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Latent Tuberculosis Infection among Foreign-Born Persons: A Prioritized Approach

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To the Editor:

We thank Dr. Griffith for his insightful commentary (1) on our recent analysis (2) and would like to address and expand on his remarks. More than two-thirds of all tuberculosis cases in the United States are among foreign-born persons, and it is estimated that most tuberculosis cases among these individuals are a result of the reactivation of latent tuberculosis infection. Testing and treatment of latent tuberculosis infection is a key strategy of tuberculosis prevention, and national guidelines are currently being jointly updated as part of a collaborative effort among the Centers for Disease Control and Prevention, the American Thoracic Society, and the Infectious Diseases Society of America.

The findings of our analysis and those of a recently published study (3) support Griffith's proposal to remove the variable "years since United States entry" as a criterion for testing and treatment of foreign-born persons. Griffith speculates that "reluctance to change this recommendation is due to concern about drug toxicity in older individuals" and suggests that limiting testing and treatment to those younger than 35 years might minimize concerns about drug toxicity. However, an examination of American Community Survey estimates from 2010 shows that among the 10.2 million Mexico-born persons living in the United States for more than 5 years, 6.3 million (65%) were aged 35 years or older (4). Therefore, if an age cutoff of younger than 35 years were adopted, it would greatly limit the potential effect of testing and treatment on tuberculosis morbidity among Mexico-born persons.

Since 2000, national guidelines have recommended testing and treatment of high-risk persons irrespective of age (5). Moreover, several evolving factors during the last decade have further increased the benefits of testing and treatment of older foreign-born persons, including more specific tests (e.g., IFN- γ release assays), less hepatotoxic treatment regimens (e.g., rifampin for 4 mo, isoniazid and rifapentine for 3 mo) with higher completion rates, and elevated mortality among older persons with tuberculosis. In addition, among older persons found to have latent tuberculosis infection, a higher prevalence of risk

factors for reactivation (e.g., end-stage renal disease, diabetes mellitus) and a higher annual risk for reactivation both favor testing and treatment. Although an age cutoff may be tempting to reduce the size of the foreign-born population requiring testing, any proposal to restrict testing and treatment of older persons should be carefully examined by a thorough evaluation study and a cost-effectiveness analysis addressing the effect of these evolving parameters.

A previous analysis found that testing all foreign-born persons regardless of age or years since U.S. entry, and treating all those found to be latently infected, would be cost-effective (6). However, expanding testing and treatment to all Mexico-born persons (or all foreign-born persons) would be an enormous undertaking. Among the 40.0 million foreign-born persons living in the United States, an estimated 7.5 million are latently infected with *Mycobacterium tuberculosis* (4, 7). Although the expansion of health coverage resulting from the Affordable Care Act might enable substantial scale-up of testing and treatment in primary care settings, testing and treatment of all foreign-born persons will still likely not be feasible, particularly in jurisdictions with a large foreign-born population.

Current national guidelines still recommend years since U.S. entry as a tool to prioritize testing and treatment of foreign-born persons (5). Removing this criterion (as Griffith has suggested) will leave a prioritization vacuum in practice for providers. Although national guidelines do provide an extensive list of risk factors for reactivation, there is no recommended strategy to prioritize foreign-born persons with specific risk factors. As a result, there is an urgent need to identify a practical, prioritized public health approach to latent tuberculosis infection among foreign-born persons. Instead of years since U.S. entry (or age), it would be useful to examine the cost-effectiveness of targeting foreign-born persons with specific risk factors for reactivation. The results of such an analysis could be used to prioritize subpopulations of foreign-born persons for testing and treatment.

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