

Further evidence supporting programmatic screening for, and treatment of latent TB Infection (LTBI) in new entrants to the UK from high TB prevalence countries

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A systematic comparison of tuberculosis (TB) cases and rates between the USA and E&W (England and Wales), shows diametrically opposed trends. Between 1993 and 2010 in the USA, active TB cases fell from 25 107 to 11 182,¹ a fall of 55%. By contrast in E&W, notified TB cases rose from 5104 in 1993^{2 3} to 7901 in 2010,⁴ an increase of 55%.

Case management is not the explanation for the difference, as both countries use rifampicin and isoniazid based 6-month short course chemotherapy, with high completion rates, 92.7% for the USA¹ and 83.6% of survivors in E&W.⁴ Equally, different BCG policies do not account for the difference as the USA has never used BCG as a health control measure.

Both countries now have a majority of TB cases in foreign-born individuals. In the USA, in 2010, 60% of all cases were foreign born, with a rate of 18.1/100 000 for this group. They were predominantly Hispanic and Latin American, and from the Phillipines, with only 9% from India and only 1% from sub-Saharan Africa.¹ By contrast in E&W, 73% of cases were non-UK born, with 55% from South Asia (Pakistani rate 132/1 000 000; Indian rate 151/1 000 000), and 26% from Sub-Saharan Africa (rate 165/100 000), with only 23% of cases diagnosed within 2 years of initial entry.⁴ So both countries have a majority of cases in foreign born sub-populations, with those from E&W from different and even higher incidence countries. This of itself does not explain the divergence in trends, but differences in

the management of new entrants, particularly in the diagnosis and treatment of latent TB Infection (LTBI) probably does.

The USA has had quite rigorous guidelines on the diagnosis and treatment of LTBI, in both recent entrants and other risk groups for many years,⁵ recently updated to include Interferon-Gamma Release Assays (IGRA).⁶ By contrast in E&W although treatment of LTBI in children was mandatory, in young adult new entrants, this was discretionary from 1984 onwards.^{7 8} In 2006, with the switch to NICE guidance, this although showing on economic appraisal that treatment of LTBI was cost-beneficial if the incidence of LTBI was at 8% in a cohort, mainly because of the absence of data, limited new entrant screening age 16–34 for LTBI, to those from Sub-Saharan Africa, and other countries with an incidence of 500/100 000pa or more,⁹ which excluded the significant proportion of E&W new entrants from South Asia.

In 2010, more rational new entrant screening was advocated,¹⁰ this and early data on the near 30% IGRA positive rate for new entrants predominantly from South Asia,¹¹ were taken into account in a further revision of NICE guidance, with emphasis on the use of IGRA tests. This led to revised NICE recommendations in 2011,¹² which reduced the threshold for new entrant screening to all countries with an incidence of 40/100 000pa or more, thus covering the main ethnic new entrant groups seen,⁴ while also confirming support on health economic grounds. The paper by Parikh *et al*¹³ in this edition, provides further significant evidence supporting programmatic screening for, and treatment of LTBI in new entrants to the UK from high TB prevalence countries, whilst also questioning whether the threshold of 40/100 000 currently advised¹² is economically appropriate. Additional data of this type should

allow refinement of the screening for LTBI to maximum efficacy and coverage.

Those involved in UK TB strategy believe that only implementation of much wider, effective and consistently applied screening for, and treatment of LTBI will change our current rising TB trend, into a persistent downward trend like the USA. The next challenge however will be ensuring that contracting and commissioning of TB services, ensures that the funding and staffing of such TB services is sufficient for its systematic implementation.^{14 15}

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