42	(6)	4	(1)	3	(0)	340	(51)
Portugal	culture	222	167	(75)	17	(8)	2	(1)	9	(4)	27	(12)
Romania	culture	5 772	2 951	(51)	570	(10)	649	(11)	532	(9)	1 070	(19)
Slovakia	culture	60	53	(88)	4	(7)	0	(0)	3	(5)	0	(0)
Slovenia	culture	26	22	(85)	1	(4)	0	(0)	1	(4)	2	(8)
Sweden	culture	11	7	(64)	0	(0)	0	(0)	0	(0)	4	(36)
United Kingdom *	culture	226	134	(59)	23	(10)	0	(0)	16	(7)	53	(23)
Andorra	culture	0	0	-	0	-	0	-	0	-	0	-
Iceland	culture	0	0	-	0	-	0	-	0	-	0	-
Israel	culture	18	14	(78)	1	(6)	0	(0)	2	(11)	1	(6)
Norway	culture	5	4	(80)	1	(20)	0	(0)	0	(0)	0	(0)
Total EU & West		**8 321**	**4 232**	**(51)**	**854**	**(10)**	**722**	**(9)**	**778**	**(9)**	**1 735**	**(21)**
Balkans												
Albania	smear	17	13	(76)	0	(0)	0	(0)	0	(0)	4	(24)
Bosnia & Herzegovina †	culture	106	98	(92)	4	(4)	1	(1)	0	(0)	3	(3)
Macedonia, F.Y.R.	smear	45	30	(67)	3	(7)	2	(4)	2	(4)	8	(18)
Serbia	culture	145	107	(74)	15	(10)	4	(3)	0	(0)	19	(13)
Turkey	smear	1 055	737	(70)	53	(5)	34	(3)	87	(8)	144	(14)
Total Balkans		**1 368**	**985**	**(72)**	**75**	**(5)**	**41**	**(3)**	**89**	**(7)**	**178**	**(13)**
East												
Armenia	smear	327	133	(41)	24	(7)	38	(12)	0	(0)	132	(40)
Belarus	smear/culture	-	-	-	-	-	-	-	-	-	-	-
Georgia	smear	1 087	527	(48)	93	(9)	160	(15)	0	(0)	307	(28)
Kazakhstan †	smear	3 145	1 575	(50)	435	(14)	430	(14)	423	(13)	282	(9)
Kyrgyzstan †	smear	411	306	(74)	27	(7)	42	(10)	0	(0)	36	(9)
Moldova	smear	1 282	448	(35)	162	(13)	246	(19)	49	(4)	377	(29)
Tajikistan	smear	796	553	(69)	106	(13)	100	(13)	0	(0)	37	(5)
Turkmenistan	smear	109	69	(63)	16	(15)	13	(12)	0	(0)	11	(10)
Total East		**7 157**	**3 611**	**(50)**	**863**	**(12)**	**1 029**	**(14)**	**472**	**(7)**	**1 182**	**(17)**
Group B) Incomplete cohorts or partial geographic coverage												
EU & West												
Italy	smear/culture	38	15	(39)	7	(18)	1	(3)	1	(3)	14	(37)
Balkans												
Croatia	culture	58	22	(38)	5	(9)	1	(2)	1	(2)	29	(50)
Montenegro	smear	10	2	(20)	2	(20)	0	(0)	3	(30)	3	(30)
East												
Azerbaijan †	smear	1 314	489	(37)	74	(6)	84	(6)	0	(0)	667	(51)
Russian Federation †	smear	4 094	1 896	(46)	625	(15)	900	(22)	0	(0)	673	(16)
Uzbekistan	smear	2 420	1 521	(63)	267	(11)	256	(11)	0	(0)	376	(16)

* Previous diagnosis of tuberculosis

† Relapses only

Table 31. Treatment outcome by geographic origin, all pulmonary cases, EU & West and Balkans, 2005*

Geographic area / Country	Cases	Success		Died		Failed or Still on treatment		Defaulted, transferred or unknown	
		N	(%)	N	(%)	N	(%)	N	(%)
A. National origin									
EU & West									
Austria	453	348	(77)	58	(13)	8	(2)	39	(9)
Belgium †	343	229	(67)	59	(17)	10	(3)	45	(13)
Cyprus	5	3	(60)	0	(0)	2	(40)	0	(0)
Czech Republic	698	534	(77)	32	(5)	21	(3)	111	(16)
Denmark	145	123	(85)	12	(8)	5	(3)	5	(3)
Estonia	393	279	(71)	20	(5)	47	(12)	47	(12)
Germany	2 546	1 732	(68)	398	(16)	129	(5)	287	(11)
Hungary	1 740	1 035	(59)	222	(13)	298	(17)	185	(11)
Ireland	228	149	(65)	28	(12)	6	(3)	45	(20)
Latvia	1 189	884	(74)	86	(7)	139	(12)	80	(7)
Lithuania	2 135	1 414	(66)	263	(12)	195	(9)	263	(12)
Malta	8	7	(88)	1	(13)	0	(0)	0	(0)
Netherlands	273	228	(84)	26	(10)	0	(0)	19	(7)
Poland	8 444	6 349	(75)	410	(5)	119	(1)	1 566	(19)
Portugal	2 302	1 983	(86)	156	(7)	42	(2)	121	(5)
Romania	25 528	19 258	(75)	1 586	(6)	1 818	(7)	2 866	(11)
Slovakia	596	543	(91)	30	(5)	9	(2)	14	(2)
Slovenia	199	164	(82)	25	(13)	1	(1)	9	(5)
Sweden	107	80	(75)	12	(11)	2	(2)	13	(12)
United Kingdom	1 510	979	(65)	177	(12)	66	(4)	288	(19)
Andorra	2	2	(100)	0	(0)	0	(0)	0	(0)
Iceland	3	3	(100)	0	(0)	0	(0)	0	(0)
Norway	42	33	(79)	8	(19)	0	(0)	1	(2)
Total EU & West	**48 889**	**36 359**	**(74)**	**3 609**	**(7)**	**2 917**	**(6)**	**6 004**	**(12)**
Balkans									
Albania	357	282	(79)	12	(3)	3	(1)	60	(17)
Macedonia, F.Y.R.	511	382	(75)	19	(4)	4	(1)	106	(21)
Serbia	2 083	1 669	(80)	132	(6)	29	(1)	253	(12)
Turkey	14 937	12 779	(86)	428	(3)	428	(3)	1 302	(9)
Total Balkans	**17 888**	**15 112**	**(84)**	**591**	**(3)**	**464**	**(3)**	**1 721**	**(10)**

	Cases	Success		Died		Failed or Still on treatment		Defaulted, transferred or unknown	
		N	(%)	N	(%)	N	(%)	N	(%)
B. Foreign origin									
EU & West									
Austria	358	221	(62)	9	(3)	39	(11)	89	(25)
Belgium †	315	206	(65)	14	(4)	7	(2)	88	(28)
Cyprus	19	12	(63)	1	(5)	0	(0)	6	(32)
Czech Republic	109	59	(54)	1	(1)	29	(27)	20	(18)
Denmark	149	128	(86)	5	(3)	3	(2)	13	(9)
Estonia	74	46	(62)	7	(9)	8	(11)	13	(18)
Germany	1 910	1 342	(70)	105	(5)	111	(6)	352	(18)
Hungary	57	36	(63)	0	(0)	7	(12)	14	(25)
Ireland	90	63	(70)	3	(3)	4	(4)	20	(22)
Latvia	80	62	(78)	6	(8)	9	(11)	3	(4)
Lithuania	76	44	(58)	8	(11)	11	(14)	13	(17)
Malta	10	10	(100)	0	(0)	0	(0)	0	(0)
Netherlands	472	394	(83)	23	(5)	5	(1)	50	(11)
Poland	15	8	(53)	0	(0)	1	(7)	6	(40)
Portugal	276	222	(80)	13	(5)	8	(3)	33	(12)
Romania	2	0	(0)	0	(0)	0	(0)	2	(100)
Slovakia	23	18	(78)	2	(9)	0	(0)	3	(13)
Slovenia	46	35	(76)	4	(9)	0	(0)	7	(15)
Sweden	245	174	(71)	10	(4)	7	(3)	54	(22)
United Kingdom	2 706	1 955	(72)	120	(4)	94	(3)	537	(20)
Andorra	4	2	(50)	0	(0)	1	(25)	1	(25)
Iceland	2	2	(100)	0	(0)	0	(0)	0	(0)
Norway	133	123	(92)	2	(2)	1	(1)	7	(5)
Total EU & West	**7 171**	**5 162**	**(72)**	**333**	**(5)**	**345**	**(5)**	**1 331**	**(19)**
Balkans									
Albania	3	1	(33)	0	(0)	0	(0)	2	(67)
Macedonia, F.Y.R.	0	0	-	0	-	0	-	0	-
Serbia	34	26	(76)	0	(0)	3	(9)	5	(15)
Turkey	50	38	(76)	0	(0)	2	(4)	10	(20)
Total Balkans	**87**	**65**	**(75)**	**0**	**(0)**	**5**	**(6)**	**17**	**(20)**

* Including only countries reporting comprehensive case-linked data on geographic origin and on outcomes for both definite and non-definite forms of pulmonary cases (see note for Belgium).
Excluding 649 cases with unknown origin reported by 9 countries.
† Culture confirmed cases only

Table 32. Treatment outcome by site of disease, EU & West and Balkans, 2005*

Geographic area / Country	Cases	Success		Died		Failed or Still on treatment		Defaulted, transferred or unknown	
		N	(%)	N	(%)	N	(%)	N	(%)
A. All pulmonary									
EU & West									
Austria	811	569	(70)	67	(8)	47	(6)	128	(16)
Cyprus	24	15	(63)	1	(4)	2	(8)	6	(25)
Czech Republic	807	593	(73)	33	(4)	50	(6)	131	(16)
Denmark	294	251	(85)	17	(6)	8	(3)	18	(6)
Estonia	468	325	(69)	28	(6)	55	(12)	60	(13)
Germany	4 609	3 158	(69)	520	(11)	250	(5)	681	(15)
Hungary	1 838	1 102	(60)	228	(12)	307	(17)	201	(11)
Ireland	319	212	(66)	31	(10)	10	(3)	66	(21)
Latvia	1 295	946	(73)	118	(9)	148	(11)	83	(6)
Lithuania	2 211	1 458	(66)	271	(12)	206	(9)	276	(12)
Malta	18	17	(94)	1	(6)	0	(0)	0	(0)
Netherlands	755	626	(83)	50	(7)	5	(1)	74	(10)
Portugal	2 599	2 224	(86)	170	(7)	50	(2)	155	(6)
Romania	25 530	19 258	(75)	1 586	(6)	1 818	(7)	2 868	(11)
Slovakia	619	561	(91)	32	(5)	9	(1)	17	(3)
Slovenia	245	199	(81)	29	(12)	1	(0)	16	(7)
Sweden	352	254	(72)	22	(6)	9	(3)	67	(19)
United Kingdom	4 611	3 116	(68)	350	(8)	175	(4)	970	(21)
Andorra	6	4	(67)	0	(0)	1	(17)	1	(17)
Iceland	5	5	(100)	0	(0)	0	(0)	0	(0)
Norway	175	156	(89)	10	(6)	1	(1)	8	(5)
Total EU & West	**47 591**	**35 049**	**(74)**	**3 564**	**(7)**	**3 152**	**(7)**	**5 826**	**(12)**
Balkans									
Albania	360	283	(79)	12	(3)	3	(1)	62	(17)
Macedonia, F.Y.R.	511	382	(75)	19	(4)	4	(1)	106	(21)
Serbia	2 118	1 696	(80)	132	(6)	32	(2)	258	(12)
Turkey	14 987	12 817	(86)	428	(3)	430	(3)	1 312	(9)
Total Balkans	**17 976**	**15 178**	**(84)**	**591**	**(3)**	**469**	**(3)**	**1 738**	**(10)**

	Cases	Success		Died		Failed or Still on treatment		Defaulted, transferred or unknown	
		N	(%)	N	(%)	N	(%)	N	(%)
B. All extra-pulmonary									
EU & West									
Austria	188	139	(74)	16	(9)	9	(5)	24	(13)
Cyprus	13	9	(69)	0	(0)	0	(0)	4	(31)
Czech Republic	200	143	(72)	3	(2)	4	(2)	50	(25)
Denmark	128	109	(85)	2	(2)	5	(4)	12	(9)
Estonia	51	44	(86)	4	(8)	1	(2)	2	(4)
Germany	1 273	965	(76)	101	(8)	52	(4)	155	(12)
Hungary	126	94	(75)	13	(10)	13	(10)	6	(5)
Ireland	129	87	(67)	6	(5)	4	(3)	32	(25)
Latvia	148	133	(90)	5	(3)	5	(3)	5	(3)
Lithuania	363	341	(94)	4	(1)	2	(1)	16	(4)
Malta	6	6	(100)	0	(0)	0	(0)	0	(0)
Netherlands	400	339	(85)	19	(5)	4	(1)	38	(10)
Portugal	970	816	(84)	47	(5)	40	(4)	67	(7)
Romania	3 757	3 350	(89)	115	(3)	36	(1)	256	(7)
Slovakia	141	136	(96)	5	(4)	0	(0)	0	(0)
Slovenia	33	29	(88)	4	(12)	0	(0)	0	(0)
Sweden	207	135	(65)	13	(6)	10	(5)	49	(24)
United Kingdom	3 647	2 632	(72)	137	(4)	147	(4)	731	(20)
Andorra	4	4	(100)	0	(0)	0	(0)	0	(0)
Iceland	6	6	(100)	0	(0)	0	(0)	0	(0)
Norway	106	98	(92)	4	(4)	0	(0)	4	(4)
Total EU & West	**11 896**	**9 615**	**(81)**	**498**	**(4)**	**332**	**(3)**	**1 451**	**(12)**
Balkans									
Albania	180	152	(84)	6	(3)	0	(0)	22	(12)
Macedonia, F.Y.R.	147	104	(71)	2	(1)	1	(1)	40	(27)
Serbia	260	230	(88)	10	(4)	0	(0)	20	(8)
Turkey	5 548	4 860	(88)	118	(2)	153	(3)	417	(8)
Total Balkans	**6 135**	**5 346**	**(87)**	**136**	**(2)**	**154**	**(3)**	**499**	**(8)**

* Including only countries reporting comprehensive case-linked outcome data for both definite and non-definite forms of pulmonary and extra-pulmonary TB. Excluding 213 cases with unknown site of disease reported by 7 countries.

Table 33. Tuberculosis deaths by localisation of disease, WHO European Region, latest available year*

Geographic area		ICD death coding system	Respiratory		Miliary		Other		Total	Other deaths attributed to late effects of TB †	Ratio of TB deaths to TB case reports ‡
Country	Year		N	%	N	%	N	%	N		
EU & West											
Austria	2005	ICD-10	36	(69)	5	(10)	11	(21)	52	5	0.05
Belgium	-	-	-	-	-	-	-	-	-	-	-
Bulgaria §	2004	ICD-9	232	(87)	-	-	36	(13)	268	1	0.08
Cyprus	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	2005	ICD-10	61	(90)	6	(9)	1	(1)	68	3	0.07
Denmark	2001	ICD-10	18	(78)	1	(4)	4	(17)	23	15	0.05
Estonia	2005	ICD-10	44	(90)	4	(8)	1	(2)	49	2	0.09
Finland	2005	ICD-10	31	(82)	2	(5)	5	(13)	38	39	0.11
France	2004	ICD-10	349	(82)	31	(7)	48	(11)	428	400	0.08
Germany	2004	ICD-10	292	(83)	29	(8)	29	(8)	350	101	0.05
Greece §	2004	ICD-9	69	(92)	-	-	6	(8)	75	0	0.10
Hungary	2005	ICD-10	177	(93)	10	(5)	4	(2)	191	67	0.10
Ireland §	2005	ICD-9	12	(80)	-	-	3	(20)	15	12	0.03
Italy §	2002	ICD-9	343	(83)	-	-	70	(17)	413	38	0.10
Latvia	2005	ICD-10	166	(98)	1	(1)	3	(2)	170	13	0.12
Lithuania	2004	ICD-10	221	(72)	83	(27)	4	(1)	308	1	0.12
Luxembourg	2005	ICD-10	1	(100)	0	(0)	0	(0)	1	0	0.03
Malta	2005	ICD-10	1	(100)	0	(0)	0	(0)	1	0	0.04
Netherlands	2004	ICD-10	28	(82)	2	(6)	4	(12)	34	44	0.03
Poland	2005	ICD-10	777	(96)	9	(1)	20	(2)	806	34	0.09
Portugal	2003	ICD-10	181	(86)	8	(4)	22	(10)	211	141	0.05
Romania	2004	ICD-10	2 029	(97)	15	(1)	45	(2)	2 089	9	0.07
Slovakia	2005	ICD-10	44	(94)	2	(4)	1	(2)	47	1	0.06
Slovenia	2005	ICD-10	10	(59)	6	(35)	1	(6)	17	1	0.06
Spain	2004	ICD-10	260	(78)	33	(10)	41	(12)	334	120	0.04
Sweden	2004	ICD-10	13	(81)	1	(6)	2	(13)	16	33	0.03
United Kingdom	2004	ICD-10	271	(71)	50	(13)	63	(16)	384	65	0.05
Andorra	-	-	-	-	-	-	-	-	-	-	-
Iceland	2005	ICD-10	0	-	0	-	0	-	0	2	0.00
Israel	2003	ICD-10	16	(67)	1	(4)	7	(29)	24	23	0.05
Monaco	-	-	-	-	-	-	-	-	-	-	-
Norway	2004	ICD-10	6	(86)	1	(14)	0	(0)	7	37	0.02
San Marino	2000	ICD-9	0	-	0	-	0	-	0	0	0.00
Switzerland §	2004	ICD-10	13	(81)	-	-	3	(19)	16	0	0.03
Balkans											
Albania §	*2004*	*ICD-9*	*10*	*(83)*	-	-	*2*	*(17)*	*12*	*6*	*0.02*
Bosnia & Herzegovina	-	-	-	-	-	-	-	-	-	-	-
Croatia	2005	ICD-10	98	(90)	5	(5)	6	(6)	109	7	0.10
Macedonia, F.Y.R. §	2003	ICD-9	73	(94)	-	-	5	(6)	78	0	0.11
Montenegro ‖	-	-	-	-	-	-	-	-	-	-	-
Serbia ‖	2002	ICD-10	253	(95)	8	(3)	6	(2)	267	19	0.09
Turkey	-	-	-	-	-	-	-	-	-	-	-
East											
Armenia §	*2003*	*ICD-9*	*150*	*(97)*	-	-	*5*	*(3)*	*155*	*0*	*0.10*
Azerbaijan §	*2002*	*ICD-10*	*997*	*(98)*	-	-	*22*	*(2)*	*1 019*	*0*	*0.19*
Belarus §	2003	ICD-10	968	(94)	-	-	59	(6)	1 027	0	0.17
Georgia	*2001*	*ICD-10*	*242*	*(95)*	*0*	*(0)*	*13*	*(5)*	*255*	*0*	*0.04*
Kazakhstan §	2004	ICD-10	3 159	(96)	-	-	146	(4)	3 305	0	0.10
Kyrgyzstan	*2005*	*ICD-10*	*738*	*(93)*	*38*	*(5)*	*21*	*(3)*	*797*	*0*	*0.12*
Moldova	2006	ICD-10	603	(97)	6	(1)	13	(2)	622	7	0.10
Russian Federation §	2005	ICD-10	28 719	(89)	-	-	3 501	(11)	32 220	0	0.21
Tajikistan §	*2005*	*ICD-9*	*605*	*(97)*	-	-	*17*	*(3)*	*622*	*0*	*0.09*
Turkmenistan	-	-	-	-	-	-	-	-	-	-	-
Ukraine §	2005	ICD-10	8 434	(71)	-	-	3 462	(29)	11 896	0	0.27
Uzbekistan	*2005*	*ICD-10*	*2 741*	*(98)*	*5*	*(0)*	*38*	*(1)*	*2 784*	*1*	*0.10*

* Since 2000. Source: WHO Mortality Database (WHOSIS, update October 2007). Codes used: ICD-9 010-018 (BTL 020-025,029) or ICD-10 A15-19.
Countries in italics had coverage or/and estimated data completeness <80% in last reporting year reported.

† Underlying cause of death being sequelae of TB (ICD-9 137 [BTL 077] or ICD-10 B90,P37.0) or pneumoconiosis associated with TB (ICD-10 J65)

‡ Ratio of total TB deaths to TB cases reported to EuroTB in the corresponding year

§ Miliary cases included under 'Other'

‖ Data from Montenegro included with Serbia

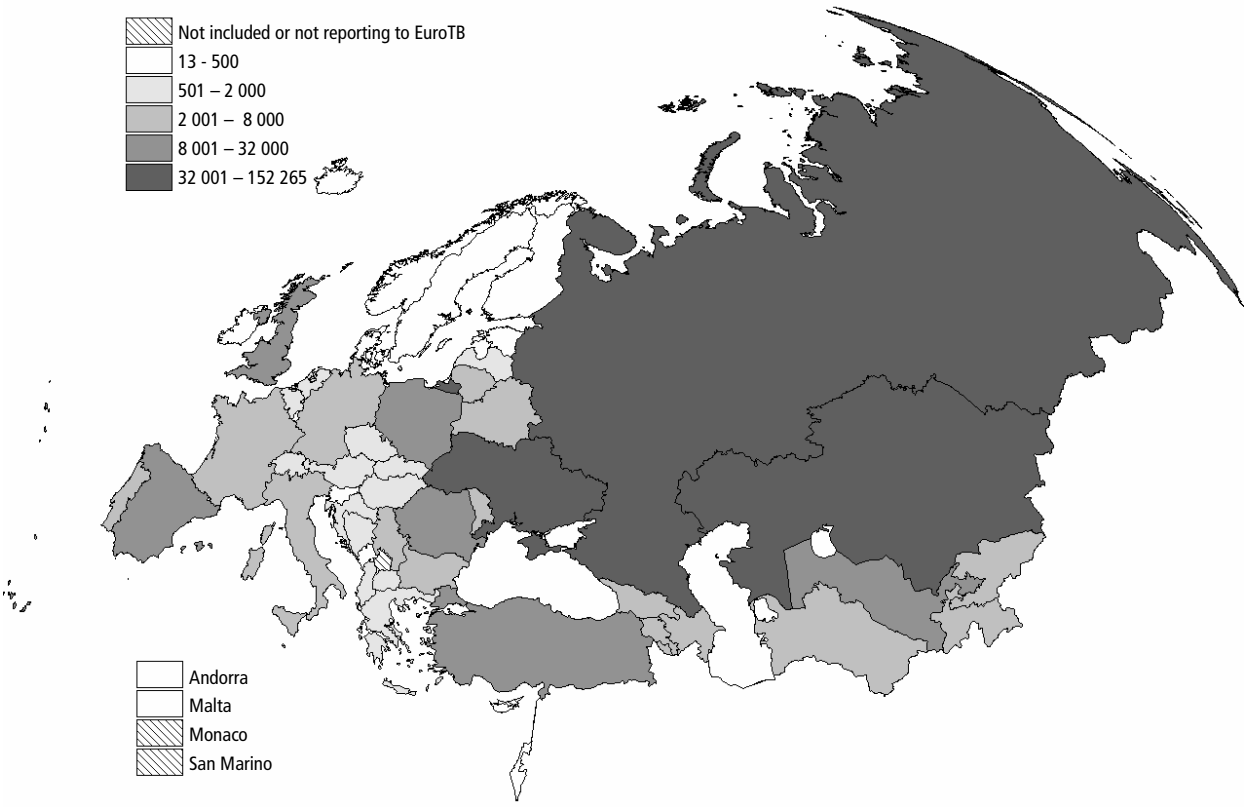
Table 34. Tuberculosis deaths and mortality rates, WHO European Region, 2000-2005*

Geographic area	TB deaths and mortality rates (/ 100,000 population)											
	2000		2001		2002		2003		2004		2005	
Country	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
EU & West												
Austria	71	0.89	55	0.68	66	0.82	45	0.55	41	0.50	52	0.63
Belgium	-	-	-	-	-	-	-	-	-	-	-	-
Bulgaria	318	3.89	285	3.60	283	3.60	275	3.52	268	3.44	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	125	1.22	94	0.92	82	0.80	81	0.79	68	0.67	68	0.66
Denmark	20	0.37	23	0.43	-	-	-	-	-	-	-	-
Estonia	106	7.74	96	7.04	88	6.48	91	6.72	98	7.26	49	3.64
Finland	84	1.62	53	1.02	57	1.10	48	0.92	29	0.55	38	0.72
France	633	1.07	587	0.99	467	0.78	499	0.83	428	0.71	-	-
Germany	497	0.60	415	0.50	388	0.47	396	0.48	350	0.42	-	-
Greece	83	0.76	105	0.96	86	0.78	107	0.97	75	0.68	-	-
Hungary	361	3.54	324	3.18	284	2.80	235	2.32	262	2.59	191	1.89
Ireland	36	0.95	27	0.70	27	0.69	22	0.55	23	0.57	15	0.36
Italy	460	0.81	415	0.73	413	0.72	-	-	-	-	-	-
Latvia	288	12.14	263	11.17	191	8.17	202	8.69	169	7.31	170	7.39
Lithuania	361	10.32	350	10.05	332	9.57	331	9.58	308	8.97	-	-
Luxembourg	1	0.23	2	0.45	3	0.67	0	0.00	0	0.00	1	0.22
Malta	1	0.26	0	0.00	1	0.25	1	0.25	0	0.00	1	0.25
Netherlands	32	0.20	44	0.27	39	0.24	33	0.20	34	0.21	-	-
Poland	1 041	2.69	1 001	2.59	892	2.33	905	2.37	813	2.13	806	2.11
Portugal	260	2.54	242	2.35	239	2.31	211	2.01	-	-	-	-
Romania	2 130	9.49	2 387	10.65	2 339	10.73	2 237	10.29	2 089	9.64	-	-
Slovakia	54	1.00	55	1.02	64	1.19	66	1.23	51	0.95	47	0.87
Slovenia	17	0.86	25	1.26	20	1.00	21	1.05	12	0.60	17	0.85
Spain	399	0.99	387	0.95	377	0.91	360	0.86	334	0.78	-	-
Sweden	18	0.20	27	0.30	21	0.24	16	0.18	16	0.18	-	-
United Kingdom	-	-	404	0.68	427	0.72	429	0.72	384	0.64	-	-
Andorra	-	-	-	-	-	-	-	-	-	-	-	-
Iceland	0	0.00	1	0.35	0	0.00	0	0.00	0	0.00	0	0.00
Israel	35	0.56	16	0.25	-	-	24	0.36	-	-	-	-
Monaco	-	-	-	-	-	-	-	-	-	-	-	-
Norway	10	0.22	16	0.35	8	0.18	11	0.24	7	0.15	-	-
San Marino	0	0.00	-	-	-	-	-	-	-	-	-	-
Switzerland	33	0.46	24	0.33	24	0.33	17	0.23	16	0.22	-	-
Balkans												
Albania	*16*	*0.51*	*14*	*0.46*	*14*	*0.45*	*12*	*0.39*	*12*	*0.38*	-	-
Bosnia & Herzegovina	-	-	-	-	-	-	-	-	-	-	-	-
Croatia	169	3.86	145	3.27	181	4.07	159	3.58	152	3.42	109	2.45
Macedonia, F.Y.R.	92	4.54	86	4.23	71	3.52	78	3.85	-	-	-	-
Montenegro †	-	-	-	-	-	-	-	-	-	-	-	-
Serbia †	379	4.54	259	3.11	267	3.29	-	-	-	-	-	-
Turkey	-	-	-	-	-	-	-	-	-	-	-	-
East												
Armenia	*157*	*4.13*	*145*	*3.82*	*167*	*5.20*	*155*	*4.83*	-	-	-	-
Azerbaijan	*1 184*	*14.71*	*1 107*	*13.65*	*1 019*	*12.47*	-	-	-	-	-	-
Belarus	726	7.26	827	8.29	938	9.45	1 027	10.40	-	-	-	-
Georgia	*288*	*6.47*	*255*	*5.61*	-	-	-	-	-	-	-	-
Kazakhstan	3 899	26.22	3 612	24.30	3 748	25.23	3 534	23.70	3 305	22.01	-	-
Kyrgyzstan	*1 019*	*20.85*	*1 170*	*23.75*	*1 003*	*20.20*	*919*	*18.34*	*812*	*16.48*	*797*	*15.58*
Moldova	608	16.70	536	14.76	556	15.33	555	15.36	624	17.31	659	18.33
Russian Federation	29 800	20.62	28 850	20.07	31 197	21.83	31 405	21.89	30 840	21.44	32 220	22.51
Tajikistan	*606*	*9.79*	*698*	*11.06*	*648*	*10.06*	*670*	*10.19*	*617*	*9.54*	*622*	*9.50*
Turkmenistan	-	-	-	-	-	-	-	-	-	-	-	-
Ukraine	10 976	22.29	11 064	22.66	9 894	20.62	10 421	21.88	10 787	22.82	11 896	25.35
Uzbekistan	*3 352*	*13.60*	-	-	*3 495*	*13.83*	*3 304*	*12.92*	*2 854*	*11.03*	*2 784*	*10.64*

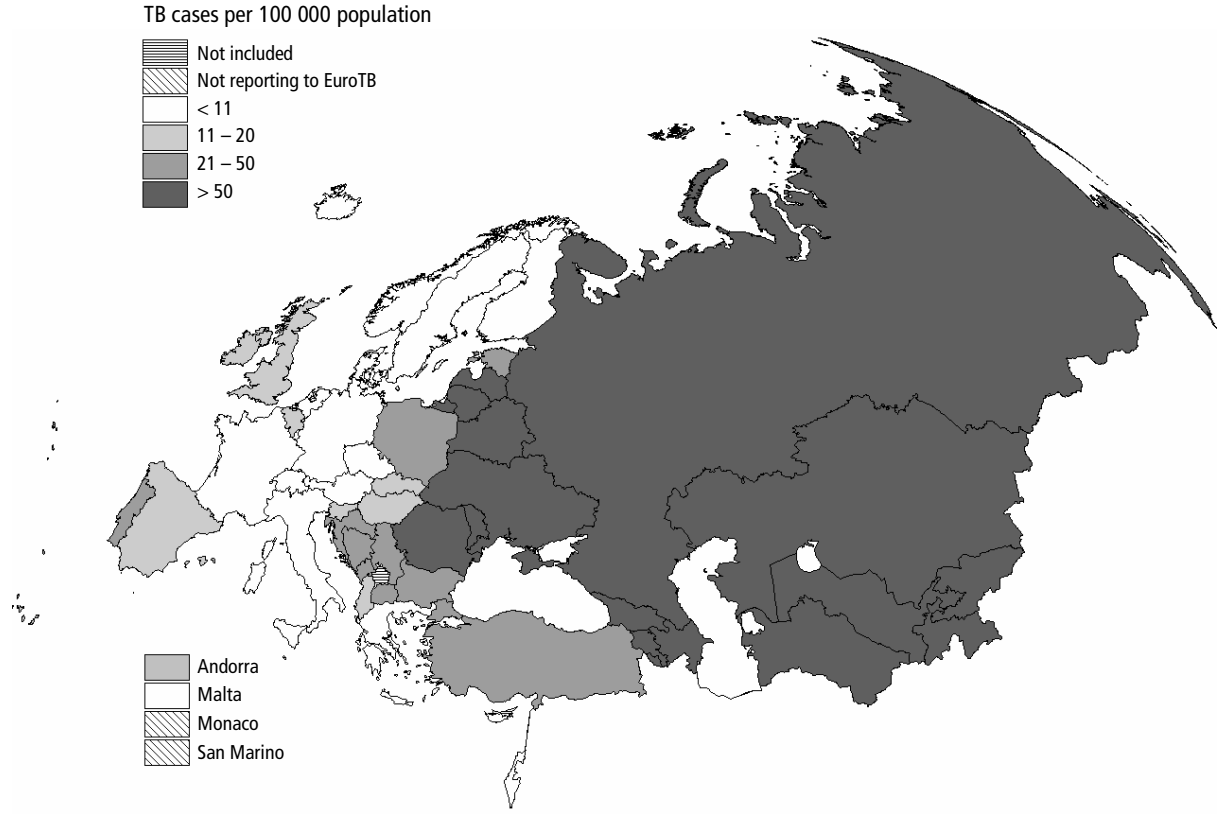
* Source: WHO Mortality Database (WHOSIS, update October 2007). Codes used: ICD-9 010-018 (BTL 020-025,029) or ICD-10 A15-19.
Countries in italics had coverage or/and estimated data completeness <80% in last reporting year reported
† Data from Montenegro included with Serbia

4. MAPS & FIGURES

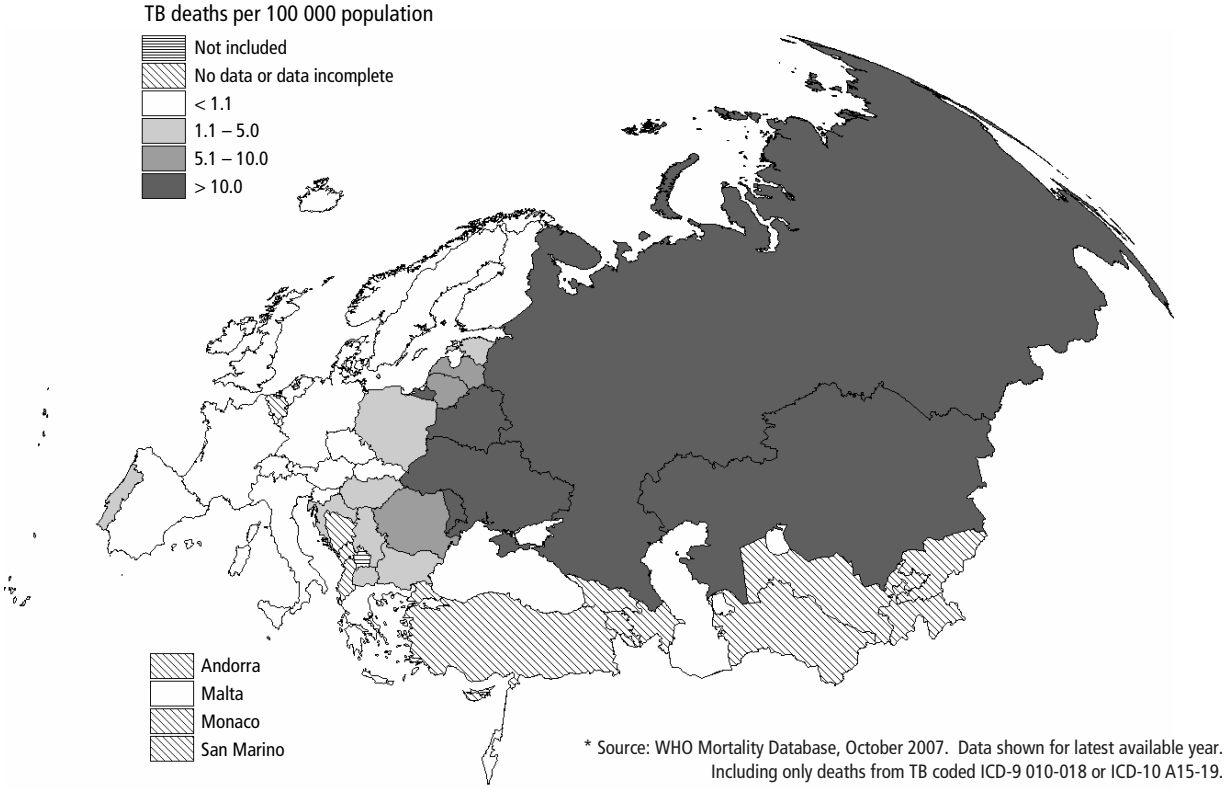
Map 1. Total TB notifications, WHO European Region, 2006



Map 2. Total TB notification rates, WHO European Region, 2006

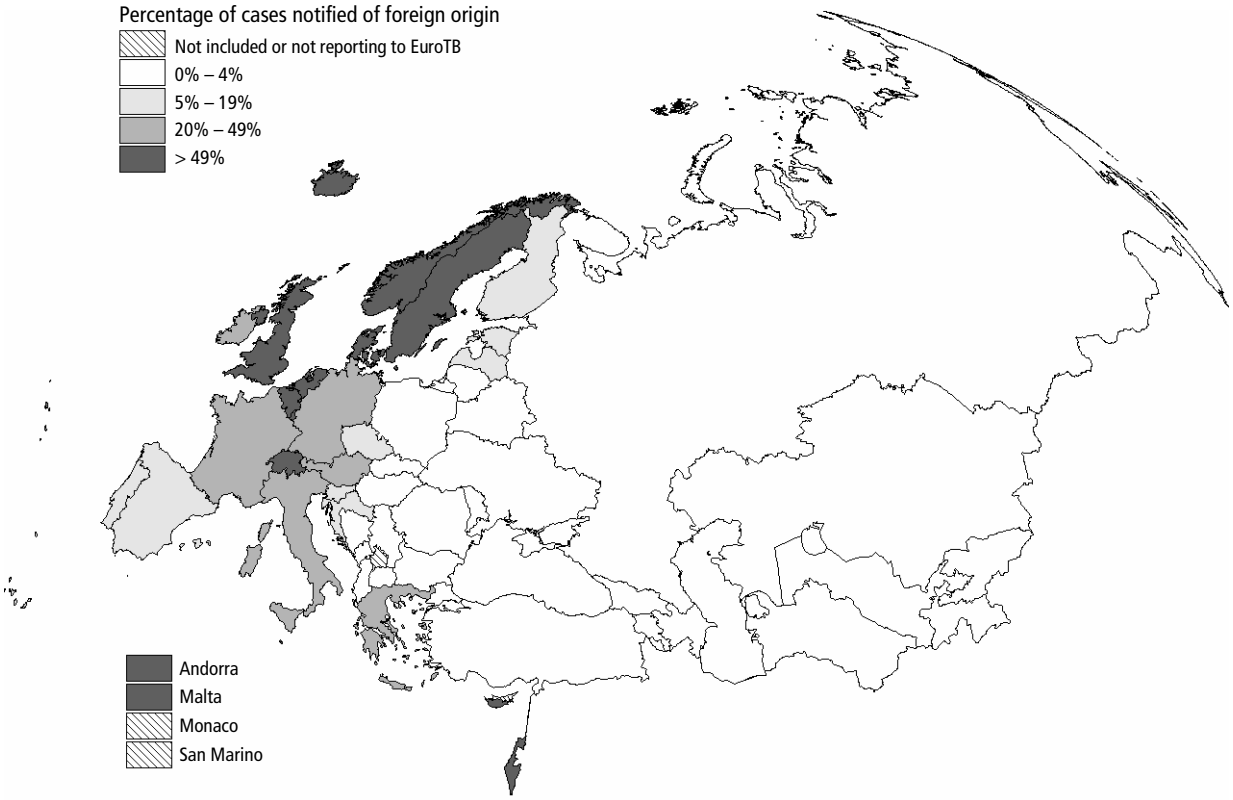


Map 3. TB mortality rates, WHO European Region, 2001-2006*

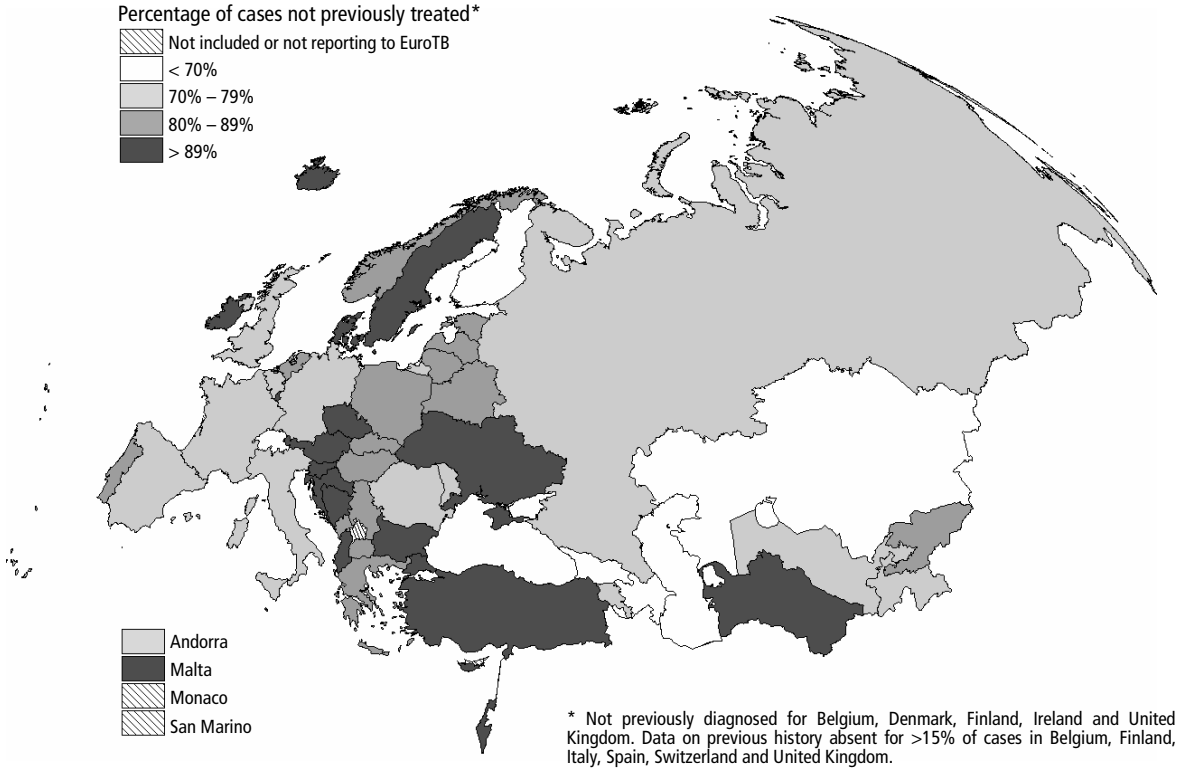


* Source: WHO Mortality Database, October 2007. Data shown for latest available year.
Including only deaths from TB coded ICD-9 010-018 or ICD-10 A15-19.

Map 4. TB cases of foreign origin, WHO European Region, 2006

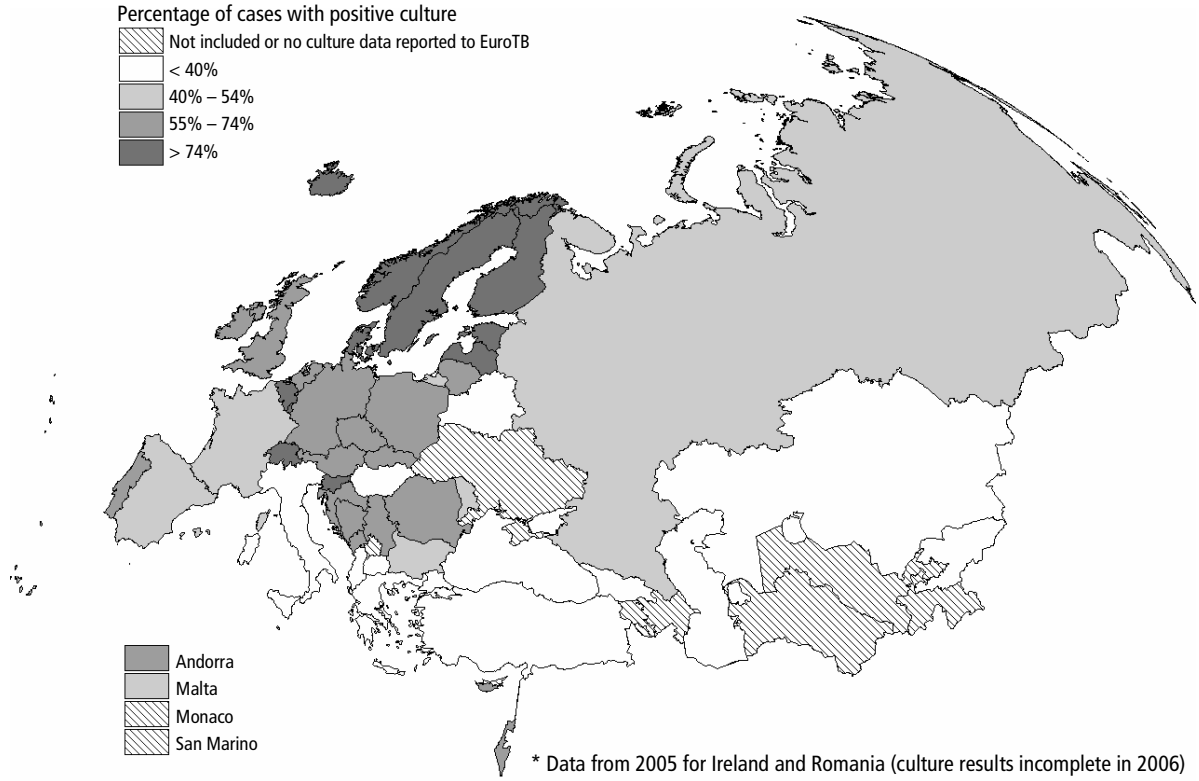


Map 5. TB cases not previously treated, WHO European Region, 2006



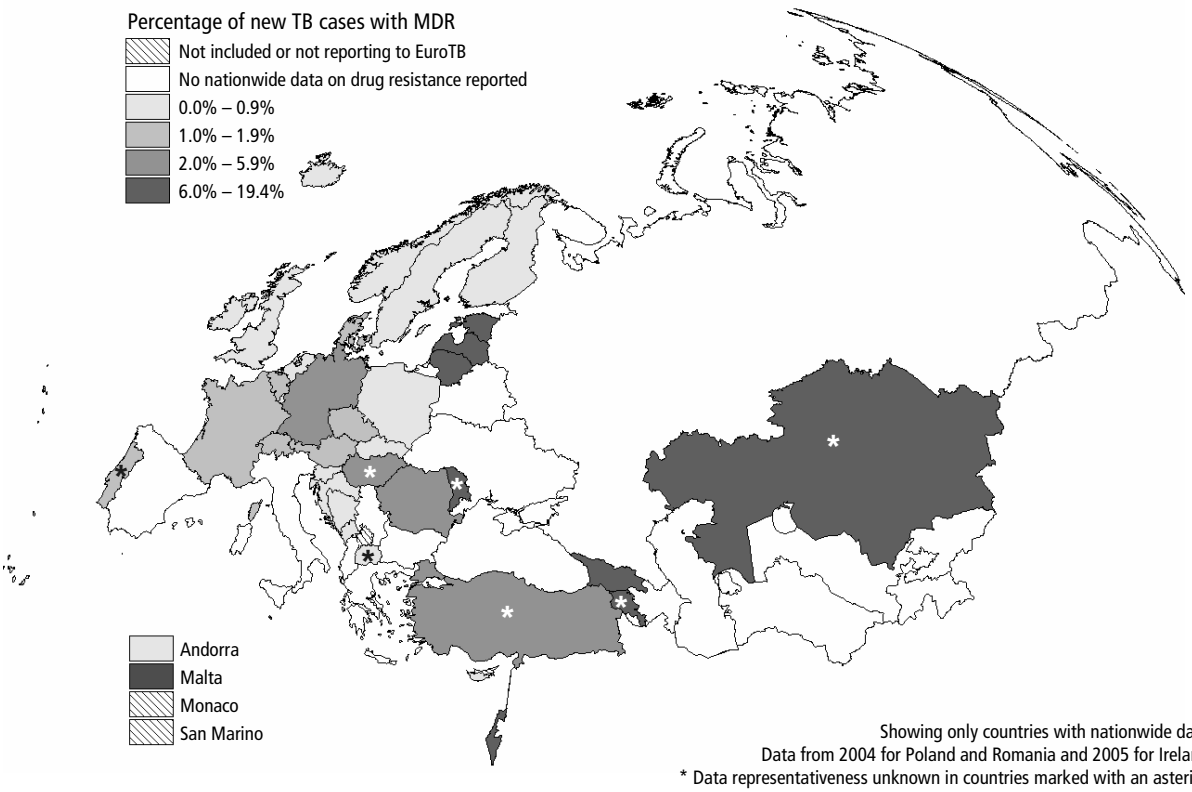
* Not previously diagnosed for Belgium, Denmark, Finland, Ireland and United Kingdom. Data on previous history absent for >15% of cases in Belgium, Finland, Italy, Spain, Switzerland and United Kingdom.

Map 6. TB cases confirmed by culture, WHO European Region, 2006*



* Data from 2005 for Ireland and Romania (culture results incomplete in 2006)

Map 7. TB cases with primary multidrug resistance, WHO European Region, 2006

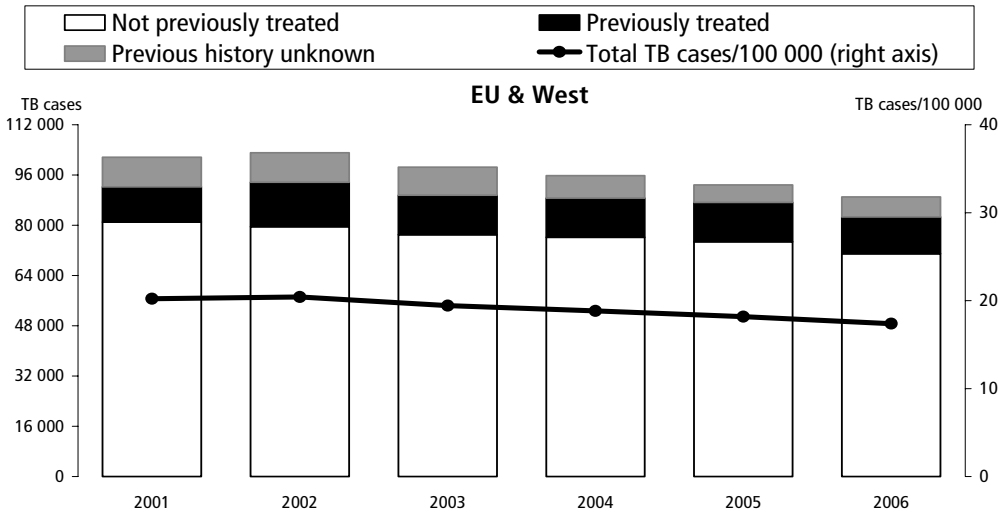


Showing only countries with nationwide data.
Data from 2004 for Poland and Romania and 2005 for Ireland.
* Data representativeness unknown in countries marked with an asterisk.

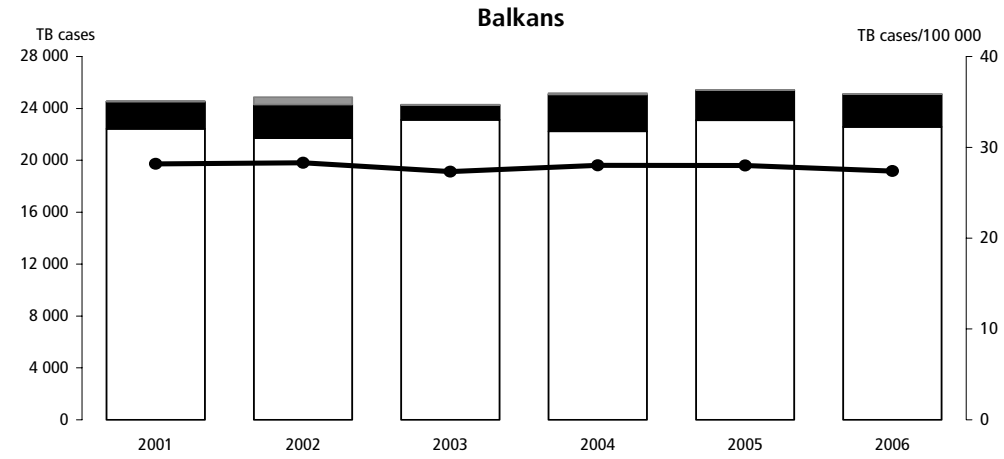
Map 8. Case-based reporting to EuroTB in 2007, WHO European Region

* No case-based data for drug resistance in Greece and Poland.
Outcome data in Greece started in report year 2006.

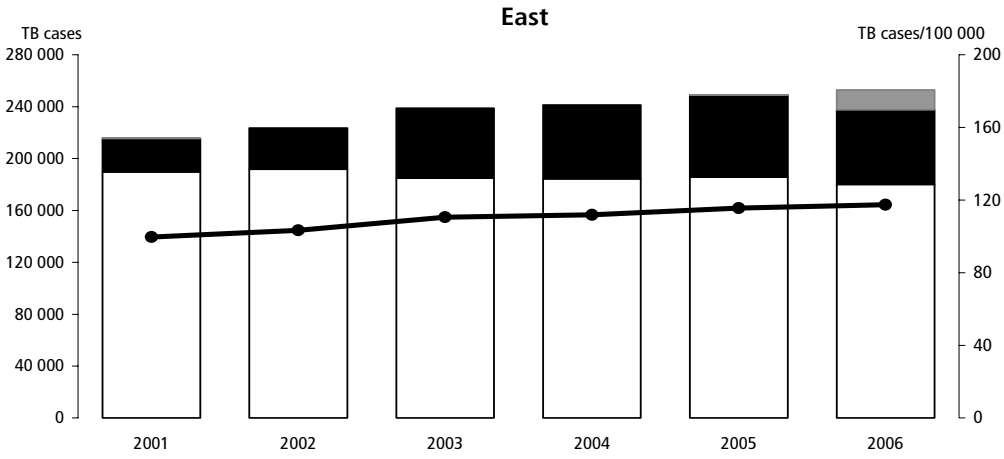
Figure 1. Total TB notifications (by previous treatment history) and total TB case rates, WHO European Region, 2001-2006



Excluding Cyprus, Monaco and San Marino.

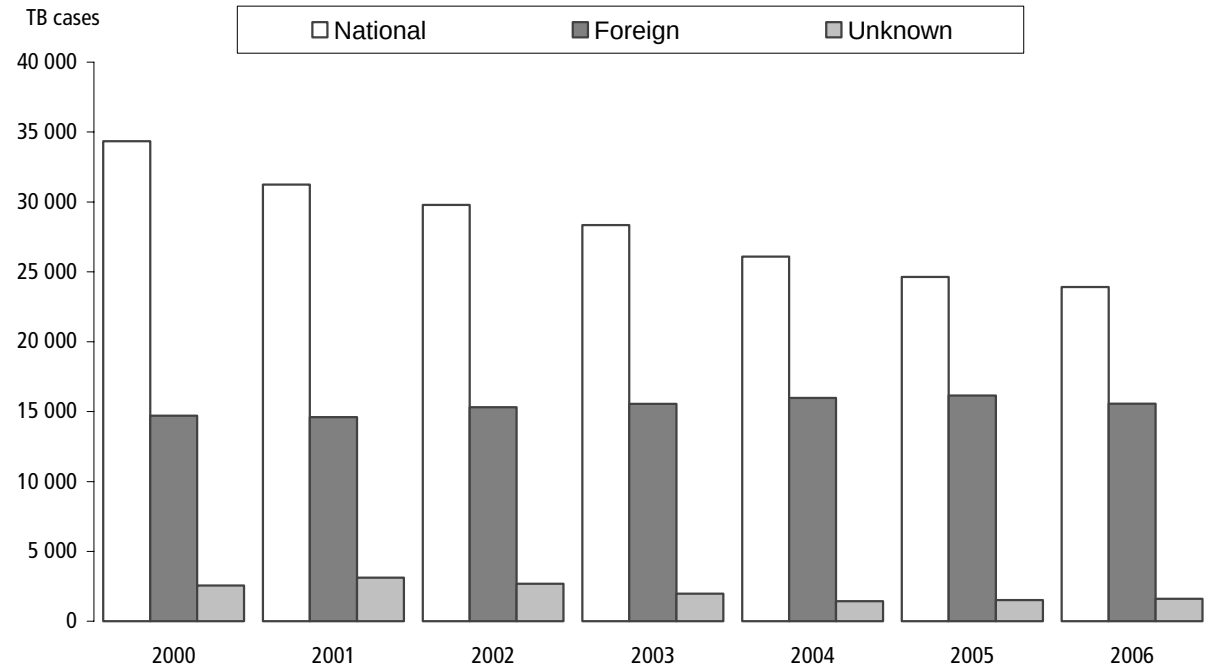


Excluding Bosnia & Herzegovina



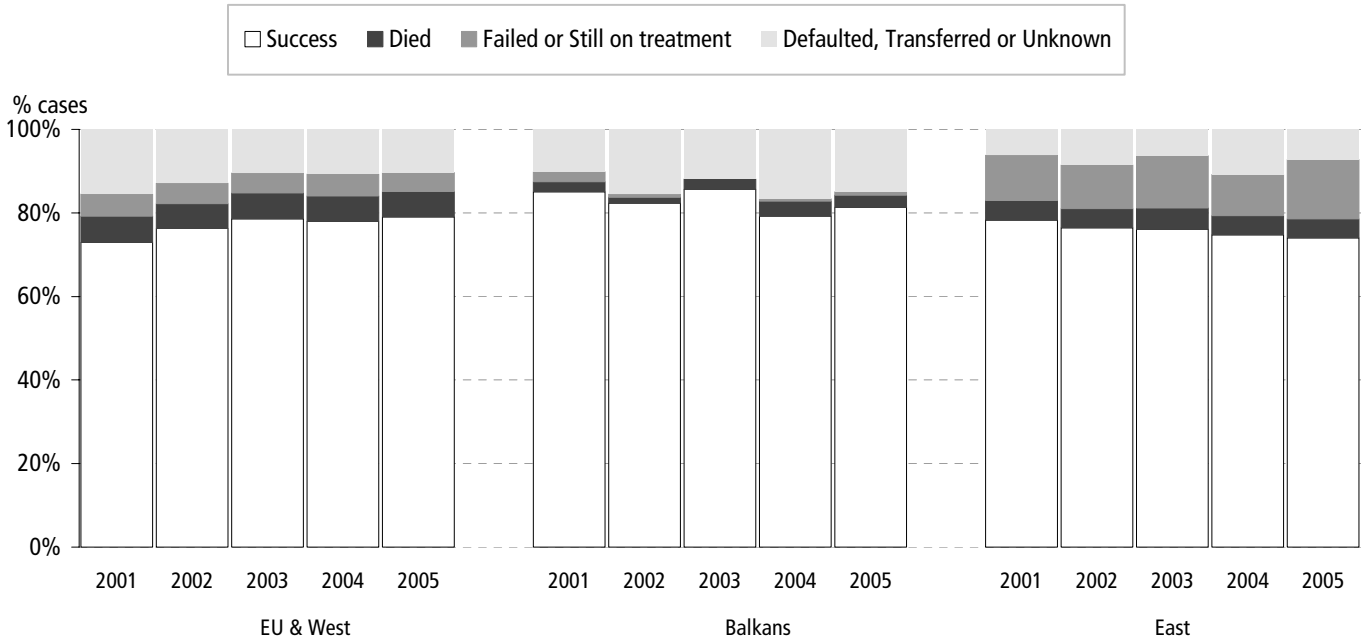
Excluding Belarus, Tajikistan and Ukraine

Figure 2. Tuberculosis cases by geographic origin, 24 EU & West countries*, 2000-2006



* Excluding Andorra, Bulgaria, Cyprus, Greece, Luxembourg, Monaco, Poland, Romania, San Marino, Spain

Figure 3. Treatment outcome by area, previously untreated definite pulmonary TB cases, WHO European Region*, 2001-2005



* Countries with representative outcome data. EU & West (culture positive): Andorra, Austria, Belgium, Czech Rep, Denmark, Estonia, Germany, Hungary, Iceland, Ireland, Israel, Latvia, Lithuania, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Sweden, United Kingdom. **Balkans** (smear positive): Albania, Macedonia F.Y.R. **East** (smear positive): Kazakhstan, Kyrgyzstan

5. COUNTRY PROFILES

WHO European Region

ALB	Albania	GRE	Greece	POL	Poland
AND	Andorra	HUN	Hungary	POR	Portugal
ARM	Armenia	ICE	Iceland	ROM	Romania
AUT	Austria	IRE	Ireland	RUS	Russian Federation
AZE	Azerbaijan	ISR	Israel	SMR	San Marino
BEL	Belgium	ITA	Italy	SVK	Slovakia
BIH	Bosnia & Herzegovina	KAZ	Kazakhstan	SVN	Slovenia
BLR	Belarus	KGZ	Kyrgyzstan	SPA	Spain
BUL	Bulgaria	LTU	Lithuania	SRB	Serbia
CRO	Croatia	LUX	Luxembourg	SWE	Sweden
CYP	Cyprus	LVA	Latvia	SWI	Switzerland
CZH	Czech Republic	MAT	Malta	TJK	Tajikistan
DEN	Denmark	MDA	Moldova	TKM	Turkmenistan
DEU	Germany	MKD	Macedonia, F.Y.R.	TUR	Turkey
EST	Estonia	MNE	Montenegro	UKR	Ukraine
FIN	Finland	MON	Monaco	UNK	United Kingdom
FRA	France	NET	Netherlands	UZB	Uzbekistan
GEO	Georgia	NOR	Norway		

Albania

Tuberculosis case notifications, 2006

Total number of cases	502	
Cases per 100 000	15.8	
Sex ratio (M:F)	1.8	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	45-54 years	
Foreign citizen	1	(0.2%)
New (never-treated)	467	(93.0%)
Culture positive	166	(33.1%)
Pulmonary	321	(63.9%)
of which smear positive	199	(62.0%)
HIV positive TB cases	3	(0.6%)
TB deaths per 100 000 (2004)	0.38	

Drug Resistance Surveillance, 2006

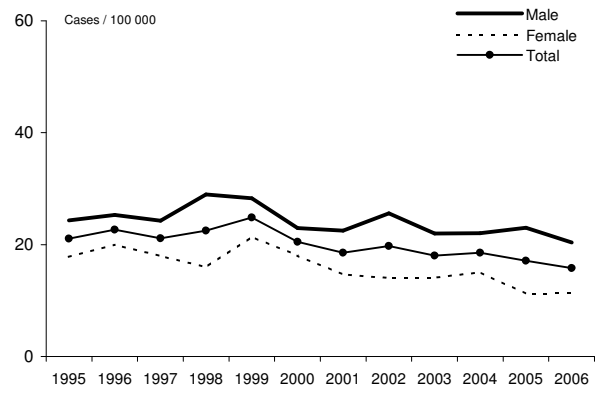
Geographic coverage	Partial *	
International proficiency testing	Yes (2005)	
Case-linked data reporting	Yes	
Cases with DST results	145	
Cases resistant to isoniazid	8	(5.5%)
Cases resistant to rifampicin	2	(1.4%)
MDR cases	1	(0.7%)
Cases resistant to ethambutol	4	(2.8%)
Cases resistant to streptomycin	15	(10.3%)

*** Data representativeness unknown**

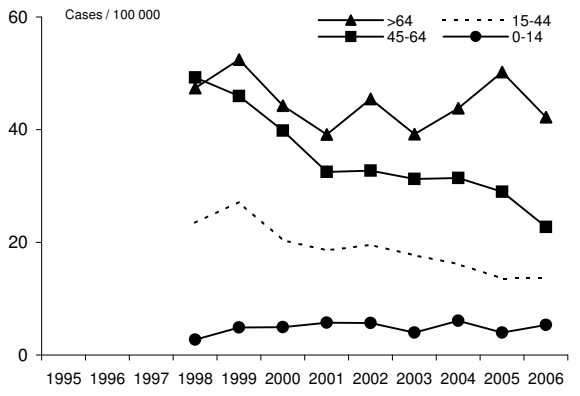
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	213	
Success	167	(78%)
Died	8	(4%)
Failed	3	(1%)
Still on treatment	0	(0%)
Lost to follow up	35	(16%)

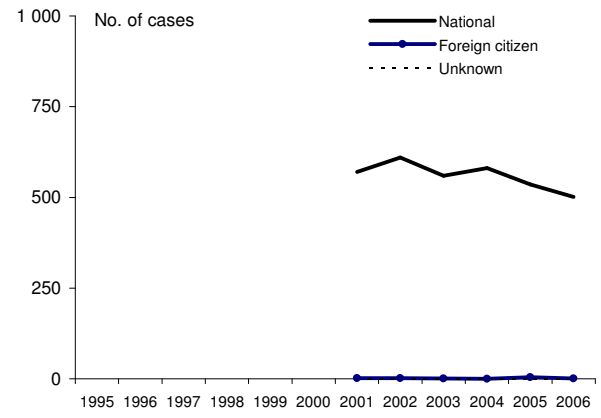
Tuberculosis notification rates by sex, 1995-2006



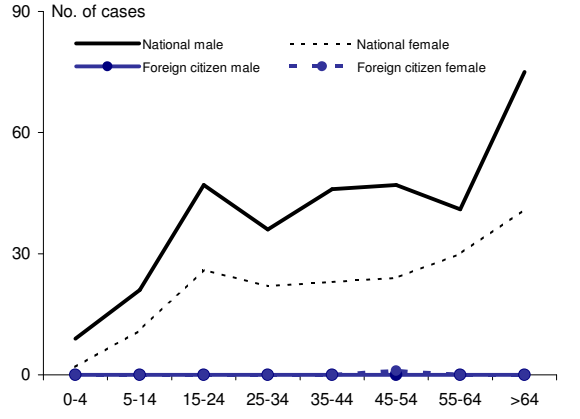
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

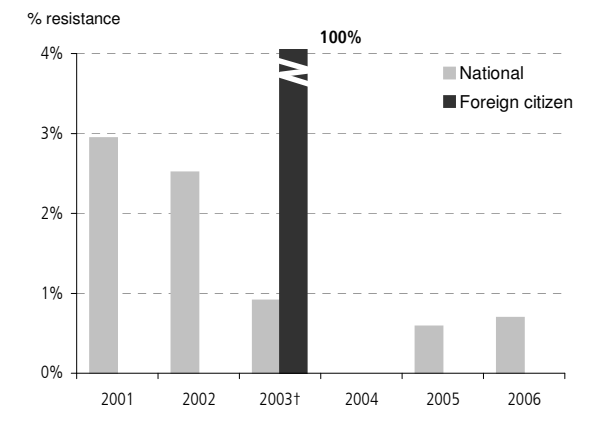


Tuberculosis cases by origin, age group and sex, 2006



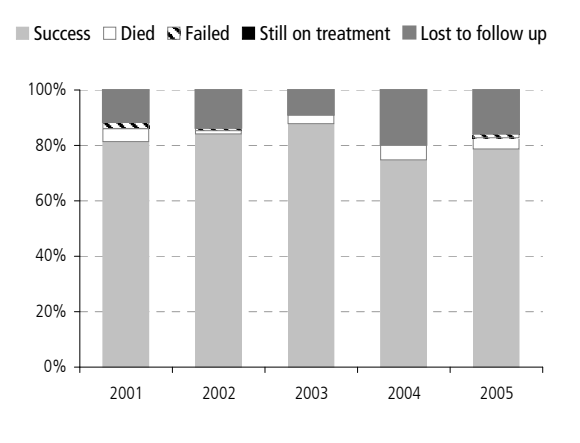
Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown



† The only foreign citizen notified with TB in 2003 had MDR

Outcomes, new pulmonary smear positive cases, 2001-2005



Andorra

Tuberculosis case notifications, 2006

Total number of cases	13	
Notification rate per 100 000	17.5	
Sex ratio (M:F)	1.6	
Median age-group, nationals	-	
Median age-group, non-nationals	45-54	years
Foreign born	13	(100.0%)
New (never-treated)	10	(76.9%)
Culture positive	8	(61.5%)
Pulmonary	10	(76.9%)
of which sputum smear positive	8	(80.0%)
HIV positive TB cases	0	(0.0%)
TB deaths per 100 000	-	

Drug Resistance Surveillance, 2006

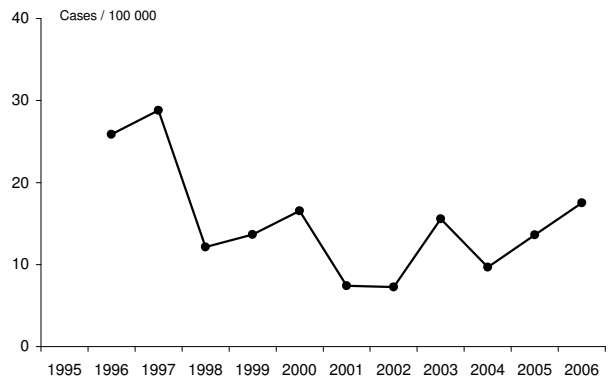
Geographic coverage	National	
International proficiency testing	No *	
Case-linked data reporting	Yes	
Cases with DST results	8	
Cases resistant to isoniazid	0	(0.0%)
Cases resistant to rifampicin	0	(0.0%)
MDR cases	0	(0.0%)
Cases resistant to ethambutol	0	(0.0%)
Cases resistant to streptomycin	0	(0.0%)

*** DST done in Spain**

Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	6	
Success	4	(67%)
Died	0	(0%)
Failed	0	(0%)
Still on treatment	1	(17%)
Lost to follow up	1	(17%)

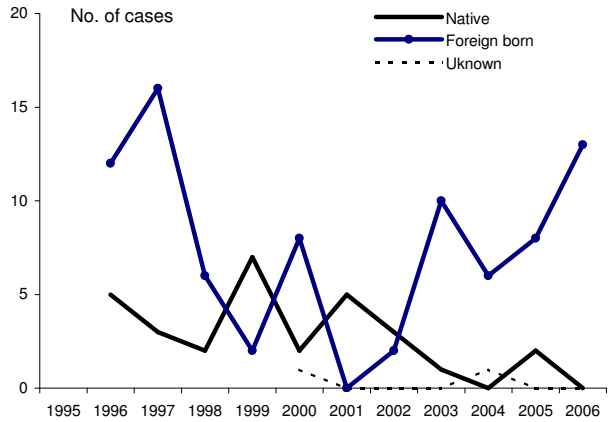
Tuberculosis notification rates, 1995-2006



Tuberculosis notification rates by age group, 1995-2006

Insufficient number of cases for graphic presentation

Tuberculosis cases by geographic origin, 1995-2006



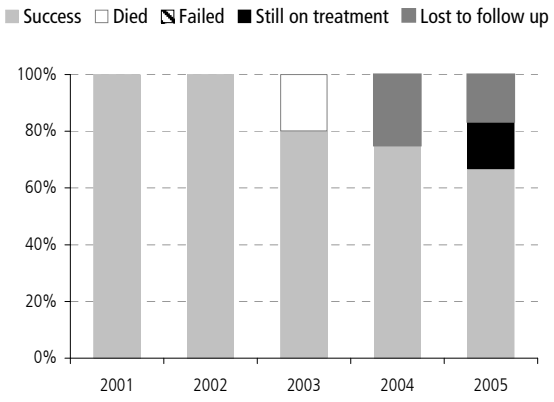
Tuberculosis cases by origin, age group and sex, 2006

Insufficient number of cases for graphic presentation

Combined multidrug resistance, by origin, 2001-2006

No MDR cases reported

Outcomes, new pulmonary culture positive cases, 2001-2005



Armenia

Tuberculosis case notifications, 2006

Total number of cases	2 155	
Notification rate per 100 000	71.6	
Sex ratio (M:F)	4.0	
Median age-group, nationals	35-44 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	1 598	(74.2%)
Culture positive	-	-
Pulmonary	1 779	(82.6%)
of which sputum smear positive	884	(49.7%)
HIV positive	25	(1.2%)
TB deaths per 100 000 (2003)	4.83	

Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes (2005)	
Case-linked data reporting	No *	
Cases with DST results	870	
Cases resistant to isoniazid	370	(42.5%)
Cases resistant to rifampicin	234	(26.9%)
MDR cases	215	(24.7%)
Cases resistant to ethambutol	133	(15.3%)
Cases resistant to streptomycin	383	(44.0%)

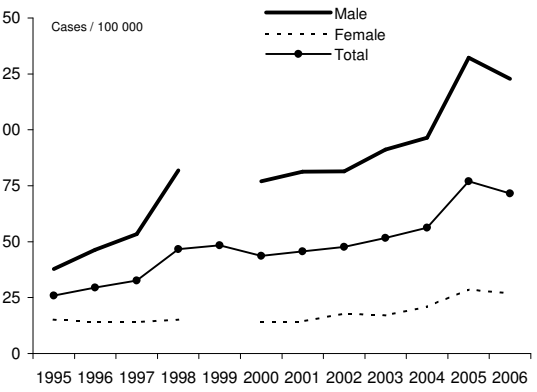
*** Data from NRL (representativeness unknown)**

Culture and DST not routinely performed

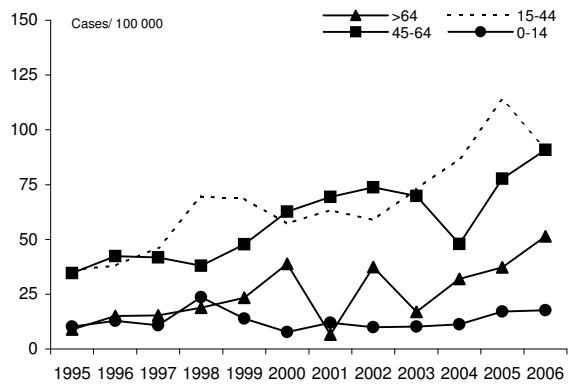
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	908	
Success	554	(61%)
Died	44	(5%)
Failed	68	(7%)
Still on treatment	0	(0%)
Lost to follow up	242	(27%)

Tuberculosis notification rates by sex, 1995-2006



Tuberculosis notification rates by age group, 1995-2006

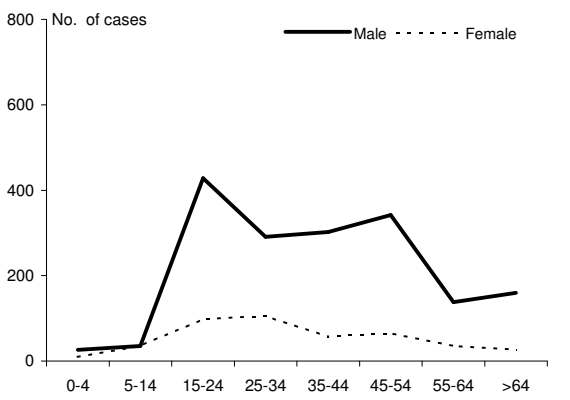


Tuberculosis cases by geographic origin, 1995-2006

No foreign citizens reported*

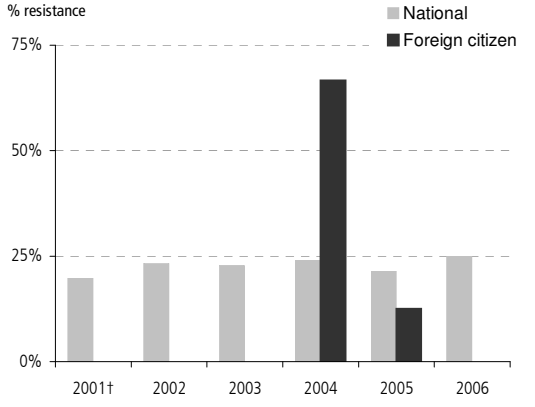
*** notification data reported separately from DST results**

Tuberculosis cases by age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006

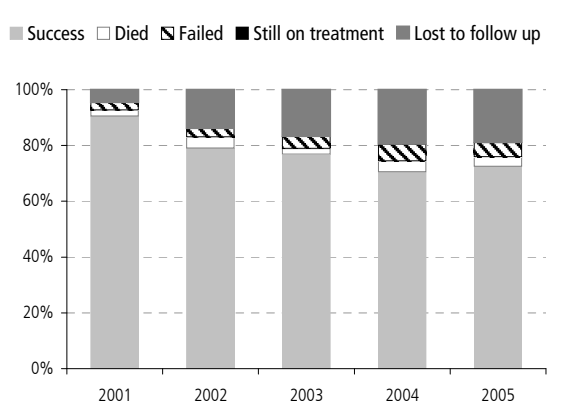
Data representativeness unknown



† Origin unknown in 2001

Outcomes, new pulmonary smear positive cases, 2001-2005

Data representativeness unknown (2001-2004)



Austria

Tuberculosis case notifications, 2006

Total number of cases	873	
Notification rate per 100 000	10.5	
Sex ratio (M:F)	1.8	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	25-34 years	
Foreign citizens	333	(38.1%)
New (never-treated)	825	(94.5%)
Culture positive	547	(62.7%)
Pulmonary	734	(84.1%)
of which sputum smear positive	217	(29.6%)
HIV positive TB cases	-	
TB deaths per 100 000 (2005)	0.63	

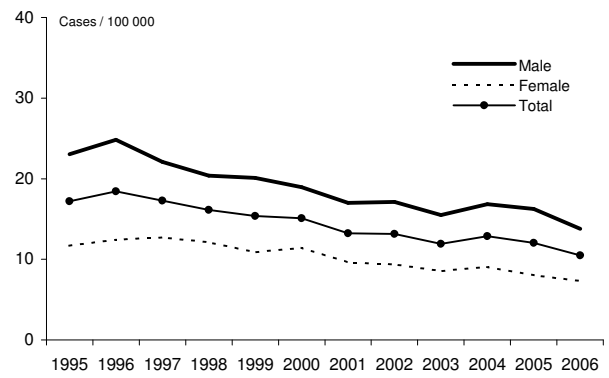
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes (2003)	
Case-linked data reporting	Yes	
Cases with DST results	511	
Cases resistant to isoniazid	34	(6.7%)
Cases resistant to rifampicin	10	(2.0%)
MDR cases	10	(2.0%)
Cases resistant to ethambutol	4	(0.8%)
Cases resistant to streptomycin	34	(6.7%)

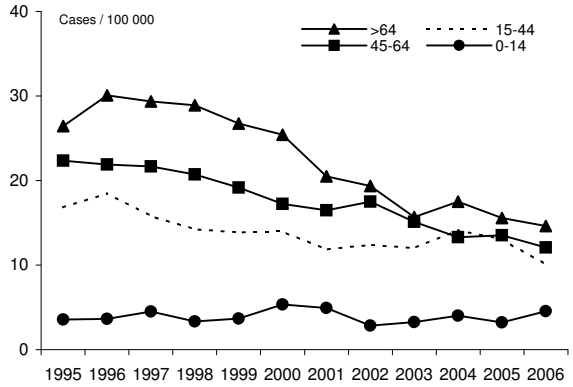
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	545	
Success	392	(72%)
Died	49	(9%)
Failed	0	(0%)
Still on treatment	33	(6%)
Lost to follow up	71	(13%)

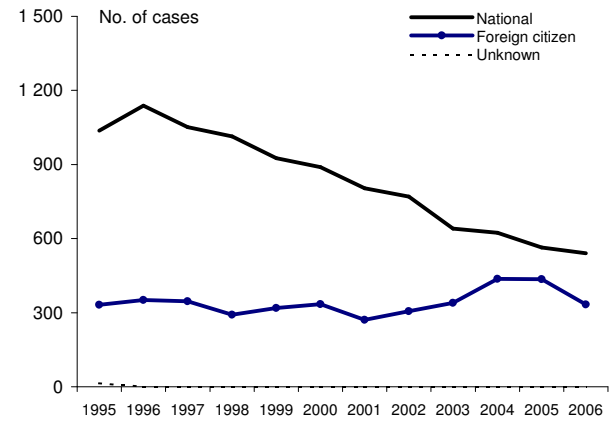
Tuberculosis notification rates by sex, 1995-2006



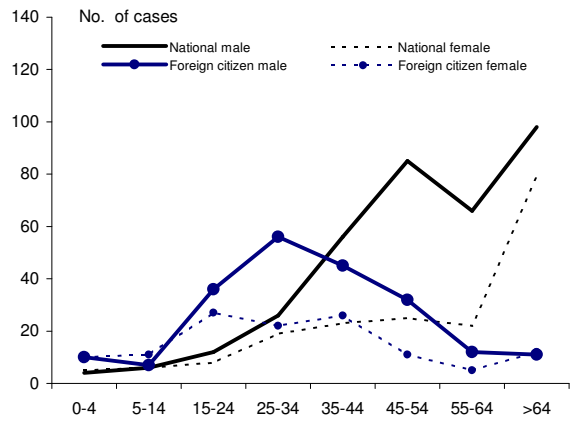
Tuberculosis notification rates by age group, 1995-2006



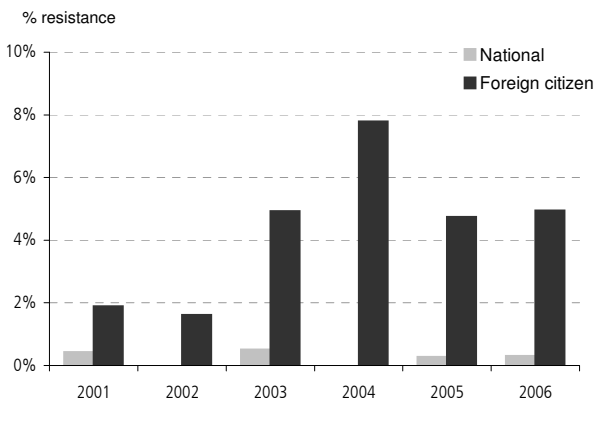
Tuberculosis cases by geographic origin, 1995-2006



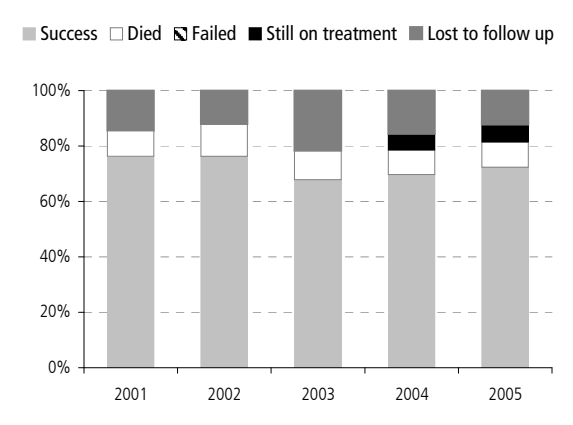
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Azerbaijan

Tuberculosis case notifications, 2006

Total number of cases	7 498	
Notification rate per 100 000	89.2	
Sex ratio (M:F)	3.6	
Median age-group, nationals	25-34	years
Median age-group, non-nationals	-	
Foreign born	0	(0.0%)
New (never-treated)	4 429	(59.1%)
Culture positive	-	-
Pulmonary	6 801	(90.7%)
of which sputum smear positive	2 730	(40.1%)
HIV positive TB cases (2003)	8	(0.2%)
TB deaths per 100 000 (2002)	12.47	

Drug Resistance Surveillance, 2006

Geographic coverage	Partial	
International proficiency testing	No	
Case-linked data reporting	No *	
Cases with DST results	513	
Cases resistant to isoniazid	316	(61.6%)
Cases resistant to rifampicin	213	(41.5%)
MDR cases	212	(41.3%)
Cases resistant to ethambutol	151	(29.4%)
Cases resistant to streptomycin	322	(62.8%)

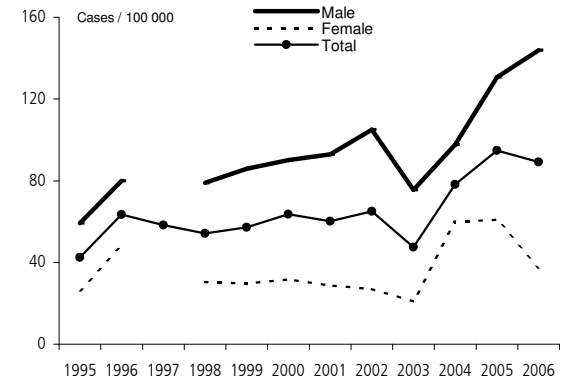
*** From all DST labs (representativeness unknown)**

Treatment Outcome Monitoring, 2005

Geographic coverage	National †	
Outcome cohort	**New & relapse pulm smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	2 875	
Success	1 411	(49%)
Died	131	(5%)
Failed	142	(5%)
Still on treatment	0	(0%)
Lost to follow up	1 191	(41%)

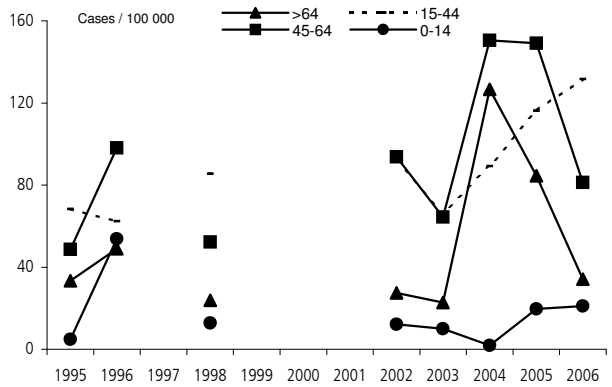
† Data representativeness unknown

Tuberculosis notification rates by sex, 1995-2006†



† Expansion of treatment programme in 2004

Tuberculosis notification rates by age group, 1995-2006†



† Expansion of treatment programme in 2004

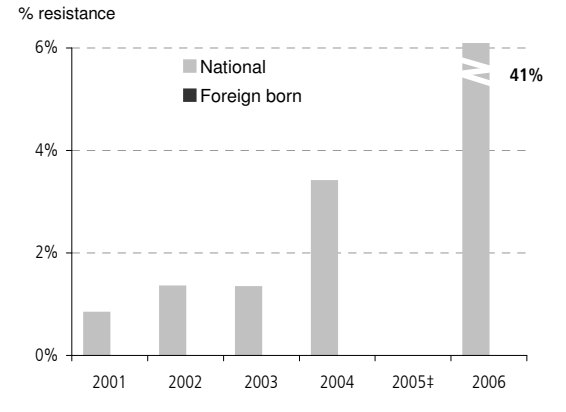
Tuberculosis cases by geographic origin, 1995-2006

Foreign-born cases not reported

Tuberculosis cases by age group and sex, 2006

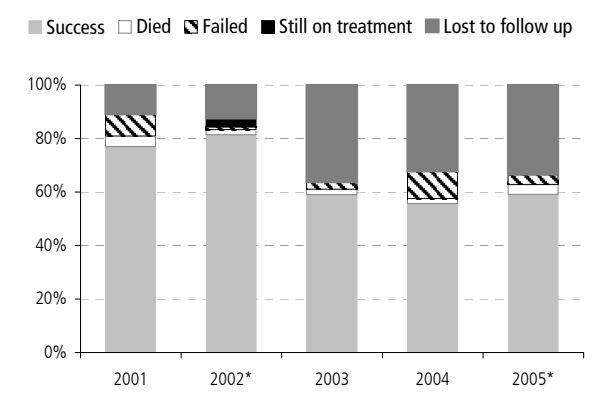
Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown



‡ No data in 2005

Outcomes, new pulmonary smear positive cases, 2001-2005



*** Data representativeness unknown in 2002 and 2005**

Belarus

Tuberculosis case notifications, 2006

Total number of cases	6 065	
Notification rate per 100 000	62.3	
Sex ratio (M:F)*	2.5	
Median age-group, nationals*	35-44 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	5 142	(84.8%)
Culture positive	2 126	(35.1%)
Respiratory	5 679	(93.6%)
of which sputum smear positive	1 072	(18.9%)
HIV positive new TB cases (2005)	32	(0.6%)
TB deaths per 100 000 (2003)	10.4	

*** For new cases only**

Drug Resistance Surveillance, 2000

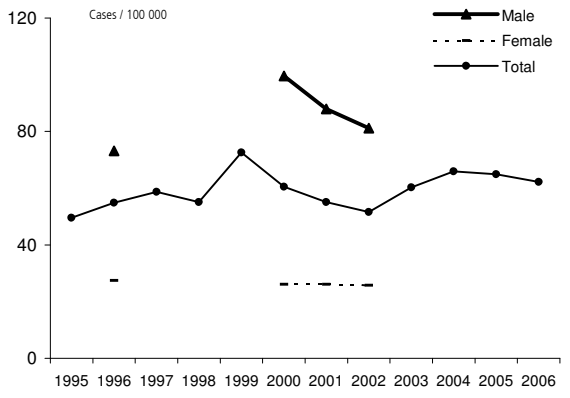
Geographic coverage	Unknown	
International proficiency testing	No	
Case-linked data reporting	No †	
Cases with DST results	2 060	
Cases resistant to isoniazid	-	-
Cases resistant to rifampicin	-	-
MDR cases	220	(10.7%)
Cases resistant to ethambutol	-	-
Cases resistant to streptomycin	-	-

† Reported as aggregate data on new cases

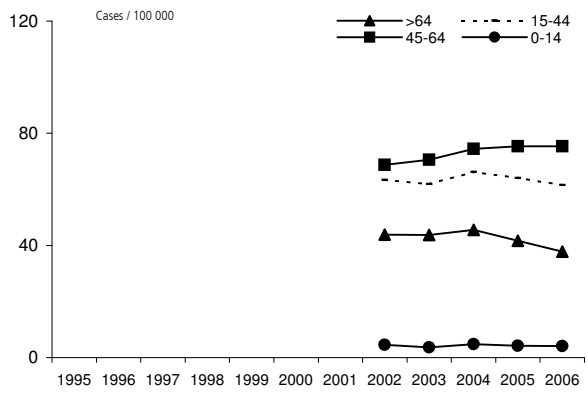
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**New pulm smear &/or culture positive**	
Case-linked data reporting	No	
Included in TOM cohort	2 247	
Success	1 642	(73%)
Died	228	(10%)
Failed	237	(11%)
Still on treatment	0	(0%)
Lost to follow up	140	(6%)

Tuberculosis notification rates, 1995-2006



Tuberculosis notification rates by age group, 1995-2006 §

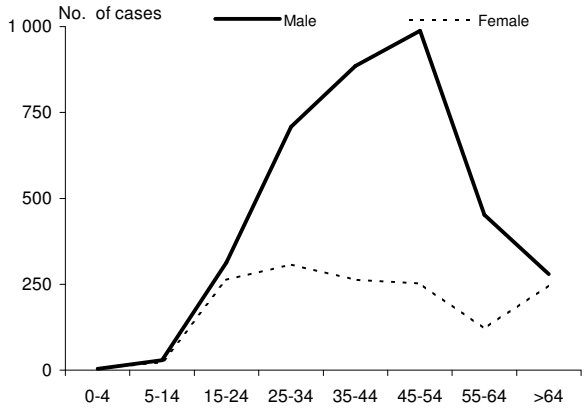


§Retreated cases not included 2003-2005

Tuberculosis cases by geographic origin, 1995-2006

Foreign citizens not reported

Tuberculosis cases by age group and sex, 2006*



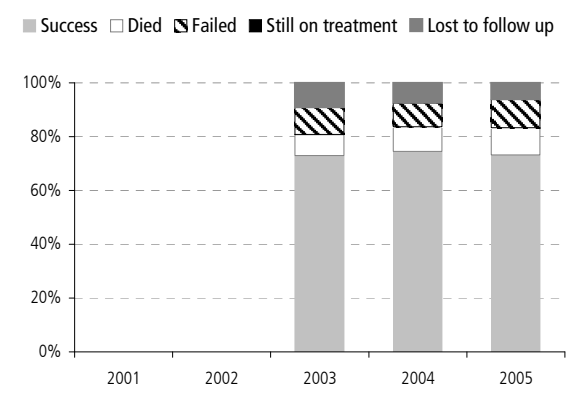
* Retreated cases not included

Combined multidrug resistance, by origin, 2001-2006

Not available

Outcomes, new pulmonary definite cases, 2001-2005

Data representativeness unknown (2003-2004)



Belgium

Tuberculosis case notifications, 2006

Total number of cases	1 127	
Notification rate per 100 000	10.8	
Sex ratio (M:F)	1.7	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	25-34 years	
Foreign citizens	575	(51.0%)
New (not previously diagnosed)	831	(73.7%)
Culture positive	889	(78.9%)
Pulmonary	777	(68.9%)
of which smear positive*	377	(48.5%)
HIV positive TB cases	55	(4.9%)
TB deaths per 100 000	-	

*Including smear of specimens other than sputum

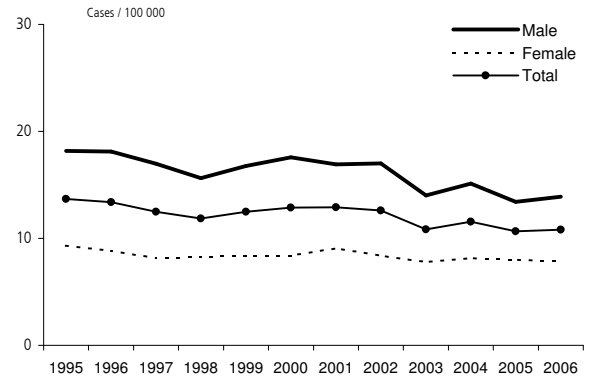
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	818	
Cases resistant to isoniazid	56	(6.8%)
Cases resistant to rifampicin	23	(2.8%)
MDR cases	18	(2.2%)
Cases resistant to ethambutol	13	(1.6%)
Cases resistant to streptomycin	-	-

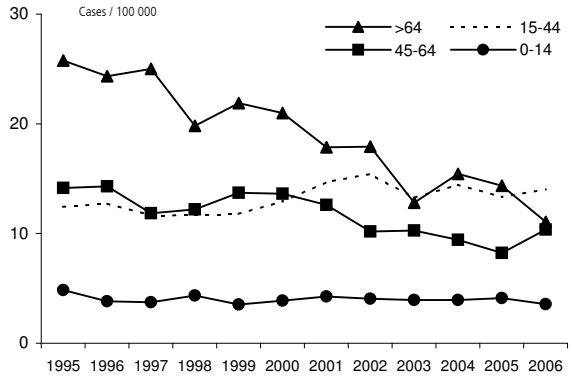
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Cases included in cohort	658	
Success	435	(66%)
Died	73	(11%)
Failed	1	(0%)
Still on treatment	16	(2%)
Lost to follow up	133	(20%)

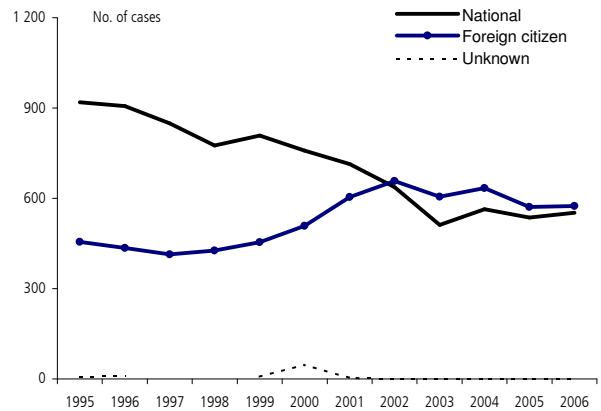
Tuberculosis notification rates by sex, 1995-2006



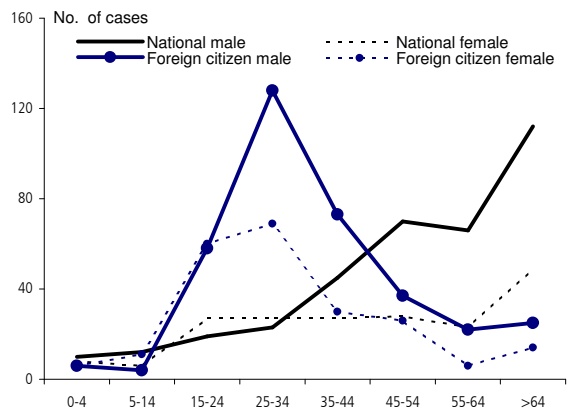
Tuberculosis notification rates by age group, 1995-2006



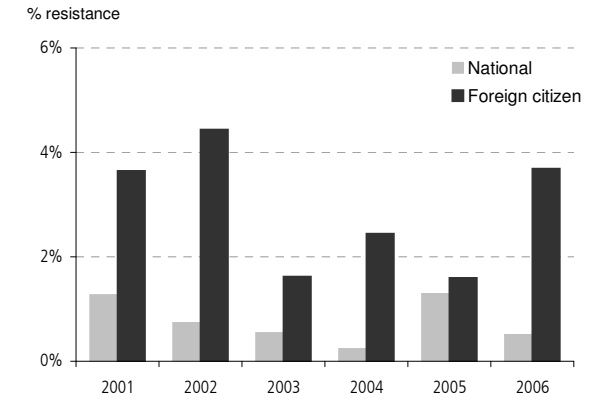
Tuberculosis cases by geographic origin, 1995-2006



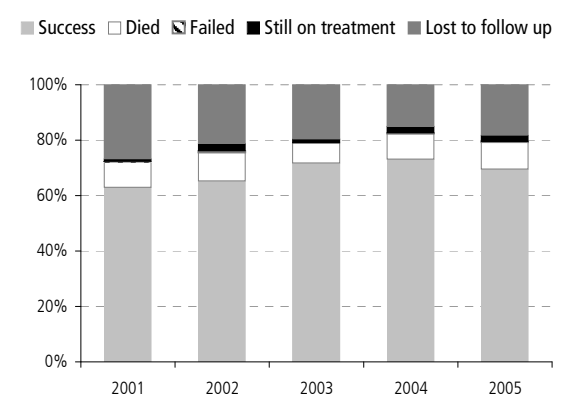
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Bosnia & Herzegovina

Tuberculosis case notifications, 2006

Total number of cases	1 800	
Notification rate per 100 000	45.8	
Sex ratio (M:F)	1.1	
Median age-group, nationals	55-64 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	1 687	(93.7%)
Culture positive	1 086	(60.3%)
Pulmonary	1 577	(87.6%)
of which sputum smear positive	598	(37.9%)
HIV positive TB cases	-	
TB deaths per 100 000	-	

Drug Resistance Surveillance, 2006

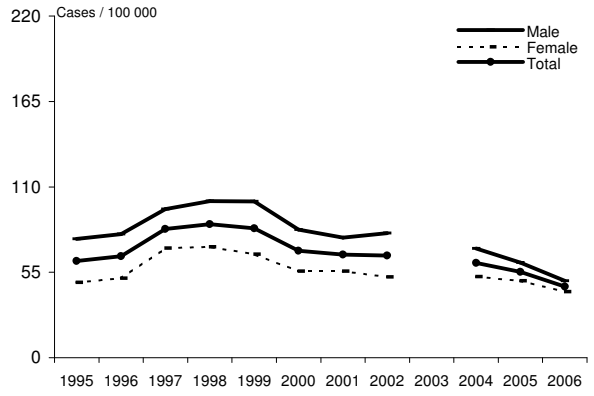
Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes *	
Cases with DST results	1 086	
Cases resistant to isoniazid	13	(1.2%)
Cases resistant to rifampicin	18	(1.7%)
MDR cases	7	(0.6%)
Cases resistant to ethambutol	9	(0.8%)
Cases resistant to streptomycin	18	(1.7%)

*** Incomplete; aggregate data shown here**

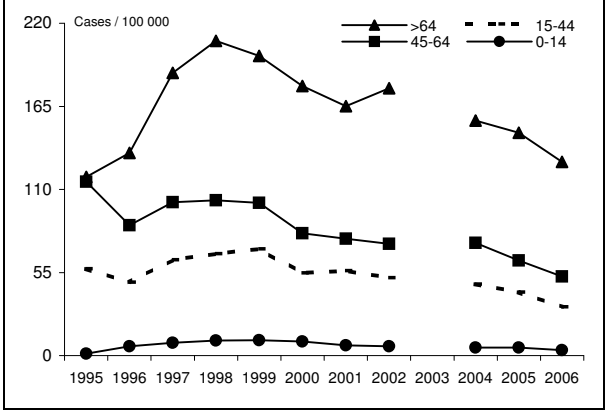
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**New & relapse pulm culture positive**	
Case-linked data reporting	No	
Included in TOM cohort	1 141	
Success	1 097	(96%)
Died	14	(1%)
Failed	6	(1%)
Still on treatment	7	(1%)
Lost to follow up	17	(1%)

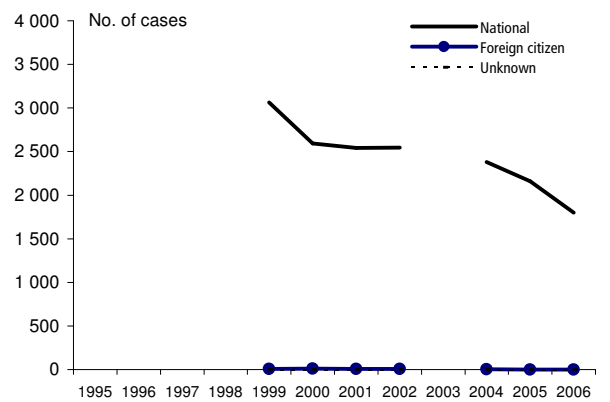
Tuberculosis notification rates by sex, 1995-2006



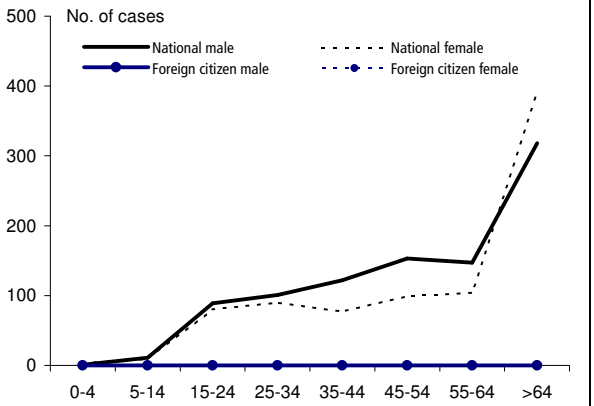
Tuberculosis notification rates by age group, 1995-2006



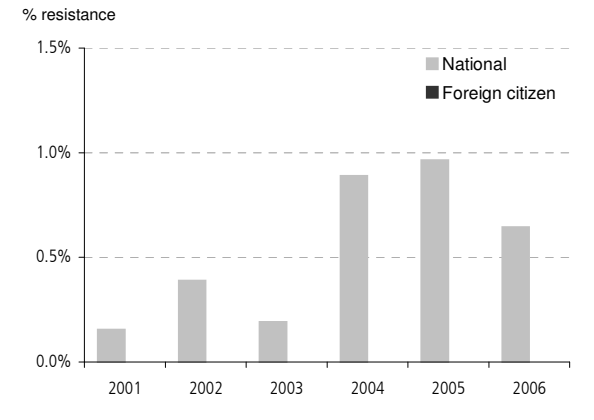
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006



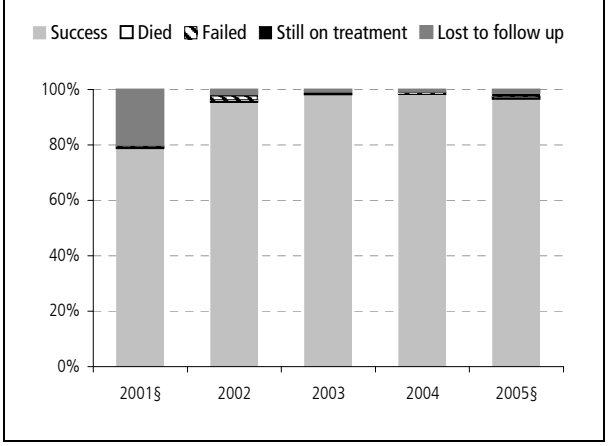
Combined multidrug resistance, by origin, 2001-2006‡



‡ Federation of Bosnia only in 2002-2004

Outcomes, new pulmonary culture positive cases, 2001-2005

Data representativeness unknown§



§ Nationwide representative data in 2001 & 2005

Bulgaria

Tuberculosis case notifications, 2006

Total number of cases	3 232	
Cases per 100 000	42.0	
Sex ratio (M:F)	1.9	
Median age-group (all cases)	45-54 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	3 011	(93.2%)
Culture positive	1 360	(42.1%)
Respiratory	2 905	(89.9%)
of which sputum smear positive	1 432	(49.3%)
HIV positive TB cases	6	(0.2%)
TB deaths per 100 000 (2004)	3.44	

Drug Resistance Surveillance, 2006

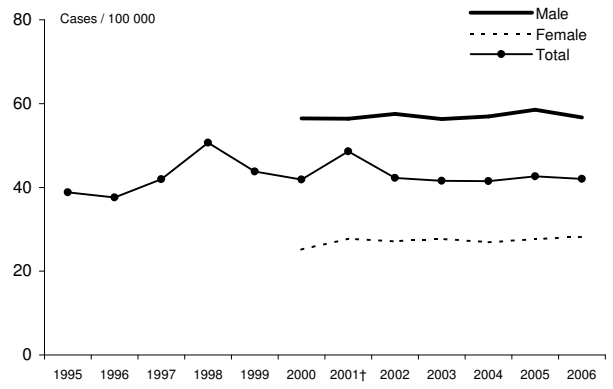
Geographic coverage	Partial *	
International proficiency testing	No	
Case-linked data reporting	No	
Cases with DST results	1 329	
Cases resistant to isoniazid	142	(10.7%)
Cases resistant to rifampicin	100	(7.5%)
MDR cases	53	(4.0%)
Cases resistant to ethambutol	81	(6.1%)
Cases resistant to streptomycin	72	(5.4%)

*** All labs doing DST (representativeness unknown)**

Treatment Outcome Monitoring, 2005

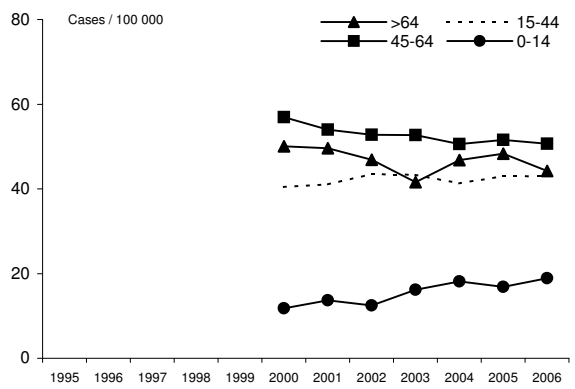
Geographic coverage	National	
Cohort	**Pulm smear or culture positive**	
Case-linked data reporting	No	
Included in TOM cohort	1 464	
Success	1 233	(84%)
Died	61	(4%)
Failed	44	(3%)
Still on treatment	0	(0%)
Lost to follow up	126	(9%)

Tuberculosis notification rates by sex, 1995-2006†



† 14% with sex unknown in 2001

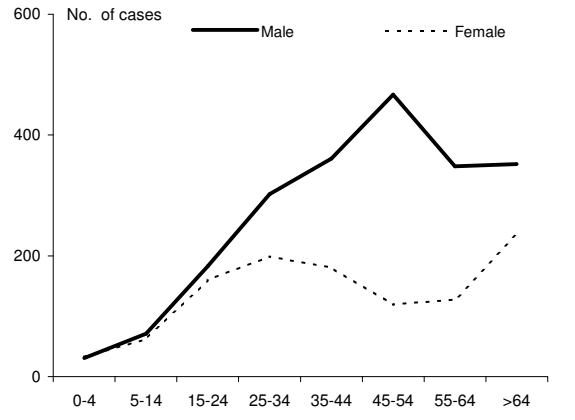
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

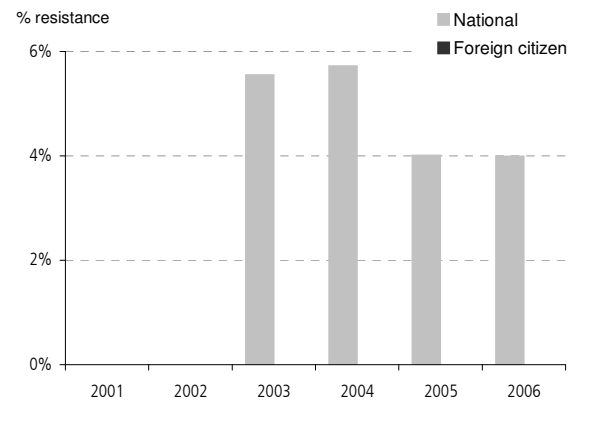
No foreign citizens reported

Tuberculosis cases by age group and sex, 2006



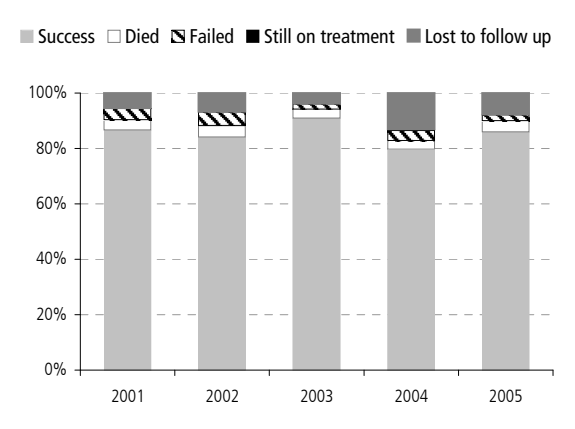
Combined multidrug resistance, by origin, 2001-2006‡

Data representativeness unknown



‡ No data by geographic origin 2001-2002

Outcomes, new pulmonary definite cases, 2001-2005



Croatia

Tuberculosis case notifications, 2006

Total number of cases	1 135	
Notification rate per 100 000	24.9	
Sex ratio (M:F)	1.7	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	55-64 years	
Foreign born*	119	(10.5%)
New (never-treated)	1 023	(90.1%)
Culture positive	696	(61.3%)
Pulmonary	1 015	(89.4%)
of which sputum smear positive	448	(44.1%)
HIV positive TB cases	-	
TB deaths per 100 000 (2005)	2.45	

***42% of cases with unknown origin**

Drug Resistance Surveillance, 2006

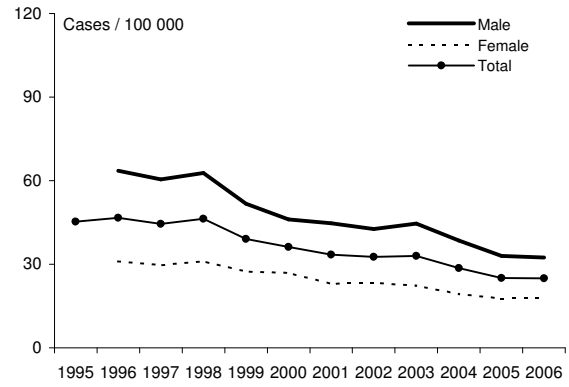
Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	696	
Cases resistant to isoniazid	7	(1.0%)
Cases resistant to rifampicin	3	(0.4%)
MDR cases	3	(0.4%)
Cases resistant to ethambutol	3	(0.4%)
Cases resistant to streptomycin	5	(0.7%)

Treatment Outcome Monitoring, 2005

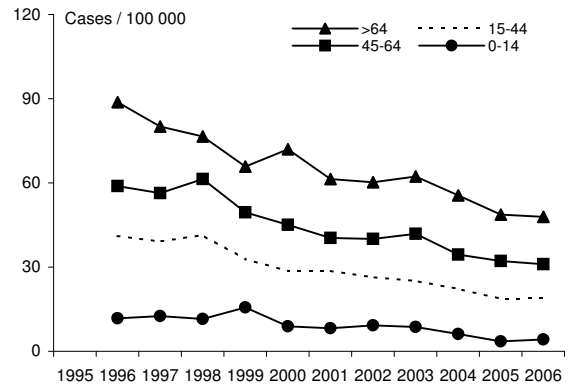
Geographic coverage	National †	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	616	
Success	280	(45%)
Died	55	(9%)
Failed	2	(0%)
Still on treatment	10	(2%)
Lost to follow up	269	(44%)

† Data representativeness unknown

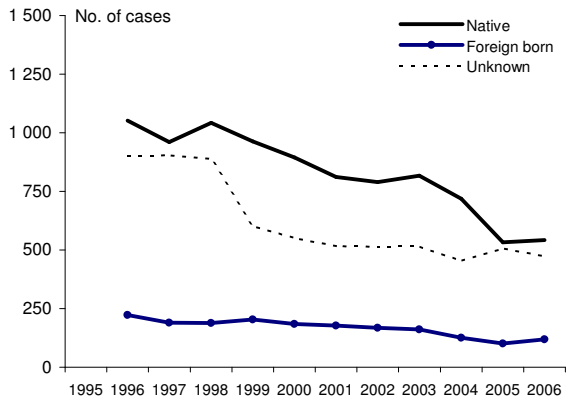
Tuberculosis notification rates by sex, 1995-2006



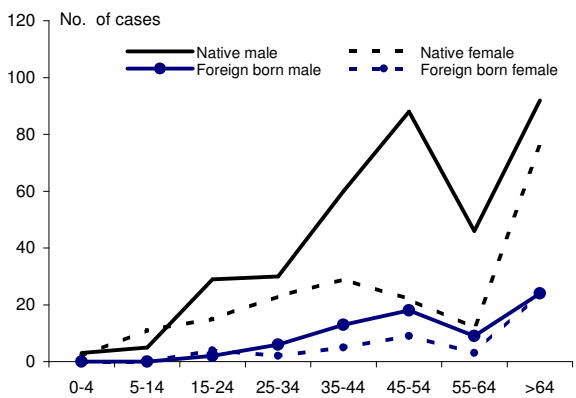
Tuberculosis notification rates by age group, 1995-2006



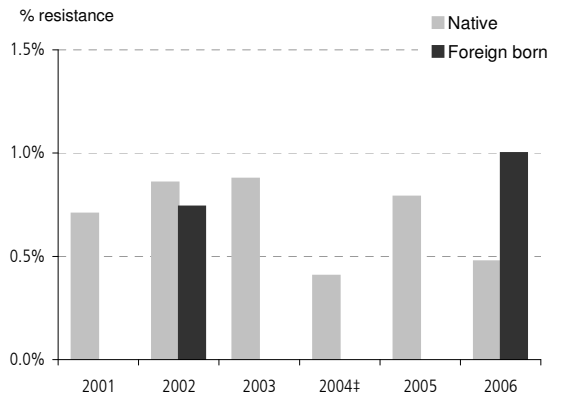
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006



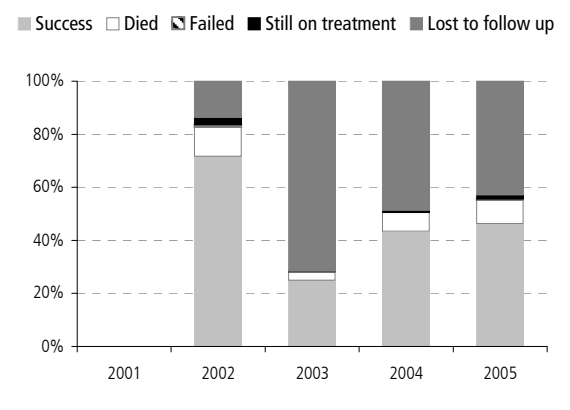
Combined multidrug resistance, by origin, 2001-2006



‡ Data representativeness unknown in 2004

Outcomes, new pulmonary culture positive cases, 2001-2005

Data representativeness unknown



Cyprus

Tuberculosis case notifications, 2006

Total number of cases	37	
Notification rate per 100 000	4.4	
Sex ratio (M:F)	0.3	
Median age-group, nationals	55-64 years	
Median age-group, non-nationals	25-34 years	
Foreign born	28	(75.7%)
New (never-treated)	35	(94.6%)
Culture positive	23	(62.2%)
Pulmonary	31	(83.8%)
of which sputum smear positive	9	(29.0%)
HIV positive TB cases	0	(0.0%)
TB deaths per 100 000	-	

Drug Resistance Surveillance, 2006

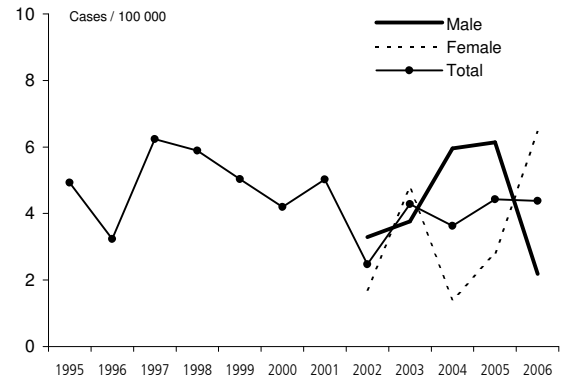
Geographic coverage	National	
International proficiency testing	- *	
Case-linked data reporting	Yes	
Cases with DST results	23	
Cases resistant to isoniazid	4	(17.4%)
Cases resistant to rifampicin	0	(0.0%)
MDR cases	0	(0.0%)
Cases resistant to ethambutol	0	(0.0%)
Cases resistant to streptomycin	1	(4.3%)

*** DST done abroad**

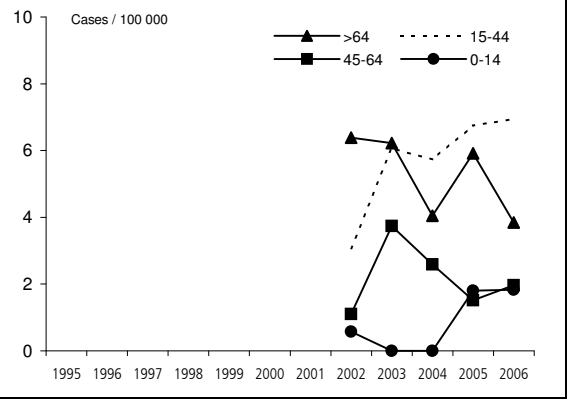
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	18	
Success	11	(61%)
Died	0	(0%)
Failed	1	(6%)
Still on treatment	0	(0%)
Lost to follow up	6	(33%)

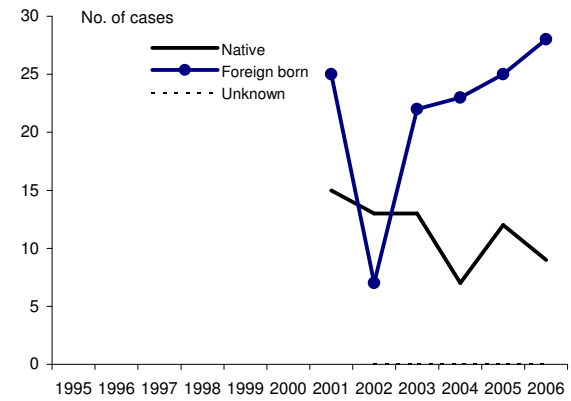
Tuberculosis notification rates, 1995-2006



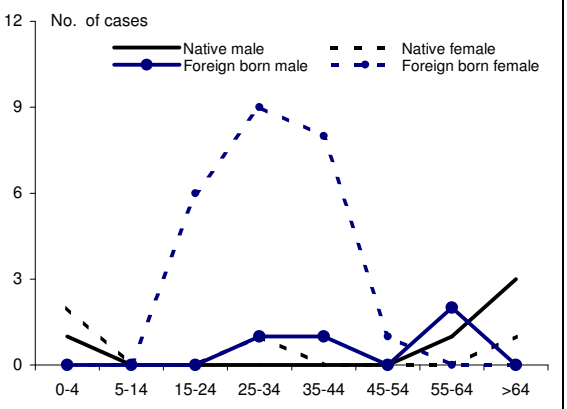
Tuberculosis notification rates by age group, 1995-2006



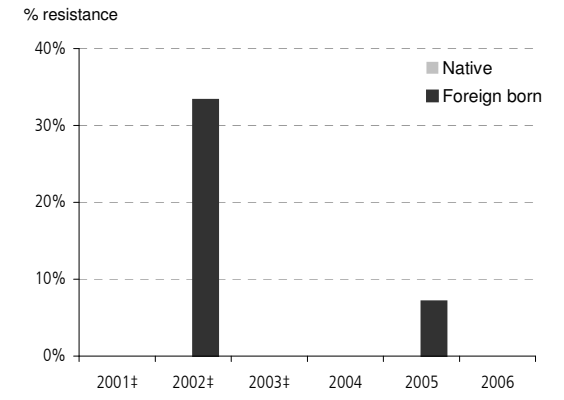
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006



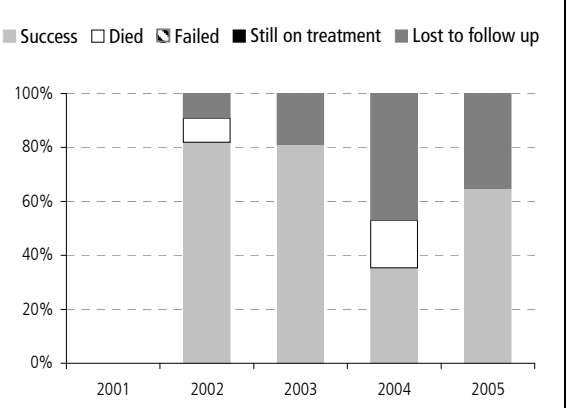
Combined multidrug resistance, by origin, 2001-2006‡



‡ No data in 2001; data representativeness unknown in 2002-2003

Outcomes, new pulmonary culture positive cases, 2001-2005

Data representativeness unknown (2002-2004)



Czech Republic

Tuberculosis case notifications, 2006

Total number of cases	973	
Notification rate per 100 000	9.5	
Sex ratio (M:F)	1.7	
Median age-group, nationals	55-64 years	
Median age-group, non-nationals	35-44 years	
Foreign born	130	(13.4%)
New (never-treated)	941	(96.7%)
Culture positive	619	(63.6%)
Pulmonary	764	(78.5%)
of which sputum smear positive	265	(34.7%)
HIV positive TB cases	4	(0.4%)
TB deaths per 100 000 (2005)	0.66	

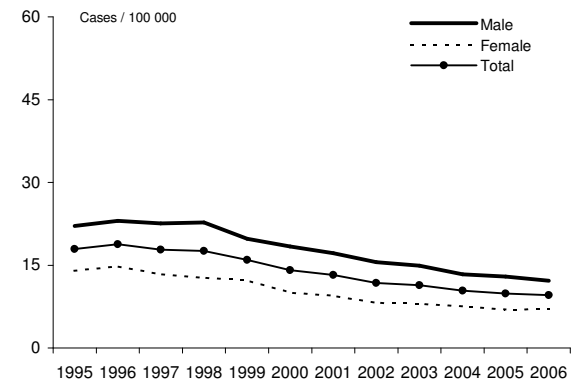
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	567	
Cases resistant to isoniazid	26	(4.6%)
Cases resistant to rifampicin	19	(3.4%)
MDR cases	9	(1.6%)
Cases resistant to ethambutol	10	(1.8%)
Cases resistant to streptomycin	28	(4.9%)

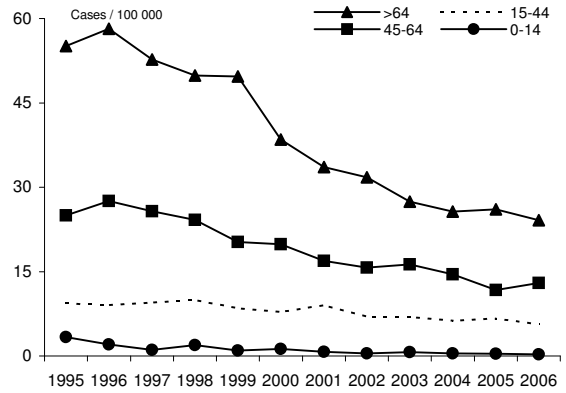
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	570	
Success	391	(69%)
Died	33	(6%)
Failed	0	(0%)
Still on treatment	50	(9%)
Lost to follow up	96	(17%)

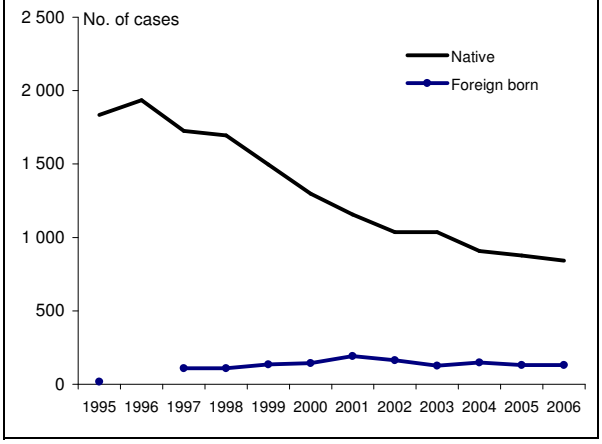
Tuberculosis notification rates by sex, 1995-2006



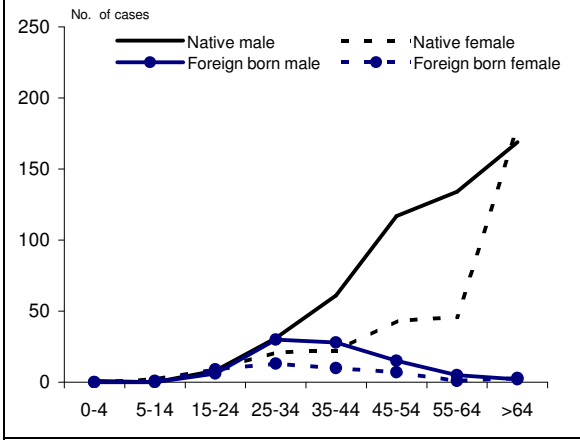
Tuberculosis notification rates by age group, 1995-2006



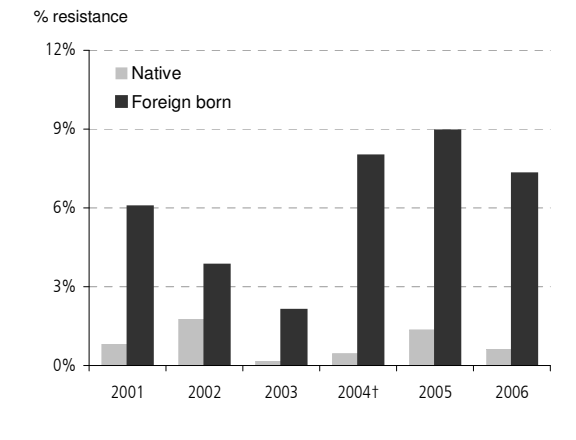
Tuberculosis cases by geographic origin, 1995-2006



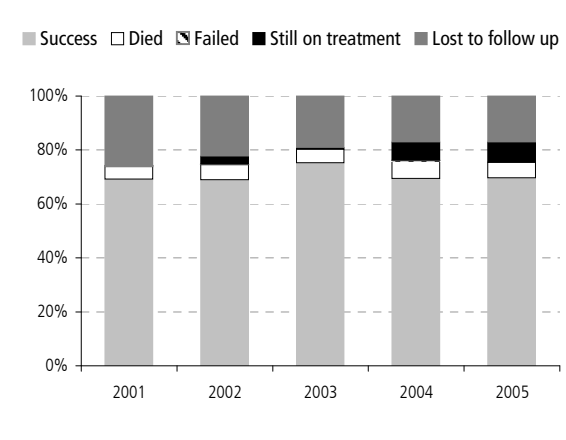
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



† Data representativeness unknown in 2004

Denmark

Tuberculosis case notifications, 2006

Total number of cases	377 *	
Notification rate per 100 000	6.9	
Sex ratio (M:F)	1.5	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	35-44 years	
Foreign born	216	(57.3%)
New (not previously diagnosed)	341	(90.5%)
Culture positive	301	(79.8%)
Pulmonary	274	(72.7%)
of which sputum smear positive	136	(49.6%)
HIV positive TB cases	11	(2.9%)
TB deaths per 100 000 (2001)	0.43	

*** Excluding Greenland (73 cases in 2006)**

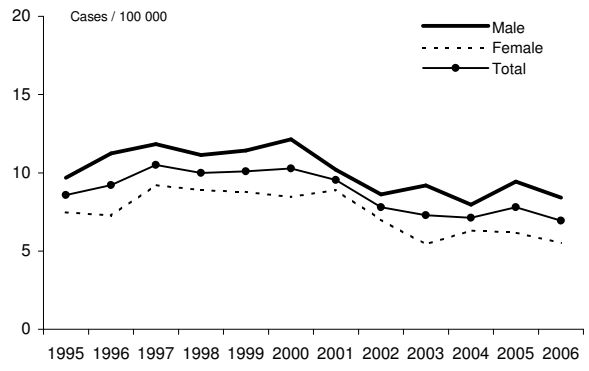
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	296	
Cases resistant to isoniazid	14	(4.7%)
Cases resistant to rifampicin	3	(1.0%)
MDR cases	3	(1.0%)
Cases resistant to ethambutol	5	(1.7%)
Cases resistant to streptomycin	-	-

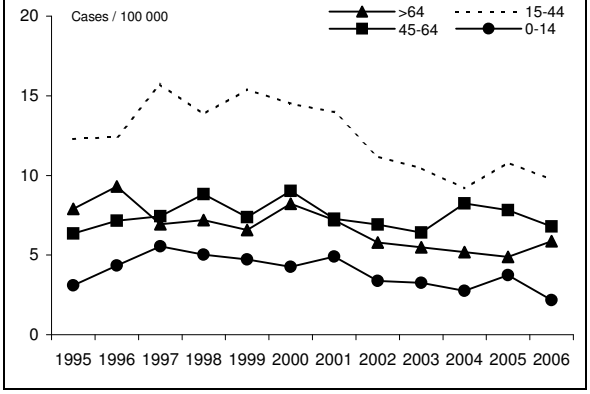
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	233	
Success	196	(84%)
Died	16	(7%)
Failed	1	(0%)
Still on treatment	6	(3%)
Lost to follow up	14	(6%)

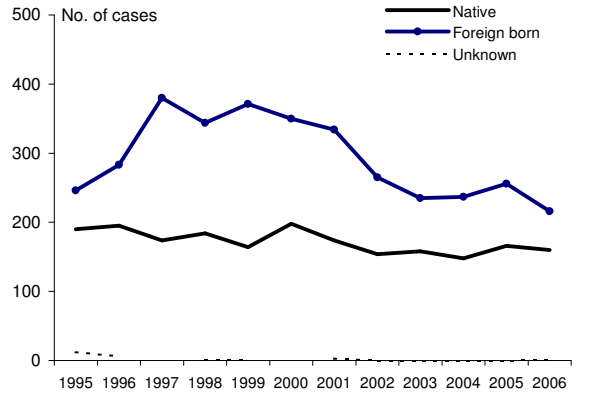
Tuberculosis notification rates by sex, 1995-2006



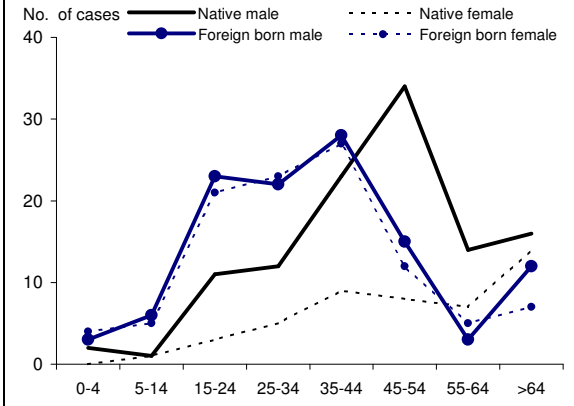
Tuberculosis notification rates by age group, 1995-2006



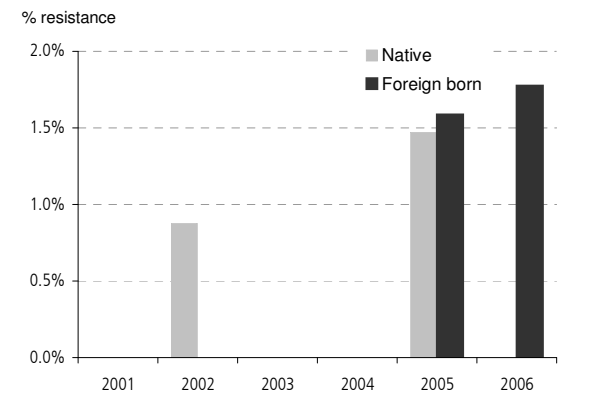
Tuberculosis cases by geographic origin, 1995-2006



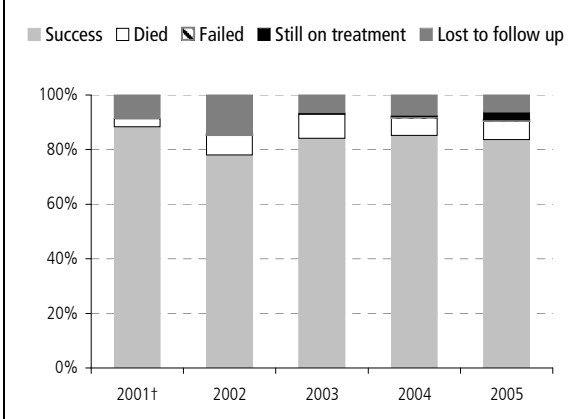
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



† Data representativeness unknown in 2001

Estonia

Tuberculosis case notifications, 2006

Total number of cases	455	
Notification rate per 100 000	34.0	
Sex ratio (M:F)	2.3	
Median age-group, nationals	35-44 years	
Median age-group, non-nationals	45-54 years	
Foreign born	70	(15.4%)
New (never-treated)	373	(82.0%)
Culture positive	347	(76.3%)
Pulmonary	418	(91.9%)
of which sputum smear positive	187	(44.7%)
HIV positive TB cases	41	(9.0%)
TB deaths per 100 000 (2005)	3.64	

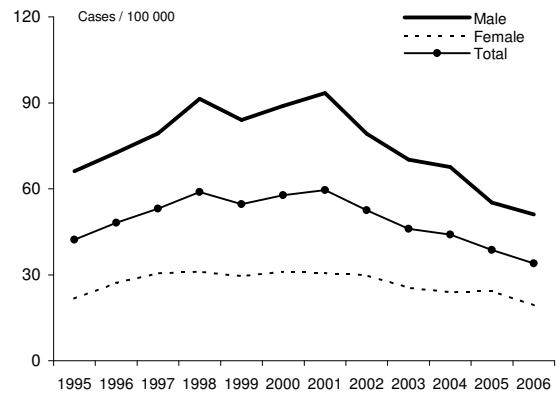
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	347	
Cases resistant to isoniazid	84	(24.2%)
Cases resistant to rifampicin	55	(15.9%)
MDR cases	52	(15.0%)
Cases resistant to ethambutol	52	(15.0%)
Cases resistant to streptomycin	96	(27.7%)

Treatment Outcome Monitoring, 2005

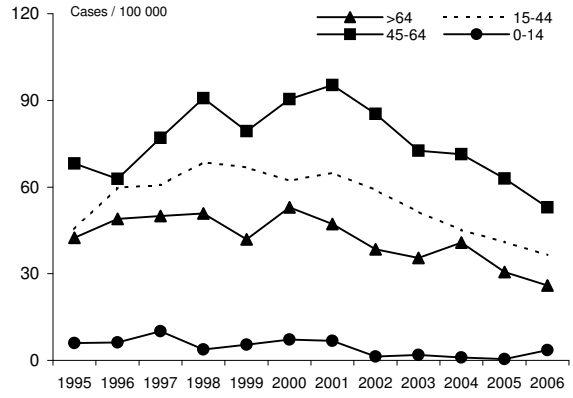
Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	363	
Success	235	(65%)
Died	23	(6%)
Failed	5	(1%)
Still on treatment	49	(13%)
Lost to follow up	51	(14%)

Tuberculosis notification rates by sex, 1995-2006*



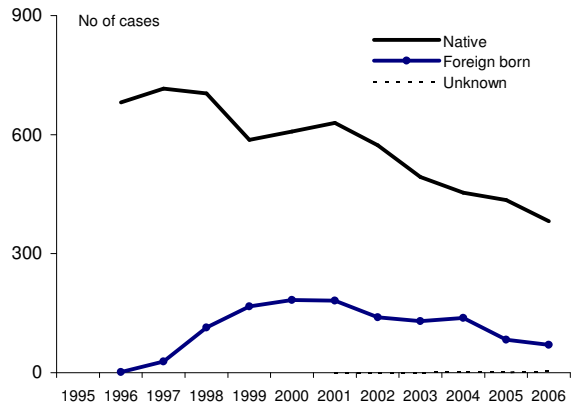
*** Retreated cases other than relapses included since 2001**

Tuberculosis notification rates by age group, 1995-2006*



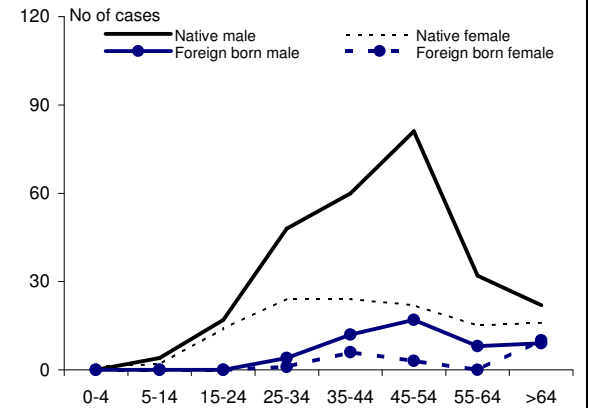
*** Retreated cases other than relapses included since 2001**

Tuberculosis cases by geographic origin, 1995-2006*

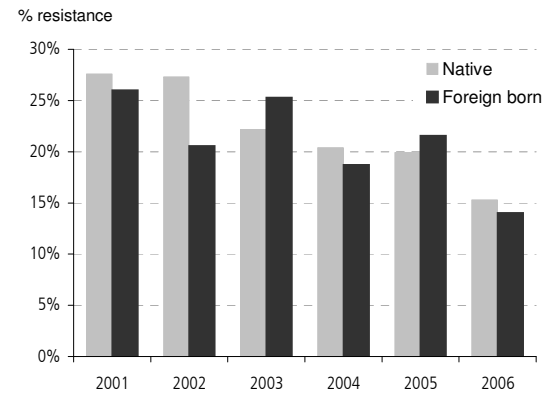


*** Retreated cases other than relapses included since 2001**

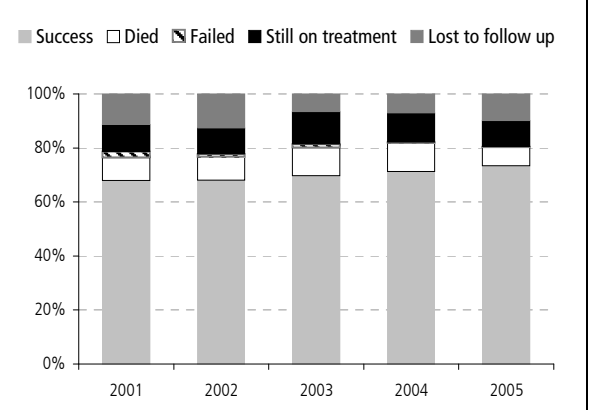
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Finland

Tuberculosis case notifications, 2006

Total number of cases	299	
Notification rate per 100 000	5.7	
Sex ratio (M:F)	1.5	
Median age-group, nationals	>64 years	
Median age-group, non-nationals	25-34 years	
Foreign born	37	(12.4%)
New (not previously diagnosed)*	191	(63.9%)
Culture positive	273	(91.3%)
Pulmonary	212	(70.9%)
of which sputum smear positive	99	(46.7%)
HIV positive TB cases	6	(2.0%)
TB deaths per 100 000 (2005)	0.72	

*30% of cases missing history of previous TB

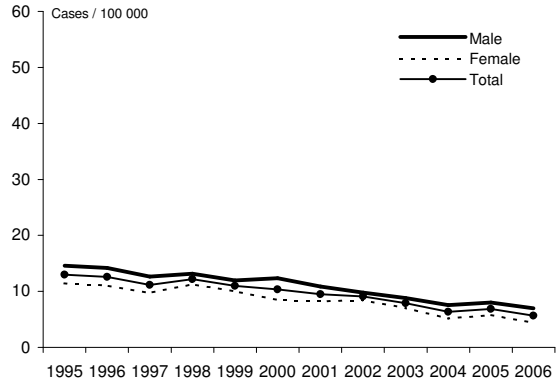
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	265	
Cases resistant to isoniazid	13	(4.9%)
Cases resistant to rifampicin	5	(1.9%)
MDR cases	2	(0.8%)
Cases resistant to ethambutol	9	(3.4%)
Cases resistant to streptomycin	8	(3.0%)

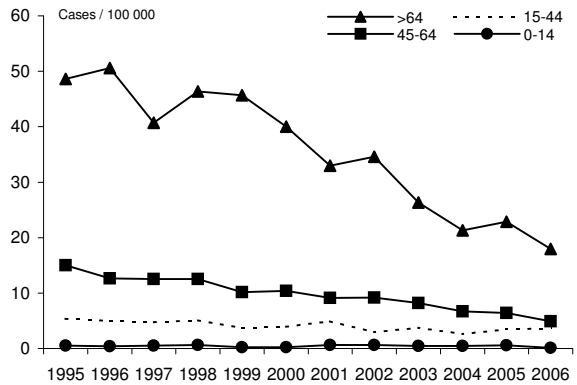
Treatment Outcome Monitoring, 2005

Not available

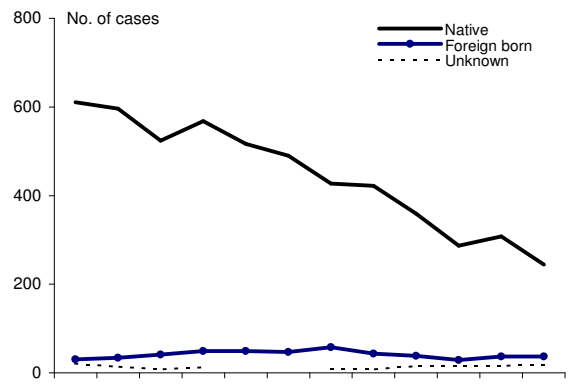
Tuberculosis notification rates by sex, 1995-2006



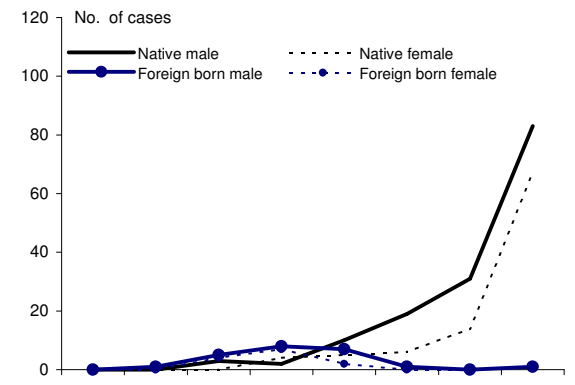
Tuberculosis notification rates by age group, 1995-2006



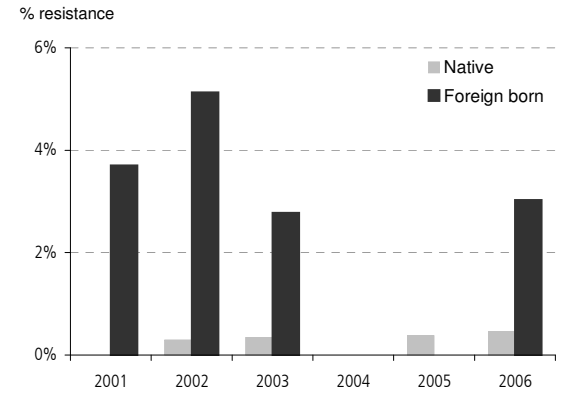
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005

Not available

France

Tuberculosis case notifications, 2006

Total number of cases	5 336	
Notification rate per 100 000	8.4	
Sex ratio (M:F)	1.4	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	35-44 years	
Foreign born	2 308	(43.3%)
New (never-treated)	4 238	(79.4%)
Culture positive	2 369	(44.4%)
Pulmonary	3 822	(71.6%)
of which sputum smear positive	2 091	(54.7%)
HIV positive TB cases (2001)	364	(5.6%)
TB deaths per 100 000 (2004)	0.71	

Drug Resistance Surveillance, 2006

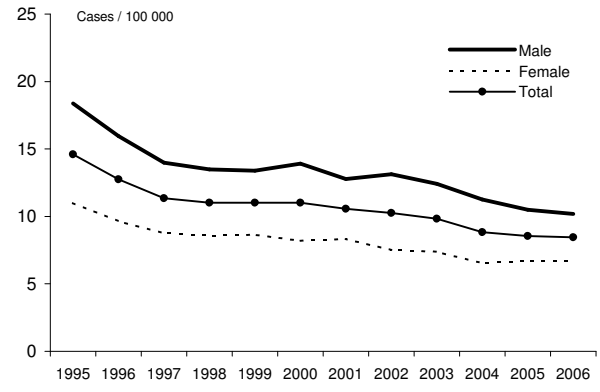
Geographic coverage	National *	
International proficiency testing	Yes	
Case-linked data reporting	No	
Cases with DST results	1 478	
Cases resistant to isoniazid	96	(6.5%)
Cases resistant to rifampicin	31	(2.1%)
MDR cases	30	(2.0%)
Cases resistant to ethambutol	15	(1.0%)
Cases resistant to streptomycin	84	(5.7%)

*** Data from sentinel network of laboratories**

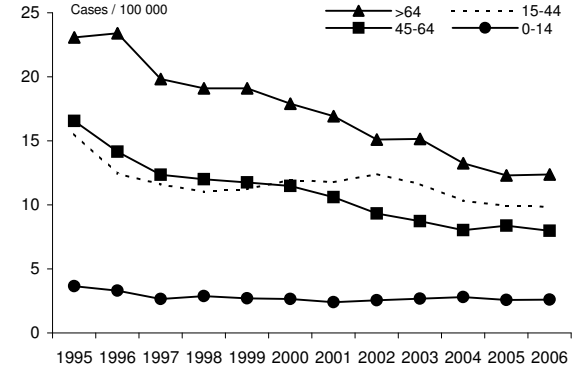
Treatment Outcome Monitoring, 2005

Not available
(started in 2007)

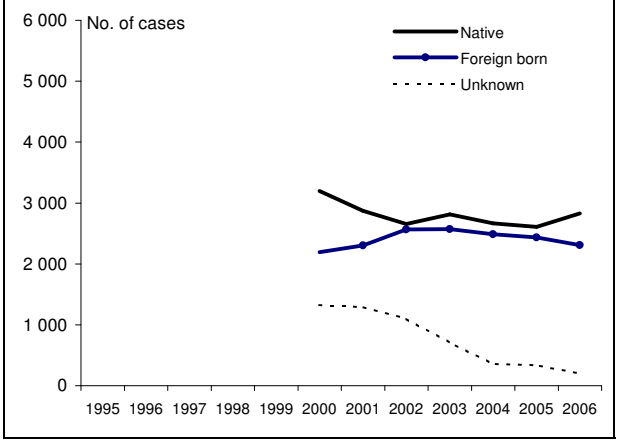
Tuberculosis notification rates by sex, 1995-2006



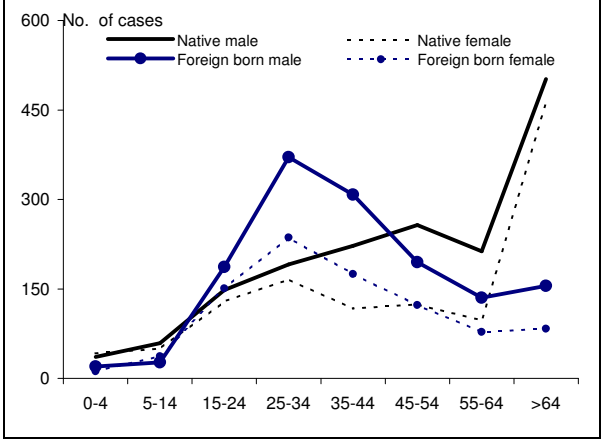
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

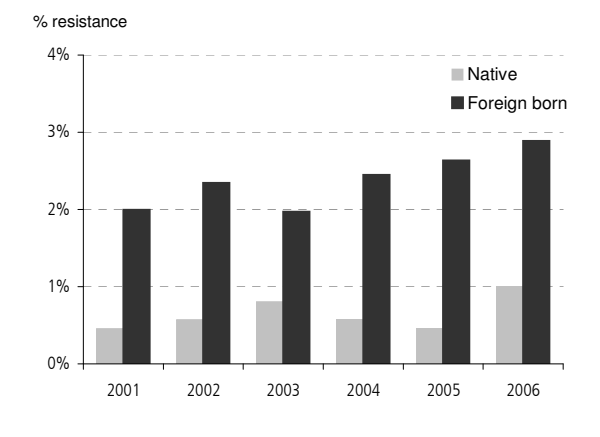


Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006

Data from sentinel laboratory network



Outcomes, new pulmonary culture positive cases, 2001-2005

Not available
(started in 2007)

Georgia

Tuberculosis case notifications, 2006

Total number of cases	6 311 *	
Notification rate per 100 000	142.4	
Sex ratio (M:F)	2.6	
Median age-group, nationals	35-44 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	4 283	(67.9%)
Culture positive	94	(1.5%)
Pulmonary	4 934	(78.2%)
of which sputum smear positive	2 984	(60.5%)
HIV positive TB cases	17	(0.3%)
TB deaths per 100 000 (2001)	5.61	

*** Excluding Abkhazia and Southern Ossetia**

Drug Resistance Surveillance, 2006

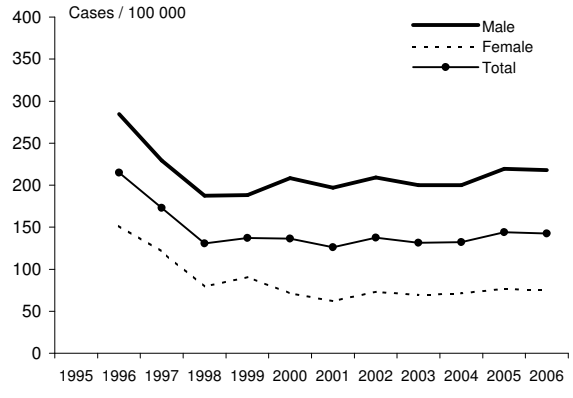
Geographic coverage	National †	
International proficiency testing	Yes (2005)	
Case-linked data reporting	No †	
Cases with DST results	1 422	
Cases resistant to isoniazid	474	(33.3%)
Cases resistant to rifampicin	233	(16.4%)
MDR cases	219	(15.4%)
Cases resistant to ethambutol	106	(7.5%)
Cases resistant to streptomycin	691	(48.6%)

† DST Survey 2005-2006; data reported in aggregated format

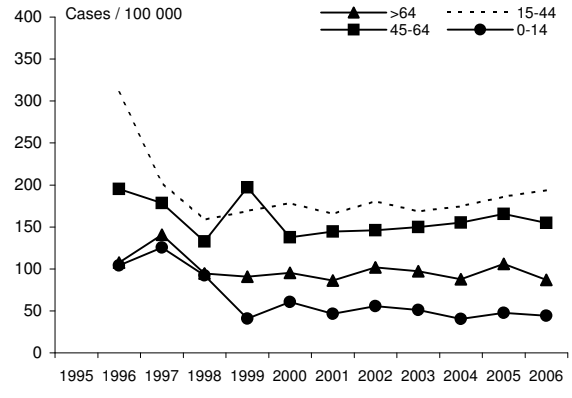
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	2 589	
Success	1 614	(62%)
Died	132	(5%)
Failed	237	(9%)
Still on treatment	0	(0%)
Lost to follow up	606	(23%)

Tuberculosis notification rates by sex, 1995-2006



Tuberculosis notification rates by age group, 1995-2006

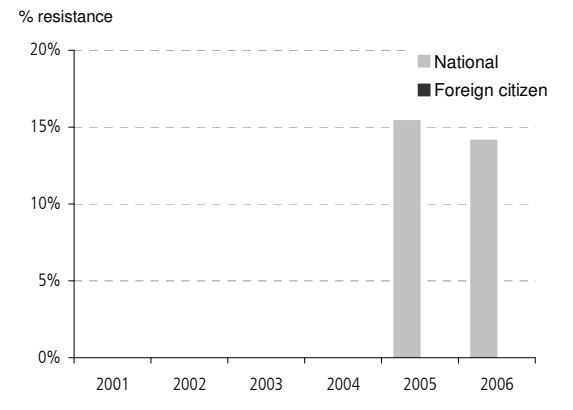


Tuberculosis cases by geographic origin, 1995-2006

Foreign citizens not reported

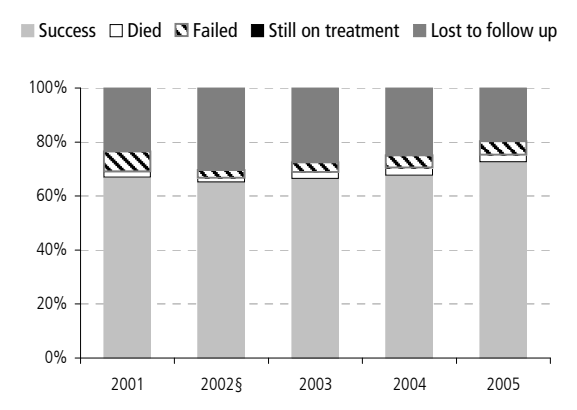
Tuberculosis cases by age group and sex, 2006

Combined multidrug resistance, by origin, 2001-2006‡



‡ No data in 2001-2004; nationwide representative survey in 2005

Outcomes, new pulmonary smear positive cases, 2001-2005



§ Data representativeness unknown in 2002

Germany

Tuberculosis case notifications, 2006

Total number of cases	5 402	
Notification rate per 100 000	6.5	
Sex ratio (M:F)	1.4	
Median age-group, nationals	55-64 years	
Median age-group, non-nationals	35-44 years	
Foreign born	2 237	(41.4%)
New (never-treated)	4 218	(78.1%)
Culture positive	3 705	(68.6%)
Pulmonary	4 189	(77.5%)
of which sputum smear positive	1 396	(33.3%)
HIV positive TB cases	-	
TB deaths per 100 000 (2004)	0.42	

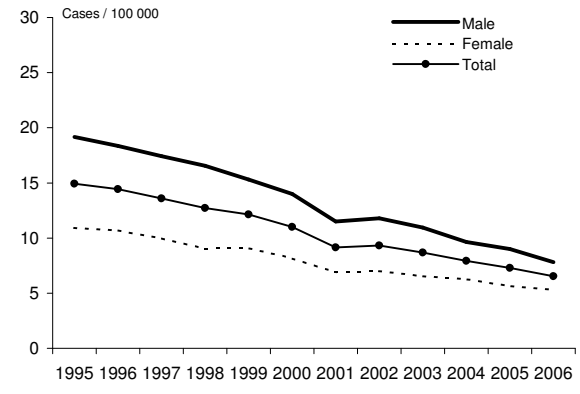
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	3 501	
Cases resistant to isoniazid	284	(8.1%)
Cases resistant to rifampicin	83	(2.4%)
MDR cases	78	(2.2%)
Cases resistant to ethambutol	80	(2.3%)
Cases resistant to streptomycin	261	(7.5%)

Treatment Outcome Monitoring, 2005

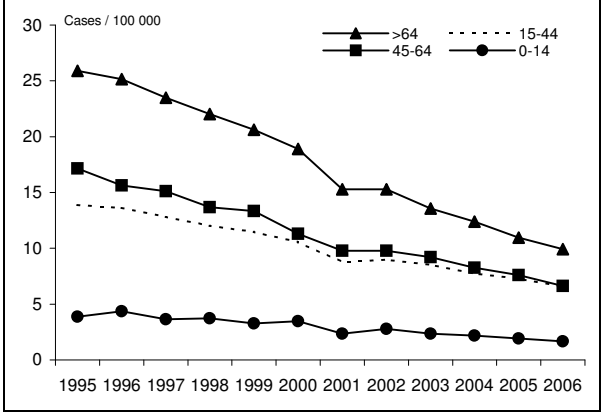
Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	3 295	
Success	2 252	(68%)
Died	395	(12%)
Failed	4	(0%)
Still on treatment	198	(6%)
Lost to follow up	446	(14%)

Tuberculosis notification rates by sex, 1995-2006*



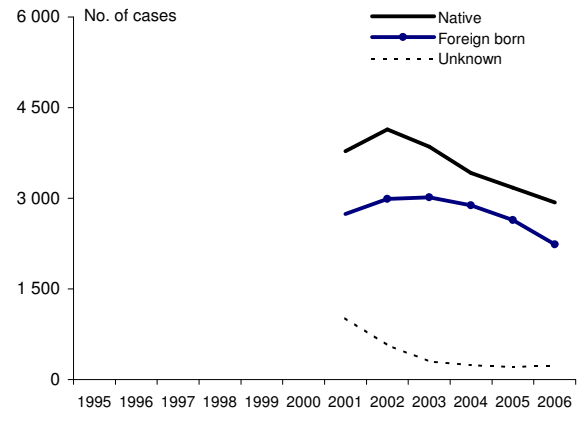
*** Notification system reorganised in 2001**

Tuberculosis notification rates by age group, 1995-2006*



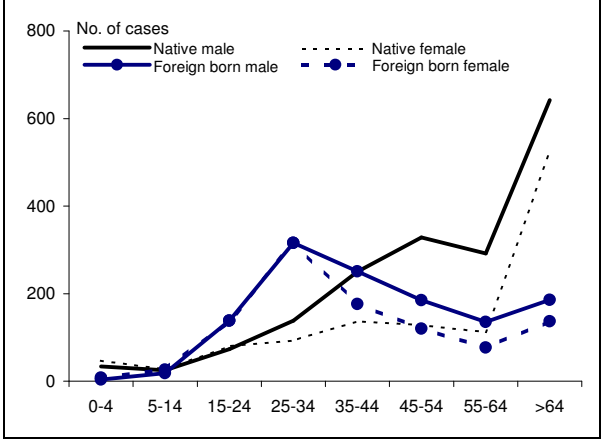
*** Notification system reorganised in 2001**

Tuberculosis cases by geographic origin, 1995-2006*

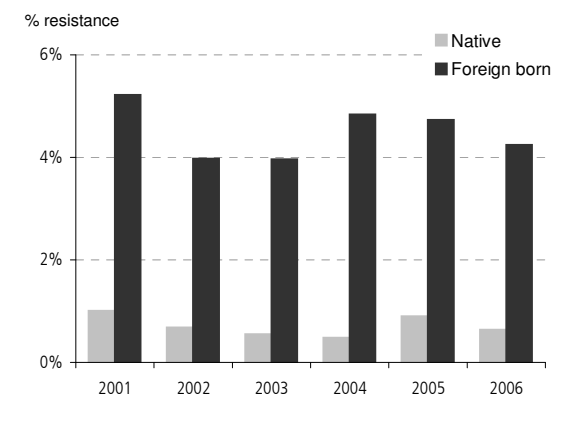


*** Notification system reorganised in 2001**

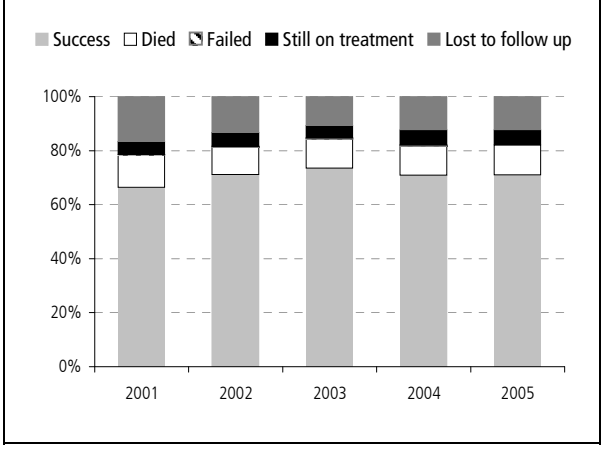
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Greece

Tuberculosis case notifications, 2006

Total number of cases	681	
Notification rate per 100 000	6.1	
Sex ratio (M:F)	1.9	
Median age-group, nationals	55-64 years	
Median age-group, non-nationals	25-34 years	
Foreign born	215	(31.6%)
New (never-treated)	567	(83.3%)
Culture positive	210	(30.8%)
Pulmonary	552	(81.1%)
of which sputum smear positive	240	(43.5%)
HIV positive TB cases	-	
TB deaths per 100 000 (2004)	0.68	

Drug Resistance Surveillance, 2006

Geographic coverage	National *	
International proficiency testing	No	
Case-linked data reporting	No	
Cases with DST results	507 †	
Cases resistant to isoniazid	26	(5.1%)
Cases resistant to rifampicin	18	(3.6%)
MDR cases	13	(2.6%)
Cases resistant to ethambutol	16	(3.2%)
Cases resistant to streptomycin	44	(8.7%)

*** Data from NRL (representativeness unknown)**

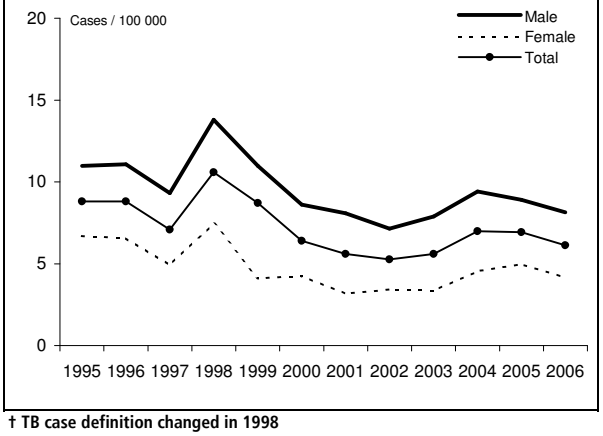
† New cases only

Treatment Outcome Monitoring, 2005

Not available

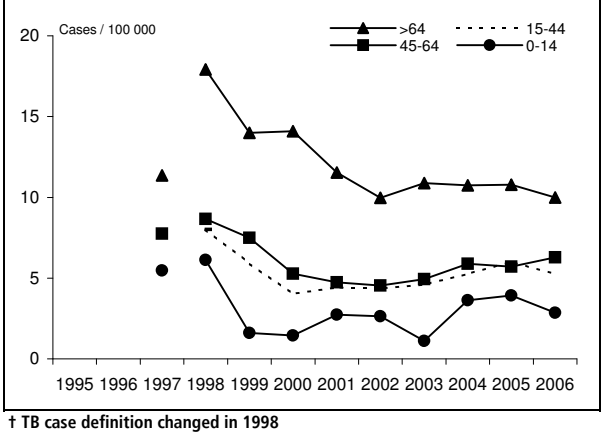
(started in report year 2006)

Tuberculosis notification rates by sex, 1995-2006 †



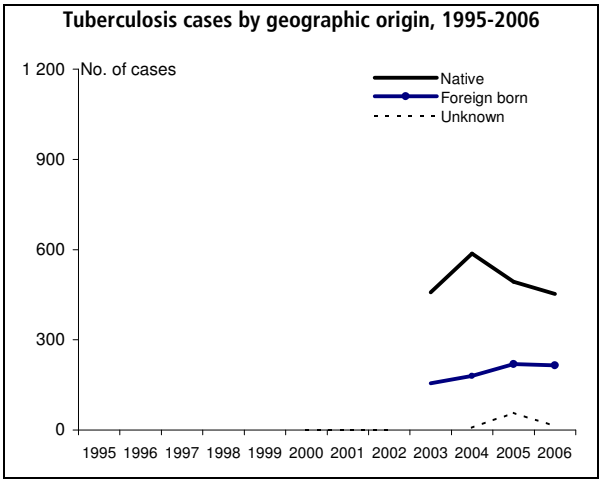
† TB case definition changed in 1998

Tuberculosis notification rates by age group, 1995-2006 †

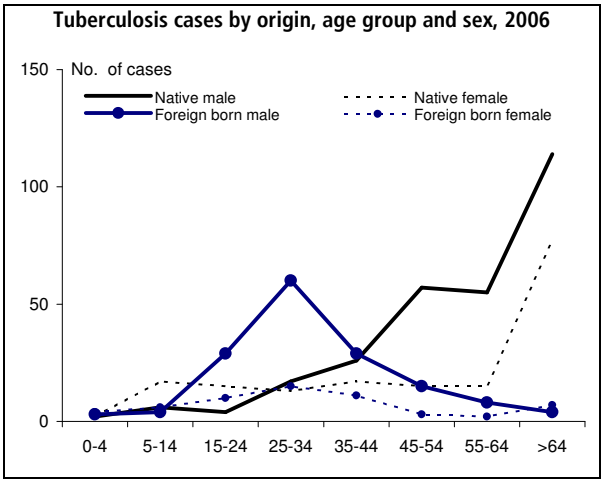


† TB case definition changed in 1998

Tuberculosis cases by geographic origin, 1995-2006

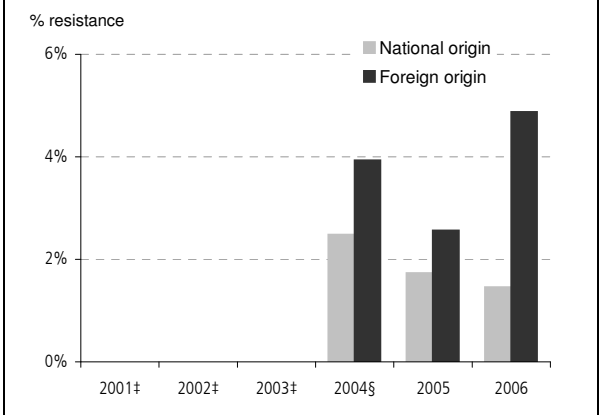


Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin‡, 2001-2006

Data representativeness unknown



‡ No data by geographic origin in 2001-2003

§ By citizenship in 2004 and by birth from 2005

Outcomes, new pulmonary culture positive cases, 2001-2005

Not available

(started in report year 2006)

Hungary

Tuberculosis case notifications, 2006

Total number of cases	1 894	
Notification rate per 100 000	18.8	
Sex ratio (M:F)	2.0	
Median age-group, nationals	45-54	years
Median age-group, non-nationals	35-44	years
Foreign born	42	(2.2%)
New (never-treated)	1 563	(82.5%)
Culture positive	735	(38.8%)
Pulmonary	1 798	(94.9%)
of which sputum smear positive	509	(28.3%)
HIV positive TB cases	-	
TB deaths per 100 000 (2005)	1.89	

Drug Resistance Surveillance, 2006

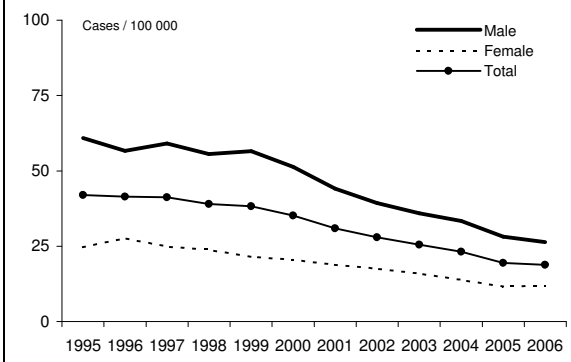
Geographic coverage	National *	
International proficiency testing	Yes (2005)	
Case-linked data reporting	Yes	
Cases with DST results	555	
Cases resistant to isoniazid	52	(9.4%)
Cases resistant to rifampicin	19	(3.4%)
MDR cases	14	(2.5%)
Cases resistant to ethambutol	-	-
Cases resistant to streptomycin	29	(5.2%)

*** Data representativeness unknown**

Treatment Outcome Monitoring, 2005

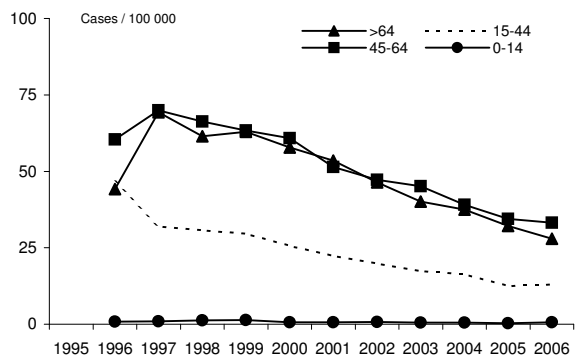
Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	743	
Success	358	(48%)
Died	90	(12%)
Failed	90	(12%)
Still on treatment	103	(14%)
Lost to follow up	102	(14%)

Tuberculosis notification rates by sex, 1995-2006*



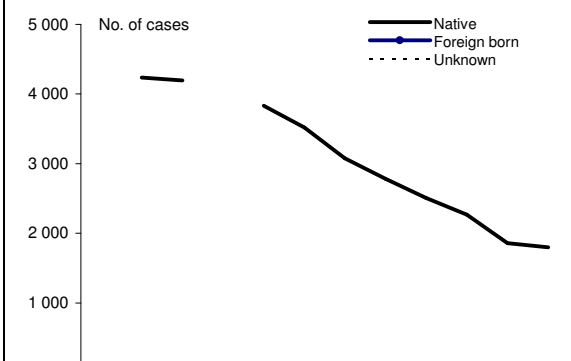
*** TB case definition changed in 1997**

Tuberculosis notification rates by age group, 1995-2006*



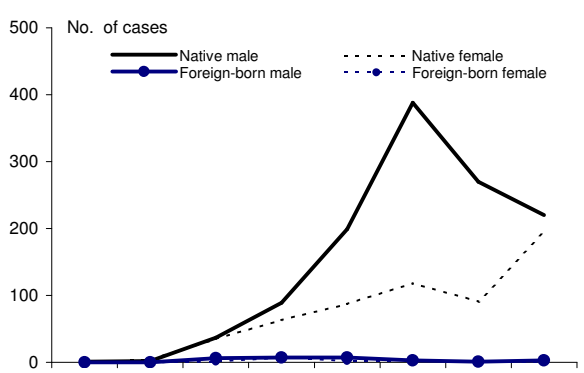
*** TB case definition changed in 1997**

Tuberculosis cases by geographic origin, 1995-2006*



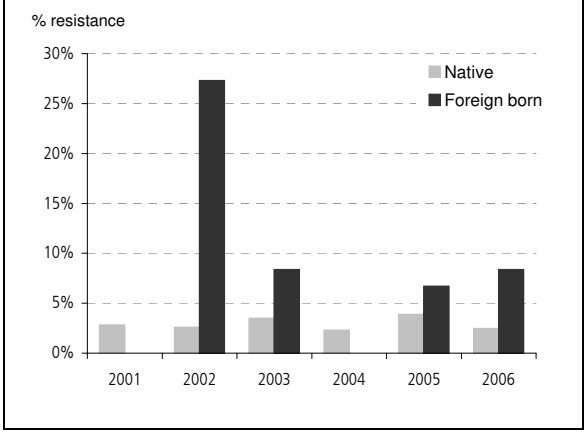
*** TB case definition changed in 1997**

Tuberculosis cases by origin, age group and sex, 2006

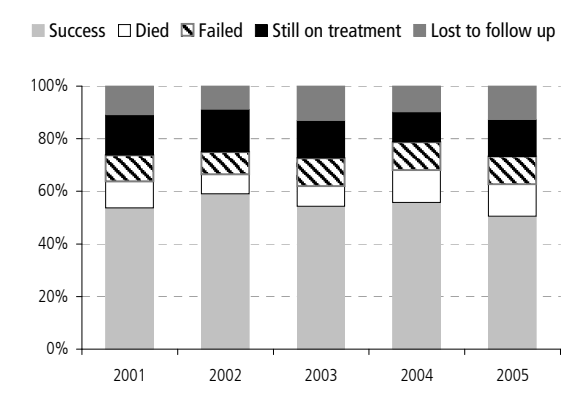


Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown



Outcomes, new pulmonary culture positive cases, 2001-2005



Iceland

Tuberculosis case notifications, 2006

Total number of cases	13	
Notification rate per 100 000	4.4	
Sex ratio (M:F)	1.2	
Median age-group, nationals	>64 years	
Median age-group, non-nationals	35-44 years	
Foreign born	10	(76.9%)
New (never-treated)	13	(100.0%)
Culture positive	12	(92.3%)
Pulmonary	7	(53.8%)
of which sputum smear positive	4	(57.1%)
HIV positive TB cases	2	(15.4%)
TB deaths per 100 000 (2005)	0.0	

Drug Resistance Surveillance, 2006

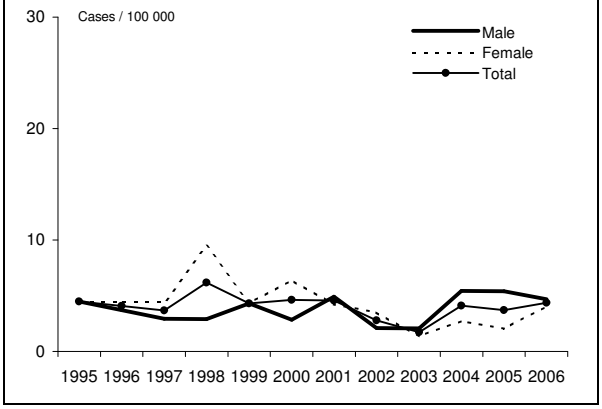
Geographic coverage	National	
International proficiency testing	- *	
Case-linked data reporting	Yes	
Cases with DST results	12	
Cases resistant to isoniazid	2	(16.7%)
Cases resistant to rifampicin	0	(0.0%)
MDR cases	0	(0.0%)
Cases resistant to ethambutol	0	(0.0%)
Cases resistant to streptomycin	-	-

*** DST done abroad**

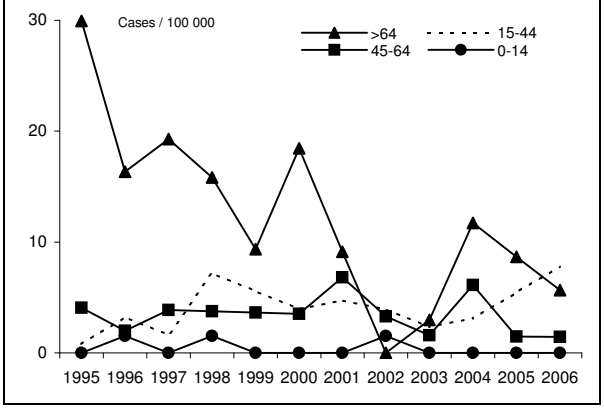
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	5	
Success	5	(100%)
Died	0	(0%)
Failed	0	(0%)
Still on treatment	0	(0%)
Lost to follow up	0	(0%)

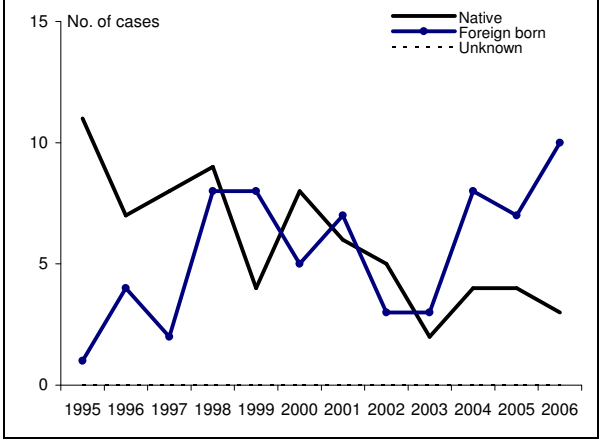
Tuberculosis notification rates by sex, 1995-2006



Tuberculosis notification rates by age group, 1995-2006



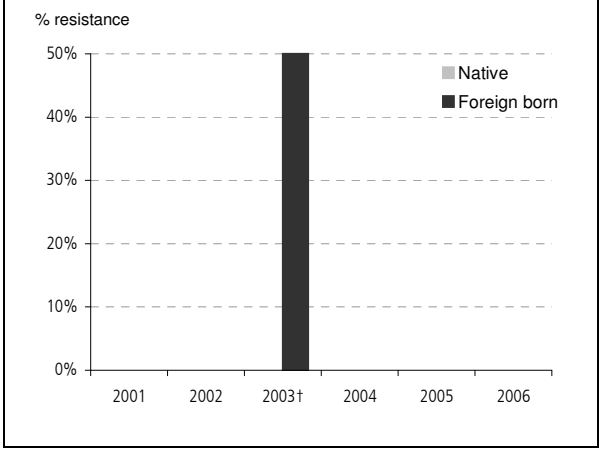
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006

Insufficient number of cases for graphic presentation

Combined multidrug resistance, by origin, 2001-2006



† One of two foreign-born TB cases with DST results in 2003 was MDR (50%)

Outcomes, new pulmonary culture positive cases, 2001-2005

Ireland

Tuberculosis case notifications, 2006

Total number of cases	458	
Notification rate per 100 000	10.8	
Sex ratio (M:F)	1.5	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	25-34 years	
Foreign born	151	(33.0%)
New (not previously diagnosed)	413	(90.2%)
Culture positive	220	(48.0%)
Pulmonary	331	(72.3%)
of which sputum smear positive	145	(43.8%)
HIV positive TB cases	7	(1.5%)
TB deaths per 100 000 (2005)	0.36	

Drug Resistance Surveillance, 2006

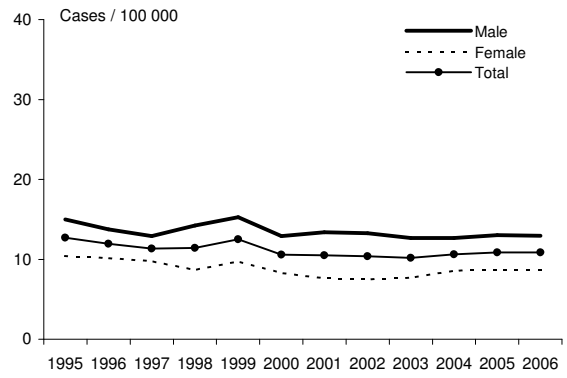
Geographic coverage	National †	
International proficiency testing	Yes (2004-5)	
Case-linked data reporting	Yes	
Cases with DST results	151	
Cases resistant to isoniazid	8	(5.3%)
Cases resistant to rifampicin	4	(2.6%)
MDR cases	3	(2.0%)
Cases resistant to ethambutol	3	(2.0%)
Cases resistant to streptomycin	-	-

† Data representativeness unknown

Treatment Outcome Monitoring, 2005

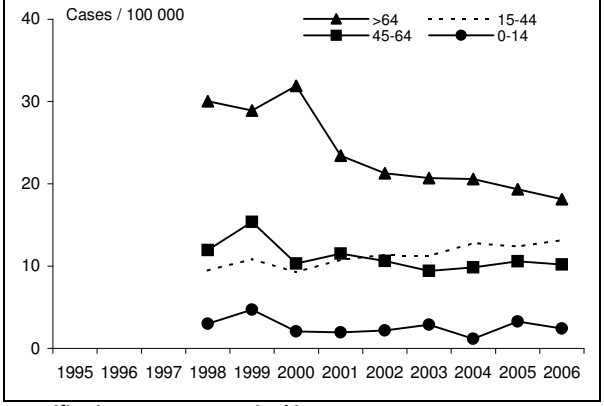
Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	224	
Success	159	(71%)
Died	21	(9%)
Failed	3	(1%)
Still on treatment	7	(3%)
Lost to follow up	34	(15%)

Tuberculosis notification rates by sex, 1995-2006 ‡



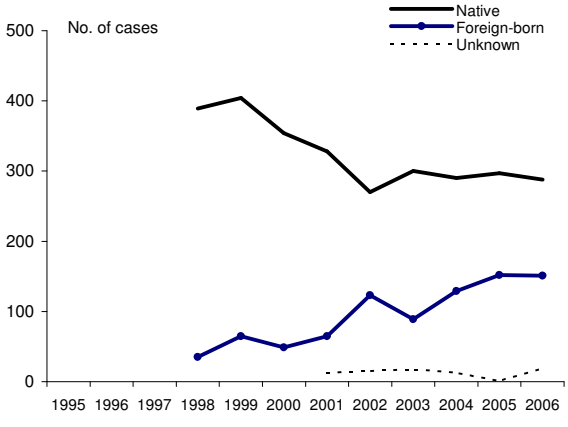
‡ Notification system reorganised in 1998

Tuberculosis notification rates by age group, 1995-2006 ‡



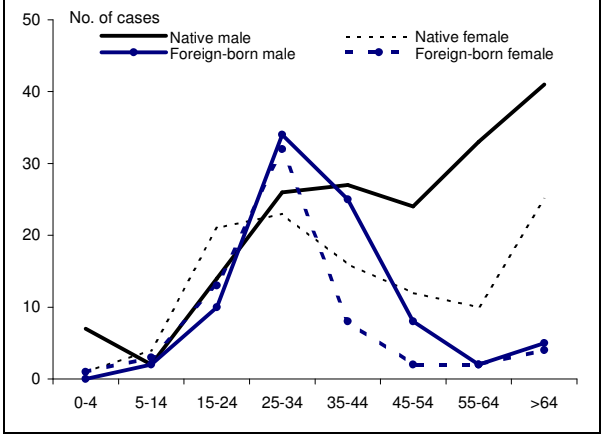
‡ Notification system reorganised in 1998

Tuberculosis cases by geographic origin, 1995-2006 ‡

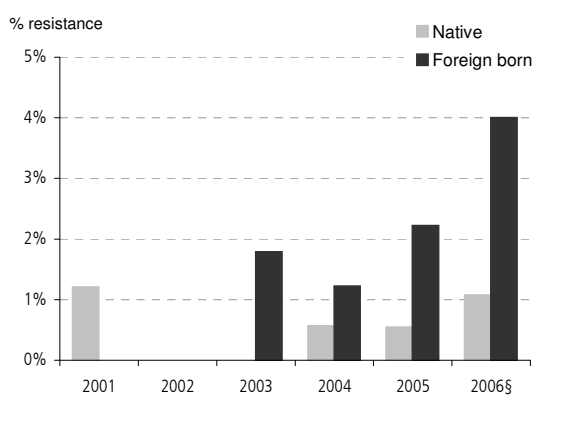


‡ Notification system reorganised in 1998

Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



§ Data representativeness unknown in 2006

Outcomes, new pulmonary culture positive cases, 2001-2005

‖ Data representativeness unknown in 2001

Israel

Tuberculosis case notifications, 2006

Total number of cases	386	
Notification rate per 100 000	5.7	
Sex ratio (M:F)	1.4	
Median age-group, nationals	35-44 years	
Median age-group, non-nationals	45-54 years	
Foreign born	316	(81.9%)
New (never-treated)	382	(99.0%)
Culture positive	267	(69.2%)
Pulmonary	311	(80.6%)
of which sputum smear positive	72	(23.2%)
HIV positive TB cases	15	(3.9%)
TB deaths per 100 000 (2003)	0.36	

Drug Resistance Surveillance, 2006

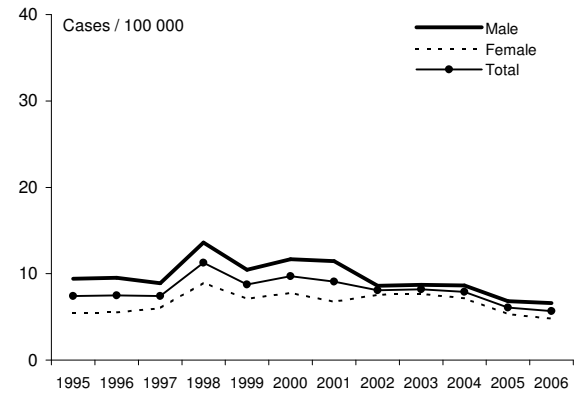
Geographic coverage	National	
International proficiency testing	Yes (2005)	
Case-linked data reporting	No *	
Cases with DST results	266	
Cases resistant to isoniazid	38	(14.3%)
Cases resistant to rifampicin	22	(8.3%)
MDR cases	19	(7.1%)
Cases resistant to ethambutol	13	(4.9%)
Cases resistant to streptomycin	56	(21.1%)

*** DST results shown from aggregate data reported by NRL**

Treatment Outcome Monitoring, 2005

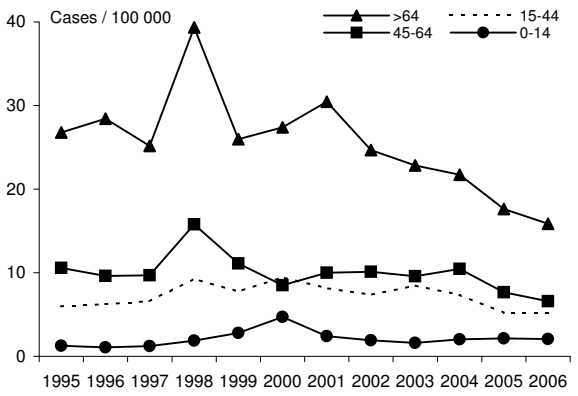
Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	No	
Included in TOM cohort	234	
Success	181	(77%)
Died	27	(12%)
Failed	3	(1%)
Still on treatment	5	(2%)
Lost to follow up	18	(8%)

Tuberculosis notification rates by sex, 1995-2006*



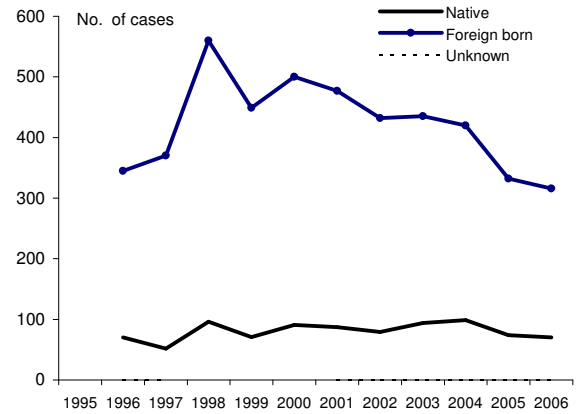
*** TB notification system re-organised in 1998**

Tuberculosis notification rates by age group, 1995-2006*



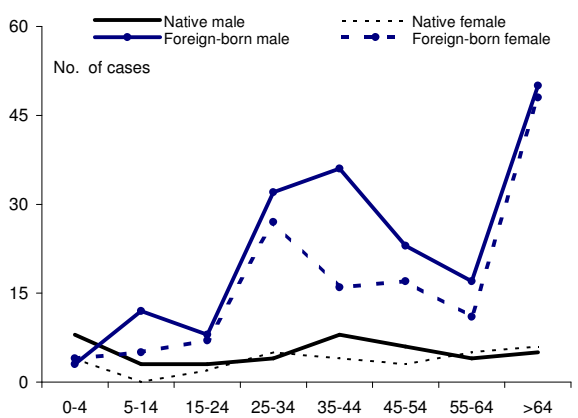
*** TB notification system re-organised in 1998**

Tuberculosis cases by geographic origin, 1995-2006*

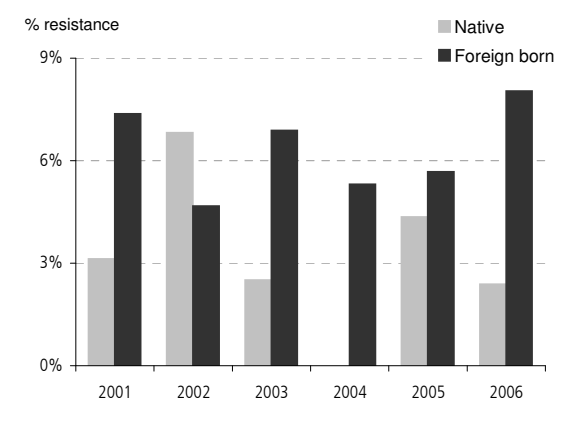


*** TB notification system re-organised in 1998**

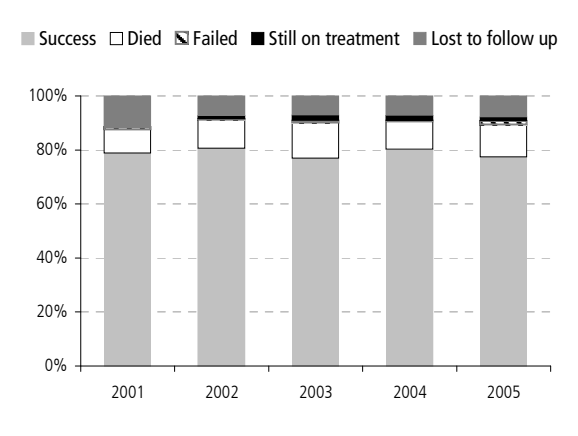
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Italy

Tuberculosis case notifications, 2006

Total number of cases	4 387	
Notification rate per 100 000	7.5	
Sex ratio (M:F)	1.5	
Median age-group, nationals	55-64	years
Median age-group, non-nationals	25-34	years
Foreign born	2 026	(46.2%)
New (never-treated)*	3 177	(72.4%)
Culture positive	1 593	(36.3%)
Pulmonary	3 020	(68.8%)
of which sputum smear positive	1 450	(48.0%)
HIV positive (selected TB cases, 2004)	11	(2.7%)
TB deaths per 100 000 (2002)	0.72	

*** 22% of cases with missing data on previous history**

Drug Resistance Surveillance, 2006

Geographic coverage	Partial *	
International proficiency testing	Yes	
Case-linked data reporting	No	
Cases with DST results	847	
Cases resistant to isoniazid	76	(9.0%)
Cases resistant to rifampicin	35	(4.1%)
MDR cases	28	(3.3%)
Cases resistant to ethambutol	25	(3.0%)
Cases resistant to streptomycin	74	(8.7%)

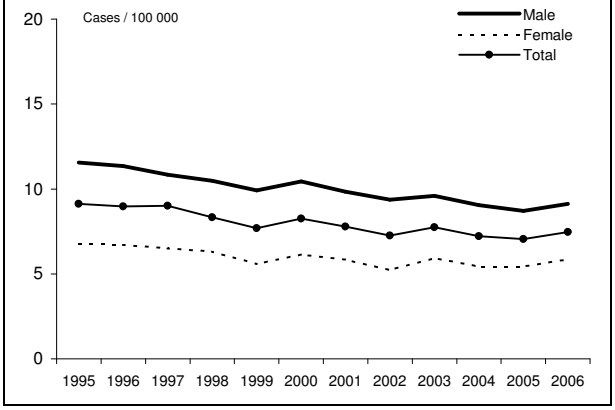
*** Data from NRL + regional labs (representativeness unknown)**

Treatment Outcome Monitoring, 2005

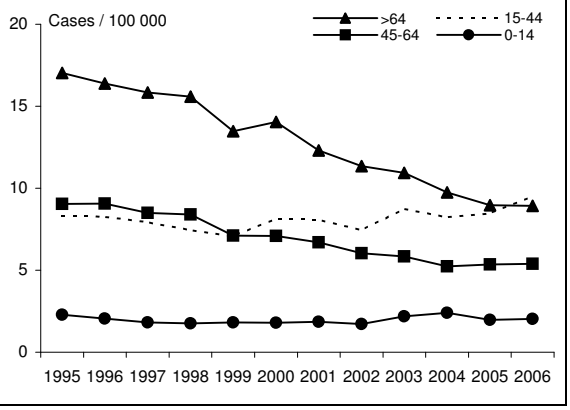
Geographic coverage	5 / 21 regions *	
Outcome cohort	**Pulm smear or culture positive**	
Case-linked data reporting	No	
Included in TOM cohort	343	
Success	218	(64%)
Died	32	(9%)
Failed	2	(1%)
Still on treatment	7	(2%)
Lost to follow up	84	(24%)

*** Data representativeness unknown**

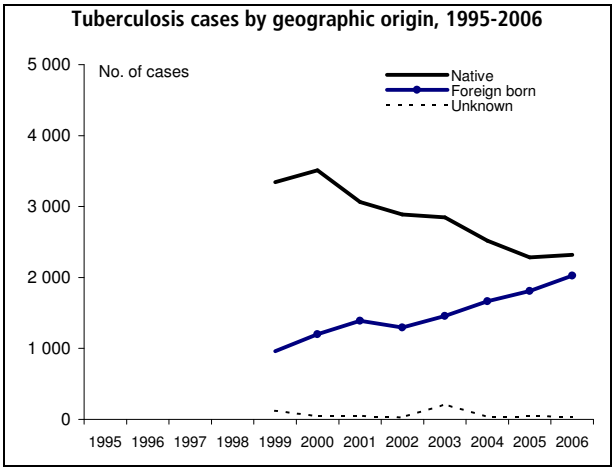
Tuberculosis notification rates by sex, 1995-2006



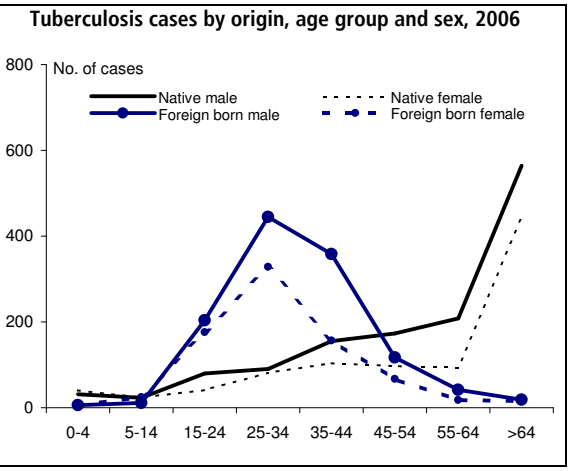
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

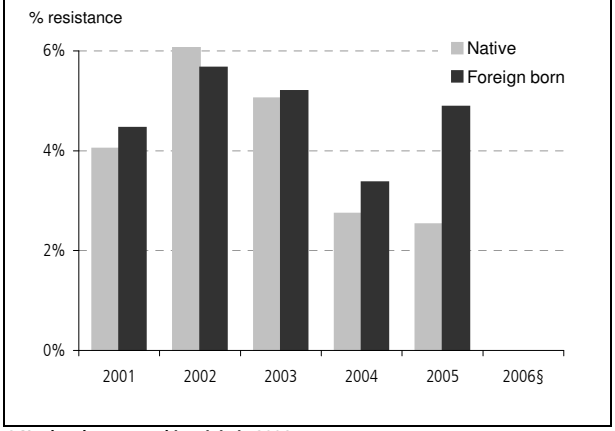


Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006

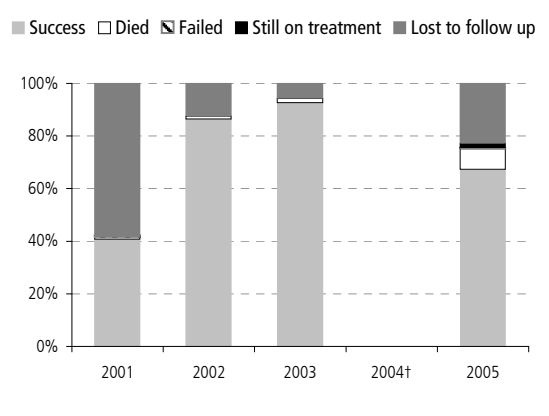
Data representativeness unknown



§ No data by geographic origin in 2006

Outcomes, new pulmonary culture positive cases, 2001-2005

Data representativeness unknown



† No data in 2004

Kazakhstan

Tuberculosis case notifications, 2006

Total number of cases	43 204	
Notification rate per 100 000	282.1	
Sex ratio (M:F)	1.6	
Median age-group, nationals	25-34 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	20 262	(46.9%)
Culture positive	8 470	(19.6%)
Pulmonary	35 971	(83.3%)
of which sputum smear positive	17 936	(49.9%)
HIV positive TB cases	234	(0.5%)
TB deaths per 100 000 (2004)	22.01	

Drug Resistance Surveillance, 2006

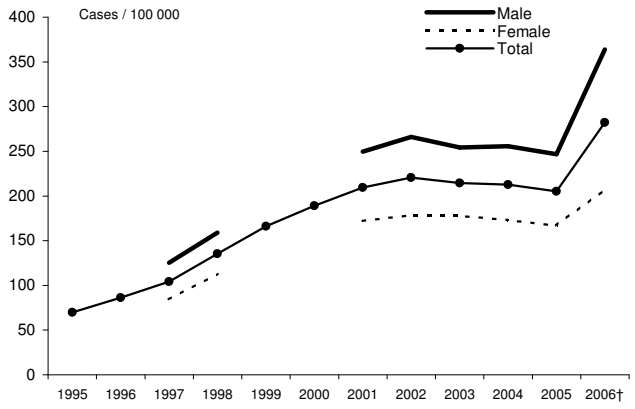
Geographic coverage	National *	
International proficiency testing	Yes (2002)	
Case-linked data reporting	No	
Cases with DST results	15 733	
Cases resistant to isoniazid	7 602	(48.3%)
Cases resistant to rifampicin	4 796	(30.5%)
MDR cases	4 117	(26.2%)
Cases resistant to ethambutol	4 471	(28.4%)
Cases resistant to streptomycin	8 542	(54.3%)

*** All DST labs (representativeness unknown)**

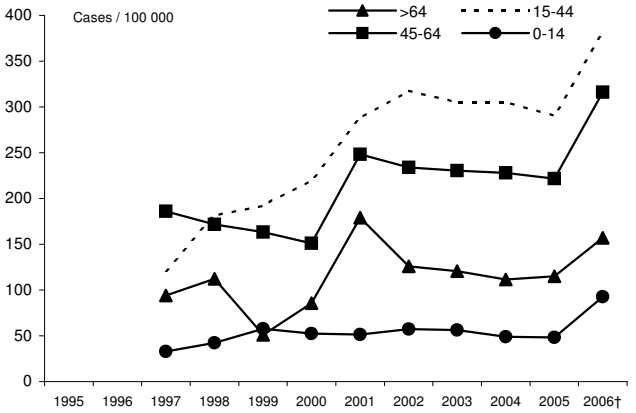
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**New & relapse pulm smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	10 029	
Success	6 469	(65%)
Died	773	(8%)
Failed	1 236	(12%)
Still on treatment	781	(8%)
Lost to follow up	770	(8%)

Tuberculosis notification rates by sex, 1995-2006



Tuberculosis notification rates by age group, 1995-2006



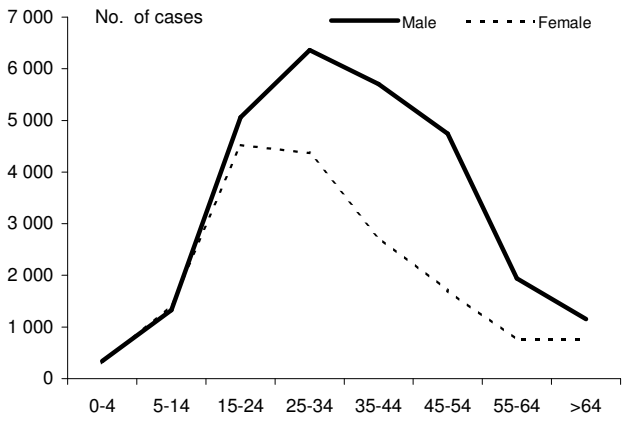
† sharp increase in cases previously treated & with unknown history in 2006

† sharp increase in cases previously treated & with unknown history in 2006

Tuberculosis cases by geographic origin, 1995-2006

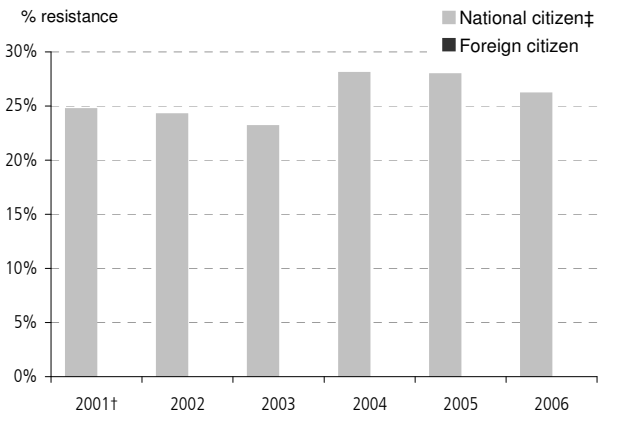
Foreign citizens not reported

Tuberculosis cases by age group and sex, 2006

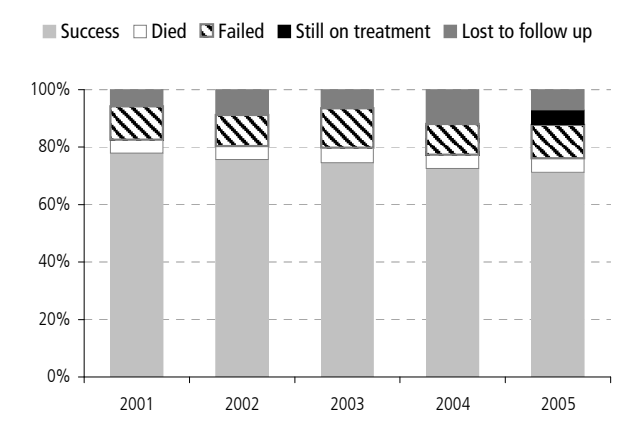


Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown†



Outcomes, new pulmonary smear positive cases, 2001-2005



† 2001: nationwide representative survey

‡ Origin unknown in 2001-2003

Kyrgyzstan

Tuberculosis case notifications, 2006

Total number of cases	6 656	
Notification rate per 100 000	126.6	
Sex ratio (M:F)*	1.4	
Median age-group, nationals*	25-34 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	5 726	(86.0%)
Culture positive	1 117	(16.8%)
Pulmonary	4 895	(73.5%)
of which sputum smear positive	2 428	(49.6%)
HIV positive TB cases	-	
TB deaths per 100 000 (2005)	15.58	

Drug Resistance Surveillance, 2006

Geographic coverage	Partial †	
International proficiency testing	Yes (2007)	
Case-linked data reporting	No	
Cases with DST results	1 117	
Cases resistant to isoniazid	578	(51.7%)
Cases resistant to rifampicin	351	(31.4%)
MDR cases	336	(30.1%)
Cases resistant to ethambutol	-	-
Cases resistant to streptomycin	-	-

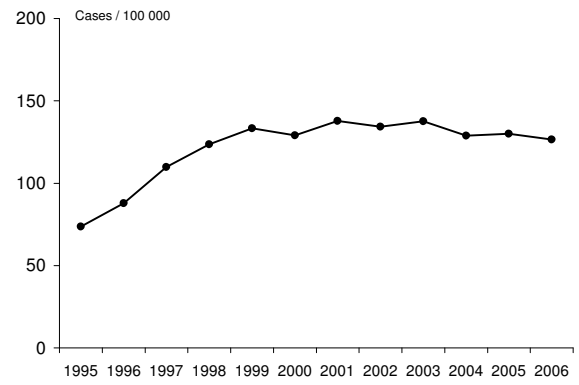
† Data from NRL (representativeness unknown)

Treatment Outcome Monitoring, 2005

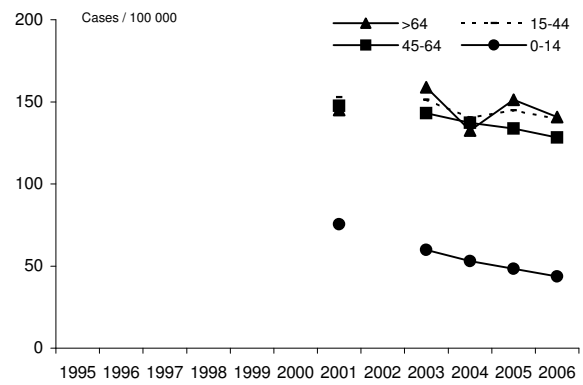
Geographic coverage	National	
Outcome cohort	**New & relapse pulm smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	2 308	
Success	1 913	(83%)
Died	87	(4%)
Failed	130	(6%)
Still on treatment	0	(0%)
Lost to follow up	178	(8%)

*** For new cases only**

Tuberculosis notification rates, 1995-2006



Tuberculosis notification rates by age group, 1995-2006*

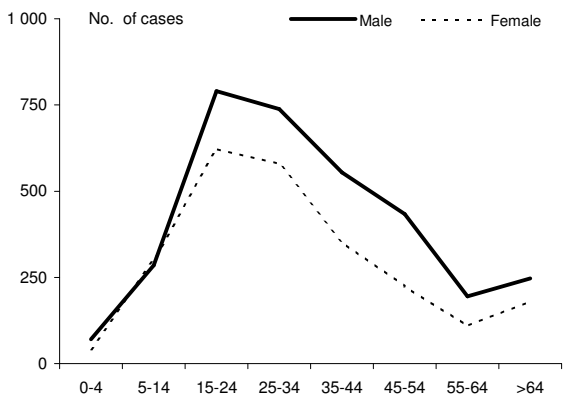


*** New cases only**

Tuberculosis cases by geographic origin, 1995-2006

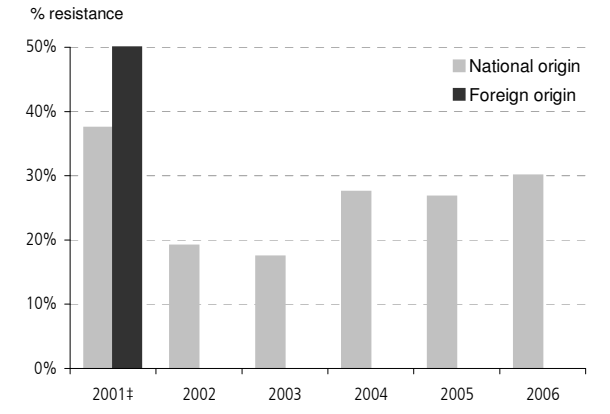
No foreign citizens reported

Tuberculosis cases (new) by age group and sex, 2006



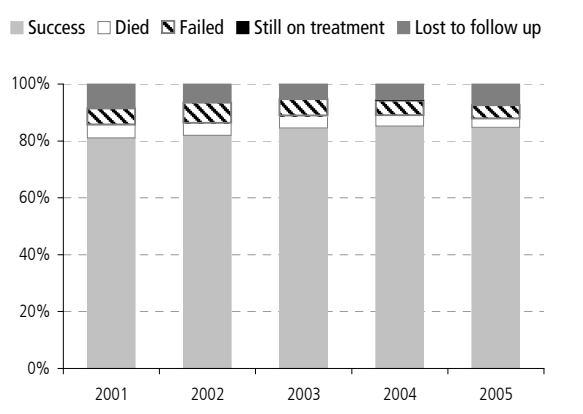
Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown



‡ One out of 2 cases of foreign origin with DST results in 2001 had MDR

Outcomes, new pulmonary culture positive cases, 2001-2005



Latvia

Tuberculosis case notifications, 2006

Total number of cases	1 328	
Notification rate per 100 000	58.0	
Sex ratio (M:F)	2.2	
Median age-group, nationals	35-44 years	
Median age-group, non-nationals	45-54 years	
Foreign born	69	(5.2%)
New (never-treated)	1 144	(86.1%)
Culture positive	994	(74.8%)
Pulmonary	1 204	(90.7%)
of which sputum smear positive	631	(52.4%)
HIV positive TB cases	45	(3.4%)
TB deaths per 100 000 (2005)	7.39	

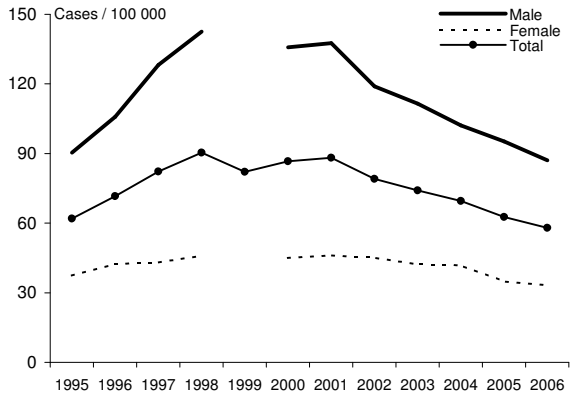
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	967	
Cases resistant to isoniazid	306	(31.6%)
Cases resistant to rifampicin	143	(14.8%)
MDR cases	142	(14.7%)
Cases resistant to ethambutol	122	(12.6%)
Cases resistant to streptomycin	302	(31.2%)

Treatment Outcome Monitoring, 2005

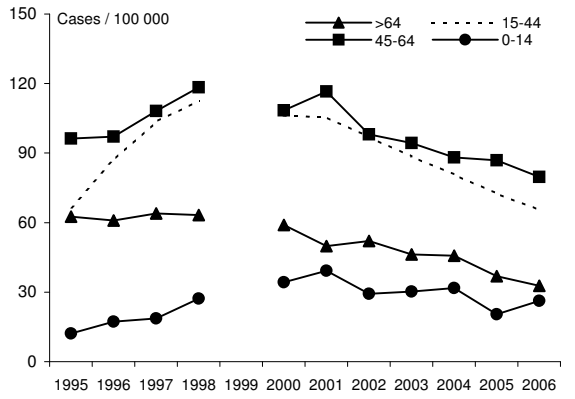
Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	1 049	
Success	748	(71%)
Died	80	(8%)
Failed	10	(1%)
Still on treatment	138	(13%)
Lost to follow up	73	(7%)

Tuberculosis notification rates by sex, 1995-2006*



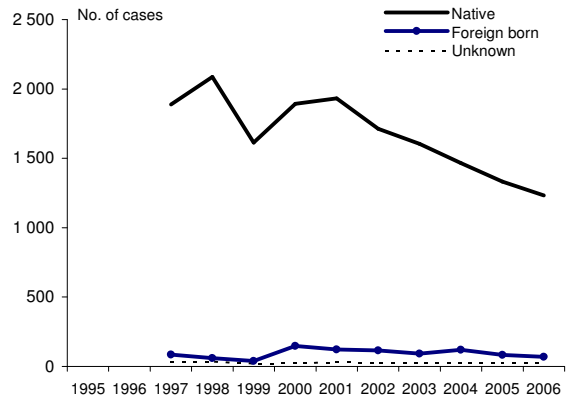
* Retreated cases other than relapses included since 2001

Tuberculosis notification rates by age group, 1995-2006*



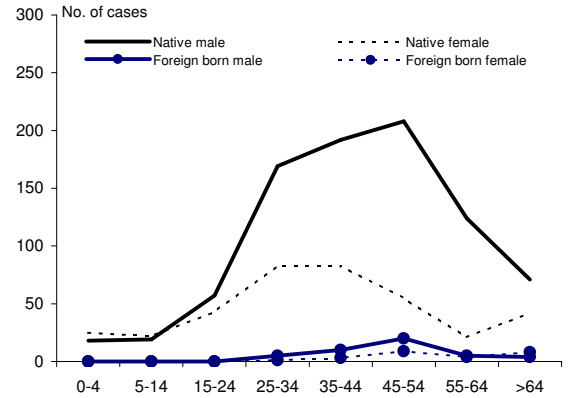
* Retreated cases other than relapses included since 2001

Tuberculosis cases by geographic origin, 1995-2006*

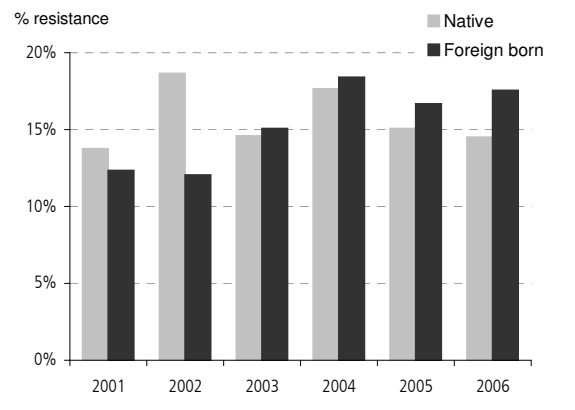


* Retreated cases other than relapses included since 2001

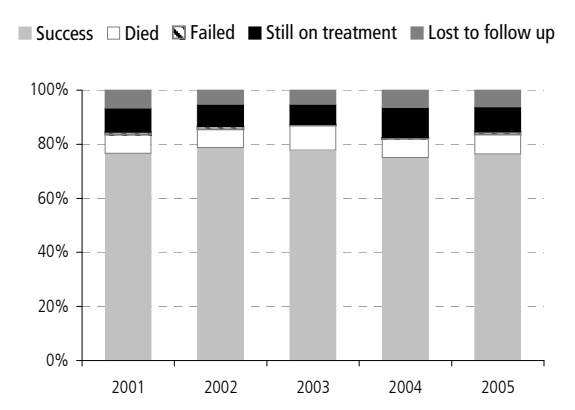
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Lithuania

Tuberculosis case notifications, 2006

Total number of cases	2 559	
Notification rate per 100 000	75.1	
Sex ratio (M:F)	2.4	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	45-54 years	
Foreign born	73	(2.9%)
New (never-treated)	2 097	(81.9%)
Culture positive	1 786	(69.8%)
Pulmonary	2 239	(87.5%)
of which sputum smear positive	1 379	(61.6%)
HIV positive TB cases	13	(0.5%)
TB deaths per 100 000 (2004)	8.97	

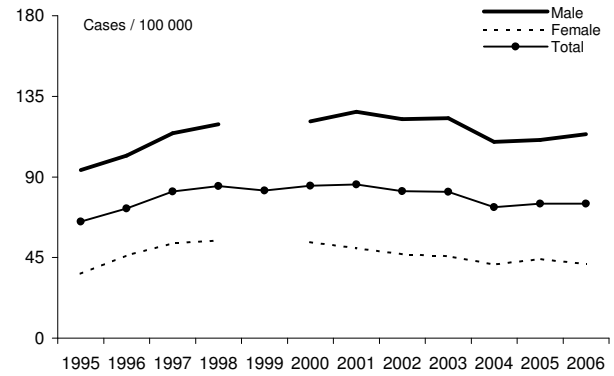
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	1 786	
Cases resistant to isoniazid	525	(29.4%)
Cases resistant to rifampicin	333	(18.6%)
MDR cases	332	(18.6%)
Cases resistant to ethambutol	211	(11.8%)
Cases resistant to streptomycin	500	(28.0%)

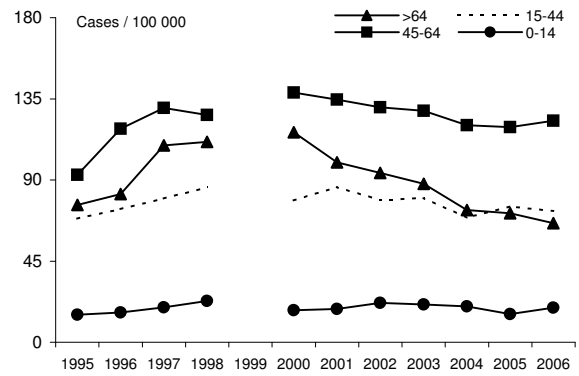
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	1 689	
Success	1 029	(61%)
Died	222	(13%)
Failed	50	(3%)
Still on treatment	155	(9%)
Lost to follow up	233	(14%)

Tuberculosis notification rates by sex, 1995-2006*



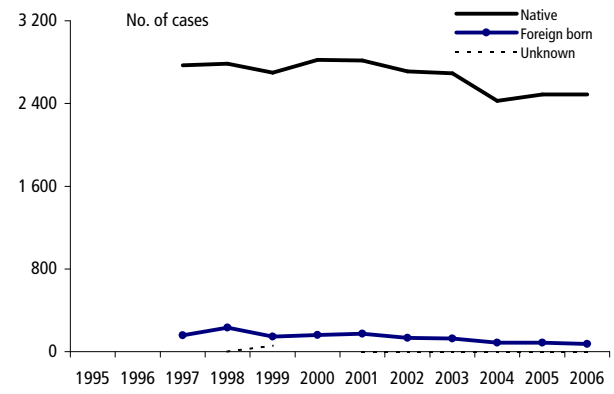
Tuberculosis notification rates by age group, 1995-2006*



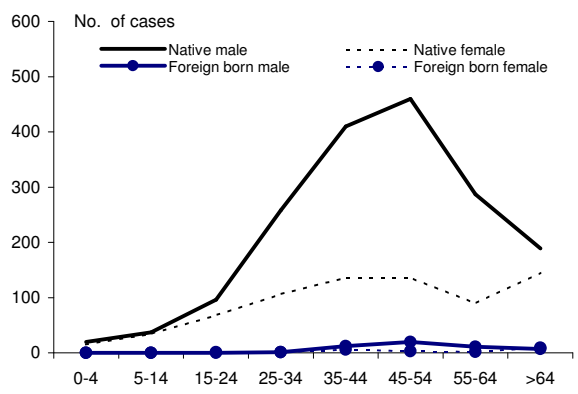
* Retreated cases other than relapses included since 2001

* Retreated cases other than relapses included since 2001

Tuberculosis cases by geographic origin, 1995-2006*

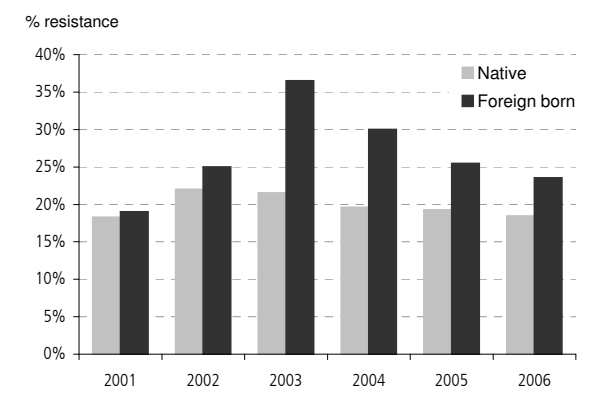


Tuberculosis cases by origin, age group and sex, 2006

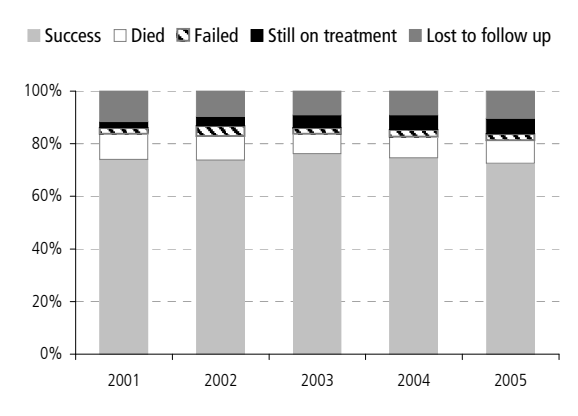


* Retreated cases other than relapses included since 2001

Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Luxembourg

Tuberculosis case notifications, 2006

Total number of cases	33	
Notification rate per 100 000	7.2	
Sex ratio (M:F)	1.2	
Median age-group, nationals	55-64	years
Median age-group, non-nationals	35-44	years
Foreign born	20	(60.6%)
New (never-treated)	33	(100.0%)
Culture positive	33	(100.0%)
Pulmonary	32	(97.0%)
of which sputum smear positive	22	(68.8%)
HIV positive TB cases	-	
TB deaths per 100 000 (2005)	0.22	

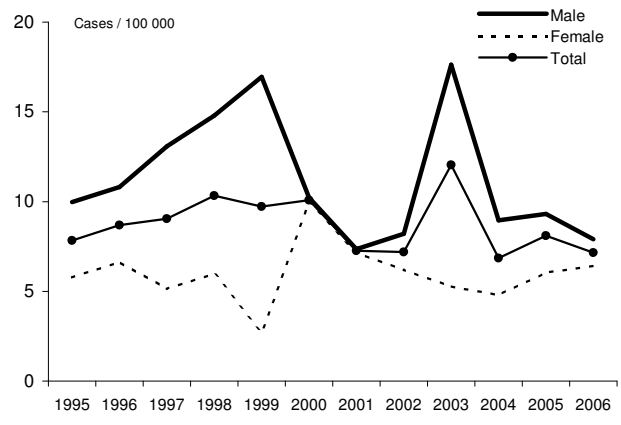
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	No	
Case-linked data reporting	Yes	
Cases with DST results	33	
Cases resistant to isoniazid	0	(0.0%)
Cases resistant to rifampicin	0	(0.0%)
MDR cases	0	(0.0%)
Cases resistant to ethambutol	0	(0.0%)
Cases resistant to streptomycin	0	(0.0%)

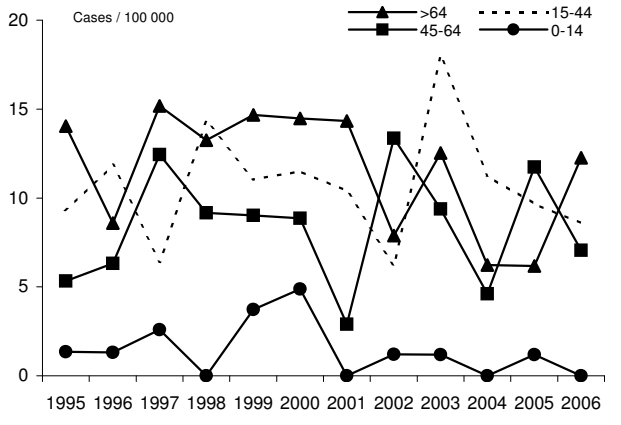
Treatment Outcome Monitoring, 2005

Not available

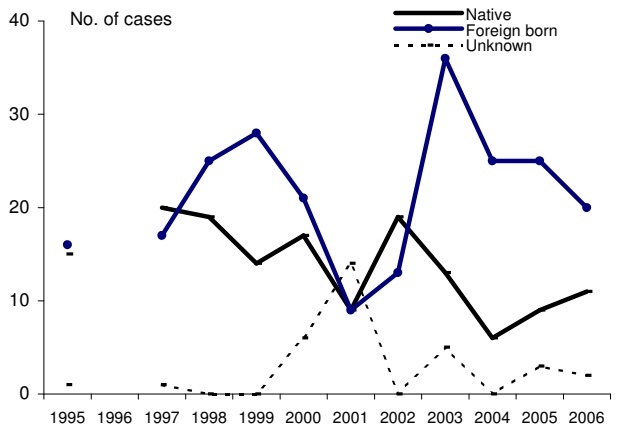
Tuberculosis notification rates by sex, 1995-2006



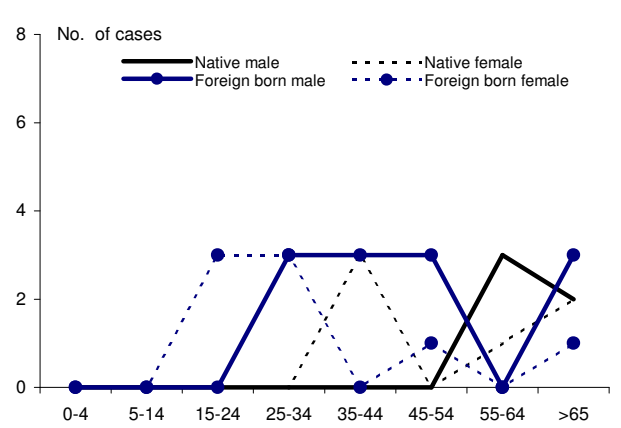
Tuberculosis notification rates by age group, 1995-2006



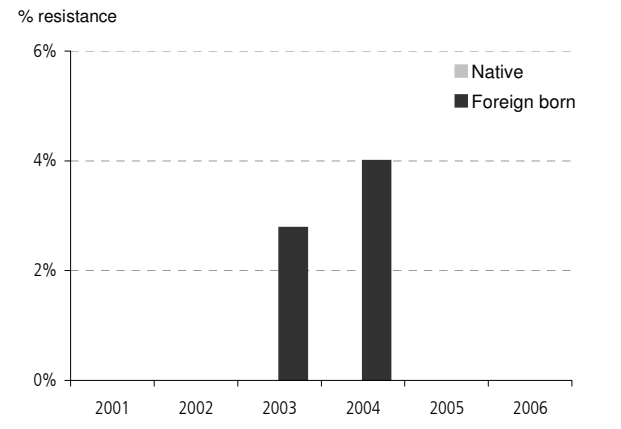
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005

Not available

F.Y.R. of Macedonia

Tuberculosis case notifications, 2006

Total number of cases	627	
Notification rate per 100 000	30.8	
Sex ratio (M:F)	1.4	
Median age-group, nationals	35-44 years	
Median age-group, non-nationals	25-34 years	
Foreign born	5	(0.8%)
New (never-treated)	529	(84.4%)
Culture positive	208	(33.2%)
Pulmonary	483	(77.0%)
of which sputum smear positive	216	(44.7%)
HIV positive TB cases	0	(0.0%)
TB deaths per 100 000 (2003)	3.85	

Drug Resistance Surveillance, 2006

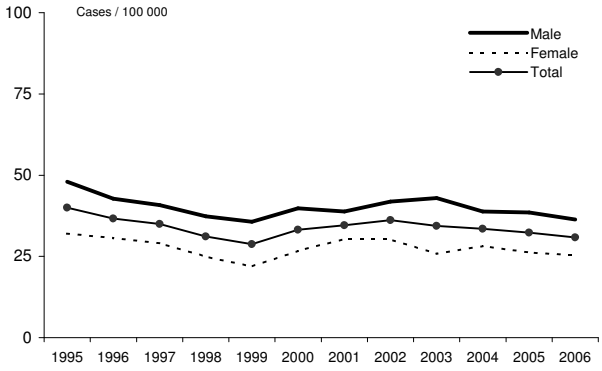
Geographic coverage	National *	
International proficiency testing	No	
Case-linked data reporting	Yes	
Cases with DST results	162	
Cases resistant to isoniazid	19	(11.7%)
Cases resistant to rifampicin	6	(3.7%)
MDR cases	6	(3.7%)
Cases resistant to ethambutol	3	(1.9%)
Cases resistant to streptomycin	7	(4.3%)

*** Data representativeness unknown**

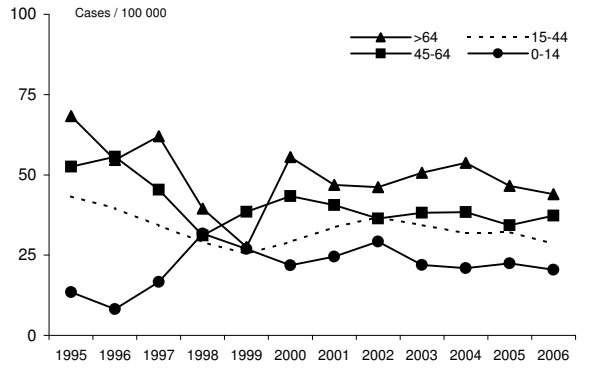
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	224	
Success	181	(81%)
Died	6	(3%)
Failed	2	(1%)
Still on treatment	2	(1%)
Lost to follow up	33	(15%)

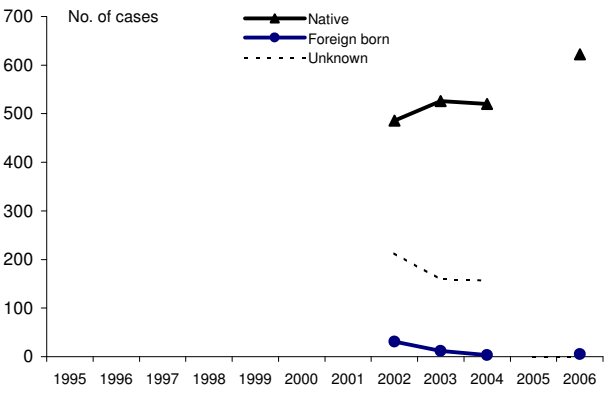
Tuberculosis notification rates by sex, 1995-2006



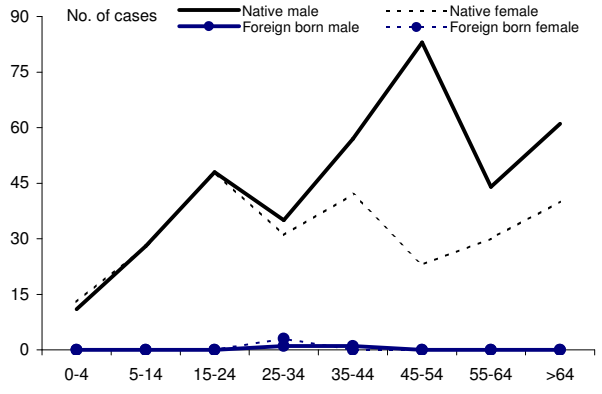
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

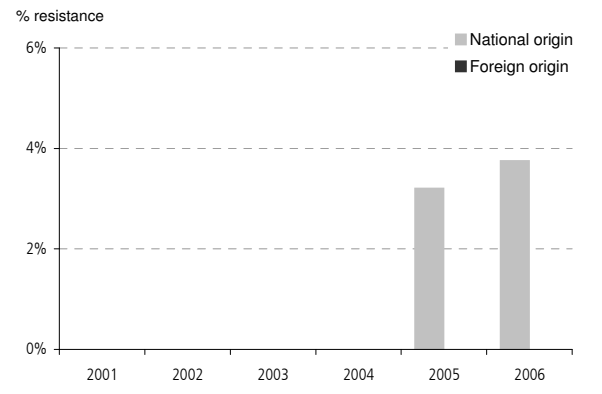


Tuberculosis cases by origin, age group and sex, 2006



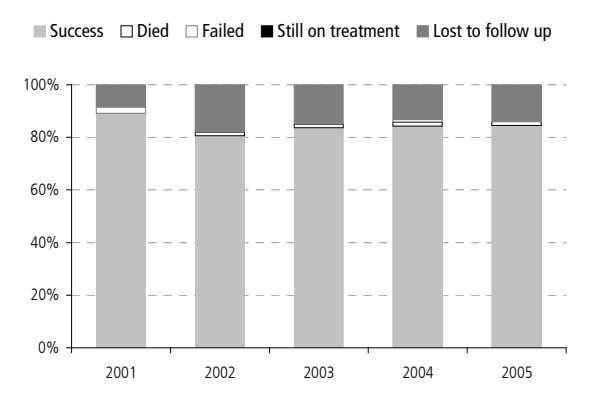
Combined multidrug resistance, by origin, 2001-2006†

Data representativeness unknown



† No data by geographic origin 2001-2004; by citizenship in 2005, by birth in 2006

Outcomes, new pulmonary smear positive cases, 2001-2005



Malta

Tuberculosis case notifications, 2006

Total number of cases	30	
Notification rate per 100 000	7.4	
Sex ratio (M:F)	6.5	
Median age-group, nationals	>64 years	
Median age-group, non-nationals	25-34 years	
Foreign citizens	17	(56.7%)
New (never-treated)	30	(100.0%)
Culture positive	15	(50.0%)
Pulmonary	24	(80.0%)
of which sputum smear positive	4	(16.7%)
HIV positive TB cases	2	(6.7%)
TB deaths per 100 000 (2005)	0.25	

Drug Resistance Surveillance, 2006

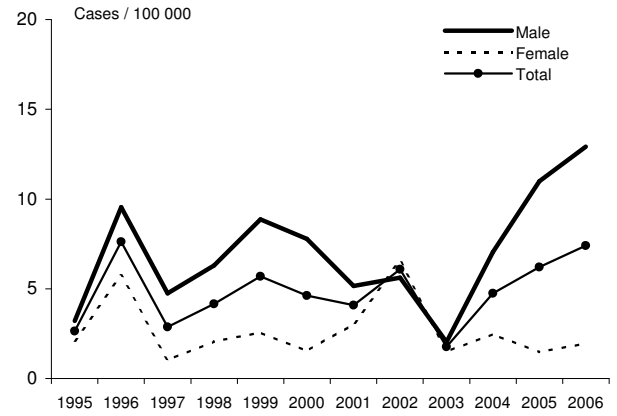
Geographic coverage	National	
International proficiency testing	- *	
Case-linked data reporting	Yes	
Cases with DST results	14	
Cases resistant to isoniazid	2	(14.3%)
Cases resistant to rifampicin	2	(14.3%)
MDR cases	2	(14.3%)
Cases resistant to ethambutol	0	(0.0%)
Cases resistant to streptomycin	4	(28.6%)

*** DST done abroad**

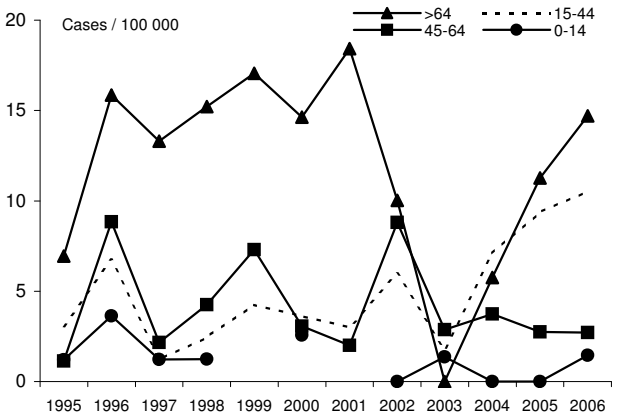
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	9	
Success	8	(89%)
Died	1	(11%)
Failed	0	(0%)
Still on treatment	0	(0%)
Lost to follow up	0	(0%)

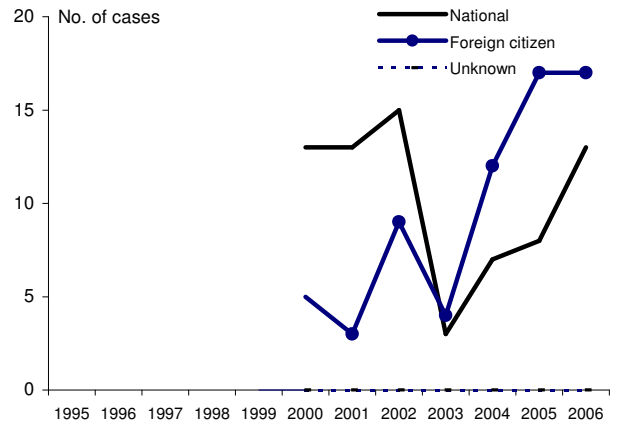
Tuberculosis notification rates by sex, 1995-2006



Tuberculosis notification rates by age group, 1995-2006



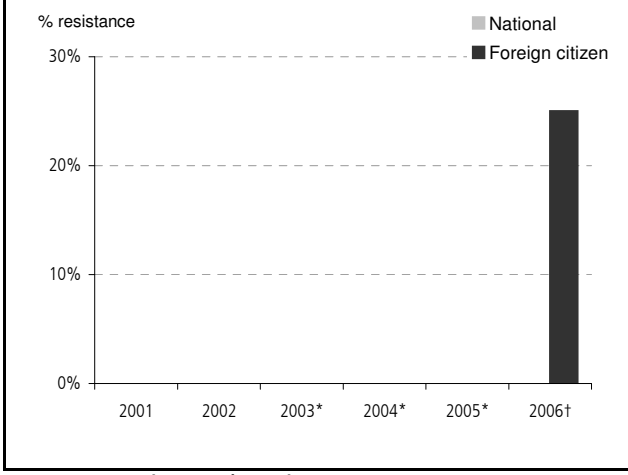
Tuberculosis cases by geographic origin, 1995-2006



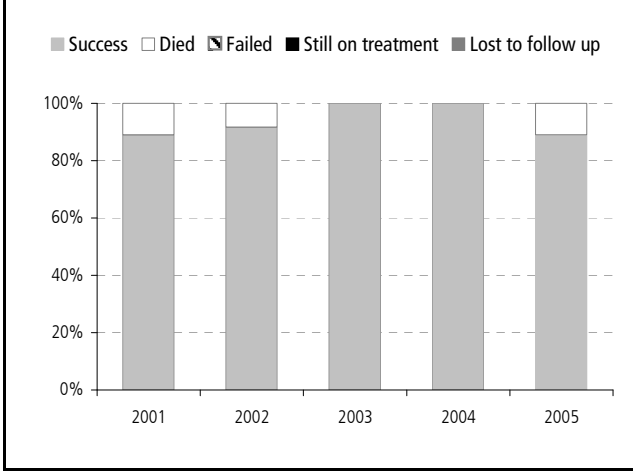
Tuberculosis cases by origin, age group and sex, 2006

Insufficient number of cases for graphic presentation

Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



*** Data representativeness unknown in 2003-2005**

† Two out of 8 cases in foreign citizens with DST results in 2006 had MDR

Moldova, Republic of

Tuberculosis case notifications, 2006

Total number of cases	6 118	
Notification rate per 100 000	159.6	
Sex ratio (M:F)	2.8	
Median age-group, nationals	-	
Median age-group, non-nationals	-	
Foreign citizens	27	(0.4%)
New (never-treated)	4 388	(71.7%)
Culture positive	2 879	(47.1%)
Pulmonary	5 475	(89.5%)
of which sputum smear positive	2 737	(50.0%)
HIV positive TB cases	-	
TB deaths per 100 000	16.23	

Drug Resistance Surveillance, 2006

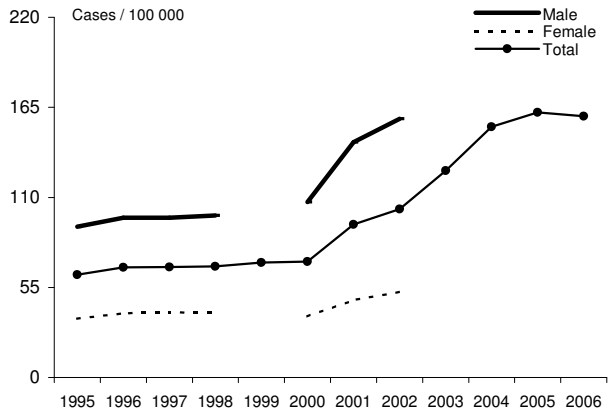
Geographic coverage	National *	
International proficiency testing	Yes (2005)	
Case-linked data reporting	No	
Cases with DST results	2 879	
Cases resistant to isoniazid	1 490	(51.8%)
Cases resistant to rifampicin	1 302	(45.2%)
MDR cases	1 204	(41.8%)
Cases resistant to ethambutol	733	(25.5%)
Cases resistant to streptomycin	1 417	(49.2%)

*** All DST labs (representativeness unknown)**

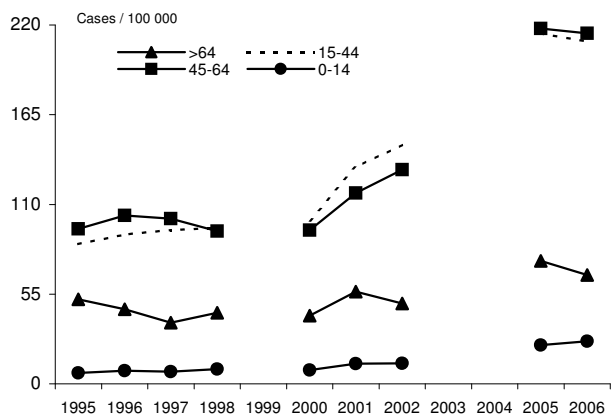
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	3 015	
Success	1 533	(51%)
Died	319	(11%)
Failed	432	(14%)
Still on treatment	77	(3%)
Lost to follow up	654	(22%)

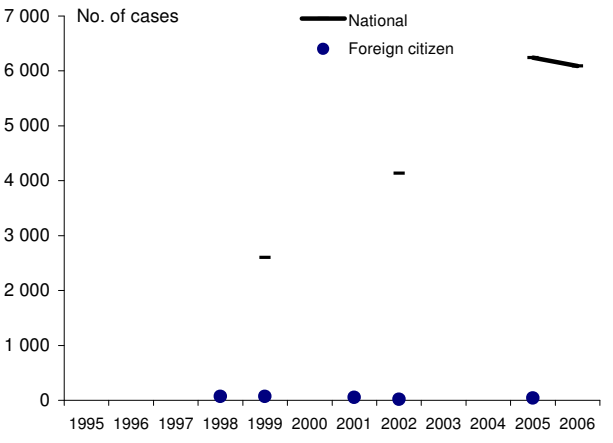
Tuberculosis notification rates by sex, 1995-2006



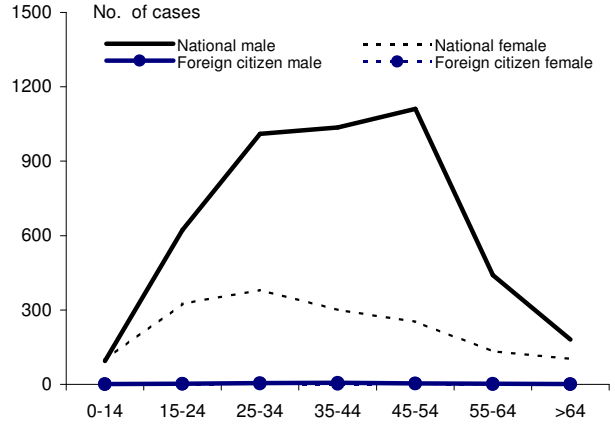
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

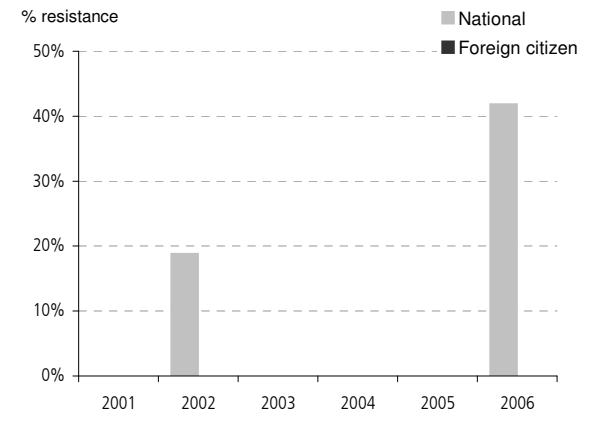


Tuberculosis cases by origin, age group and sex, 2006



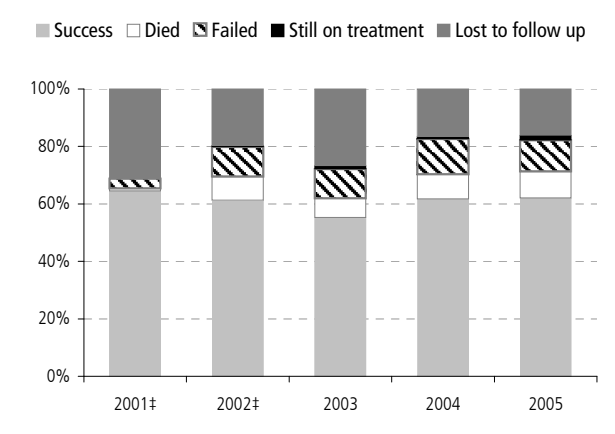
Combined multidrug resistance, by origin, 2001-2006†

Data representativeness unknown



† No data in 2001, 2003-2005

Outcomes, new pulmonary smear positive cases, 2001-2005‡



‡ Data representativeness unknown 2001-2002

Monaco

Tuberculosis case notifications, 2006

Not available

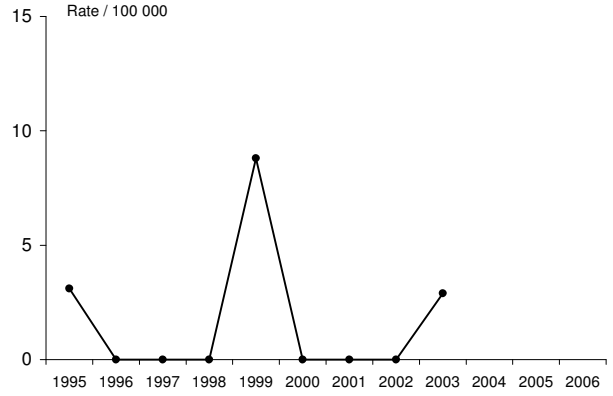
Drug Resistance Surveillance, 2006

Not available

Treatment Outcome Monitoring, 2005

Not available

Tuberculosis notification rates, 1995-2006*



* No data reported in 2004-2006

Tuberculosis notification rates by age group, 1995-2006

Not available

Tuberculosis cases by geographic origin, 1995-2006

Insufficient number of cases for graphic presentation

Tuberculosis cases by origin, age group and sex, 2006

Not available

Combined multidrug resistance, by origin, 2001-2006

Not available

Outcomes, new pulmonary culture positive cases, 2001-2005

Not available

Montenegro*

Tuberculosis case notifications, 2006

Total number of cases	171	
Notification rate per 100 000	28.5	
Sex ratio (M:F)	1.8	
Median age-group, nationals	45-54	years
Median age-group, non-nationals	35-44	years
Foreign citizens	1	(0.6%)
New (never-treated)	151	(88.3%)
Culture positive	119	(69.6%)
Pulmonary	150	(87.7%)
of which sputum smear positive	68	(45.3%)
HIV positive TB cases	1	(0.6%)
TB deaths per 100 000	-	

Drug Resistance Surveillance, 2006

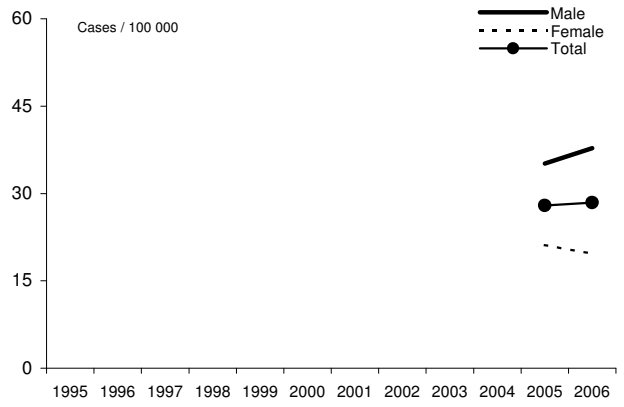
Geographic coverage	National †	
International proficiency testing	No	
Case-linked data reporting	No	
Cases with DST results	105	
Cases resistant to isoniazid	2	(1.9%)
Cases resistant to rifampicin	3	(2.9%)
MDR cases	2	(1.9%)
Cases resistant to ethambutol	1	(1.0%)
Cases resistant to streptomycin	1	(1.0%)

† Data from NRL

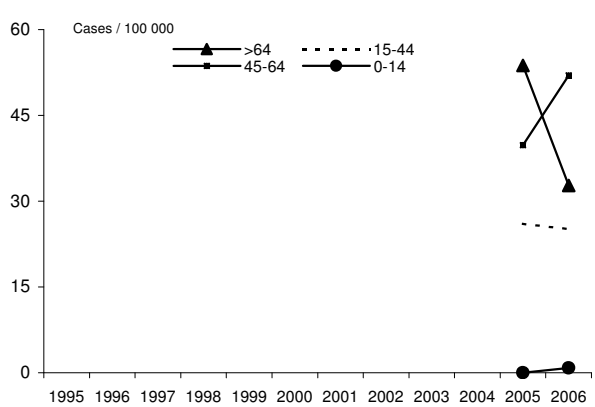
Treatment Outcome Monitoring, 2005

Geographic coverage	Pilot project	
Outcome cohort	**Pulmonary smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	73	
Success	21	(29%)
Died	2	(3%)
Failed	0	(0%)
Still on treatment	3	(4%)
Lost to follow up	47	(64%)

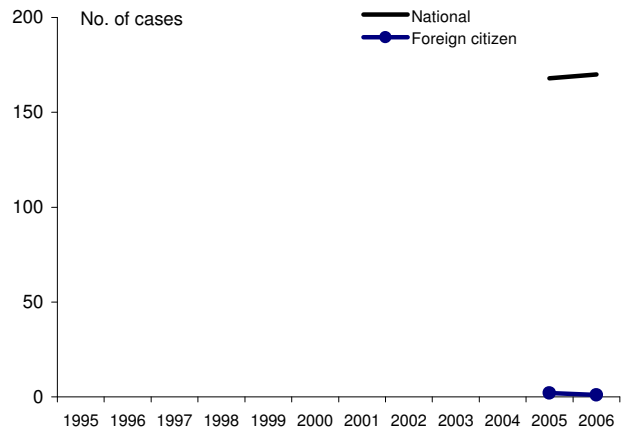
Tuberculosis notification rates, 1995-2006*



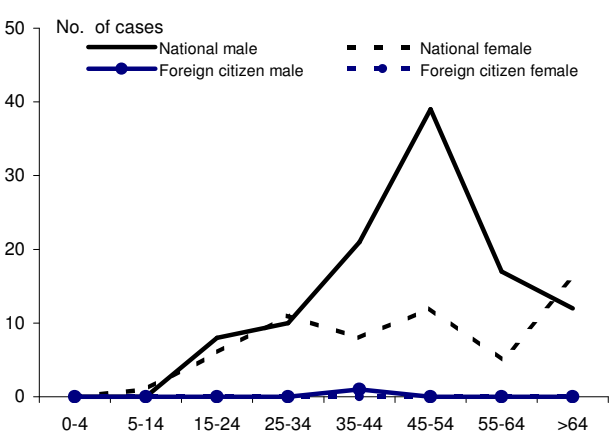
Tuberculosis notification rates by age group, 1995-2006*



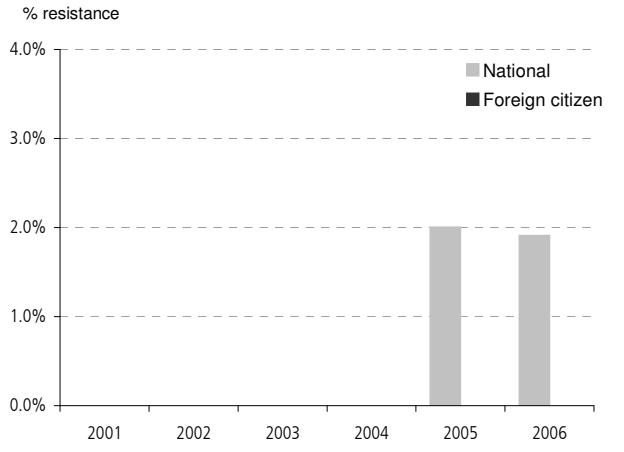
Tuberculosis cases by geographic origin, 1995-2006*



Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006*



Outcomes, new pulmonary smear positive cases, 2001-2005

Pilot project, results incomplete

*** established in 2006 following the split of Serbia & Montenegro; data starting from 2005**

The Netherlands

Tuberculosis case notifications, 2006

Total number of cases	1 021	
Notification rate per 100 000	6.2	
Sex ratio (M:F)	1.4	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	35-44 years	
Foreign born	642	(62.9%)
New (never-treated)	840	(82.3%)
Culture positive	701	(68.7%)
Pulmonary	668	(65.4%)
of which sputum smear positive	213	(31.9%)
HIV positive TB cases	41	(4.0%)
TB deaths per 100 000 (2004)	0.21	

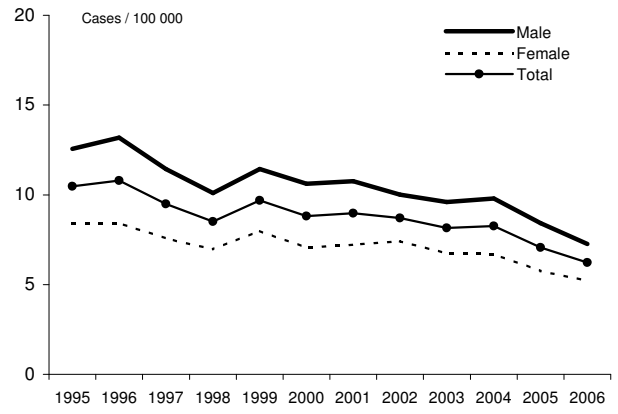
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	594	
Cases resistant to isoniazid	42	(7.1%)
Cases resistant to rifampicin	5	(0.8%)
MDR cases	5	(0.8%)
Cases resistant to ethambutol	0	(0.0%)
Cases resistant to streptomycin	38	(6.4%)

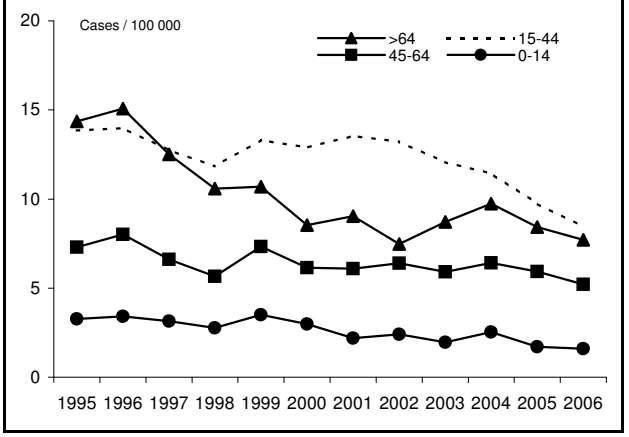
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	592	
Success	500	(84%)
Died	42	(7%)
Failed	0	(0%)
Still on treatment	5	(1%)
Lost to follow up	45	(8%)

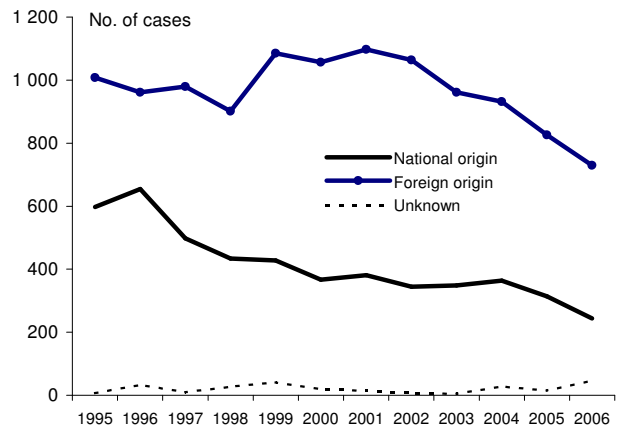
Tuberculosis notification rates by sex, 1995-2006



Tuberculosis notification rates by age group, 1995-2006

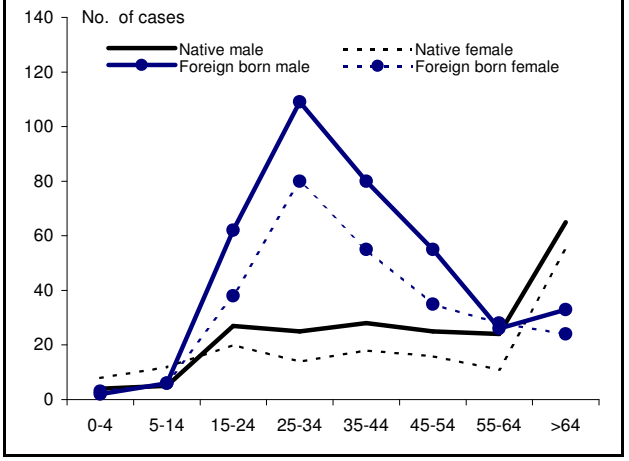


Tuberculosis cases by geographic origin, 1995-2006*

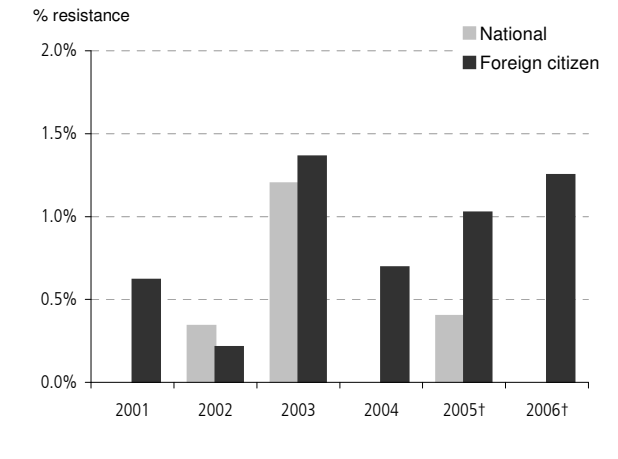


*** by birthplace of case and parents (as per Report Table 7)**

Tuberculosis cases by origin, age group and sex, 2006

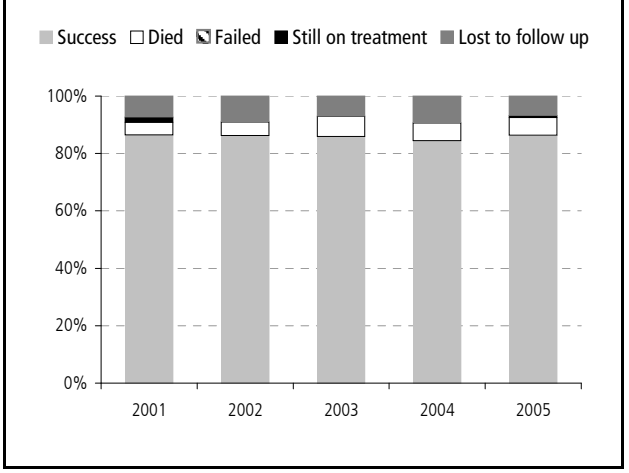


Combined multidrug resistance, by origin, 2001-2006



† By birthplace in 2005-2006

Outcomes, new pulmonary culture positive cases, 2001-2005



Norway

Tuberculosis case notifications, 2006

Total number of cases	294	
Notification rate per 100 000	6.3	
Sex ratio (M:F)	1.0	
Median age-group, nationals	55-64 years	
Median age-group, non-nationals	25-34 years	
Foreign born	238	(81.0%)
New (never-treated)	241	(82.0%)
Culture positive	226	(76.9%)
Pulmonary	188	(63.9%)
of which sputum smear positive	51	(27.1%)
HIV positive TB cases	-	
TB deaths per 100 000 (2004)	0.15	

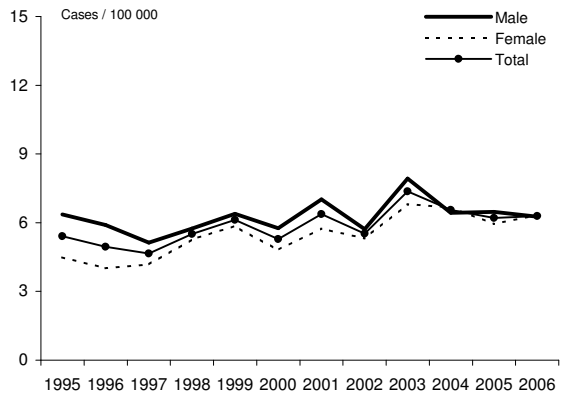
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	225	
Cases resistant to isoniazid	27	(12.0%)
Cases resistant to rifampicin	3	(1.3%)
MDR cases	3	(1.3%)
Cases resistant to ethambutol	5	(2.2%)
Cases resistant to streptomycin	34	(15.1%)

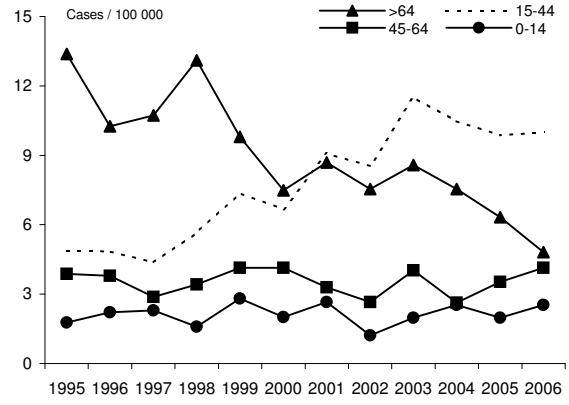
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	132	
Success	118	(89%)
Died	6	(5%)
Failed	0	(0%)
Still on treatment	1	(1%)
Lost to follow up	7	(5%)

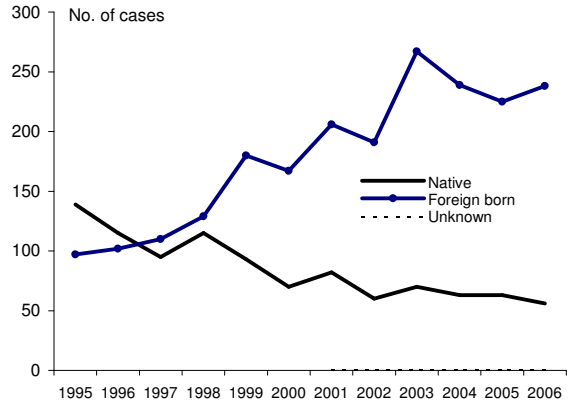
Tuberculosis notification rates by sex, 1995-2006



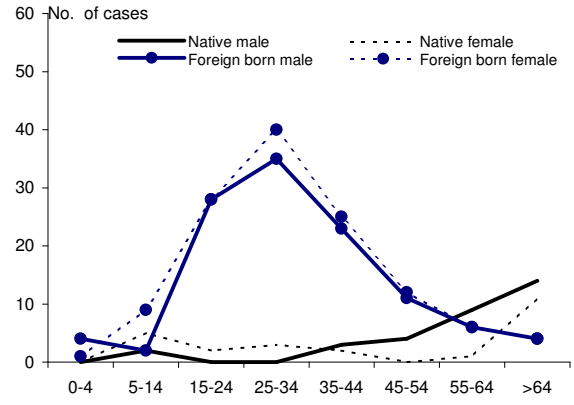
Tuberculosis notification rates by age group, 1995-2006



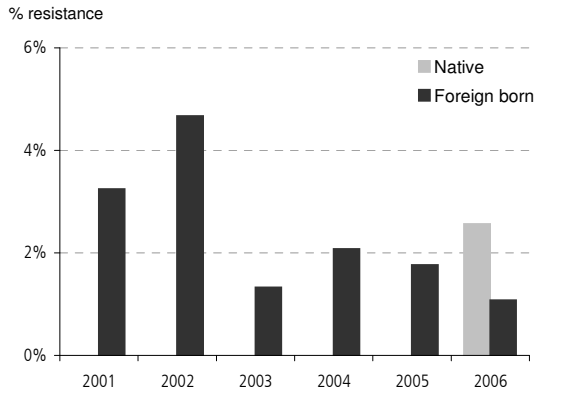
Tuberculosis cases by geographic origin, 1995-2006



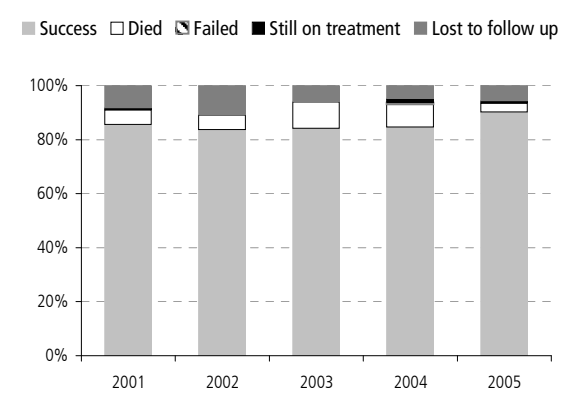
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Poland

Tuberculosis case notifications, 2006

Total number of cases	8 593	
Notification rate per 100 000	22.5	
Sex ratio (M:F)	2.0	
Median age-group (all cases)	45-54 years	
Median age-group, non-nationals	25-34 years	
Foreign citizens	47	(0.5%)
New (not previously diagnosed)	7 585	(88.3%)
Culture positive	5 233	(60.9%)
Pulmonary	7 884	(91.7%)
of which sputum smear positive	3 310	(42.0%)
HIV positive TB cases (2003)	15	(0.1%)
TB deaths per 100 000 (2005)	2.11	

Drug Resistance Surveillance, 2004

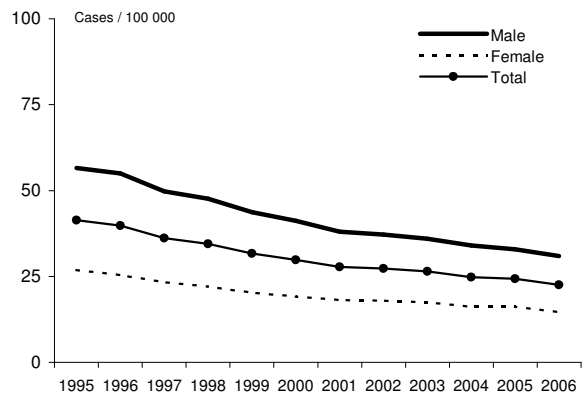
Geographic coverage	National	
International proficiency testing	Yes (2004)	
Case-linked data reporting	No *	
Cases with DST results	3 239	
Cases resistant to isoniazid	162	(5.0%)
Cases resistant to rifampicin	66	(2.0%)
MDR cases	51	(1.6%)
Cases resistant to ethambutol	16	(0.5%)
Cases resistant to streptomycin	131	(4.0%)

*** Survey of all DST laboratories**

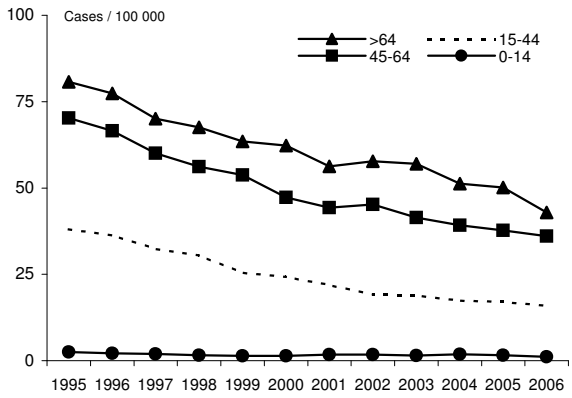
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	5 178	
Success	3 760	(73%)
Died	286	(6%)
Failed	33	(1%)
Still on treatment	21	(0%)
Lost to follow up	1 078	(21%)

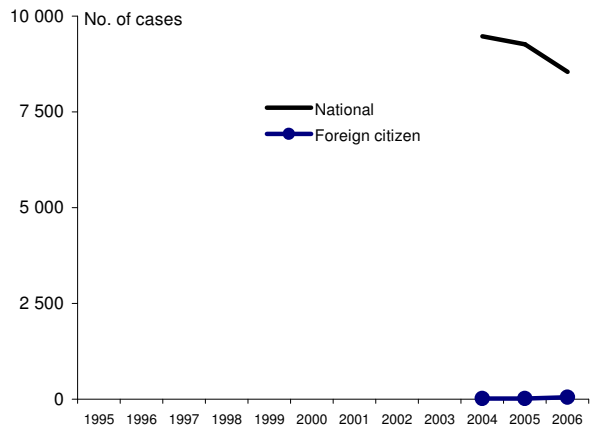
Tuberculosis notification rates by sex, 1995-2006



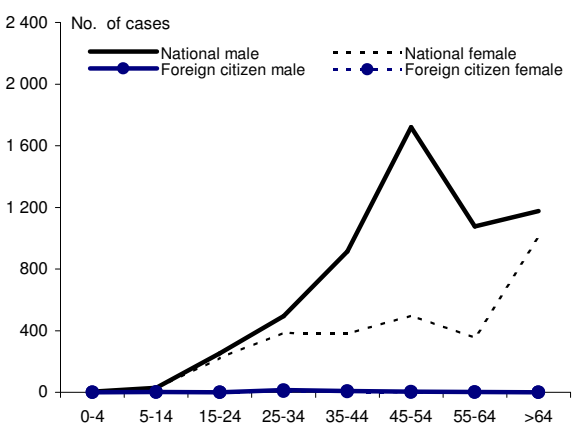
Tuberculosis notification rates by age group, 1995-2006



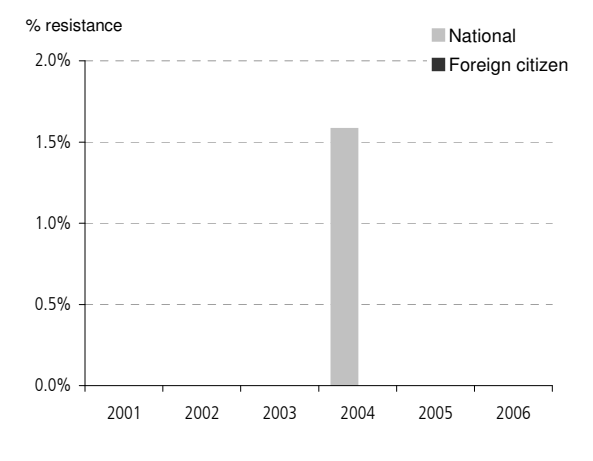
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006

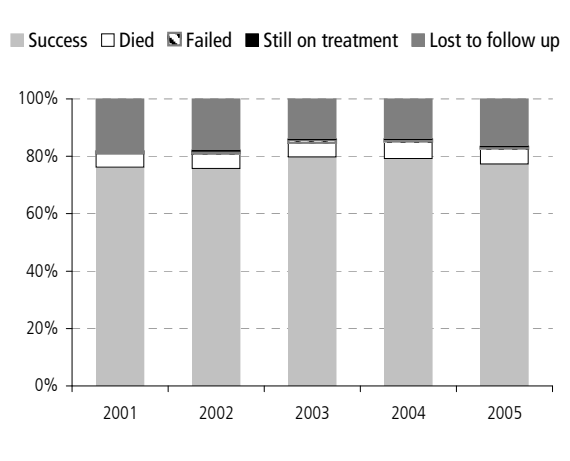


Combined multidrug resistance, by origin, 2001-2006†



† No data by origin except in 2004 survey

Outcomes, new pulmonary culture positive cases, 2001-2005



Portugal

Tuberculosis case notifications, 2006

Total number of cases	3 423	
Notification rate per 100 000	32.4	
Sex ratio (M:F)	2.1	
Median age-group, nationals	35-44 years	
Median age-group, non-nationals	35-44 years	
Foreign born	387	(11.3%)
New (never treated)	3 077	(89.9%)
Culture positive	1 924	(56.2%)
Pulmonary	2 532	(74.0%)
of which sputum smear positive	1 471	(58.1%)
HIV positive TB cases	474	(13.8%)
TB deaths per 100 000 (2003)	2.01	

Drug Resistance Surveillance, 2006

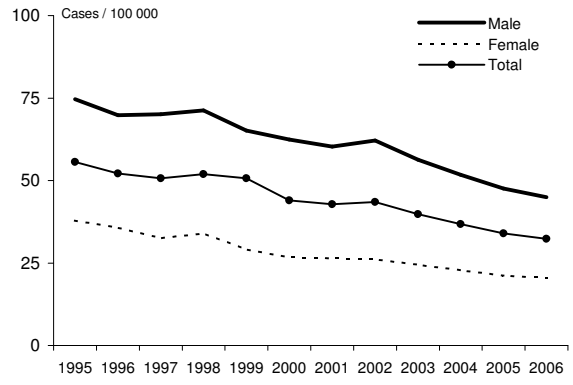
Geographic coverage	National *	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	1 212	
Cases resistant to isoniazid	92	(7.6%)
Cases resistant to rifampicin	18	(1.5%)
MDR cases	17	(1.4%)
Cases resistant to ethambutol	17	(1.4%)
Cases resistant to streptomycin	103	(8.5%)

*** Data representativeness unknown**

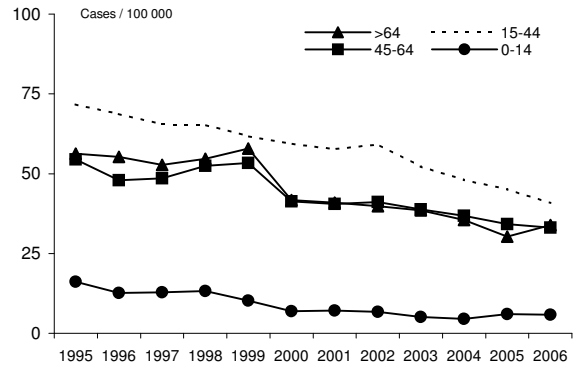
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	1 971	
Success	1 715	(87%)
Died	108	(5%)
Failed	3	(0%)
Still on treatment	34	(2%)
Lost to follow up	111	(6%)

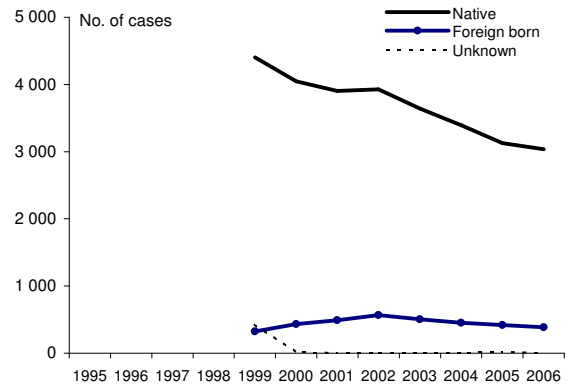
Tuberculosis notification rates by sex, 1995-2006



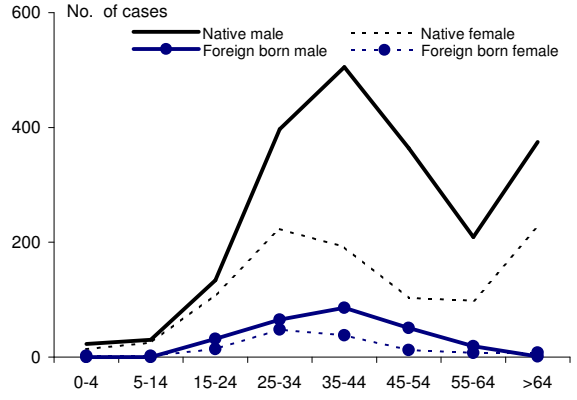
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

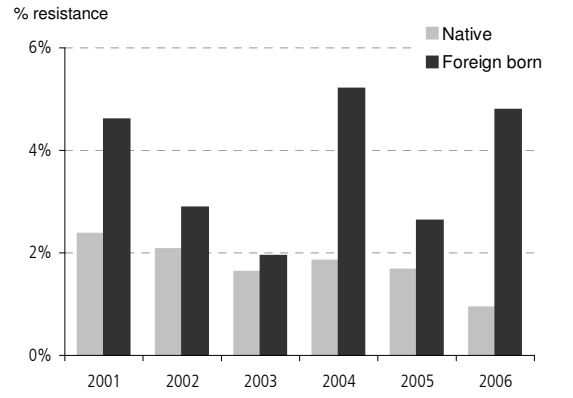


Tuberculosis cases by origin, age group and sex, 2006

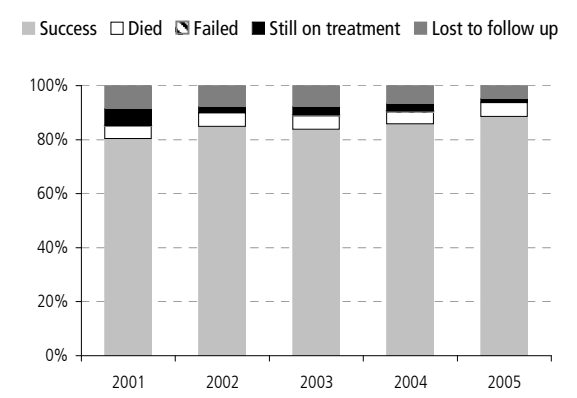


Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown



Outcomes, new pulmonary culture positive cases, 2001-2005



Romania

Tuberculosis case notifications, 2006

Total number of cases	27 319	
Notification rate per 100 000	126.9	
Sex ratio (M:F)	2.2	
Median age-group, nationals	35-44 years	
Median age-group, non-nationals	-	
Foreign-born	0	(0.0%)
New (never-treated)	20 726	(75.9%)
Culture positive	5 373	(19.7%)
Pulmonary	23 450	(85.8%)
of which sputum smear positive	14 591	(62.2%)
HIV positive TB cases	60	(0.2%)
TB deaths per 100 000 (2004)	9.64	

Drug Resistance Surveillance, 2003-2004

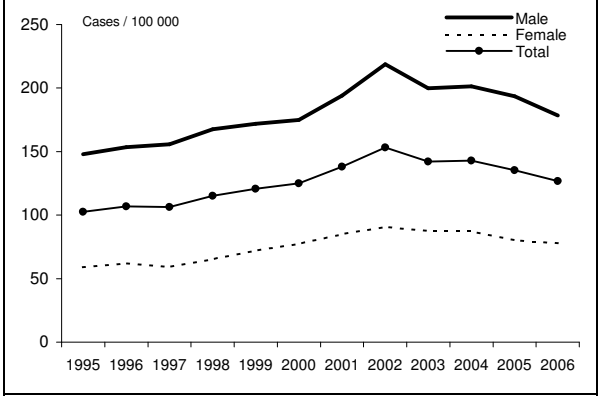
Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	No *	
Cases with DST results	1 251	
Cases resistant to isoniazid	179	(14.3%)
Cases resistant to rifampicin	90	(7.2%)
MDR cases	66	(5.3%)
Cases resistant to ethambutol	74	(5.9%)
Cases resistant to streptomycin	139	(11.1%)

*** Survey by NRL; reported as aggregate data**

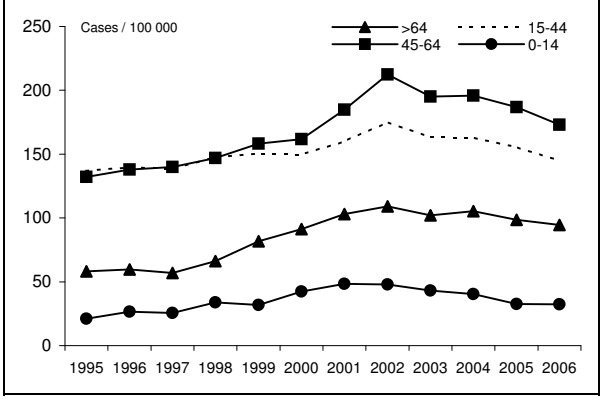
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	18 311	
Success	13 543	(74%)
Died	1 105	(6%)
Failed	1 108	(6%)
Still on treatment	627	(3%)
Lost to follow up	1 928	(11%)

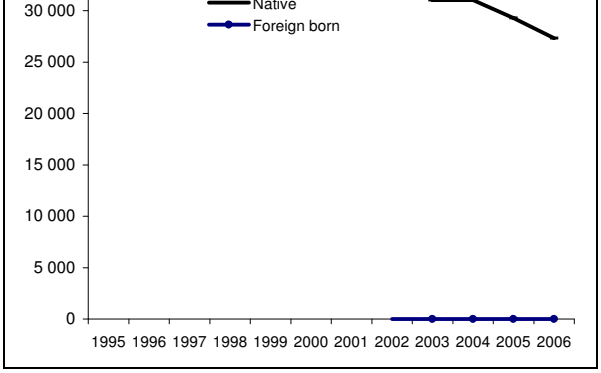
Tuberculosis notification rates by sex, 1995-2006



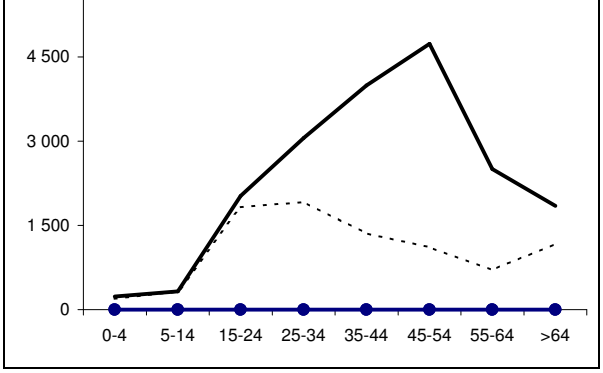
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

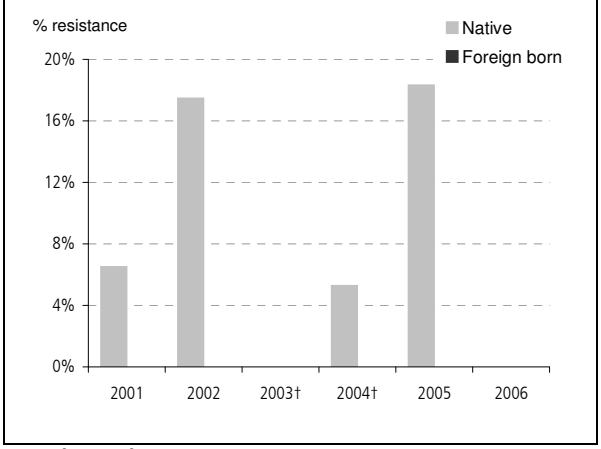


Tuberculosis cases by origin, age group and sex, 2006



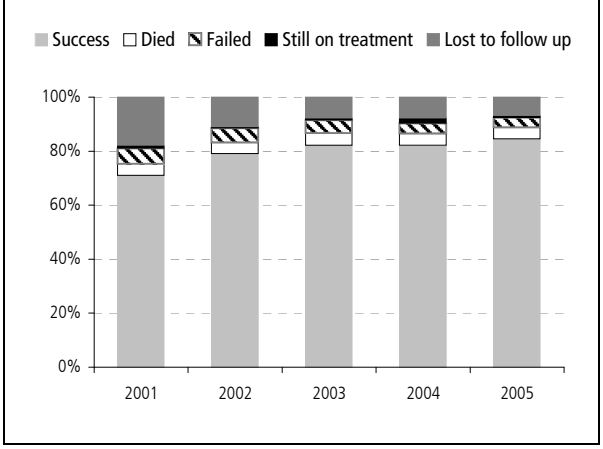
Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown†



† Data for 2004 from representative survey in 2003-2004

Outcomes, new pulmonary culture positive cases, 2001-2005



Russian Federation

Tuberculosis case notifications, 2006

Total number of cases	152 265	
Notification rate per 100 000	106.3	
Sex ratio (M:F) *	2.4	
Median age-group *	35-44	years
Median age-group, non-nationals *	25-34	years
Foreign citizens *	554	(0.5%)
New (never-treated)	117 646	(77.3%)
Culture positive	60 240	(39.6%)
Pulmonary	139 159	(91.4%)
of which sputum smear positive	43 264	(31.1%)
HIV positive new TB cases *	1 979	(1.7%)
TB deaths per 100 000 (2005)	22.51	

*** For new cases only**

Drug Resistance Surveillance, 2005-2006 †

Geographic coverage	Mary El	Orel	Tomsk
Year	2006	2006	2005
Int. proficiency testing	Yes	Yes	Yes
New cases tested	304	317	515
INH resistance	79 (26%)	64 (20%)	136 (26%)
RMP resistance	38 (13%)	30 (9%)	86 (17%)
MDR	38 (13%)	28 (9%)	77 (15%)
EMB resistance	39 (13%)	14 (4%)	33 (6%)
SM resistance	78 (26%)	76 (24%)	167 (32%)

† New cases only; data representative for the three regions only

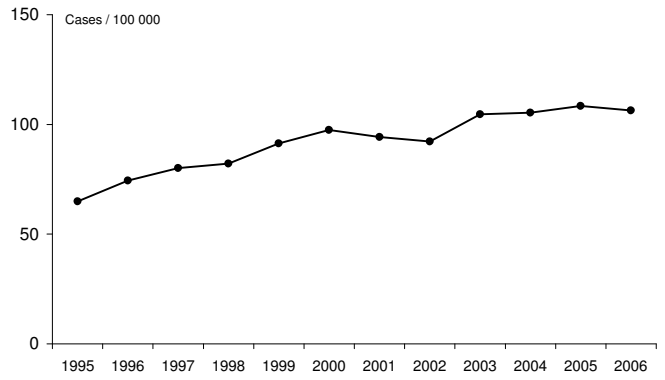
Source: WHO/HTM/TB/2008.394

Treatment Outcome Monitoring, 2005

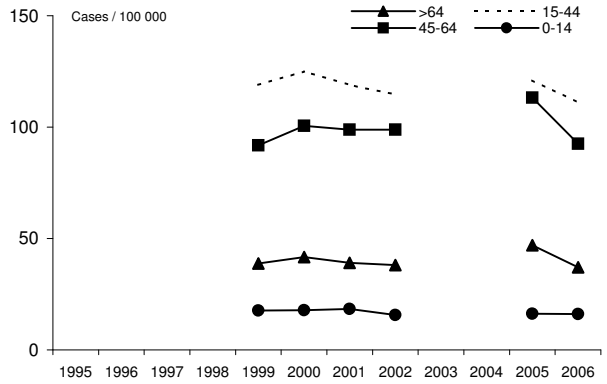
Geographic coverage	DOTS areas †	
Outcome cohort	**New & relapse pulm smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	29 786	
Success	16 701	(56%)
Died	4 027	(14%)
Failed	4 582	(15%)
Still on treatment	0	(0%)
Lost to follow up	4 476	(15%)

† Data representativeness unknown

Tuberculosis notification rates, 1995-2006

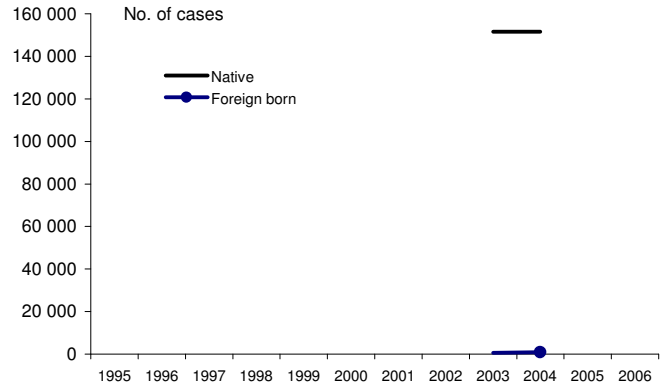


Tuberculosis notification rates by age group, 1995-2006‡

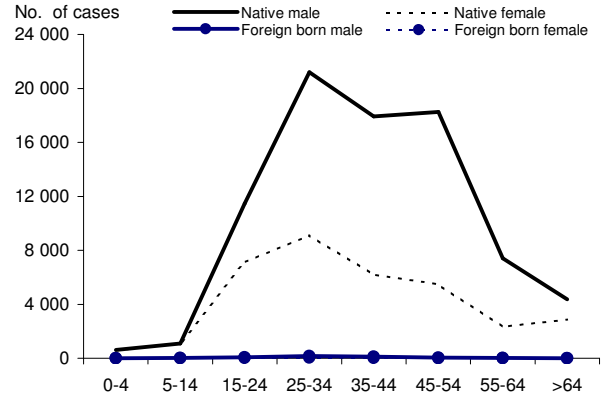


‡ New cases only (including also relapses in 2005)

Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases (new) by origin, age group and sex, 2006

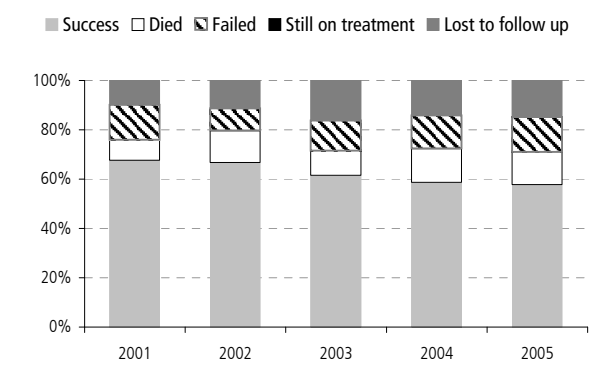


Combined multidrug resistance, by origin, 2001-2006

Not available

Outcomes, new pulmonary smear positive cases, 2001-2005

DOTS areas, data representativeness unknown



San Marino

Tuberculosis case notifications, 2006

Not available

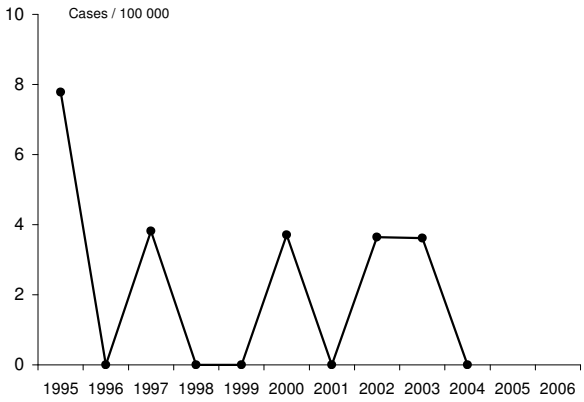
Drug Resistance Surveillance, 2006

Not available

Treatment Outcome Monitoring, 2005

Not available

Tuberculosis notification rates, 1995-2006*



Tuberculosis notification rates by age group, 1995-2006

Insufficient number of cases for graphic presentation

* No data reported in 2005-2006

Tuberculosis cases by geographic origin, 1995-2006

Insufficient number of cases for graphic presentation

Tuberculosis cases by origin, age group and sex, 2006

Not available

Combined multidrug resistance, by origin, 2001-2006

No MDR cases reported

Outcomes, new pulmonary culture positive cases, 2001-2005

Insufficient number of cases for graphic presentation

Serbia*

Tuberculosis case notifications, 2006

Total number of cases	2 150 †	
Notification rate per 100 000	29.0	
Sex ratio (M:F)	1.6	
Median age-group, nationals	45-54 years	
Median age-group, non-nationals	45-54 years	
Foreign citizens	20	(0.9%)
New (not previously diagnosed)	1 868	(86.9%)
Culture positive	1 271	(59.1%)
Pulmonary	1 853	(86.2%)
of which sputum smear positive	984	(53.1%)
HIV positive TB cases	5	(0.2%)
TB deaths per 100 000 (2002)	3.29	

† Excluding Kosovo (1,122 cases in 2006)

Drug Resistance Surveillance, 2006

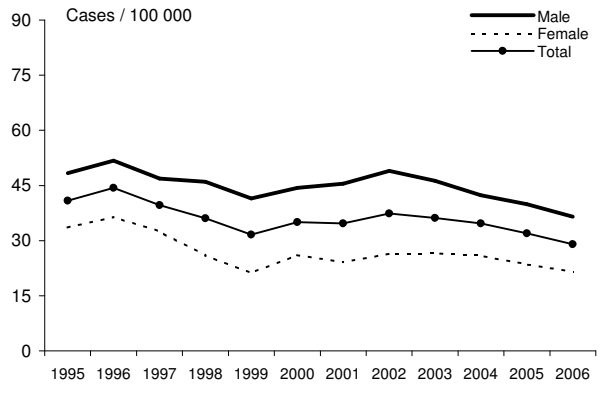
Geographic coverage	Partial †	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	1 269	
Cases resistant to isoniazid	21	(1.7%)
Cases resistant to rifampicin	11	(0.9%)
MDR cases	11	(0.9%)
Cases resistant to ethambutol	6	(0.5%)
Cases resistant to streptomycin	31	(2.4%)

† Data representativeness unknown

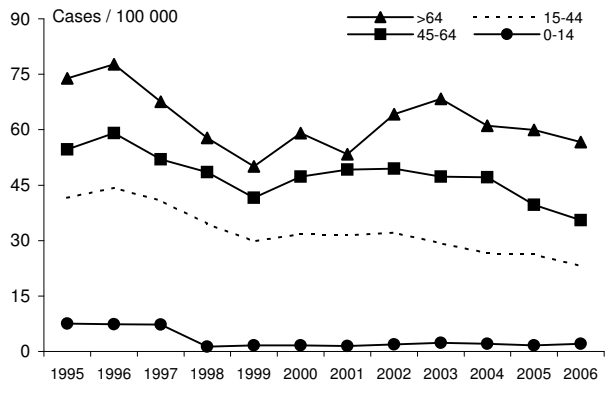
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	All pulmonary culture positive	
Case-linked data reporting	Yes	
Included in TOM cohort	1 338	
Success	1 120	(84%)
Died	73	(5%)
Failed	15	(1%)
Still on treatment	1	(0%)
Lost to follow up	129	(10%)

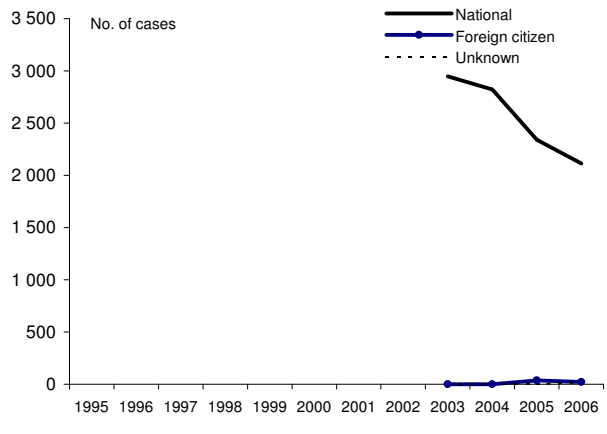
Tuberculosis notification rates by sex, 1995-2006*



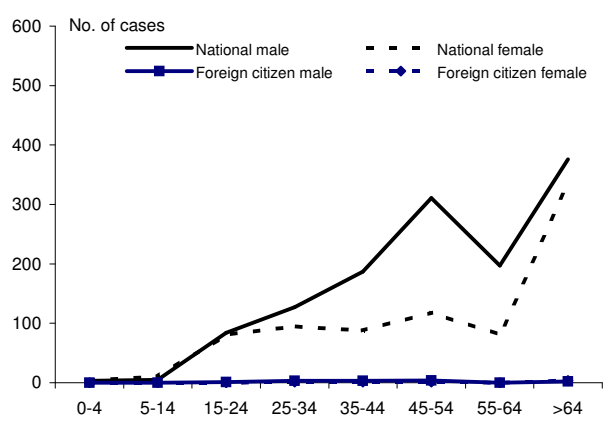
Tuberculosis notification rates by age group, 1995-2006*



Tuberculosis cases by geographic origin, 1995-2006*

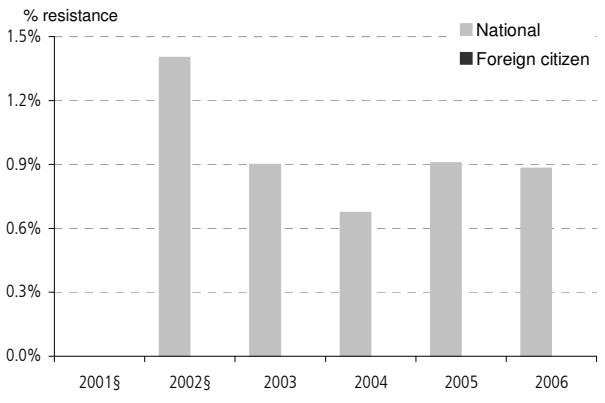


Tuberculosis cases by origin, age group and sex, 2006



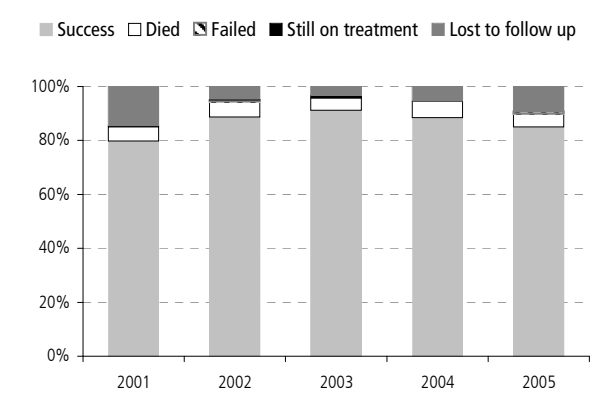
Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown



§ No data for 2001; origin unknown in 2002

Outcomes, new pulmonary definite cases, 2001-2005§



§ Belgrade region 2001-2004; nationwide pulmonary culture positive in 2005

* established in 2006 following the split of Serbia & Montenegro; notifications for Kosovo included until 1997 and for Montenegro until 2004

Slovakia

Tuberculosis case notifications, 2006

Total number of cases	730	
Notification rate per 100 000	13.5	
Sex ratio (M:F)	1.8	
Median age-group, nationals	55-64 years	
Median age-group, non-nationals	25-34 years	
Foreign born	11	(1.5%)
New (never-treated)	601	(82.3%)
Culture positive	401	(54.9%)
Pulmonary	597	(81.8%)
of which sputum smear positive	193	(32.3%)
HIV positive TB cases	0	(0.0%)
TB deaths per 100 000 (2005)	0.87	

Drug Resistance Surveillance, 2006

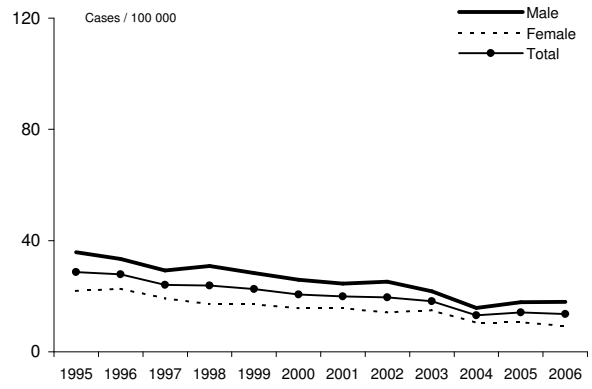
Geographic coverage	National *	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	401	
Cases resistant to isoniazid	18	(4.5%)
Cases resistant to rifampicin	7	(1.7%)
MDR cases	7	(1.7%)
Cases resistant to ethambutol	3	(0.7%)
Cases resistant to streptomycin	5	(1.2%)

* **Data representativeness unknown**

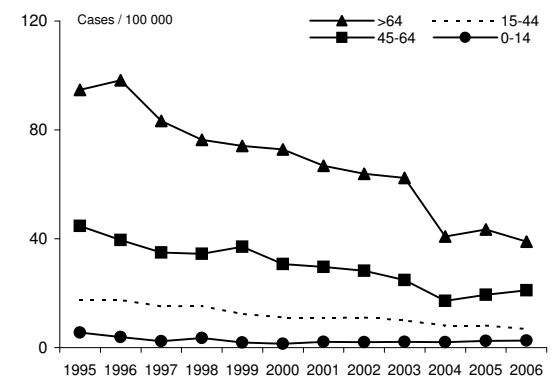
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	330	
Success	293	(89%)
Died	20	(6%)
Failed	1	(0%)
Still on treatment	7	(2%)
Lost to follow up	9	(3%)

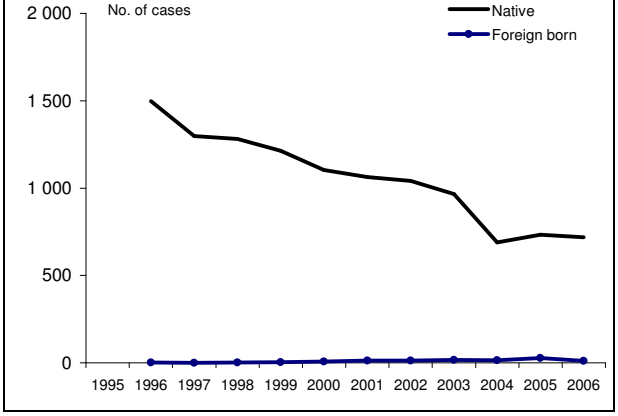
Tuberculosis notification rates by sex, 1995-2006



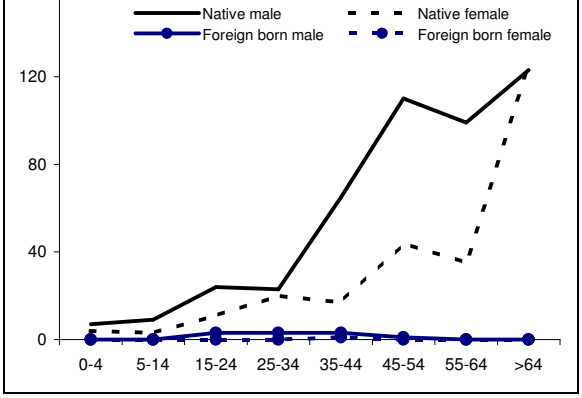
Tuberculosis notification rates by age group, 1995-2006



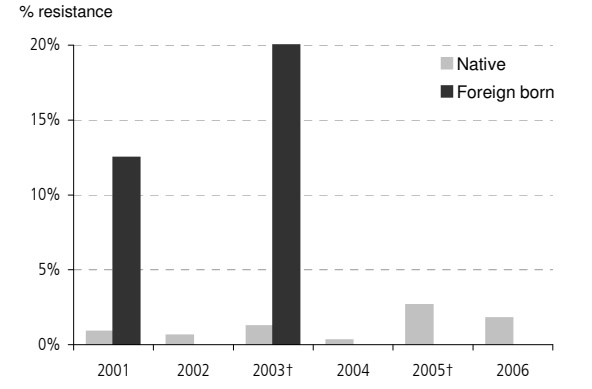
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006

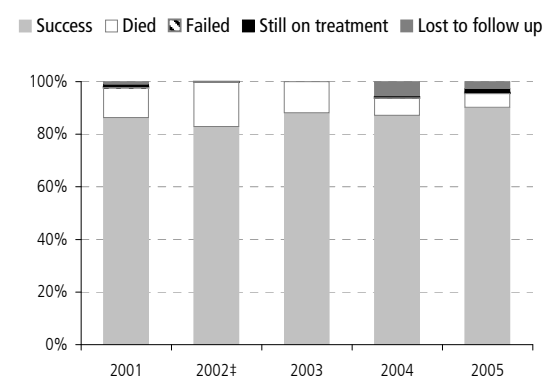


Combined multidrug resistance, by origin, 2001-2006†



† **Data representativeness unknown in 2003 & 2005**

Outcomes, new pulmonary culture positive cases, 2001-2005



‡ **Data representativeness unknown in 2002**

Slovenia

Tuberculosis case notifications, 2006

Total number of cases	215	
Notification rate per 100 000	10.7	
Sex ratio (M:F)	1.2	
Median age-group, nationals	55-64 years	
Median age-group, non-nationals	35-44 years	
Foreign born	34	(15.8%)
New (never-treated)	202	(94.0%)
Culture positive	184	(85.6%)
Pulmonary	174	(80.9%)
of which sputum smear positive	85	(48.9%)
HIV positive TB cases	1	(0.5%)
TB deaths per 100 000 (2005)	0.85	

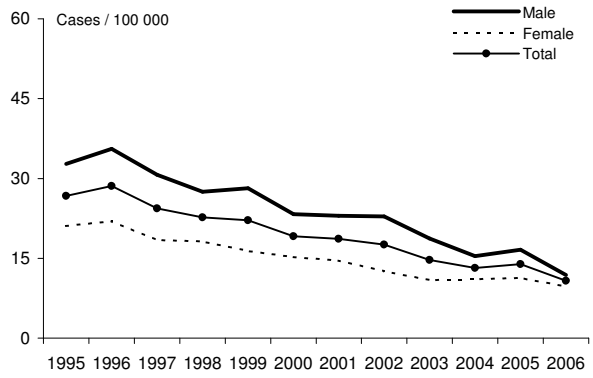
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes (2005)	
Case-linked data reporting	Yes	
Cases with DST results	184	
Cases resistant to isoniazid	1	(0.5%)
Cases resistant to rifampicin	1	(0.5%)
MDR cases	1	(0.5%)
Cases resistant to ethambutol	1	(0.5%)
Cases resistant to streptomycin	3	(1.6%)

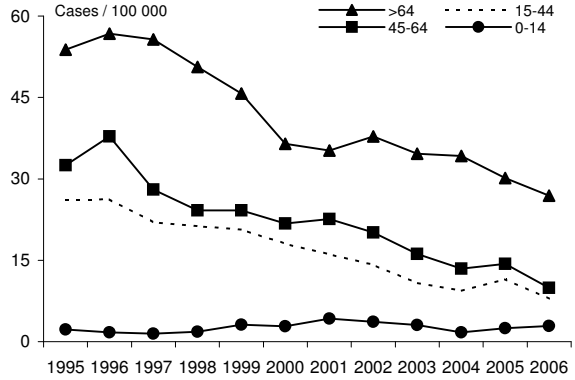
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	223	
Success	180	(81%)
Died	27	(12%)
Failed	0	(0%)
Still on treatment	1	(0%)
Lost to follow up	15	(7%)

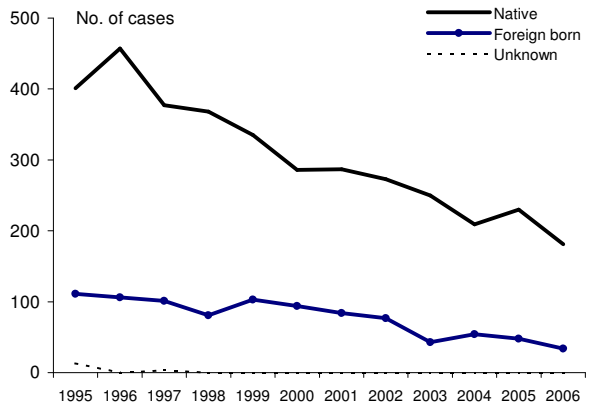
Tuberculosis notification rates by sex, 1995-2006



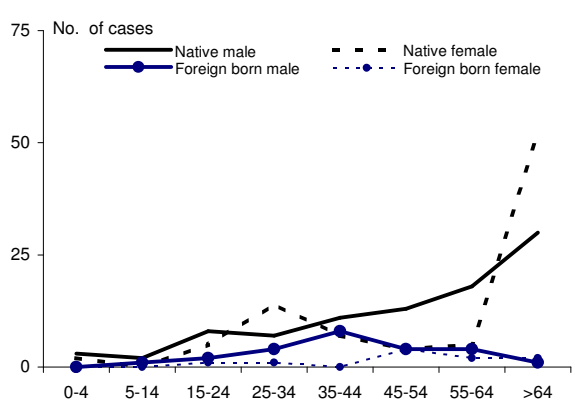
Tuberculosis notification rates by age group, 1995-2006



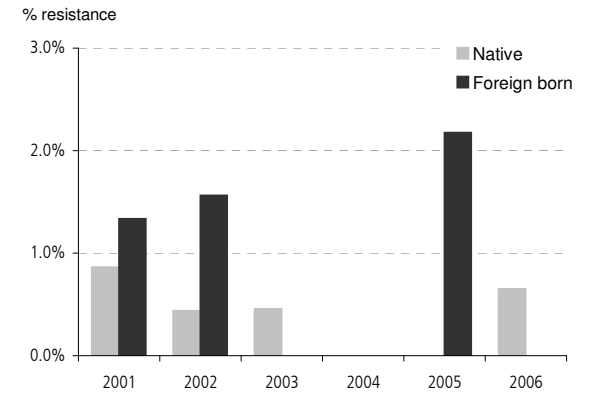
Tuberculosis cases by geographic origin, 1995-2006



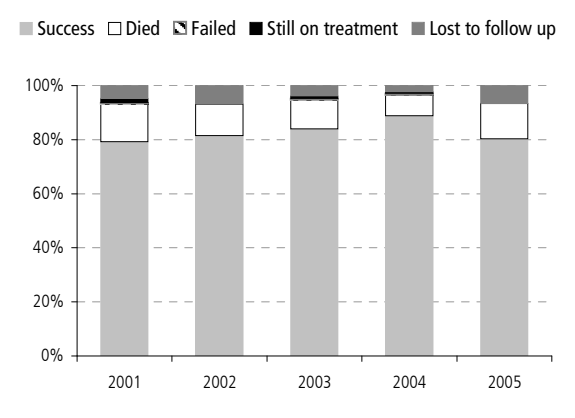
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Spain

Tuberculosis case notifications, 2006

Total number of cases	8 029	
Notification rate per 100 000	18.3	
Sex ratio (M:F)	1.8	
Median age-group, nationals	35-44	years
Median age-group, non-nationals	25-34	years
Foreign born*	1 552	(19.3%)
New (never-treated)	6 101	(76.0%)
Culture positive	3 651	(45.5%)
Pulmonary	6 599	(82.2%)
of which sputum smear positive	2 129	(32.3%)
HIV positive TB cases	354	(4.4%)
TB deaths per 100 000 (2004)	0.78	

*** 24% of cases missing information on origin**

Drug Resistance Surveillance, 2006

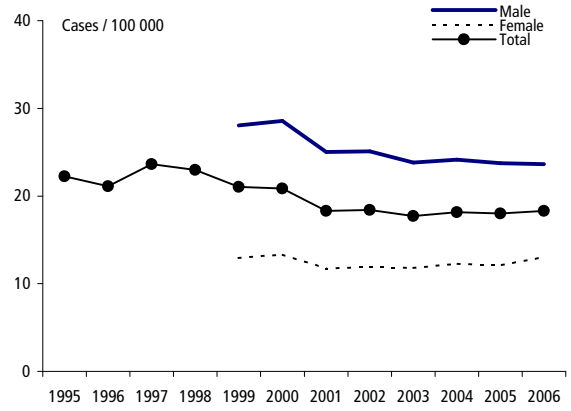
Geographic coverage	Partial †	
International proficiency testing	Yes (2005)	
Case-linked data reporting	No	
Cases with DST results	1 319	
Cases resistant to isoniazid	132	(10.0%)
Cases resistant to rifampicin	58	(4.4%)
MDR cases	50	(3.8%)
Cases resistant to ethambutol	15	(1.1%)
Cases resistant to streptomycin	56	(4.2%)

† Data from NRL (representativeness unknown)

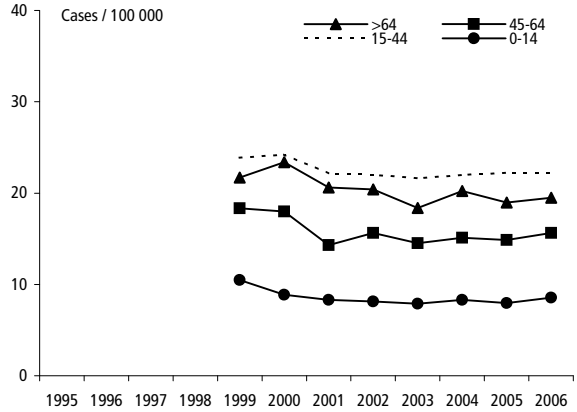
Treatment Outcome Monitoring, 2005

Not available

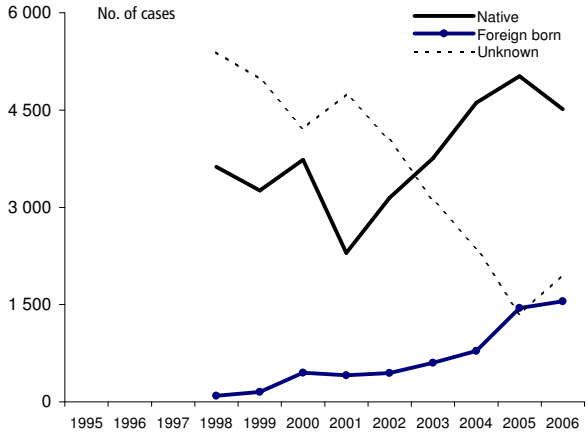
Tuberculosis notification rates, 1995-2006 ‡



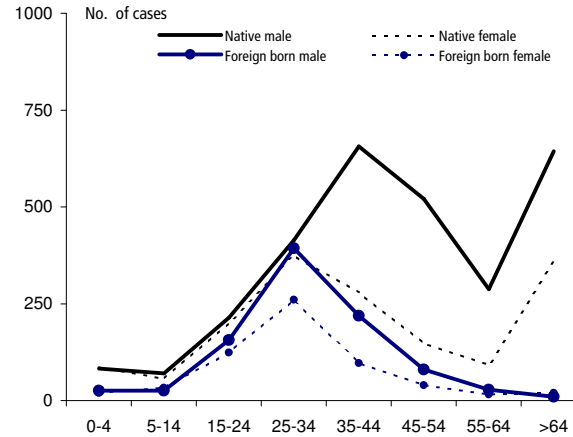
Tuberculosis notification rates by age group, 1995-2006 ‡



Tuberculosis cases by geographic origin, 1995-2006 ‡

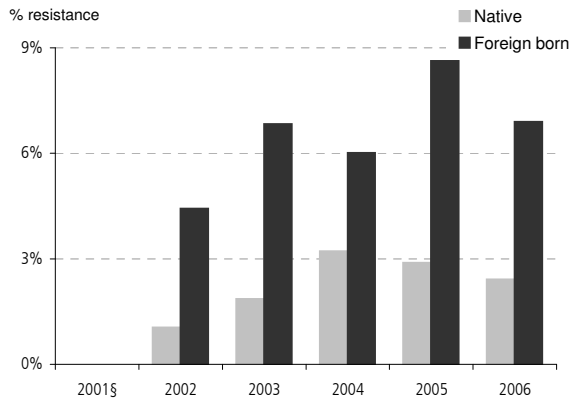


Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown



§ No data by origin in 2001

Outcomes, new pulmonary culture positive cases, 2001-2005

Not available

‡ 1995-96 new respiratory cases only; 1997-2003 new and recurrent respiratory and meningeal cases

Sweden

Tuberculosis case notifications, 2006

Total number of cases	497	
Notification rate per 100 000	5.5	
Sex ratio (M:F)	1.1	
Median age-group, nationals	>64 years	
Median age-group, non-nationals	25-34 years	
Foreign born	357	(71.8%)
New (never-treated)	469	(94.4%)
Culture positive	397	(79.9%)
Pulmonary	318	(64.0%)
of which sputum smear positive	110	(34.6%)
HIV positive TB cases	-	
TB deaths per 100 000 (2004)	0.18	

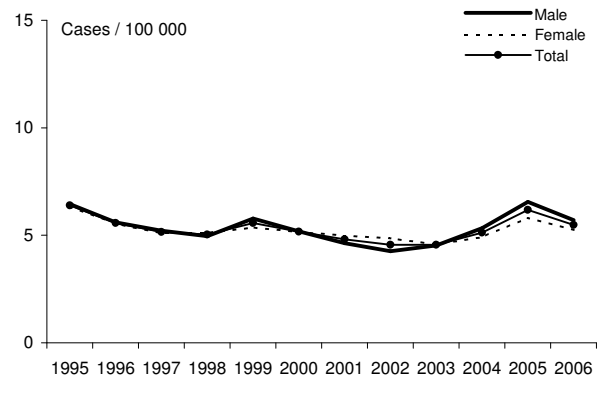
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	396	
Cases resistant to isoniazid	38	(9.6%)
Cases resistant to rifampicin	5	(1.3%)
MDR cases	3	(0.8%)
Cases resistant to ethambutol	2	(0.5%)
Cases resistant to streptomycin	-	-

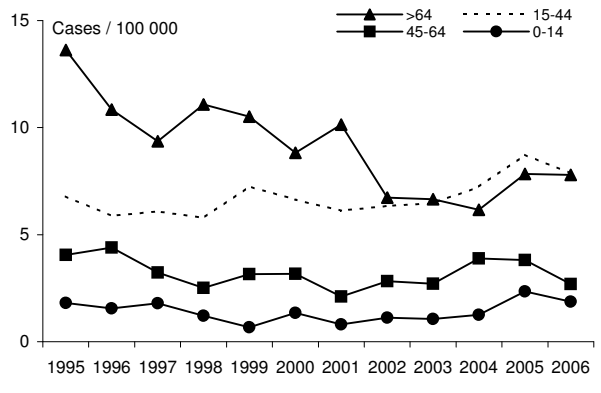
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	287	
Success	199	(69%)
Died	21	(7%)
Failed	1	(0%)
Still on treatment	8	(3%)
Lost to follow up	58	(20%)

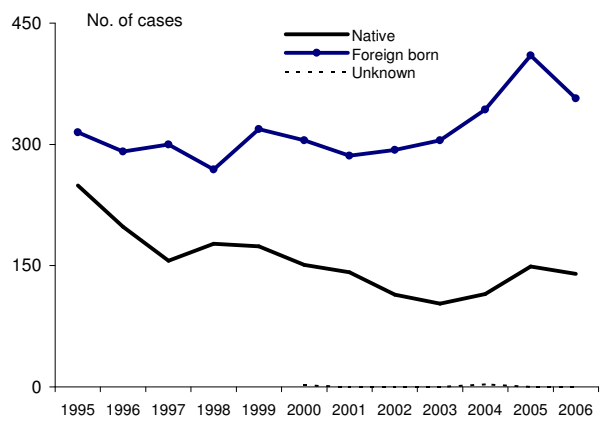
Tuberculosis notification rates by sex, 1995-2006



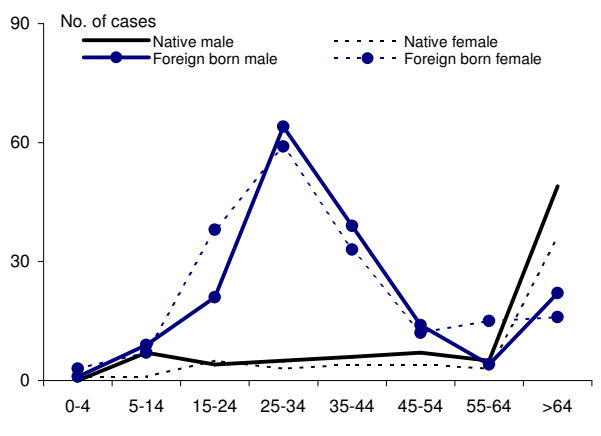
Tuberculosis notification rates by age group, 1995-2006



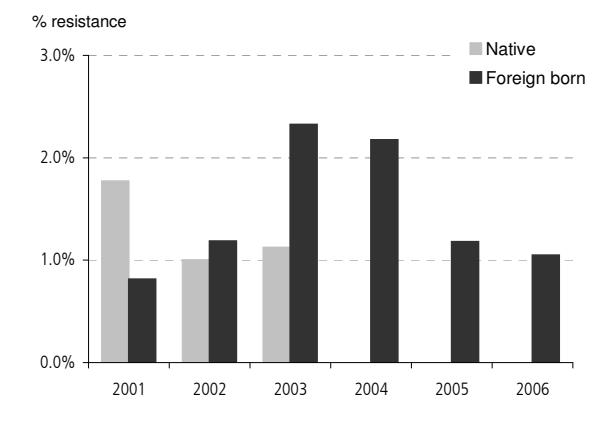
Tuberculosis cases by geographic origin, 1995-2006



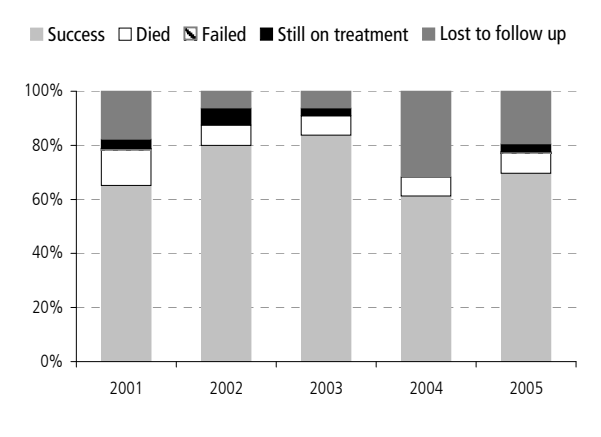
Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005



Switzerland

Tuberculosis case notifications, 2006

Total number of cases	520	
Notification rate per 100 000	7.0	
Sex ratio (M:F)	1.2	
Median age-group, nationals	55-64	years
Median age-group, non-nationals	35-44	years
Foreign born*	308	(59.2%)
New (never-treated)*	352	(67.7%)
Culture positive	449	(86.3%)
Pulmonary	377	(72.5%)
of which sputum smear positive	121	(32.1%)
HIV positive TB cases	-	
TB deaths per 100 000 (2004)	0.22	

*** >20% case missing data on previous history and origin**

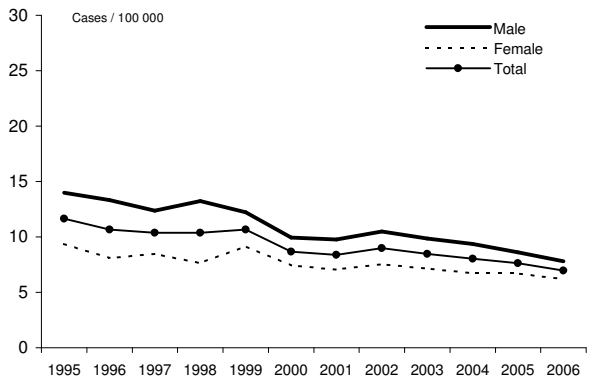
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes	
Case-linked data reporting	Yes	
Cases with DST results	423	
Cases resistant to isoniazid	25	(5.9%)
Cases resistant to rifampicin	5	(1.2%)
MDR cases	4	(0.9%)
Cases resistant to ethambutol	3	(0.7%)
Cases resistant to streptomycin	-	-

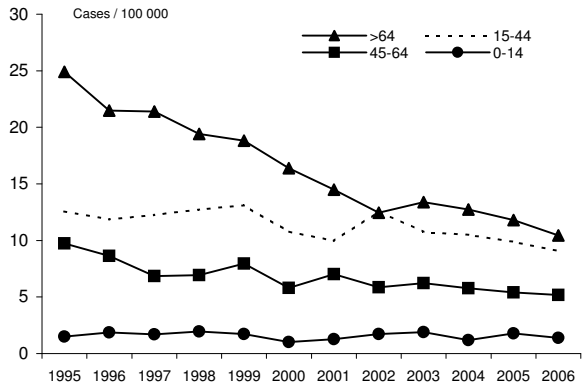
Treatment Outcome Monitoring, 2005

Not available

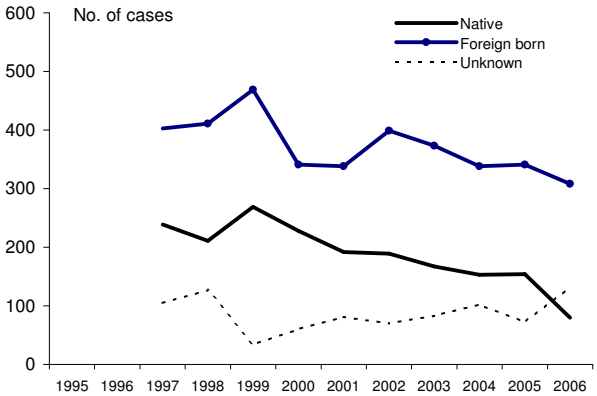
Tuberculosis notification rates by sex, 1995-2006



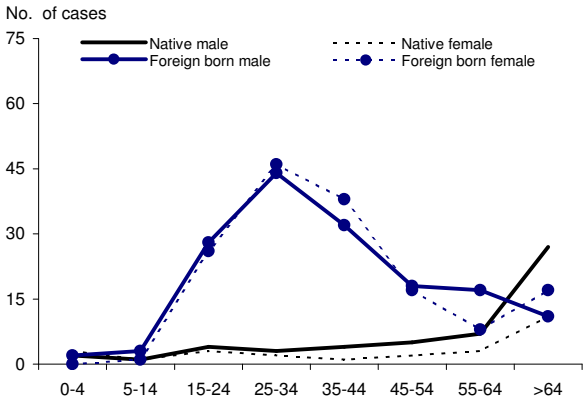
Tuberculosis notification rates by age group, 1995-2006



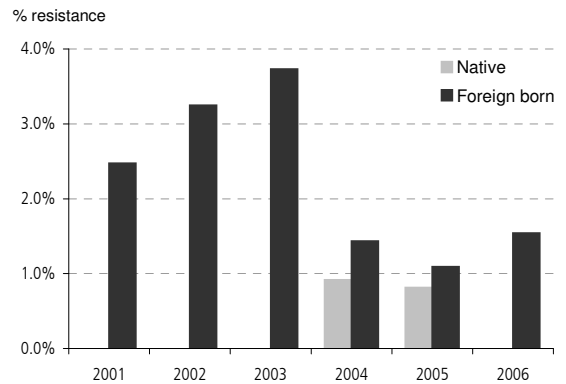
Tuberculosis cases by geographic origin, 1995-2006



Tuberculosis cases by origin, age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006



Outcomes, new pulmonary culture positive cases, 2001-2005

Not available

Tajikistan

Tuberculosis case notifications, 2006

Total number of cases	6 671	
Notification rate per 100 000	100.5	
Sex ratio (M:F)	1.5	
Median age-group, all cases*	25-34 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	5 226	(78%)
Culture positive	-	-
Pulmonary	4 683	(70%)
of which sputum smear positive	2 790	(60%)
HIV positive TB cases †	3	(0.3%)
TB deaths per 100 000 (2005)	9.50	

*** For new cases only**

† Selected cases (Dushanbe city)

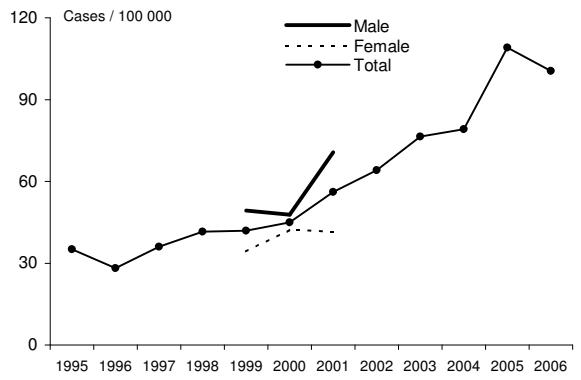
Drug Resistance Surveillance, 2006

Not available

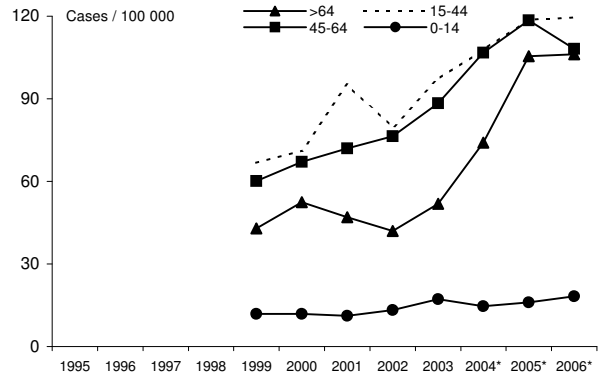
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	2 525	
Success	1 975	(78%)
Died	176	(7%)
Failed	210	(8%)
Still on treatment	0	(0%)
Lost to follow up	164	(6%)

Tuberculosis notification rates, by sex, 1995-2006



Tuberculosis notification rates by age group, 1995-2006

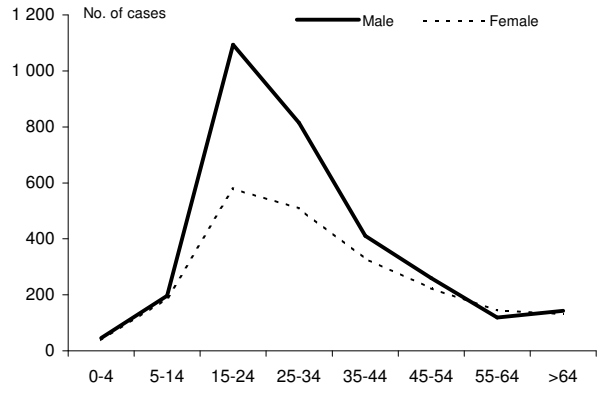


*** New cases only**

Tuberculosis cases by geographic origin, 1995-2006

Foreign citizens not reported

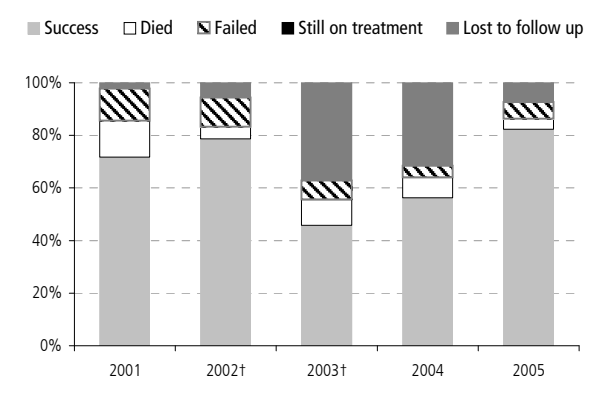
Tuberculosis cases (new) by age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006

Not available

Outcomes, new pulmonary culture positive cases, 2001-2005†



† Data representativeness unknown in 2002-2003

Turkey

Tuberculosis case notifications, 2006

Total number of cases	20 526	
Notification rate per 100 000	27.8	
Sex ratio (M:F)	1.8	
Median age-group, all cases	25-34 years	
Median age-group, non-nationals	25-34 years	
Foreign citizens	118	(0.6%)
New (never-treated)	18 544	(90.3%)
Culture positive	6 786	(33.1%)
Pulmonary	14 740	(71.8%)
of which sputum smear positive	9 132	(62.0%)
HIV positive TB cases	-	
TB deaths per 100 000	-	

Drug Resistance Surveillance, 2006

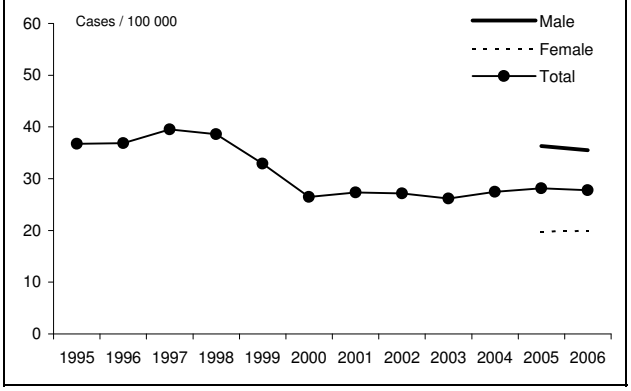
Geographic coverage	National *	
International proficiency testing	Yes	(2003)
Case-linked data reporting	Yes	
Cases with DST results	4 846	
Cases resistant to isoniazid	613	(12.6%)
Cases resistant to rifampicin	326	(6.7%)
MDR cases	249	(5.1%)
Cases resistant to ethambutol	241	(5.0%)
Cases resistant to streptomycin	469	(9.7%)

*** Data representativeness unknown**

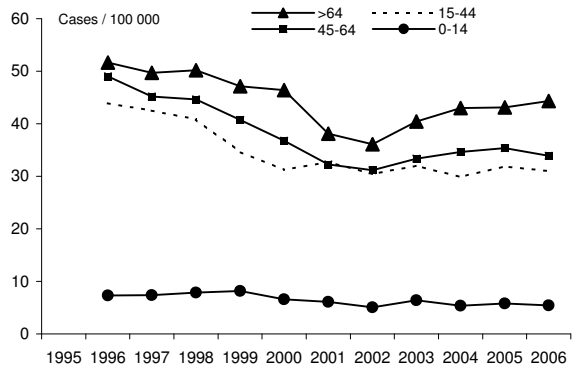
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	8 505	
Success	7 390	(87%)
Died	227	(3%)
Failed	70	(1%)
Still on treatment	210	(2%)
Lost to follow up	608	(7%)

Tuberculosis notification rates, 1995-2006

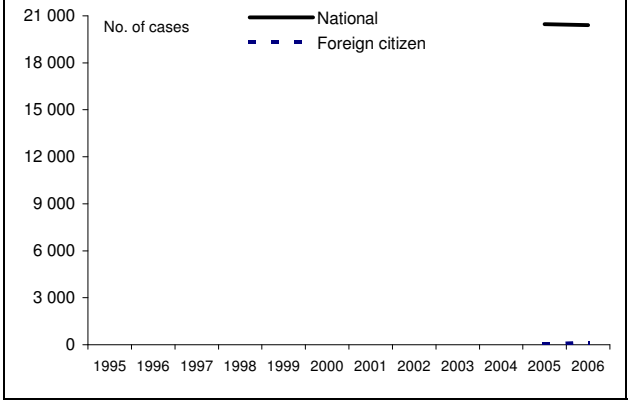


Tuberculosis notification rates by age group, 1995-2006†

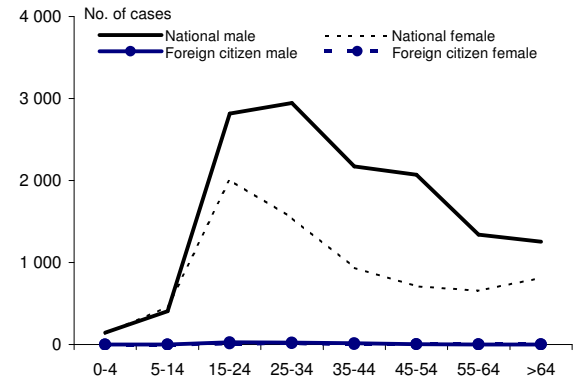


† New cases only

Tuberculosis cases by geographic origin, 1995-2006

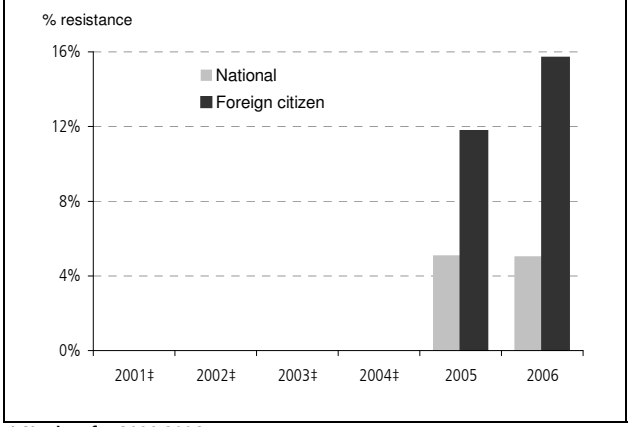


Tuberculosis cases by origin, age group and sex, 2006



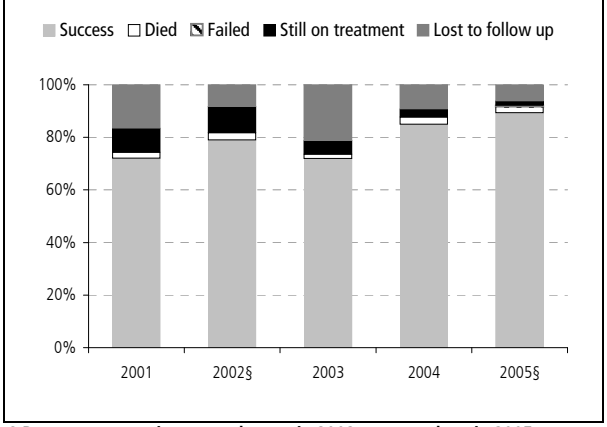
Combined multidrug resistance, by origin, 2001-2006‡

Data representativeness unknown



‡ No data for 2001-2004

Outcomes, new pulm smear &/or culture positive cases, 2001-2005



§ Data representativeness unknown in 2002; smear cohort in 2005

Turkmenistan

Tuberculosis case notifications, 2006

Total number of cases	3 369	
Notification rate per 100 000	68.8	
Sex ratio (M:F)	2.0	
Median age-group, all cases	25-34 years	
Median age-group, non-nationals	-	
Foreign born	0	(0.0%)
New (never-treated)	3 124	(92.7%)
Culture positive	-	-
Pulmonary	2 734	(81.2%)
of which sputum smear positive	1 334	(48.8%)
HIV positive TB cases	-	
TB deaths per 100 000	-	

Drug Resistance Surveillance, 2001-2002

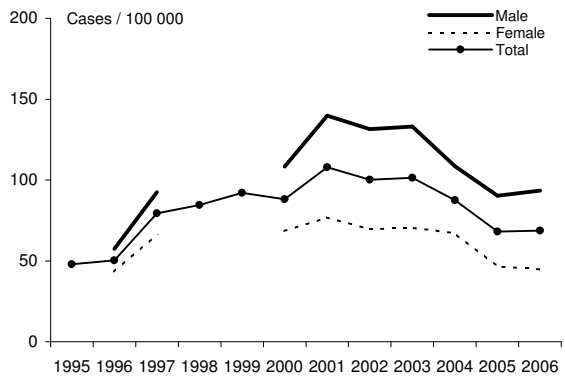
Geographic coverage	Partial *	
International proficiency testing	No	
Case-linked data reporting	No	
Cases with DST results	105 *	
Cases resistant to isoniazid	16	(15.2%)
Cases resistant to rifampicin	4	(3.8%)
MDR cases	4	(3.8%)
Cases resistant to ethambutol	2	(1.9%)
Cases resistant to streptomycin	26	(24.8%)

*** Data for new cases from regional survey in 2001-2002 (Dashoguz; representativeness unknown). MDR reported in 16% of 103 retreated cases in Ashgabat city in 2006.**

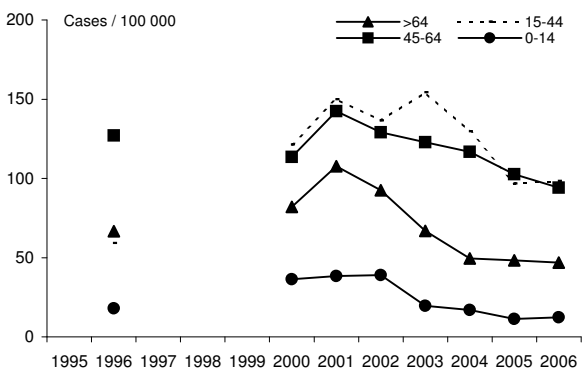
Treatment Outcome Monitoring, 2005

Geographic coverage	National	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	1 104	
Success	913	(83%)
Died	71	(6%)
Failed	53	(5%)
Still on treatment	0	(0%)
Lost to follow up	67	(6%)

Tuberculosis notification rates by sex, 1995-2006



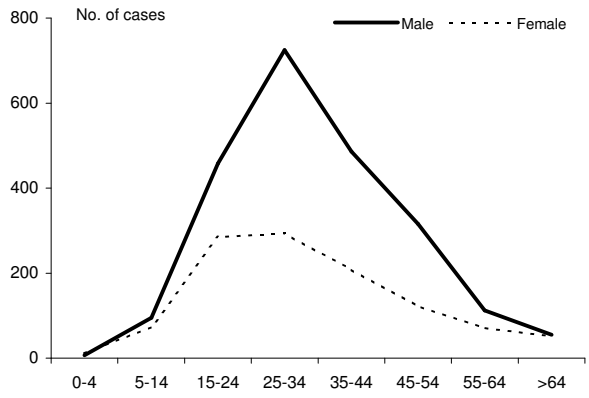
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

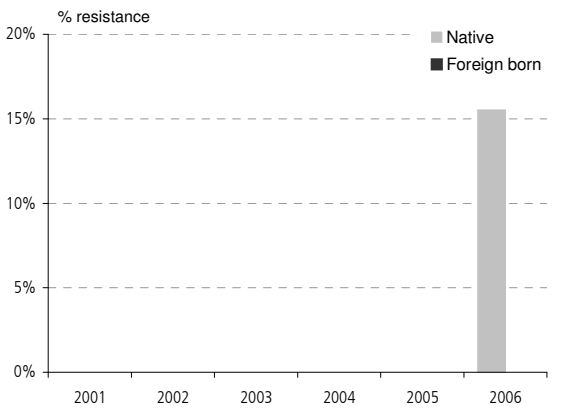
Foreign-born cases not reported

Tuberculosis cases by age group and sex, 2006



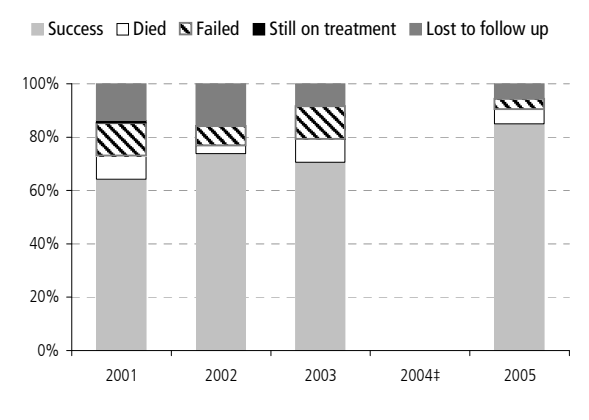
Combined multidrug resistance, by origin, 2001-2006

Data representativeness unknown†



† Retreated cases in Ashgabat city; no data by geographic origin before 2006

Outcomes, new pulmonary smear positive cases, 2001-2005



‡ No data in 2004

Ukraine

Tuberculosis case notifications, 2006

Total number of cases	41 265	
Notification rate per 100 000	88.6	
Sex ratio (M:F)*	2.4	
Median age-group, nationals*	35-44	years
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	38 884	(94.2%)
Culture positive	-	-
Pulmonary	36 813	(89.2%)
of which sputum smear positive	16 587	(45.1%)
HIV positive TB cases*	1 987	(5.1%)
TB deaths per 100 000 (2005)	25.35	

*** For new cases only**

Drug Resistance Surveillance, 2006

Geographic coverage	Donetsk *	
International proficiency testing	Yes	(Donetsk)
Case-linked data reporting	No	
Cases with DST results	1 497	
Cases resistant to isoniazid	609	(40.7%)
Cases resistant to rifampicin	421	(28.1%)
MDR cases	379	(25.3%)
Cases resistant to ethambutol	70	(4.7%)
Cases resistant to streptomycin	537	(35.9%)

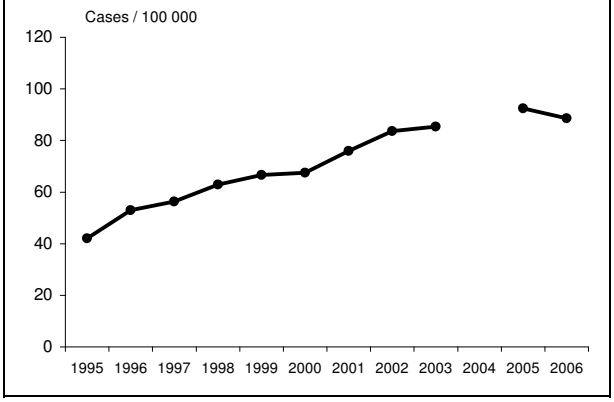
*** Survey representative of one region**

Source: WHO/HTM/TB/2008.394

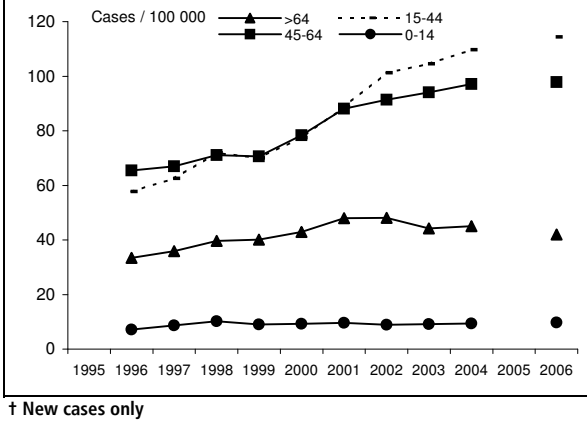
Treatment Outcome Monitoring, 2005

Not available

Tuberculosis notification rates, 1995-2006



Tuberculosis notification rates by age group, 1995-2006†

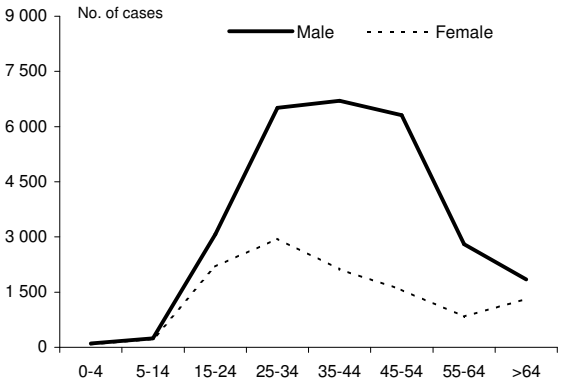


† New cases only

Tuberculosis cases by geographic origin, 1995-2006

Foreign citizens not reported

Tuberculosis cases (new) by age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006

Not available

Outcomes, new pulmonary culture positive cases, 2001-2005

Not available

United Kingdom

Tuberculosis case notifications, 2006

Total number of cases	8 498	
Notification rate per 100 000	14.0	
Sex ratio (M:F)	1.2	
Median age-group, all cases	35-44 years	
Median age-group, non-nationals	25-34 years	
Foreign born*	5 430	(63.9%)
New (not previously diagnosed)†	6 339	(74.6%)
Culture positive	5 307	(62.4%)
Pulmonary	4 743	(55.8%)
of which sputum smear positive	1 830	(38.6%)
HIV positive TB cases (2003)	548	(8.3%)
TB deaths per 100 000 (2004)	0.64	

*** 11% of cases missing information on origin**

† 19% of cases missing data on previous TB diagnosis

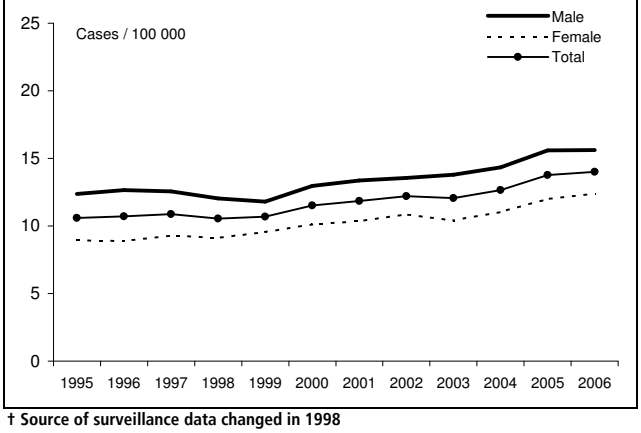
Drug Resistance Surveillance, 2006

Geographic coverage	National	
International proficiency testing	Yes (2007)	
Case-linked data reporting	Yes	
Cases with DST results	4 932	
Cases resistant to isoniazid	340	(6.9%)
Cases resistant to rifampicin	72	(1.5%)
MDR cases	52	(1.1%)
Cases resistant to ethambutol	29	(0.6%)
Cases resistant to streptomycin	-	-

Treatment Outcome Monitoring, 2005

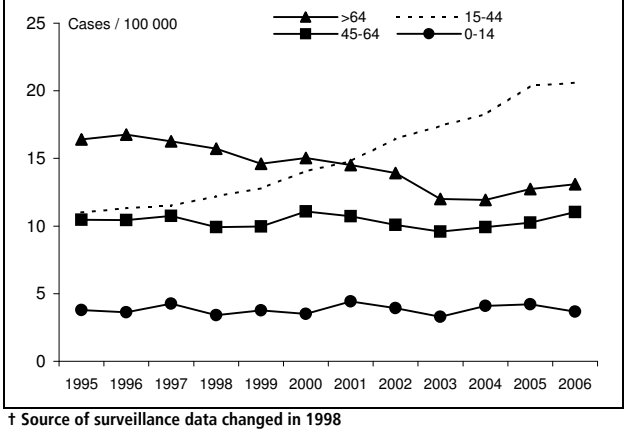
Geographic coverage	National	
Outcome cohort	**All pulmonary culture positive**	
Case-linked data reporting	Yes	
Included in TOM cohort	3 253	
Success	2 220	(68%)
Died	247	(8%)
Failed	0	(0%)
Still on treatment	140	(4%)
Lost to follow up	646	(20%)

Tuberculosis notification rates by sex, 1995-2006†



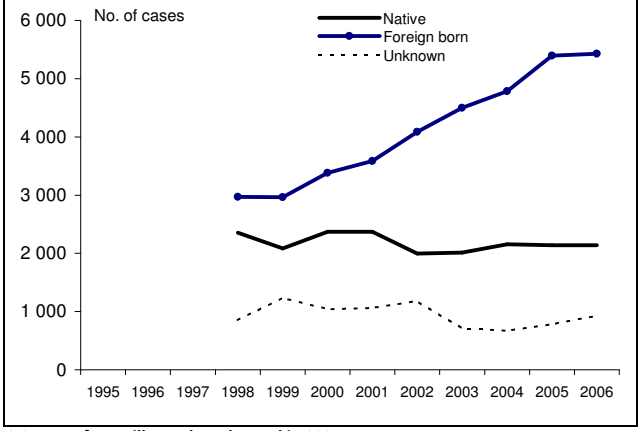
† Source of surveillance data changed in 1998

Tuberculosis notification rates by age group, 1995-2006†



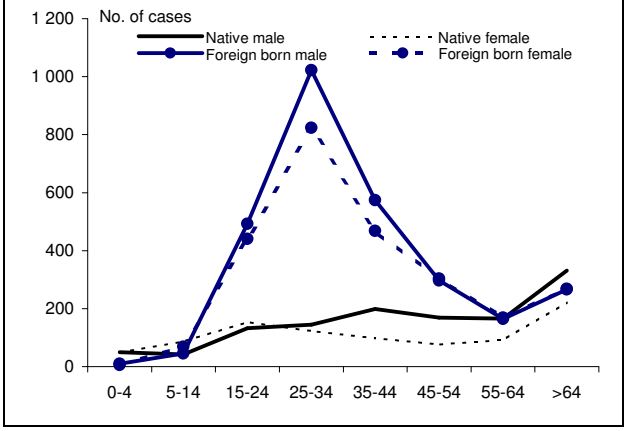
† Source of surveillance data changed in 1998

Tuberculosis cases by geographic origin, 1995-2006†

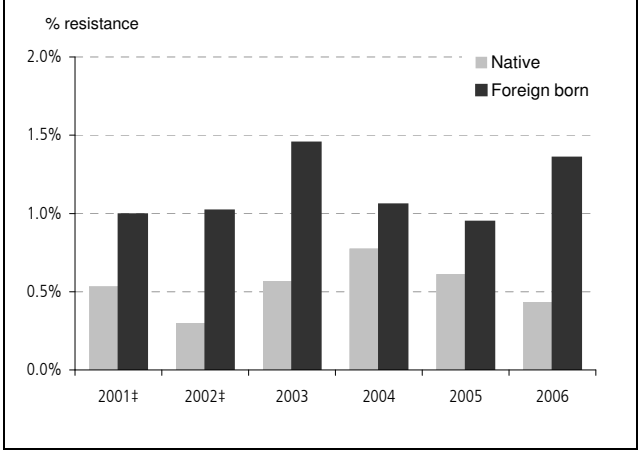


† Source of surveillance data changed in 1998

Tuberculosis cases by origin, age group and sex, 2006

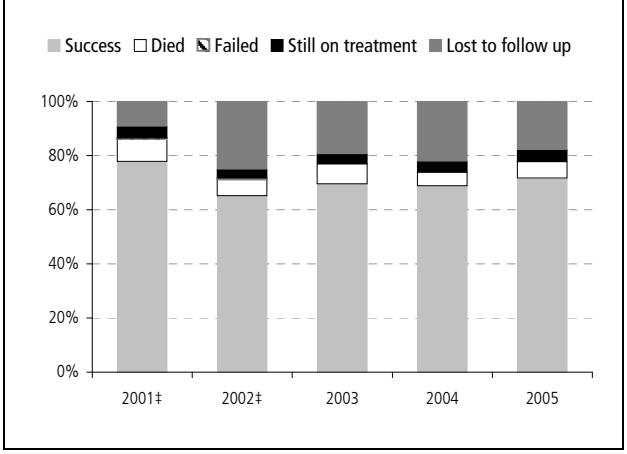


Combined multidrug resistance, by origin, 2001-2006



‡ Excluding Scotland in 2001-2002

Outcomes, new pulmonary culture positive cases, 2001-2005



‡ Excluding Scotland in 2001-2002

Uzbekistan

Tuberculosis case notifications, 2006

Total number of cases	25 310	
Notification rate per 100 000	93.8	
Sex ratio (M:F)	1.4	
Median age-group, all cases	35-44 years	
Median age-group, non-nationals	-	
Foreign citizens	0	(0.0%)
New (never-treated)	18 574	(73.4%)
Culture positive	-	
Pulmonary	19 549	(77.2%)
of which sputum smear positive	8 488	(43.4%)
HIV positive TB cases	238	(0.9%)
TB deaths per 100 000 (2005)	10.64	

Drug Resistance Surveillance, 2006

Geographic coverage	Tashkent *	
International proficiency testing	Yes (Tashkent)	
Case-linked data reporting	No	
Cases with DST results	295	
Cases resistant to isoniazid	156	(52.9%)
Cases resistant to rifampicin	84	(28.5%)
MDR cases	83	(28.1%)
Cases resistant to ethambutol	51	(17.3%)
Cases resistant to streptomycin	159	(53.9%)

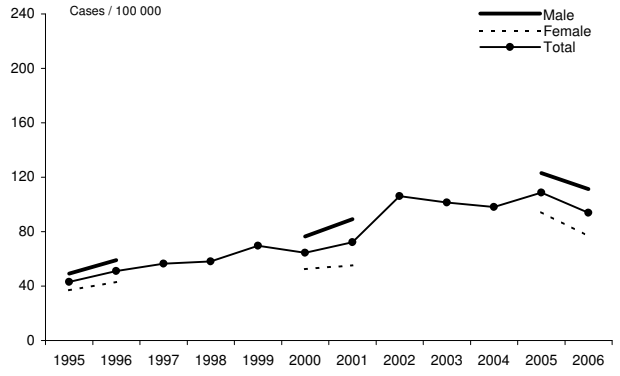
*** Representative sample of sputum smear positive cases detected in city labs participating in microscopy QA**

Treatment Outcome Monitoring, 2005

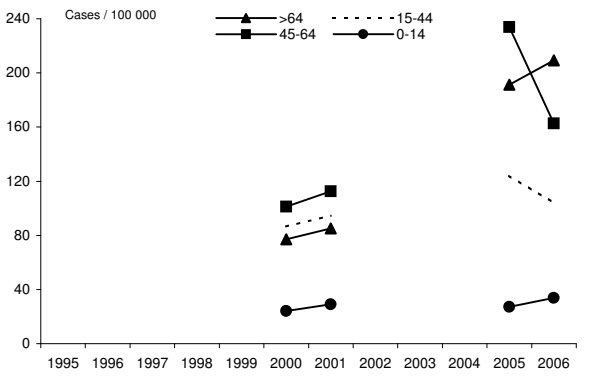
Geographic coverage	DOTS areas*	
Outcome cohort	**All pulmonary smear positive**	
Case-linked data reporting	No	
Included in TOM cohort	7 756	
Success	5 817	(75%)
Died	565	(7%)
Failed	566	(7%)
Still on treatment	0	(0%)
Lost to follow up	808	(10%)

*** Data representativeness unknown**

Tuberculosis notification rates by sex, 1995-2006



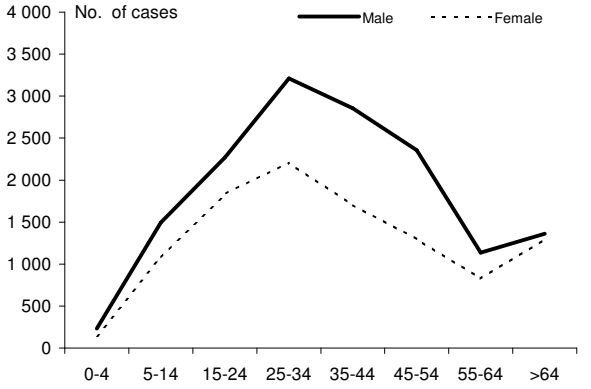
Tuberculosis notification rates by age group, 1995-2006



Tuberculosis cases by geographic origin, 1995-2006

Foreign citizens not reported

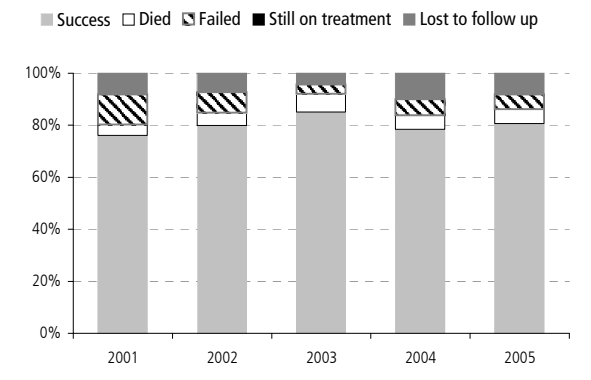
Tuberculosis cases by age group and sex, 2006



Combined multidrug resistance, by origin, 2001-2006

Not available

Outcomes, new pulmonary smear positive cases, 2001-2005
Data representativeness unknown



6. Technical Note

All 53 countries of the WHO European Region are included in tuberculosis surveillance activities coordinated by EuroTB (list of national Contact Points after title page; map on cover page of Country Profiles). National surveillance institutions are responsible for the quality of data provided. The procedures, methods and definitions guiding EuroTB activities are those recommended by European experts, WHO and the International Union against Tuberculosis and Lung Disease (UNION) **[1-4].**

6.1 Reporting of tuberculosis cases, mortality, drug resistance and treatment outcome

TB case reporting and mortality

Since 1996 (reporting year 1995), data on TB notification for the previous calendar year have been collected annually. Reporting of case-based, anonymous data, in accordance with standardised specifications (see www.eurotb.org), is preferred over aggregate reporting.[1] Individual data are now requested for the latest two years to allow for belated exclusion of cases included more than once or found not to have TB, as well as for updates of certain data including culture and treatment outcome. This may explain differences in data presented in the current report and those shown in previous years or in other publications.

Countries not reporting case-based records report notifications in standard, aggregate tables by age-group, sex, geographic origin, previous history of anti-TB treatment, site of disease, culture and sputum smear results. Following reception, EuroTB staff control data in liaison with the respective country. Since 1999, aggregate TB notification and outcome data have been collected and validated in collaboration with WHO personnel.

Data on tuberculosis as underlying cause of death were retrieved from the WHO Statistical Information System (WHOSIS) Mortality Database, available on Internet **[5]**. These data are coded and reported by national vital registration authorities. Population data for calculation of mortality rates alone were downloaded from the same source.

TB/HIV surveillance

Information on HIV sero-status of notified TB cases is collected by EuroTB in aggregate format only. Information on TB morbidity at AIDS diagnosis is obtained from case-based information on initial AIDS-indicative diseases reported to EuroHIV (accessed in September 2007) **[6].** The number of cases with HIV-associated TB obtained from both TB and AIDS notification is an underestimate. Testing and reporting of HIV sero-status of TB cases is incomplete. Moreover, TB episodes occurring after initial AIDS diagnosis are not reported to AIDS notification systems.

Drug resistance surveillance (DRS)

Since the reporting year 1998, the results of drug susceptibility testing (DST) from initial isolates of *M. tuberculosis* have been collected for isoniazid, rifampicin, ethambutol and streptomycin. In countries where DST results are matched with TB case notifications, DST information is collected as part of the individual data. When this is not possible, or when DRS data are not matched with TB case notifications (e.g. surveys), data are collected as aggregate tables by previous history of anti-TB treatment and by geographic origin (see www.eurotb.org). Information on the organisation of DRS and on laboratory practices for DST is also collected using a standard form. Data from drug resistance surveys reported separately to WHO are also included in this report **[7, 8]**.

Treatment outcome monitoring

Since the reporting year 2002, outcome data are collected for all cases in individual format by resubmission of an updated individual dataset for the year before the last (thus in 2007, outcome data were collected for TB cases notified in 2005). Alternatively, treatment outcome data are reported separately in tabular format (see www.eurotb.org).

6.2 Data analysis and presentation

TB case reporting and mortality

While most countries reported data by November 2007, changes to the national totals of TB notifications shown in this report were allowed until end January 2008. Notification data were not adjusted for under- or over-reporting. Where relevant, particularly for countries in the EU & West, tables have been stratified by origin (national/foreign). Rates of sputum smear TB and TB meningitis in children shown are aligned to the standard recommendations for use of BCG in low prevalence countries **[9]**. The incomplete geographic coverage of notification data from certain countries has been noted in the report (Table 1). For calculation of notification rates, country population denominators by age-group and sex were derived from United Nations statistics **[10].** Population data for Serbia (since 1998) were supplied by the respective national Contact Point. Mortality data collected from WHOSIS were analyzed and interpreted at EuroTB. Only deaths

[1] By 2007, all countries of the EU & West and Balkans except Bulgaria, Israel, Monaco, Montenegro, San Marino and Spain were reporting individual demographic and clinical data on TB cases to EuroTB (Table 1). Of these, 31 countries included data on anti-TB drug-susceptibility testing and 29 on outcome for 2005 (Map 8). In contrast, only one country in the East reported individual data, starting in 2007.

coded as ICD-9 010-018 (BTL 020-025,029) or ICD-10 A15-19 were considered for inter-country comparison. Deaths attributed to late effects of TB or pneumoconiosis associated with TB – ICD-9 137 (BTL 077) and ICD-10 B90, J65, P37.0 - are not included in totals but are shown in Table 33). Data for countries in which reporting completeness or estimated coverage was <80% in the latest available year (as reported by WHOSIS) are not included in Map 3 but they are shown in the Tables (identified in italics) and in the Country Profiles.

TB/HIV surveillance

Information on HIV sero-status of TB cases is expressed as the percentage of all TB cases reported known to have a positive test, and may thus under-estimate HIV prevalence in TB patients. AIDS data for the latest year are presented by year of report. The number of AIDS cases with TB as initial AIDS indicative disease, expressed as a proportion of total TB cases notified in the same year, is used to give a conservative estimate of HIV-associated TB. The trend in AIDS-defining TB cases over time is presented by year of diagnosis adjusted for reporting delays [11].

Drug resistance surveillance

Data on the result of DST for isoniazid, rifampicin, ethambutol and streptomycin at the start of treatment are reported as "susceptible" or "resistant". Proportions of drug-resistant cases are calculated using as a denominator cases with available DST results for at least isoniazid and rifampicin. If 90% of these cases or more had results for ethambutol and streptomycin, DST results for the latter antibiotics are also shown. DRS methodology varies across countries. Initial DST results may be collected routinely for all culture positive TB cases notified, or for cases included in specific surveys or diagnosed in / referred to selected laboratories. Geographic coverage of DRS is partial in some countries. The representativeness of diagnostic DST data depends on the routine use of culture and DST at TB diagnosis. On the basis of differences in geographic coverage and on underlying laboratory practices, DRS data are analyzed and presented in two groups:

Group A:

- nationwide data matched to TB case notification in countries using culture routinely (50%+ of cases reported as culture positive in 2006) and DST results for isoniazid and rifampicin are available for the majority of culture positive cases (80%+ in 2006)

or

- data from laboratory networks or surveys using sampling methods considered nationally representative;

Group B:

- data with incomplete or undefined geographic coverage;
- diagnostic DST data from countries where:
  - culture and DST are routinely used but conditions for being in group A above are not met (<50% culture confirmation or <80% culture positive cases with DST results)

or

  - diagnostic DST results are provided from selected laboratories or areas.

Data in Group A are considered representative of the national situation and comparable across countries, whereas data in Group B are not considered representative.

Trends of MDR over the years are considered statistically significant if Chi-squared test for linear trend has a P value <0.05.

Treatment outcome monitoring

Cases eligible for outcome analysis (cohorts) are expected to include all definite pulmonary TB cases notified in the calendar year of interest, after exclusion of cases with final diagnosis other than TB as well as cases found to have been reported more than once. In countries reporting individual data, the cohort is defined on the basis of the new dataset updated following initial notification (see above). In countries reporting aggregate outcome data, completeness of cohorts is assessed by comparing the total number of cases included in TOM cohorts with those initially notified as pulmonary culture or smear positive depending on the type of cohort.

On the basis of available information, TOM data are presented in two groups:

- **Group A,** cohorts including at least 90% of definite pulmonary TB cases notified, considered as country-representative and complete
- **Group B,** cohorts including less than 90% of TB cases initially notified, or from selected areas, or for which data for assessing completeness of TOM cohorts were not available. If the total of Defaulted, Transferred and Unknown exceeds 35% of cases included in the cohort, data are included under Group B.

'DOTS areas' as used in this report refer to units within the country adopting the WHO-recommended strategy of TB control.

Geographic areas

The 53 countries of the WHO European Region have been grouped into geographic areas, based on epidemiological and geo-political features (map on first page):

- the European Union and West (EU & West): the 27 Member States of the EU in 2008 plus Andorra, Iceland, Israel, Monaco, Norway, San Marino and Switzerland.
- the Balkans: Albania, Bosnia & Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, Montenegro, Serbia and Turkey.
- the East: 12 countries of the former Soviet Union[2] - Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova Rep. of, Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

The respective total populations of the three areas in 2006 were 513, 96 and 278 million.
TB notifications from Greenland and Kosovo in 2006 are footnoted in Table 2, but are not included in the totals of the WHO European Region. Data for the part of Cyprus outside the government-controlled area, for Abkhazia and for Southern Ossetia were not available.
The template used for maps in this report was adapted from the map of the WHO European Region located at the WHO/EURO website (www.euro.who.int).

6.3 Definitions

TB case definition for surveillance

Definite TB case

- in countries where laboratories able to perform culture and identification of *M. tuberculosis* complex are routinely available, a definite case is a patient with culture-confirmed disease due to *M. tuberculosis, M. africanum* or *M. bovis* (excluding *M. bovis* BCG);
- in countries where routine culturing of specimens is not feasible, patients with sputum smear positive for acid-fast bacilli (AFB) are also considered as definite cases.

Other-than-definite TB case

A patient meeting the two following conditions:

- a clinician's judgement that the patient's clinical and/or radiological signs and/or symptoms are compatible with tuberculosis,

and

- a clinician's decision to treat the patient with a full course of anti-tuberculosis treatment.

In the 2007 round of data collection, information was collected to allow classification of cases according to the **revised European case-definition**, expected to be applied from 2008 (see Table 16). By the new definition, cases will be divided into *possible* (based on clinical criteria alone), *probable* (having in addition positive AFB or detection of *M. tuberculosis* nucleic acid or granulomata on histology) and *confirmed* (by culture or by detection of both positive AFB and *M. tuberculosis* nucleic acid). A case discovered post-mortem with gross pathological findings of active TB that would have indicated anti-TB treatment had the patient been diagnosed before dying would fit the clinical criteria.

Previous anti-TB treatment status

Never treated case

A case who never received drug treatment for active TB in the past, or who received anti-TB drugs for less than one month.

Previously treated case (retreated case)

A case diagnosed with TB in the past and who received treatment with anti-TB drugs (excluding preventive therapy) for at least one month.

Site of disease

Pulmonary case

A case with TB affecting the lung parenchyma, the tracheo-bronchial tree or the larynx.

Extra-pulmonary case

A case with TB affecting any site other than pulmonary (see above). Pleural TB and intra-thoracic lymphatic TB by themselves are considered as extra-pulmonary.

Notes

- The above definitions conform to the European Commission's definitions for tuberculosis surveillance **[4]**. Cases with laryngeal TB are included with pulmonary for surveillance purposes;
- All definite and other-than-definite TB cases detected in the calendar year of interest are reported to European surveillance and are included in the totals presented in this report. Under the revised European case definition, if no clinical information is available, laboratory confirmed cases should also be reported. Cases are to be notified only once in a given 12-month period. A case, however, should be reported again if the diagnosis of confirmed tuberculosis is made following completion of anti-tuberculosis treatment (relapse case) even if this occurs within the 12 months since reporting of the initial episode of disease;
- Never treated cases are commonly referred to as new cases although this term should not be considered to indicate incidence in the strict epidemiological sense. Among retreated cases, relapses are included in notifications in all countries whereas cases retreated after failure or after default or chronic cases are variably included. In countries where information on previous anti-TB treatment is incomplete or not available, information on whether or not TB had been previously diagnosed is used as a proxy (as in Table 13);
- Cases with disseminated tuberculosis (i.e. tuberculosis involving more than two organ systems or the isolation of *M. tuberculosis* complex from blood) are classified as pulmonary if the lung parenchyma, the tracheo-bronchial tree or the larynx

[2] The Baltic States (Estonia, Latvia and Lithuania) are included with EU & West since 2004.

are involved, and as extra-pulmonary otherwise. Miliary tuberculosis is included under pulmonary (shown separately from respiratory in analysis of mortality, see Table 33). In individual data, detailed information is collected on the major site and one minor site of disease. A pulmonary localization when present is always classified as the major site. In contrast to the recommended pulmonary classification, under the respiratory classification pulmonary cases as well as cases with pleural and intra-thoracic lymphatic TB, are classified as 'respiratory' cases, and cases with another localisation as 'extra-respiratory'.

Geographic origin

The geographic origin of TB cases is classified according to place of birth (born in the country / foreign born) or, if unavailable, citizenship (citizen / non citizen). In Denmark, the place of birth of the parents is also used in classifying origin (similarly in the Netherlands for time-trend data shown in Table 7 and in the Country Profile). The country or continent of origin is included in individual data. The term "national" as used in this report refers to cases born in, or having citizenship of, the country of report.

Drug resistance

Resistance among cases never treated: indicates primary drug resistance due to infection with resistant bacilli.

Resistance among cases previously treated: usually indicates acquired drug resistance emerging during treatment as a consequence of selection of drug-resistant mutant bacilli. It can also result from exogenous re-infection with resistant bacilli.

Combined resistance: overall resistance in the population regardless of prior treatment.

Multi-drug resistance (MDR): resistance to at least isoniazid and rifampicin.

Extensive drug resistance (XDR): resistance to (1) at least isoniazid and rifampicin (i.e. MDR) and (2) resistance to a fluoroquinolone and (3) resistance to one or more of the following injectable drugs: amikacin, capreomycin, or kanamycin **[12]**.

Treatment outcome

Cohort

TB cases notified in the calendar year of interest, after exclusion of cases with final diagnosis other than TB or cases found to have been reported more than once.

Notes:

1) since 2002 cohorts, individual outcome data have been collected for all TB cases;

2) until 2003 cohorts, aggregate outcome data were only collected for definite pulmonary cases. Since 2004 cohorts, aggregate data collection has been extended to all pulmonary cases as well as new extra-pulmonary cases.

Period of observation

Cases are observed until meeting the first outcome, for a maximum of 12 months after the start of treatment.[3]

Outcome categories

Since 2001 cohorts, outcome categories are those internationally recommended - with two additional categories "still on treatment at 12 months", and "unknown" **[3, 13]**

Cured: Treatment completion and:

- culture becoming negative on samples taken at the end of treatment and on at least one previous occasion

or

- in countries where sputum smear positive cases are classified as definite cases sputum microscopy becoming negative for AFB at the end of treatment and on at least one previous occasion.

Completed: Treatment completion and does not meet the criteria to be classified as cure or treatment failure

Failed: Culture or sputum smear remaining positive or becoming positive again 5 months or later into the course of treatment.

Died: Death before cure or treatment completion, irrespective of cause.

Defaulted: Treatment interrupted for 2 months or more, not resulting from a decision of the care provider or patient lost to follow-up for 2 months or more before the end of treatment, except transferred.

Transferred: Patient referred to another clinical unit for treatment and information on outcome not available.

Still on treatment: Patient still on treatment at 12 months and who did not meet any other outcome during treatment. It includes patients with:

- initial treatment changed due to polyresistance (i.e. resistance to at least two first line drugs) on the isolate taken at the start of treatment;
- treatment prolonged because of side effects / complications;
- initial regimen planned for > 12 months;
- information on the reasons for being still on treatment not available

Unknown: Information on outcome not available, for cases not known to have been transferred.

In this report:

- "Success" refers to the combined ratios of cured and completed;
- "Loss to follow up" is the combination of defaulted, transferred and unknown.

[3] The degree of adherence by countries to the 12 month limit is unknown and a number are known to exceed it.

6.4 References

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