

### National survey of notifications of tuberculosis in England and Wales in 1988

In the otherwise superb paper from the Medical Research Council Cardiothoracic Epidemiology Group (October 1992;47:770-5), the authors imply in their introduction that there was only a slight reduction in the rates of decline of disease in the 1960s at a time when immigration from the Asian subcontinent and East Africa was high. In fact tuberculosis notifications declined at an annual rate of 9.3% from 1954 until the mid 1960s, at which time the decline changed to 3% per year until 1980 when a decline of over 9% resumed. A threefold decline in reduction in notification rates could hardly be described as slight.

What is not alluded to in the paper but is of great concern is that since 1987 there has been a steady increase in tuberculosis notifications in England and Wales amounting to an approximately 2% annual increase.

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**AUTHORS' REPLY** We are grateful to Dr Davies for his kind comments on our paper. Although he is correct in saying that the rate of decline in tuberculosis notifications in England and Wales in the 1970s was considerably lower than between 1954 and 1967, the rate of reduction was also relatively slow before 1953. In the context of the century as a whole, therefore, the change in the late 1960s was fairly slight.

We are aware of the increases in numbers of notifications over the past five years and, indeed, gave the figures in the discussion section of the paper. Although the increase has not been steady—for example, numbers for 1990 were 4.2% lower than those for 1989—between 1987 and 1991 the figures rose by an average of 1.7% per year. The reasons for this are not known, but the national survey of notifications of tuberculosis in England and Wales in 1993 should throw some light on them by determining in which groups of the population the increases have occurred.

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### Does a positive Heaf test reaction in Asian schoolchildren predict later breakdown of tuberculosis?

Comparing names at two points in time as was done in the study by Drs J B Cookson and A G I Cookson (October 1992;47:776-7) is a notoriously inaccurate method of follow up. The authors did not know whether the 756 children with a strongly positive Heaf test who were found not to have tuberculosis had moved out of the area, developed tuberculosis but failed to be notified, or developed tuberculosis but were missed because their name was misread.

Although the authors imply from the discussion that coverage with BCG vaccination is 80%, they do not tell us specifically what proportion of the 760 children in the study had been vaccinated with BCG nor what proportion were Heaf grade III or IV reactors. If the great majority had had BCG and

were grade III reactors, it could well be argued that progression to disease was unlikely. On the other hand if only a minority had had a BCG vaccination and all had grade IV reactions, the absence of progression to disease would be of interest. In addition, the authors imply that 60% of Asian children are born in the UK, but they do not state what proportion of the 760 children in the study were UK born.

The authors state that the BTA contact study<sup>1</sup> showed that clinical disease usually occurs within two years of infection. What that study showed, in fact, was that follow up of close contacts was worthwhile for up to one year for whites and for up to two years for Asians. It is well established that approximately half of all cases of tuberculosis occur anywhere between two years and a life time after the initial infection. Dr Citron is right to point out that little is known about the prognosis of Asian reactors in terms of breakdown of tuberculosis. Studies from the USA<sup>2</sup> suggest that, in tuberculin reactive individuals, black women aged between 20 and 39 years may be of greater risk of developing disease than corresponding whites; otherwise little difference between racial groups has been shown.

It is perhaps a measure of the poverty of research into tuberculosis in the UK that after 30 years of experience of tuberculosis in immigrants from the Indian subcontinent we still have so little information about the development of the disease in tuberculin reactors. There is still time for proper studies to be carried out. In the meantime the conclusion of Drs J B and A G I Cookson that routine prophylaxis is not justified for Asian children with a strongly positive tuberculin test reaction should be discarded and the BTS guidelines<sup>3</sup> accepted.

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- 1 British Thoracic Association. A study of a standardised contact procedure in tuberculosis. *Tubercle* 1978;19:245.
- 2 Comstock GW. Frost revisited: the modern epidemiology of tuberculosis. *Am J Epidemiol* 1975;101:363-81.
- 3 Joint Tuberculosis Committee of the British Thoracic Society. Control and prevention of tuberculosis: an updated code of practice. *BMJ* 1990;300:995-8.

**AUTHORS' REPLY** We thank Dr Davies for his interest in our paper. Although we do not know how many of our children moved out of the area, we do present evidence that migration in this age group in Leicestershire as a whole is very small. Failure of notification is, of course, the difficulty of any study like this but we do have a good system of cross notification from microbiology and pathology reports.

The small number of notifications did not surprise us. In 1991, for example, of 213 notifications only three were in the 13-17 years age group and two of these had had a recent close contact rather than breakdown of earlier disease.

The figures of 60% of Asian children born in the UK and BCG coverage of 80% were from a similar, although admittedly separate, cohort of children with grades III and IV Heaf reactions when tested at school. They do not refer to the general population of Asian children. Relapse of disease may occur late in life but with so few occurring early it seems unlikely that a large number will occur later. Dr Davies

urges acceptance of the BTS guidelines but they only cover tuberculosis contacts and new immigrants, not the population with which we are concerned. Dr Citron suggests confining chemoprophylaxis in this group to those with no previous BCG vaccination.

We agree with Dr Davies that further work is necessary but we wanted to provide some answers where currently there are none. Mass chemoprophylaxis of hundreds of children each year does not seem to be right.

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### Tuberculosis contact tracing: are the British Thoracic Society guidelines still appropriate?

On the basis of their study which found relatively few contacts of patients with tuberculosis to have the disease, and all those at the first screening, the article by Dr SF Hussain *et al* (November 1992;47:984-5) calls into question the British Thoracic Society (BTS) guidelines on contact tracing. The authors have recently made the same point in another paper<sup>1</sup> as has another centre in South Wales.<sup>2</sup> Both sets of authors conclude that there should be a new nationwide study of contact tracing. Our own experience in Liverpool has been somewhat different. Within the last 12 months we have seen several close contacts of patients with tuberculosis who have developed the disease between three and six months after initial screening.

There are many data to suggest a genetic predisposition towards the disease.<sup>3</sup> Historical data<sup>4</sup> have shown, for example, that tuberculosis rates in north Pembrokeshire were considerably higher than those in south Pembrokeshire. North Pembrokeshire is traditionally Welsh speaking whereas south Pembrokeshire, occupied by the English since Norman times, is not. Genetic factors are probably playing a part in susceptibility to the disease within the relatively small confines of South Wales.

Before an unnecessary amount of money and effort is spent on a new contact tracing survey, perhaps we should look at the results by area of the 1978 survey carried out by the British Thoracic Association and on which the BTS guidelines are based, to determine whether there is a geographical and therefore possibly a genetic difference between areas. I feel there are more important areas of tuberculosis research which we should be investigating at present such as the reasons for the current increase in notifications in England and Wales.

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- 1 Hussain SF, Watura R, Cashman B, Campbell IA, Evans MR. Audit of tuberculosis contact tracing clinic. *BMJ* 1992;304:1213-5.
- 2 Esmonde TFG, Petheram IS. Audit of tuberculosis contact tracing procedures in South Gwent. *Respir Med* 1991;85:421-4.
- 3 Comstock GW. Tuberculosis in twins: a re-analysis of the Proffit survey. *Am Rev Respir Dis* 1978;117:621-4.
- 4 Brownlee I. *An investigation into the epidemiology of phthisis in Great Britain and Ireland*. Special Report Series No 18, London: HMSO, 1918.