

Post-migration follow-up of migrants at risk of tuberculosis

Lancet Infectious Diseases 2017; 17(11): 1124. [http://dx.doi.org/10.1016/S1473-3099\(17\)30567-4](http://dx.doi.org/10.1016/S1473-3099(17)30567-4)

In recent Correspondence about the screening and treatment of latent tuberculosis infection in migrants who had moved from countries with a high tuberculosis burden to low-burden countries, Kayvan Bozorgmehr¹ reported that asylum seekers in Germany from Somalia and Iraq had very different prevalences of latent infection. He commented that “Many studies on effectiveness of tuberculosis screening treat migrants as homogenous, neglecting that this population is socially constructed and highly heterogeneous”, citing our study² as one of the examples.

In fact, we did not treat our study cohort as homogeneous: we presented analysis considering age, sex, visa category (students, settlement and dependants, work, working holiday, family reunion, other), and tuberculosis prevalence of the country of origin, and found that there were significant differences in tuberculosis risk associated with the last two variables.² This complements earlier work on the yield of latent tuberculosis infection screening in England,^{3,4} which informed the new national screening programme in England.

We agree with Bozorgmehr that collection of detailed data is important “to develop and assess screening programmes that account for the heterogeneity in migrant populations”.¹ We would like to highlight that in addition to latent tuberculosis infection prevalence in different migrant groups, several other important considerations are related to the effectiveness, cost-effectiveness, and equity³⁻⁵ of tuberculosis control programmes for migrants. Addressing them requires detailed data from programmes,⁶ including data linkage between pre-entry screening programmes,⁷ post-migration latent tuberculosis infection screening and treatment programmes, and surveillance of active tuberculosis diagnoses.

Programmes need to ensure access to screening, promote treatment uptake in patients with diagnosed latent tuberculosis infection, and provide effective support for adherence to treatment, in ways that are culturally sensitive and cost-effective.

Uncertainty in the effectiveness of latent tuberculosis infection treatment regimens⁸ causes uncertainty in the expected impact and cost-effectiveness of screening and treatment programmes. Record linkage of large, detailed datasets from such screening programmes and surveillance of active tuberculosis diagnoses will be essential for assessing and optimising the impact of the programmes. Finally, it is important to monitor the epidemiology of tuberculosis and the performance of control programmes at the local level to ensure appropriate allocation of resources and equitable access to care.⁵

1 Bozorgmehr K. Post-migration follow-up of migrants at risk of tuberculosis. *Lancet Infect Dis* 2017; 17: 692.

2 Aldridge RW, Zenner D, White PJ, et al. Tuberculosis in migrants moving from high-incidence to low-incidence countries: a population-based cohort study of 519 955 migrants screened before entry to England, Wales, and Northern Ireland. *Lancet* 2016; 388: 2510–18.

3 Pareek M, Watson JP, Ormerod LP, et al. Screening of immigrants in the UK for imported latent tuberculosis: a multicentre cohort study and cost-effectiveness analysis. *Lancet Infect Dis* 2011; 11: 435–44.

4 Pareek M, Bond M, Shorey J, et al. Community-based evaluation of immigrant tuberculosis screening using interferon gamma release assays and tuberculin skin testing: observational study and economic analysis. *Thorax* 2013; 68: 230–39.

5 Pareek M, Abubakar I, White PJ, et al. TB screening of migrants to low TB burden nations: insights from evaluation of UK practice. *Eur Resp J* 2011; 37: 1175–82.

6 White PJ, Abubakar I. Improving control of tuberculosis in low-burden countries: insights from mathematical modeling. *Front Microbiol* 2016; 7: 394.

7 Aldridge RW, Zenner D, White PJ, et al. Prevalence and risk factors for active tuberculosis in migrants screened before entry to the UK: a population-based cross-sectional study. *Lancet Infect Dis* 2016; 16: 962–70.

8 Zenner D, Beer N, Harris RJ, Lipman MC, Stagg HR, van der Werf MJ. Treatment of latent tuberculosis infection: an updated network meta-analysis. *Ann Int Med* 2017; 167: 248–255.

Peter J White^{1,2}, Ibrahim Abubakar^{3,4}, Robert W Aldridge^{3,5}, Andrew C Hayward⁵

¹MRC Centre for Outbreak Analysis and Modelling, NIHR Health Protection Research Unit in Modelling Methodology, and Department of Infectious Disease Epidemiology, Imperial College London, London W2 1PG, UK

²Modelling and Economics Unit, National Infection Service, Public Health England, London, UK

³Institute for Global Health, University College London, London, UK

⁴Medical Directorate, Public Health England, London, UK

⁵Institute of Epidemiology and Health Care, University College London, London, UK

PJW has received research funding from Otsuka SA for a retrospective study of multidrug-resistant tuberculosis treatment in several eastern European countries. IA and ACH co-chaired the National Institute for Health and Care Excellence tuberculosis guideline development group, which considered evidence on testing and treatment of latent tuberculosis in migrant groups. RWA declares no competing interests. PJW thanks the UK National Institute for Health Research (NIHR) Health Protection Research Unit in Modelling Methodology at Imperial College London, in partnership with Public Health England (HPRU-2012-10080) and the Medical Research Council (MR/K010174/1) for funding. IA was supported by the NIHR, the Department of Health Policy Research Programme (015/0307), and the Medical Research Council. RWA thanks the Wellcome Trust for funding a research training fellowship (097980/Z/11/Z) and the NIHR for funding an academic clinical lectureship. ACH is supported by funds from the NIHR. The views expressed are those of the authors and not necessarily those of the Department of Health, Medical Research Council, NHS, NIHR, Public Health England, or Wellcome Trust.