

Reversing the tide of the UK tuberculosis epidemic

In the UK, tuberculosis is an urgent public health problem, particularly for immigrants and other socially deprived and vulnerable groups.¹ London has the highest rate of tuberculosis of any western European capital.^{1,2} Although recently improved National Health Service tuberculosis services aimed at early diagnosis and initiatives to prevent transmission in hard-to-reach groups are in place, these measures are unlikely to reverse the tide. Present trends of tuberculosis in the UK suggest that, within the next 2 years, the UK will have more new tuberculosis cases than the whole of the USA (figure).

Effective strategies to tackle tuberculosis in the UK will need to be tailored to its epidemiology. Some London boroughs have rates higher than parts of sub-Saharan Africa. Proactive programmes for screening, prevention, and treatment, targeting defined high-risk populations (eg, Find and Treat), need to be strengthened. For tuberculosis cases diagnosed in immigrants, although only a small number occur within the first year of entry, nearly half are diagnosed within 5 years of arrival, which suggests that latent tuberculosis infection (LTBI) often occurs overseas.³ By contrast with the New York epidemic in the early 1990s, in which transmission events determined the increase in tuberculosis rates,⁴ in the UK the role of reactivation of remotely acquired LTBI is supported by molecular epidemiological studies. Robust evidence suggests that LTBI screening and treatment can prevent tuberculosis,⁵ is cost effective,⁶ and is feasible to implement in primary care.⁷ For example, a previous analysis⁶ showed that targeted screening for LTBI is cost effective for immigrants from areas with a tuberculosis incidence of more than 150 cases per 100 000 population, costing £20 818 (US\$32 532) per case prevented. More recent data suggest that treatment can be shortened and the pill burden reduced, potentially improving adherence.⁸ The acceptability of screening in the community also seems to be high.⁹

In Europe, renewed interest has led to new initiatives for a programmatic approach to latent tuberculosis. In the UK, screening for latent tuberculosis has been recommended by the UK National Institute for Health and Care Excellence since 2006,¹⁰ but implementation has been variable.¹¹ This variation results from the fact that implementation is the responsibility of local health commissioners, and is therefore subject to local

resourcing priorities with no coherent national approach to identify tuberculosis control as a priority.

A national approach for tuberculosis is being developed, and aims to achieve a year-on-year reduction of new cases.³ In London, a target of 50% incidence reduction within the next 5 years has been set. To achieve these targets, screening initiatives for latent tuberculosis need to be better coordinated and targeted. To promote such coordination and to form a consensus, stakeholders at a recent national workshop held in London agreed to develop a coherent screening strategy for LTBI for presentation to the national screening committee. On the basis of the present proposal for a national programme, workshop participants considered screening eligibility criteria, ways to identify individuals for screening, acceptability issues, screening and treatment pathways, and the evaluation of LTBI screening. Several challenges were identified and solutions proposed, including strategies to promote screening uptake, and to manage potential hepatic toxicity by carefully selecting outpatients with pre-existing liver disease.

A programme to screen for active tuberculosis before arrival to the UK is already in place, but does not detect LTBI in immigrants living in the UK, disadvantaged and vulnerable communities, or people at risk as a result of immunosuppressive therapy. A quality-assured,

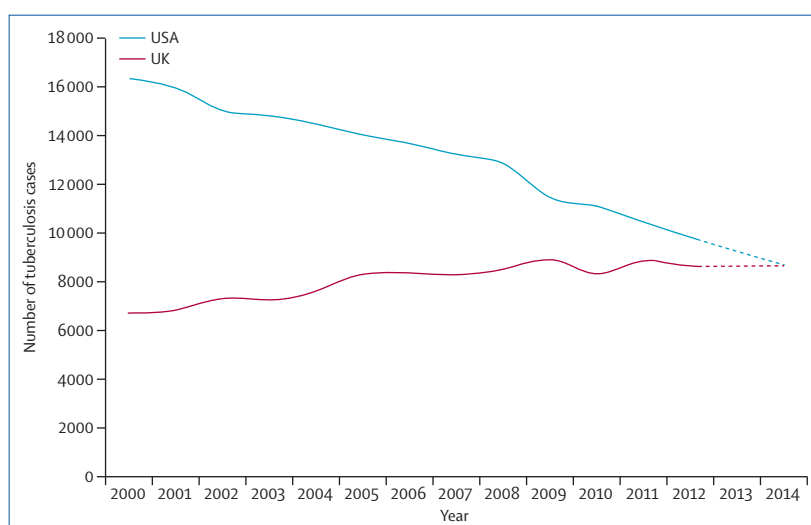


Figure: Trends in the annual number of cases of tuberculosis in the UK compared with the USA
Dotted lines show projected numbers, assuming present annual percentage change continues for 2 more years. Based on data from Public Health England (UK) and the Centers for Disease Control and Prevention (USA).

primary-care-based screening programme for LTBI for individuals aged 16–35 years, who entered the UK in the past 5 years from a country with a tuberculosis incidence of 150 cases per 100 000 population or higher, could provide a pragmatic solution to begin to turn the tide. This urgently needs more investments into services for tuberculosis diagnosis, treatment, and prevention, targeted at high-risk and hard-to-reach groups and delivered as part of a coordinated national tuberculosis-control strategy. The strategy should also enhance watchful surveillance for multidrug-resistant tuberculosis, which continues to spread relentlessly worldwide and has become a major problem in eastern Europe¹² and Asia—two geographical areas from which a large proportion of UK immigrants come.^{2,3}

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The global pandemic of peripheral artery disease

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In 2013 it is known that the global burden of non-communicable diseases greatly impairs community health.¹ Yet we have not created a fully accurate description of the non-communicable diseases that contribute to this burden. When people in countries such as China, India, or Turkey are unable to walk because of leg muscle fatigue, their productivity and health are diminished. If these individuals also have a first heart attack, as a consequence of metastatic atherosclerosis in leg arteries, a preventable moment is lost. When citizens of the USA, UK, or Australia seek invasive care strategies to avoid amputation for foot gangrene, substantial health-care resources will be expended. However, amputation and death will be merely delayed, and efforts to prevent the underlying disease will probably never be initiated.

Atherosclerotic peripheral artery disease is one of the most prevalent, morbid, and mortal diseases. The term

“pandemic” is traditionally applied to epidemics that occur worldwide, crossing international boundaries and affecting a large number of people.² Globally, as many as 34 million people were living with HIV, a pandemic disease, at the end of 2011.³ Gerald Fowkes and colleagues⁴ now provide in *The Lancet* the first conservative estimate of the global burden of peripheral artery disease, which affects more than 202 million individuals. Compared with HIV, peripheral artery disease is more prevalent and is associated with a higher case fatality rate, due to cardiovascular ischaemic events. This disease spares no nation. The study,⁴ which uses advanced meta-analysis methods, provides at least four key new insights that serve as a major call to action.

First, the contribution of key modifiable risk factors to the aetiology of peripheral artery disease is reconfirmed: smoking, diabetes, hypertension, and dyslipidaemia cause