Tuberculosis among the central London single homeless

A four-year retrospective study

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Introduction
The prevalence of tuberculosis in Great Britain has declined dramatically over the last hundred years. It is now largely confined to particular high risk groups, such as the single homeless [1,2]. Although tuberculosis is a treatable disease, it has proved difficult to eradicate among the homeless; attendance at mass radiography is notoriously poor [3,4], and the initiation and continuation of effective treatment of the homeless is particularly unsuccessful [5,6].

This study assesses the prevalence of active tuberculosis, the demographic characteristics of the patients, and the success, over the last four years of treatment in two clinics for the homeless in central London.

Methods
The study was conducted at two centres: the Great Chapel Street Medical Centre, a large health clinic for the homeless in Soho, where clinics are held daily [7] and the St Martin-in-the-Fields Day Centre, which provides recreational facilities, social support and food for the homeless; clinics are held there twice a week.

The period of the study was from January 1983 to January 1987. Only patients newly diagnosed or receiving chemotherapy for tuberculosis were included in the study. The diagnostic criteria were isolation of the tubercle bacillus or characteristic clinical and radiographic changes that merited full chemotherapy. Demographic data and information concerning drug abuse, the duration of the illness and compliance with treatment were obtained for each patient from our own and hospital records. Alcohol consumption was assessed at clinic visits. Abuse was defined as a mean daily intake in excess of four pints of beer or equivalent during the previous month.

Results
Great Chapel Street Medical Centre
Over the study period, 6,224 new patients were seen at the Centre. The mean age was 28 years (range 10–85 years). Of the total number, 40 per cent were hostel dwellers or sleeping rough (subsequently referred to as homeless). One third of the people were women although only one in 20 of homeless persons was female. Nineteen patients were diagnosed as suffering from tuberculosis of which 18 were white British or Irish men. There was only one woman, a Vietnamese refugee. All the men were hostel dwellers and at least one third regularly slept rough. Only respiratory tuberculosis was seen. The mean age was 41 years (range 26–58 years); 15 were alcohol abusers and three abused drugs (heroin, amphetamine and codeine). All 19 had had their disease detected clinically, none by screening. Of the 17 patients diagnosed before 1 January 1986, 12 had received chemotherapy for more than one year and were considered poor attenders with doubtful compliance and tuberculous disease had been previously documented in five. The prevalence of active tuberculosis was 7.6 per 1000 among the homeless but only 0.27 per 1000 among those with homes (one patient out of 3,734). One fifth of the homeless took alcohol in excess of four pints of beer per day. With the exception of the woman, tuberculosis was confined to those in hostels or sleeping rough. Fourteen out of 18 homeless patients with tuberculosis abused alcohol as opposed to only one in five without tuberculosis (p<0.001).

St. Martin-in-the Fields Day Centre
All people attending this day centre were homeless. Over the study period 555 new patients were seen at the clinic of whom 18 were female. The mean age was 40 years (range 16–80 years). There were six patients diagnosed as having tuberculosis, of which five were male and all six were white British or Irish nationals. Their mean age was 51 years (range 30–63 years). All had respiratory tuberculosis and one died of miliary tuberculosis. Four abused alcohol and there were no drug abusers. Only two were considered to have complied with treatment. Two patients had previously documented tuberculous disease and all six had their disease detected clinically.

The prevalence of active tuberculosis was 11 per 1000.
One in five patients at the Day Centre abused alcohol; four out of six patients with tuberculosis abused alcohol compared to one in five persons without tuberculosis ($p<0.01$).

**Discussion**

The study shows that active tuberculosis remains a significant problem among the homeless of central London. Our figures are almost certainly underestimates. Effective screening without on-site X-ray facilities or a more comprehensive mass screening programme is difficult. Both Ross et al. [3] and Patel [4] showed that increasing the numbers X-rayed significantly increased the diagnosis rate. In an intensive case finding study in New York, McAdam et al. [8] found 4.3 per cent of hostel dwellers to have active tuberculosis.

In addition to being common, tuberculosis among the homeless is difficult to treat successfully. One year after diagnosis only about a third of patients were cured; this figure is in line with other studies [4,8]. There are a number of underlying reasons for this. Homeless patients, by their nature, are often reluctant to take responsibility for their own health and mistrust doctors, whom they see as symbols of unwanted authority. They have other pressing needs such as ensuring a bed for the night and obtaining social security benefit and in addition, alcohol takes an inevitable toll on good intentions. All these factors make compliance with long-term therapy unlikely.

No patients had their disease detected by mass radiography. Previous studies [3,4] have documented the difficulty of screening hostel residents; despite being given money or food vouchers as incentives, less than half of them were X-rayed. Initiatives are needed such as making evidence of a recent chest X-ray a pre-condition of stay at a hostel and closer involvement of general practitioners with screening programmes is required [9]. Alcohol abuse was significantly more common in homeless patients with tuberculosis than in those without it. Caplin, in East London, reported 43 per cent of patients on a tuberculosis ward to be alcoholic [5]. The reasons are several: a chaotic lifestyle, malnutrition and poor compliance with treatment all make for frequent and severe illness.

The prevalence of tuberculosis and the difficulty of treating patients seems surprising in a highly developed nation. The problems are in some way closer to the health problems of Third World countries, and indeed the methods of improving compliance with treatment and follow-up are better developed in those countries. The use of members of the community to increase the acceptability and effectiveness of health care is well established in Africa and Thailand. McAdam et al. [8] argue the advantages of including former hostel dwellers in health care teams for the homeless. Such persons are likely to be trusted by the homeless and to have an intimate knowledge of their problems and ways. We have just started such a scheme at our clinics for the homeless and early results are encouraging. Further developments in the care of tuberculosis patients among the homeless include the use of sick bays as described by Caplin in East London and, more recently, by El Kabir in West London [5,10]. In such a setting the pressures of day-to-day living can be lessened, medication supervised and anxieties contained, allowing successful treatment in patients otherwise likely to default. There does, however, remain much to be done to improve diagnosis and treatment of tuberculosis among this deprived group.

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**References**

1. Scott, R., Gaskell, P. G. and Morrell, D. C. (1966) *British Medical Journal*, 2, 1561.
2. Joint Tuberculosis Council. (1965) *The Medical Officer*, 113, 103.
3. Ross, J. D., Reid, K. D. G. and Jameson, A. (1977) *Update*, July, 167.
4. Patel, K. R. (1985) *British Journal of Diseases of the Chest*, 79, 60.
5. Caplin, M. (1978) *The Lancet*, ii, 460.
6. Trachtman, L. and Greenberg, H. (1978) *Journal of the American Medical Association*, 240, 739.
7. El Kabir, D. J. (1982) *British Medical Journal*, 284, 480.
8. McAdam, J., Brickner, P. W., Glicksman, R. et al. (1985). In *Health care of homeless people* (eds P. W. Brickner, L. K. Scharer et al.) p 155. New York: Springer Publishing Company.
9. Shanks, N. J. and Carroll, K. B. (1982) *Journal of Epidemiology and Community Health*, 36, 130.
10. Berthoud, R. (1985) *Illustrated London News*, March 20.