Tackling tuberculosis in migrants

Arturo Rodriguez/AP/Press Association Images

Lancet Infect Dis 2016

Published Online
March 21, 2016
http://dx.doi.org/10.1016/S1473-3099(16)00148-1

See Online/Articles
http://dx.doi.org/10.1016/S1473-3099(16)00072-4

In *The Lancet Infectious Diseases*, Robert Aldridge and colleagues[1] report findings from the UK migrant screening programme for tuberculosis, in which visa applicants are screened for tuberculosis before migration. This pre-migration screening covers people who are applying to travel to the UK with an intention to stay for more than 6 months and come from a country with a high incidence of tuberculosis. People intending to migrate to the UK are required to report to a clinic that has been approved by the Home Office, and are then examined with chest radiography to exclude tuberculosis. Individuals identified with tuberculosis by the screening process will be given a visa only after completion of tuberculosis treatment, when they cease to be infectious, which lowers the risk for onward transmission in the UK. Such programmes are used to replace on-arrival screening. Migrants cover the costs of testing and treatment and, therefore, the host country can save health-care costs. Given these advantages, why shouldn't all European countries implement pre-entry tuberculosis screening?[2]

First of all, pre-entry screening only covers regular planned migration; asylum seekers and irregular migrants are not included. Thus a pre-entry screening programme will need to be complemented by other measures to control tuberculosis in migrant groups that are not targeted by the programme, and it is, therefore, not the ultimate solution. Indeed, an important limitation of Aldridge and colleagues' study,[1] acknowledged by the authors, is that it did not include undocumented migrants. The recent influx of irregular migrants and those applying for refugee status into the European Union raises an urgent question about infectious disease screening in this population, which cannot be addressed with pre-entry screening. In fact, compulsory pre-entry screening might provide incentive for irregular migration.

Also, migrants coming from countries with a tuberculosis incidence below a prespecified threshold are not screened. In Aldridge and colleagues's study,[1] individuals had to undergo pre-entry screening if the WHO-estimated tuberculosis incidence exceeded 40 per 100 000 in their country of origin. The incidence rate cutoff that determines whether an individual needs to be screened seems to be an arbitrary choice. High-income countries vary in the choice of tuberculosis incidence rate in the migrants' country of origin that they use to define target groups for screening (eg, from >15 cases per 100 000, to >40, >50, or >100 cases per 100 000).[2] The question arises as to what criteria—eg, the yield of screening, its cost-effectiveness—should be used to set such threshold values. Whatever the choice of cutoff rate, tuberculosis cases will occur in migrants who are not subjected to screening.

Second, no type of screening programme for active tuberculosis precludes the occurrence of tuberculosis afterwards. Country level data show that in an important proportion of tuberculosis cases in migrants, tuberculosis is diagnosed more than 2 years after entry into the country.[3,4] This finding could be due to reactivation of latent tuberculosis infection, or transmission in the host country. Also, chest radiography is not a perfect screening method, and a proportion of tuberculosis cases will not be identified during the screening process.

Finally, published information about cost-effectiveness of pre-entry screening is scarce.[5] Potential overall savings might be a result of shifting the screening (and treatment) costs to the country of origin. Whether this is a cost-effective strategy depends on the perspective taken—ie, a country or global perspective, or health sector or societal perspective.

We believe that tuberculosis in migrants needs attention if the goal of tuberculosis elimination is to be reached.[6,7] Pre-entry screening programmes can be a useful component of a tuberculosis elimination strategy and can add to the control of tuberculosis in migrants; however, they do not cover all types of migrant populations, and tuberculosis will occur after screening. Therefore, as emphasised in a recent publication by the European Centre for Disease Prevention and Control, priority should be given to ensuring that health-care services are accessible and responsive to the needs of all, including migrants, so that they can ensure early diagnosis and treatment of incident tuberculosis in migrants[6,8] and other potentially susceptible groups. This view is also advocated by the 2015–20 Collaborative Tuberculosis Strategy for England,[9] which includes not only coordination of pre-entry screening, but also a strong focus on improving access to services and ensuring early diagnosis.

Marieke J van der Werf, Piotr Kramarz
European Centre for Disease Prevention and Control, Stockholm, 171 65 Solna, Sweden
marieke.vanderwerf@ecdc.europa.eu

We declare no competing interests.

1 Aldridge RW, Zenner D, White PJ, et al. Prevalence of and risk factors for active tuberculosis in migrants screened before entry to the UK: a population-based cross-sectional study. *Lancet Infect Dis* 2016; published online March 21. http://dx.doi.org/10.1016/S1473-3099(16)00072-4.

2 Pareek M, Baussano I, Abubakar I, Dye C, Lalvani A. Evaluation of immigrant tuberculosis screening in industrialized countries. *Emerg Infect Dis* 2012; **18:** 1422–29.

3 Vos AM, Meima A, Verver S, et al. High incidence of pulmonary tuberculosis persists a decade after immigration, The Netherlands. *Emerg Infect Dis* 2004; **10:** 736–39.

4 Zuber PL, McKenna MT, Binkin NJ, Onorato IM, Castro KG. Long-term risk of tuberculosis among foreign-born persons in the United States. *JAMA* 1997; **278:** 304–07.

5 Dasgupta K, Schwartzman K, Marchand R, Tennenbaum TN, Brassard P, Menzies D. Comparison of cost-effectiveness of tuberculosis screening of close contacts and foreign-born populations. *Am J Respir Crit Care Med* 2000; **162:** 2079–86.

6 Lonnroth K, Migliori GB, Abubakar I, et al. Towards tuberculosis elimination: an action framework for low-incidence countries. *Eur Respir J* 2015; **45:** 928–52.

7 European Centre for Disease Prevention and Control. Framework action plan to fight tuberculosis in the European Union. Stockholm: European Centre for Disease Prevention and Control, 2008.

8 Semenza JC, Carrillo-Santisteve P, Herve Zeller H, et al. Public health needs of migrants, refugees and asylum seekers in Europe, 2015: infectious disease aspects. *Eur J Public Health* (in press).

9 Public Health England, National Health Service England. Collaborative tuberculosis strategy for England: 2015 to 2020. London: Public Health England, 2015.