

Study helps identify which populations of foreign-born persons living in US at higher risk of TB

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The relative yield of finding and treating latent tuberculosis is particularly high among higher-risk groups of foreign-born persons living in the U.S., such as individuals from most countries of sub-Saharan Africa and Southeast Asia, according to a study in the July 23/30 issue of *JAMA*.

"From 1993 to 2006, the number of tuberculosis (TB) cases in the United States decreased by 45 percent, from 25,107 to 13,779. This decline has occurred disproportionately among the U.S.-born population, for whom the number of cases has declined by 66 percent, while the number of TB cases among foreign-born persons in the United States increased by 5 percent," the authors write. "In 2006, 57 percent of all reported TB cases were among foreign-born persons." They add that current TB control strategies have not sufficiently addressed the high levels of TB disease and latent TB infection (LTBI; TB that is not active, or infectious) in this population.

Kevin P. Cain, M.D., of the Centers for Disease Control and Prevention, Atlanta, and colleagues conducted a study to examine which populations of foreign-born persons in the U.S. are at higher risk of TB and drug-resistant TB. The researchers analyzed data of foreign-born persons in the United States diagnosed with TB from 2001 through 2006.

A total of 46,970 cases of TB disease were reported among foreign-born

persons in the U.S. from 2001 through 2006, of which 12,928 (28 percent) were among recent entrants (within 2 years of U.S. entry). Among the foreign-born population overall, TB case rates declined with increasing time since U.S. entry, but remained higher than among U.S.-born persons (more than four times higher in 2006), even more than 20 years after arrival. An average of 4,035 TB cases per year were reported among individuals born in high-risk countries (populations with annual case rates of 100 or greater per 100,000 persons among recent entrants).

Among recent entrants who were culture-positive for TB, isoniazid (antibacterial drug used to treat TB) resistance was found in 20 percent from Vietnam, 18 percent from Peru, 17 percent from the Philippines and 16 percent from China.

Individuals born in most countries of sub-Saharan Africa had annual case rates of greater than 250 per 100,000 persons during the first 2 years after U.S. entry, while individuals born in Central America, Eastern Europe, the Pacific Islands, and South, East, and Central Asia had annual case rates of greater than 100 per 100,000 persons in the first 2 years. On average, 250 individuals per year were diagnosed with smear-negative, culture-positive TB disease within 3 months of U.S. entry; 46 percent of these were from the Philippines or Vietnam.

"With more than 37 million foreign-born persons currently living in the United States, it is not possible to find and test all foreign-born persons for LTBI. This study assists in targeting LTBI screening efforts by examining risk of TB disease among subgroups of foreign-born populations. Finding and treating LTBI among some specific groups of foreign-born persons living in the United States is likely to provide high yield relative to some other TB control strategies. Given current immigration patterns, the impact of culture-enhanced overseas screening of immigrants and refugees is likely be greatest in the Philippines and

Vietnam, but may have limited yield for most other countries of birth," the authors write.

"Current strategies for TB control, as presently implemented, are not adequate for achieving TB elimination in the near future. TB control and elimination among foreign-born persons in the United States will require a multifaceted approach. In the future, preventing TB disease among legal immigrants to the United States might best be accomplished through overseas diagnosis and treatment of LTBI prior to immigration. The present use of a 9-month regimen for LTBI treatment makes this strategy impractical. This strategy may be both feasible and high yield when shorter, effective treatment regimens for LTBI become available. Increased investment in global TB control could also result in decreases in U.S. TB rates."

Source: JAMA and Archives Journals

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