

World TB day: European countries report over 400,000 tuberculosis cases in 2004

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In 2004, 414 163 tuberculosis (TB) cases were notified by 51 of the 52 countries of the World Health Organization (WHO) European Region, representing 8% of notifications to WHO worldwide in the same year [1,2]. Seventy per cent of all TB cases in the region were in the 12 countries of the Former Soviet Union, 15% from the 'EU & West' (the European Union and Andorra, Iceland, Israel, Norway, San Marino and Switzerland), and 15% from the Balkan countries (Albania, Bosnia & Herzegovina, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia, Romania, Serbia & Montenegro and Turkey).

The overall notification rate was 47 per 100 000 population, with an incremental west-to-east gradient (Figure 1). The trend differences across Europe have been increasingly divergent in recent years (Figure 2).

Figure 1. Tuberculosis notification rates per 100 000 population, WHO European Region, 2004

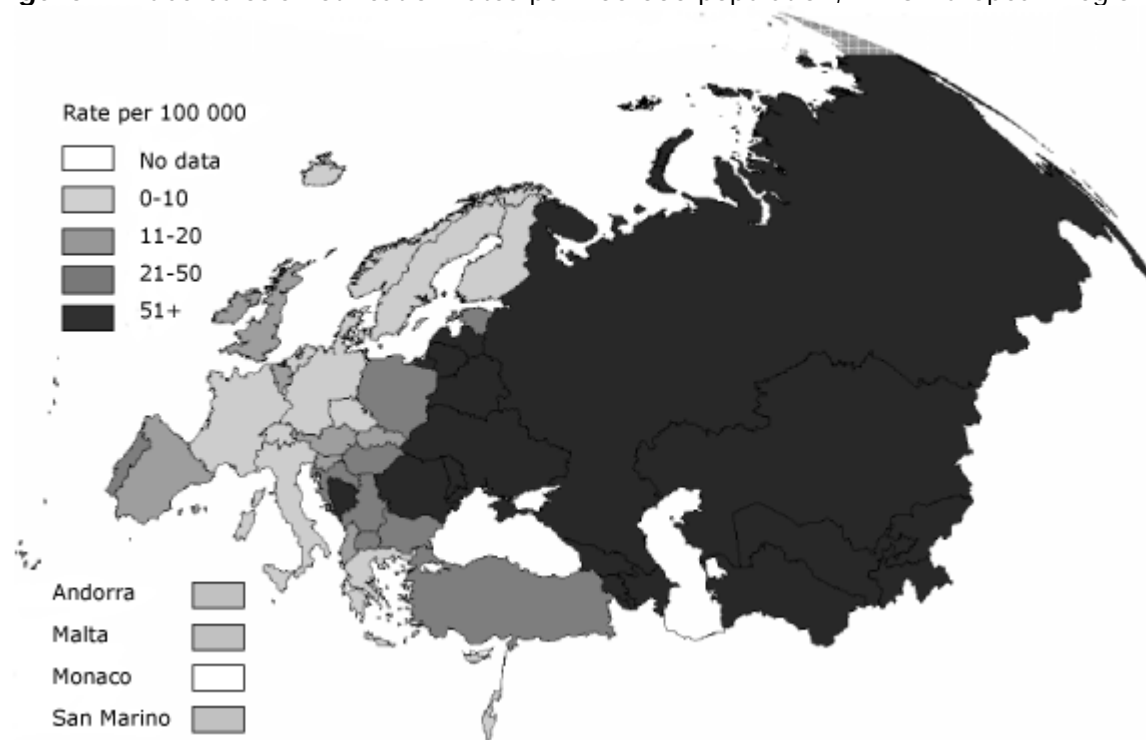
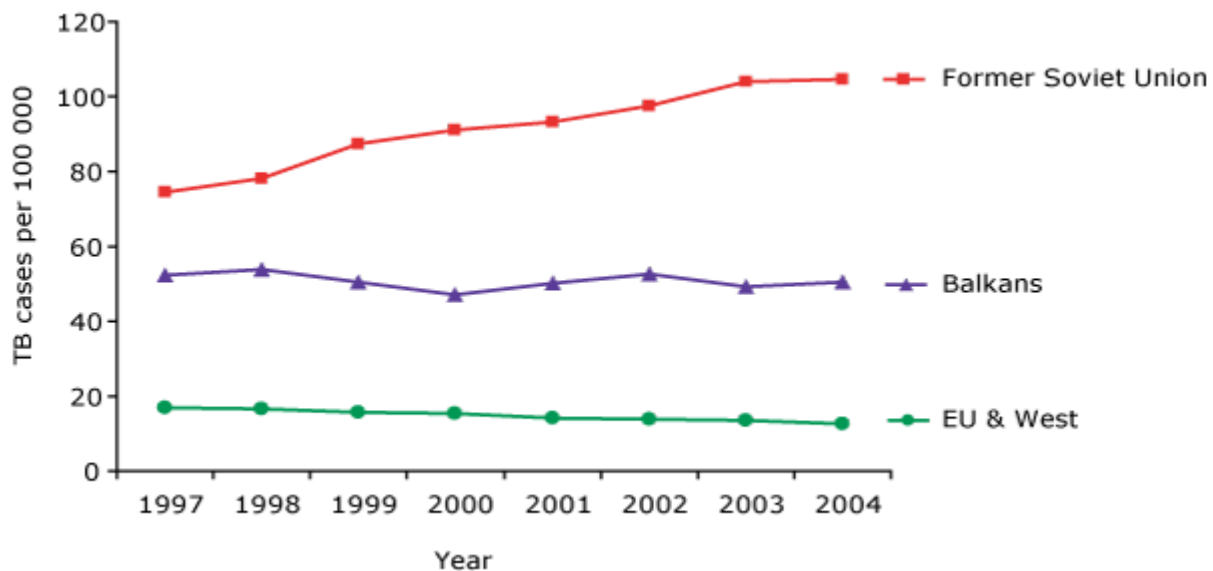


Figure 2. Tuberculosis notification rates by geographic area*, WHO European Region, 1997-2004.



* Excluding countries with missing data : Bosnia & Herzegovina (Balkans) and Monaco (EU & West)

Data on tuberculosis notifications presented here are based on reports to EuroTB and the WHO by countries of the WHO European region up to the end of 2004 (2003 for treatment outcomes). Information on TB and HIV comorbidity are based on HIV/AIDS data provided to EuroHIV (<http://www.eurohiv.org>).

EU and West

In the EU and West, 60 266 TB cases were notified in 2004, equivalent to an overall notification rate of 13 per 100 000. The rate was highest in the Baltic states (44-73 per 100 000). Twenty three per cent of all cases were in patients aged over 64 years, 63% were in men, and at least 29% were in people of foreign origin. Notification rates were higher in the population of foreign origin (57 per 100 000; peaking at 25-34 years) than in EU nationals (5 per 100 000; peaking at over 64 years).

Between 1998 and 2004, rates decreased by 24%, but less so in young adults (-3%) than in the older age groups (-31%). Numbers of cases decreased less in people of foreign origin (-2%) than in nationals (-38%). HIV prevalence among TB patients (20 countries) was below 0.4% in five countries, but increased progressively to 3%-4% in Estonia and Latvia in 2004, and was highest in Portugal (16%).

Among 9924 AIDS cases reported in the EU & West in 2004, 2311 (23%) had TB as the initial AIDS-indicative disease, representing 3% of all notified TB cases that year. Multi-drug resistance (MDR) remained more frequent in the Baltic states (combined MDR: 19%) than in 17 other countries in EU & West (combined MDR: 2%; range: 0-5%), where MDR was common (16%) in patients originating from the FSU. In 23 countries with complete outcome data (2003), success was reported in 77% of new definite pulmonary cases, death in 7%, and 11% were lost to follow up. The proportion of successful outcomes decreased with increasing age and was higher in extrapulmonary cases.

Balkans and Turkey

The Balkan countries (Albania, Bosnia & Herzegovina, Bulgaria, Croatia, the Former Yugoslav Republic of Macedonia, Romania, Serbia & Montenegro) and Turkey notified 62 609 cases in 2004. Rates (50.7 per 100 000 overall) were much higher in Romania (146/100 000) than in the other countries (19 - 61/100 000). Age-specific rates peaked in the 45-64 years age group in Romania (201/100 000) and Bulgaria (50/100 000), and in cases aged over 64 years in the other countries (no age-specific data for Turkey). Since 2000, TB notification rates decreased only in Albania, Croatia and Serbia & Montenegro. Culture confirmation was not available for Turkey and was reported in over 50% of cases only in Bosnia & Herzegovina, Croatia and in Romania.

AIDS incidence remained low in 2004 (n=370). AIDS-indicative diseases were missing for 66% of AIDS cases, and 7% had TB comorbidity, representing less than 0.1% of total TB cases. Drug resistance data from all countries (no data on drug resistance was available for Turkey) indicated low levels of drug resistance except in Bulgaria and Romania (combined MDR: 5%-6%). The proportion of successful treatment outcome among new cases in 2003 was higher than 80% in four countries with complete data.

Former Soviet Union (excluding Baltic countries)

In 2004, Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, the Republic of Moldova, the Russian Federation, Tajikistan, Turkmenistan, Ukraine and Uzbekistan reported 291288 TB cases (105/100 000), of which 52% were from the Russian Federation. Between 2000 and 2004, notification rates increased by 3.6% annually, but this is partly due to increased completeness of reporting.

Age-specific rates (data from five countries) peaked between 25-34 years (240 per 100 000), which may be an indicator of recent transmission. Culture results were reported by five countries for a small proportion of cases (8% culture positive; country range 4%-35%). Of 2902 AIDS cases notified in 2004 (88% from Ukraine; no data from Kyrgyzstan, the Russian Federation or Uzbekistan), 54% had TB as an AIDS-indicative disease, representing 3.6% of total TB cases in Ukraine and less than 0.8% in the other countries.

In 2004, three countries reported MDR among 16% to 22% of cases not previously treated. Although these data were not nationally representative, levels of resistance were not very different from those observed in certain well-conducted surveys elsewhere in the FSU in recent years. Six of the 10 countries reporting treatment outcomes for 2003 notifications had complete data and reported 10% failures (range 3%-14%) among new smear positive cases, most likely as a consequence of the high prevalence of drug resistance.

Conclusions

The high levels of TB morbidity and multidrug resistance in the FSU are a major public health concern for the whole European region, while surveillance data remain incomplete and of limited use to TB control. The low level of laboratory confirmation, notably culture-confirmed disease, limits the interpretation of case notification and trends over time

In the EU & West, TB morbidity is concentrated in vulnerable groups, notably the population of foreign origin and the elderly. Surveillance and control should target these risk groups.

In the Balkans and Turkey, the lack of decrease in notification rates in countries with highest prevalence and the scarcity of data on culture and drug resistance call for strengthened TB control programmes.

Recommendations

More efforts are required to improve the uptake of European surveillance recommendations to ensure greater comparability of data between countries and over time, particularly in the FSU and in the Centre. Improved tuberculosis surveillance can be expected to contribute to public health action by:

- applying the European definitions for TB surveillance [1] to allow a more complete, accurate situation as a means to advocate for appropriate resources to control the problem across the region
- improving data quality and completeness, through wider use of individual TB case reporting and reporting of TB cases. Laboratories are key adjuncts to public health activities, confirming and reporting directly transmissible conditions
- locating zones (such as metropolitan areas) and vulnerable groups (such as recent immigrants) in order to prioritise preventive measures. In low prevalence countries in particular, TB control measures such as screening for TB disease and infection, contact investigation and outbreak management are essential
- having routine surveillance of HIV prevalence among TB patients, by using information available from HIV/AIDS case reporting and by conducting HIV prevalence surveys in areas with high or increasing HIV prevalence, advocating for the joint case management of HIV/TB patients
- implementing drug resistance surveillance, using either ongoing collection of initial drug susceptibility data or through periodic prevalence surveys [5]

- strengthening treatment outcome monitoring, including patients with extra-pulmonary disease; management reduces transmission and prevents the emergence of drug-resistant disease.

References:

1. EuroTB and the national coordinators for tuberculosis surveillance in the WHO European Region. Surveillance of tuberculosis in Europe. Report on tuberculosis cases notified in 2004, Institut de veille sanitaire, Saint-Maurice, France. February 2006. (<http://www.eurotb.org>)
2. World Health Organization. Global Tuberculosis Control: Surveillance, Planning, Financing. WHO Report 2006. Geneva, Switzerland. WHO/HTM/TB/2006.362 (http://www.who.int/tb/publications/global_report/2006/en/index.html)
3. Broekmans JF, Migliori GB, Rieder HL, Lees J, Ruutu P, Loddenkemper R, et al. European framework for tuberculosis control and elimination in countries with a low incidence. Recommendations of the World Health Organization (WHO), International Union Against Tuberculosis and Lung Disease (IUATLD) and Royal Netherlands Tuberculosis Association (KNCV) Working Group. Eur Respir J. 2002;19:765-767. (<http://erj.ersjournals.com/cgi/content/full/19/4/765>) (http://www.who.int/gtb/publications/drugresistance/tb_2003_320/surveillance_guidelinespdf.pdf)
4. World Health Organization. Guidelines for HIV surveillance among tuberculosis patients. 2nd edition. WHO, Geneva, 2004. WHO/HTM/TB/2004.339. (http://whqlibdoc.who.int/hq/2004/WHO_HTM_TB_2004.339.pdf)
5. World Health Organization. Guidelines for surveillance of drug resistance in tuberculosis 2nd edition. WHO, Geneva, 2003. WHO/CDS/TB/2003.320.