TB Rates at All-Time Low, But the Decline Has Slowed

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The U.S. tuberculosis rate hit an all-time low in 2006, but the rate of decline has been slowing while drug-resistant cases continue to pose a threat, the Centers for Disease Control and Prevention said.

In 2006, 13,767 TB cases were reported, a rate of 4.6 per 100,000 population. That represents a 3.2% decline from the 2005 rate, the lowest recorded since reporting began in 1953. However, the rate of decline has slowed in recent years: The average annual percentage decline in the TB incidence rate was 7.3% a year during 1993-2000, but the rate of decline dropped to just 3.8% a year during 2000-2006, the CDC said (MMWR 2007;56:245-50).

In 2006, the rate of TB infection in individuals who were born outside of the United States was 9.5 times that of those who were born in the country.

Foreign-born individuals and racial/ethnic minority populations remain disproportionately affected by TB in the United States. In 2006, the TB rate in individuals born outside the United States was 9.5 times that of those born in the country; rates in blacks, Asians, and Hispanics were 8.4, 21.2, and 7.6 times higher than in whites, respectively.

The proportion of TB cases among foreign-born individuals has increased each year since 1993. In 2006, 56% of those cases were from just five countries: Mexico, the Philippines, Vietnam, India, and China. Most of the foreign-born individuals in the United States who progress from latent TB infection to TB disease initially became infected while abroad. Thus, "if the global TB pandemic remains unmitigated, eliminating TB in the United States will be increasingly difficult," the CDC said.

A total of 124 cases of multidrug-resistant TB (MDR TB) were reported in 2005, the most recent year for which complete drug susceptibility data are available. The proportion of MDR TB cases—defined as resistance to at least two first-line therapies, isoniazid and rifampin—remained constant at 1.2% from 2004 to 2005. In 2005, foreign-born individuals accounted for 81.5% of the 124 MDR TB cases, the CDC said.

The number of extensively drug-resistant TB (XDR TB) cases didn't change substantially from 1993-1999 to 2000-2006, but the characteristics of cases shifted in parallel with the changing epidemiology of TB in general and of MDR TB in particular. During 1993-1999, 32 reported cases met the criteria for XDR TB (resistance to isoniazid and rifampin, and to any second-line fluoroquinolone and at least one injectable drug), compared with 17 during 2000-2006 (MMWR 2007;56:250-3).

As with the overall TB rates, the overall numbers declined while the proportion among foreign-born individuals rose, from 39% in the first period to 76% in the second. Other changes in XDR TB epidemiology included a decrease in the proportion of cases among HIV-infected individuals and an increase in the proportion of patients who are Asian, they said.

Effective treatment of MDR TB requires administration for 18-24 months of 4-6 drugs to which the infecting organism is susceptible, including multiple second-line drugs. Beginning in the 1980s, the use of second-line drugs increased substantially as physicians and TB control programs treated growing numbers of MDR TB cases. Increased use of these drugs resulted in MDR TB strains with extensive resistance to both first- and second-line drugs, the CDC said.

Some progress has been made on new drugs in the past year, with human testing currently being conducted with six agents in five different drug classes. The CDC's TB Trials Consortium, in collaboration with the Global Alliance for TB Drug Development, has completed two preliminary trials with moxifloxacin. Those studies are expected to lay the groundwork for a trial of a treatment-shortening regimen for TB. The consortium is also nearing completion of a trial of a 3-month rifapentine-based treatment for latent TB infection. ■