Short report

Recent increases in tuberculosis notifications in England and Wales – real or artefact?

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Abstract

Background In light of recent increases in tuberculosis notifications in England and Wales, this study examines data on the occurrence of tuberculosis from other sources to see if the increase seen in notifications is corroborated.


Results Data from all three sources reveal a similar overall trend, with the increase most marked in 1999 and 2000 and a steady increase in the number of cases reported from London. The largest increase is seen in the 15–34 year age group. National survey and enhanced surveillance data show a continuing increase in the proportion of tuberculosis patients born abroad, and in number of patients from most non-White ethnic groups. All sources show an increased number of patients with extra-pulmonary disease.

Conclusion A similar level in the overall increase in cases, and their distribution by geographic region, age, sex and site of disease, observed using data from all three sources, suggests that much of the increase is likely to be real. Data from additional continuous years of enhanced surveillance will permit more accurate assessment of trends in population subgroups.

Keywords: tuberculosis, increase, notifications, England and Wales

Introduction

The previously observed decline in notifications of tuberculosis in England and Wales ceased in the late 1980s. Between 1988 and 1999, the average annual increase in notifications was 1.7 per cent. The final corrected figure for notifications of tuberculosis in 2000 (6572) was lower than the provisional figure (6797) published in January 2001 but still represents an increase over the previous year that is three times higher than the average annual increase since 1988. So far, figures for 2001 suggest that the upward trend in notifications of tuberculosis is continuing, with 4422 cases reported up to the end of week 32 compared with 4163 for the same period last year. This recent increase may be real or may be artefactual, as a result of year-to-year variation or improved case ascertainment. We have examined data on the occurrence of tuberculosis in England and Wales from other sources to see if they corroborate the increase seen in notifications.

Methods

Trends in numbers of notifications of tuberculosis from 1988 to 2000, and the demographic characteristics of the cases, were compared with (1) laboratory reports of isolates of Mycobacterium tuberculosis complex to Mycobnet (UK Mycobacterial Resistance Network) from 1994 to 2000 and (2) data on cases reported to the national tuberculosis surveys of 1988, 1993 and 1998 and the newly implemented system of enhanced tuberculosis surveillance in 1999 and 2000. Data were analysed for the first 6 months of each year only, as data were collected on all patients only during this period in the national surveys before 1998.

Results

Data from all three sources reveal a similar overall trend, with the increase most marked in 1999 and 2000 (Figure) and a steady increase in the number of cases reported from London. The number of cases reported from outside London has changed very little since 1988 (data not shown). National survey and enhanced surveillance data show a continuing increase in the proportion of tuberculosis patients born abroad (45 per cent in 1988; 56 per cent in 1998; 59 per cent in 1999).
A similar pattern in distribution and trends in case numbers, by age and sex, is seen in all three data sources: the biggest increase is seen in the 15–34 year age group and smaller increases in the 0–14 and 35–54 year groups. Little change is seen in cases 55 years and over. Cases in males exceed those in females every year with no change in the proportions by age group.

Although very little difference is seen in the number of patients with pulmonary disease between 1988 and 2000, there is a steady increase in patients with extra-pulmonary tuberculosis during this period, demonstrated by all data sources.

Finally, examination of data on tuberculosis patients by ethnic group using national survey and enhanced surveillance data (this information is not on notification forms) shows an increase in those of non-White ethnic groups, except for patients of Chinese and Indian subcontinent (India, Pakistan and Bangladesh) origin, whose numbers show little change.

Discussion
A similar level in the overall increase in cases, and their distribution by geographic region, age, sex and site of disease, is observed using data from all three sources. Although increased clinical awareness and improved reporting of tuberculosis cases might account for some of the observed increase, the parallel increase in number of laboratory-confirmed cases and the similar change in the distribution of cases suggest that much of the increase is likely to be real.

Our findings indicate that the increases have occurred mainly in non-White ethnic groups and those aged 15–34 years. This is consistent with recent patterns of immigration in England and Wales and with the latest national survey data, which show that tuberculosis patients of non-White origin tend to be younger and have more extra-pulmonary disease than White patients, and that there are very high rates in new immigrants from high prevalence parts of the world. Increases in London may be associated with increases in non-UK born patients, most of which are reported from the capital.

Tuberculosis services need to be adapted to the occurrence of disease in minority groups. Data from additional continuous years of enhanced surveillance will permit more accurate assessment of trends in population subgroups.

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References

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