Tuberculosis screening of new entrants; how can it be made more effective?

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Abstract

Background The importance of extending TB screening to all new entrants has been shown by the occurrence of cases of active TB and high rates of those needing prophylaxis or BCG protection. TB is particularly likely to be prevalent in populations with large numbers of refugees, but high rates in immigrants have been reported consistently both in this country and elsewhere in Europe.

Method This paper examines possible reasons for a low uptake of screening by immigrants in the United Kingdom and describes initiatives, some of which have already been launched in East London, by which access to screening could be increased.

Results Screening at the new patient check-up by general practitioners has been shown to be practicable and effective in an East London pilot. This screening method could be expanded throughout East London and is applicable to other areas. Other ways of improving access to screening through other agencies have also been found to be acceptable.

Conclusion No one screening system is likely to be effective and pilots of methods of extending the access to new entrants need to be carried out and evaluated urgently.

Keywords: tuberculosis, screening, immigrants

Introduction

Tuberculosis (TB) is currently responsible for an estimated 8 million new cases and 3 million deaths each year despite being preventable and curable. The World Health Organization (WHO) has advocated screening of immigrants on arrival in Europe as part of increased infection control measures to limit the spread of the world-wide pandemic, as TB incident rates have been reported to be up to 20 times higher in immigrant groups compared with indigenous populations. Immigrants to the United Kingdom have high incidence rates of undiagnosed TB not only on entry, but also for at least the first 5 years after entry and into the second generation. Because for every infectious case there are 5–20 contacts, of whom 0.8–12.7 per cent develop tuberculous disease, it is important to detect and treat TB cases, preferably before they become infectious. Whereas active case-finding or screening is not practicable in populations with low incidence rates of TB, it becomes important when rates are high, and is increasingly cost-effective as incidence rates increase.

Current screening system

The British Port Health Screening system only identifies 10–40 per cent of the new entrants known to the Home Office or registering with general practitioners (GPs). Moreover, TB rates are likely to be higher in those who are not invited or are invited and do not attend for screening. The system appears to concentrate on detecting the rare cases of infectious disease rather than offering protection to the many who are in need of it. It could therefore be perceived as stigmatizing, particularly by those coming from countries where fear of TB is rampant.

Screening at the point of entry, as recommended by WHO, offers the theoretical advantage of immediate access to new entrants so that any who require treatment, prophylaxis or BCG vaccine could be identified before they disperse. Unfortunately, TB tests require an interval of 1 week before they can be interpreted and this delay will remain a major disadvantage until a rapid diagnostic test is available that can distinguish between those who are susceptible or immune and those with early or fully developed disease.

Drawback of present system

The existing system is both incomplete and random, even if it functioned well, because only a proportion of new entrants are accessed and referred for screening. It operates only at international ports with Port Health Units attached and relies upon immigration officers identifying certain categories of travellers and referring them to Port Health Units for screening by Port Health Officers. At periods of peak travel, immigration officers may not have sufficient time or staff to detain all falling within these categories. Those who may be stopped include new immigrants who state that they are intending to stay for more than 6 months, or have come for health care, or who appear unwell, frail or indigent. Screening consists of a brief medical...
examination and a chest X-ray. Children, pregnant women and any new entrants who would have to wait more than 30 minutes are not X-rayed at the port. All the new entrants, whether or not they have been X-rayed, are referred to the Consultant in Communicable Disease Control at the Health Authority of the district of intended residence for further screening, but there are no guidelines on the extent of screening.

The Department of Health is currently evaluating the screening system and has recently piloted a new screening system in an attempt to focus on new entrants most at risk of TB. It was aimed at those holding passports from countries with TB incidence rates higher than 40 per 100 000. Even if this system were to be extended to all Port Health Units, there still remain major deficiencies in the completeness of the system, as it would not identify people who have lived or were born in countries with high TB incidence rates but hold passports from low incidence countries, nor will it deal with those who enter by the smaller ports without Port Health facilities, those who stay on after a short visit, illegal immigrants or the many asylum seekers, half of whom are in-country applicants. Neither is pre-screening by chest X-ray in the country of origin a foolproof option, as it is open to abuse through fraud, and surprisingly high numbers of immigrants who were reported as having old TB are still suffering from active and sometimes infectious disease.7

Benefits of screening

Many Health Authorities do not arrange screening for the new entrants referred to them on the grounds that they have other priorities, or do not have the resources, and that cases of TB found at screening are extremely rare,5,8 so that TB screening is unnecessary. Chest X-rays will detect only old or current pulmonary cases of TB, some of which will be infectious, whereas skin testing will identify those with sub-clinical TB who need prophylaxis, and those who require BCG. As skin tests need to be read 1 week after testing, it is essential that screening is carried out in the district of residence, in addition to the port of entry. Recent studies of immigrant screening, where skin testing is employed, have shown that cases of active TB are detected, giving incidence rates of 1546 per 100 000 in Hackney9 and 450 per 100 000 in Blackburn10 in the respective new entrant populations, compared with a national incidence rate of 10 per 100 000. More importantly, perhaps, both studies revealed that high proportions, up to a third, of new entrants required preventive measures against TB. Prophylaxis and BCG were needed for 3.3 per cent and 9.9 per cent of children and young adults in Hackney and for 4.1 per cent and 31 per cent, respectively, in Blackburn. Similar levels of disease and need for protection were seen in previous studies.4,11 The higher levels of disease seen in Hackney new entrants’ results are likely to reflect the fact that 70 per cent are refugees,11 but other areas of London also report that approximately 40 per cent of their TB cases occur among those who have arrived in the country within the last 5 years. Both prophylaxis and BCG are known to be protective in immigrant populations,12 and in areas where these measures are practised they appear to have helped to reduce any increases in the incidence rates of TB.11

Weakness of current system

Even if more new entrants were identified and referred and all Health Authorities carried out screening, the system would still be inadequate, as only 14–50 per cent of those who are invited for TB screening attend, despite reminders.9,11 One of the most important reasons for failure to attend is a change of address, sometimes within 24 hours of arrival, so that the screening invitation never reaches the immigrant. Other reasons ascertained in East London are false addresses, language difficulties, mistrust of authorities, particularly when there are worries about immigration status and, especially in ethnic minorities with high TB incidence rates, fear of the disease itself, and associated stigmatization.6 There is a further loss when those who are tested do not return for a reading of their skin test or do not reattend for treatment or prophylaxis when indicated.9

Improving uptake of screening

Clearly a more comprehensive approach to TB surveillance, screening and treatment of new immigrants is needed, and immigrants and their friends and families need to be informed of its benefits, as it is they who are most at risk of imported infection. A number of steps might be taken to improve matters. Advocates advise that any incentive linked to screening centres, at places where they are available, should improve uptake of screening. Leaflets with information, in the appropriate languages, on how to access the National Health Service and the need for protection against TB should be distributed at the port of entry. The uptake of screening may be improved if the letter from the Health Authority offering screening also contains general information about medical services and how to find a GP. This letter needs to be widely distributed so as to be available to all newcomers to the district, not just immigrants from countries with high TB rates, as all can benefit from the services offered. Language problems can be anticipated by adding to the welcome letter a flyer, translated into the main ethnic minority languages spoken in the district, welcoming the recipient and stating that the letter contains important information about health services. Health education about TB for ethnic minority groups, especially refugee organizations and those who work with them in health care facilities, local authorities and the voluntary sector, is needed to allay fears and improve knowledge about the curability of TB. Reassurance is needed that TB screening is not a manifestation of xenophobia but a means of protecting the immigrant, their family and the ethnic minority community involved, as these are the people most at risk of any undiagnosed TB.
Asylum Seekers Bill

It is difficult to assess the impact that the Asylum Seekers Bill will have as details are not widely available, but it may change procedures for dealing with immigrants at ports and in the district of residence. If asylum seekers are dispersed throughout the country rather than segregating with communities composed of their own countrymen, they may find it more difficult to adapt. The need for advocates and the expertise in dealing with refugees in a sensitive and appropriate manner that has been gained elsewhere will need to be shared with the new centres. If those with special needs are to be retained in London, care must be taken that this is not construed as being stigmatizing.

Screening in general practice

Screening consisted of a short questionnaire eliciting details of any symptoms, BCG status or residence in a country with high rates of TB, and skin testing where appropriate. This method avoids being discriminatory and the venue is also more likely to be acceptable to, and convenient for, the patient than the chest clinic. If, particularly in areas with high immigration rates, the majority of GP practices could be trained to provide this service, TB screening could be greatly increased. GP screening is also a practical option for areas of low incidence, particularly where chest clinic facilities are difficult to access. However, screening in GP practices in areas of low incidence would probably best be confined to the questionnaire, with onward referral, if necessary, as skin test interpretation could be suboptimal if performed infrequently.

GPs are often the first contact with the NHS and could be the first TB screening opportunity for most new entrants, but it is likely that few GPs refer their immigrant patients to a chest clinic for screening. The successful GP pilot in Hackney has shown that TB screening of all new patients at the new patient check is feasible, usually taking 2–5 minutes.

The role of the Primary Care Groups

Primary Care Groups have a responsibility to provide health care for all of their population, whether or not they have a GP. New entrants or refugees who do not speak English are particularly likely to experience difficulties in finding a suitable practice. Busy GPs may be understandably loath to take on a patient with multiple needs and little or no understanding of English. Specialized practices geared to the needs of new entrants with easy access to health advocates and translation facilities may be an optimal way of providing health services for this inaccessible group. However, when large numbers of immigrants, for whatever reason, are unaccounted for by the Census or surveys, funding based on population size will be underestimated and funding will be below that required to maintain minimum standards, let alone special needs.

Improving access to unidentified immigrants

Because not all new entrants are successful in finding a GP and those most in need, such as refugees, may have greater than average problems in this respect, other adjuncts to the Port Health Screening system will need to be employed. Accident and emergency departments are likely to be accessed by new entrants who are ill, particularly if they do not have a GP. Twelve (10.7 per cent) of the Hackney TB cases in 1996 were new entrants admitted through casualty departments.8 Health visitors for the homeless already refer new entrants to the chest clinics for screening and could be trained to administer screening questionnaires, perform skin testing and administer BCG. Local Authority departments of social services, education and housing, and local refugee groups could distribute the Health Authority’s welcome letter and additional health education material providing information and encouraging access to health services. Local refugee groups, community leaders of ethnic minority groups and advocates have an important role to play in encouraging uptake of TB screening and utilization of immunization and antenatal services in a timely fashion. The Healthy Living Centre initiatives currently being planned could be another valuable way of introducing immigrants to the benefits of TB screening as part of holistic health care, because the latter may have other medical needs such as immunization, antenatal care, medication for pre-existing medical problems, and psychological assessment and support.

It is important that all immigrants and those who work with them should be aware that new entrants continue to be at increased risk of TB, especially for the first few years, so that, if they suffer from signs and symptoms compatible with TB, they are diagnosed and treated at an early stage before they become infectious.

The benefits of screening and treatment are likely to be considerable, but at present we know little about the most cost-effective strategies that might be adopted to deal with new entrants. A comprehensive surveillance system that extends beyond the port entry system is clearly required, together with a multilingual health education programme. A concerted effort by all those in contact with new immigrants should be made to inform them of the benefits to them and their families of screening, that is, the protection offered by prophylaxis and BCG, as well as the treatment of existing disease. Such information should include reassurance that the health intervention will not compromise the new entrant’s rights to admission into the United Kingdom. The costs of providing better surveillance, whether at port of entry or subsequently by Health Authorities or by GP services will differ according to the characteristics of the local populations and need to be calculated. The different methods of providing information also need to be explored systematically to assess the impact upon uptake of screening and its costs. The benefits will include the costs and morbidity avoided by the reduction of illness.
TB is an expensive disease and it is likely that simple but comprehensive approaches to surveillance and screening will prove to be highly cost effective, especially in populations that have a high incidence of the disease, as is the case with the population of new immigrants.

References


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Accepted on 18 October 1999