

Executive Commentary

Highlights of 2004 Report

Since 1953, through the cooperation of state and local health departments, CDC has collected information on the numbers of newly reported cases of TB disease in the United States. Currently, each individual TB case report (Report of Verified Case of Tuberculosis, or RVCT) is submitted electronically to CDC and DTBE. The highlights of the 2004 report include

1. Updated case counts for each year from 1993 through 2003
2. Change in case rates now calculated using unrounded figures
 - 14,517 TB cases were reported to CDC from the 50 states and the District of Columbia, representing a 2.3% decrease from 2003
 - o 19 states reported increases in case counts (Table 28)
 - o California, New York, and Texas, accounted for 42% of the overall 2004 national case total (Table 28)
 - o For the first time, Hispanics (29%) exceeded non-Hispanic blacks (28%) as the racial/ethnic group with the largest percentage of all cases (Table 2)
 - o U.S.-born blacks represented 45% of TB cases in U.S.-born persons and more than one fifth of all cases (Tables 17, 18)
 - The TB case rate declined to 4.9 per 100,000 population (Table 28)
 - o 12 states and DC reported rates above the national average (Table 20)
 - o 24 states met the definition for low incidence (≤ 3.5 cases per 100,000 population) (Table 20)
 - o The TB case rate was 2.6 per 100,000 for U.S.-born persons and 22.8 for foreign-born persons (Table 5)
 - o Asians and Native Hawaiians or Other Pacific Islanders continue to have the highest case rate among all racial and ethnic groups (Table 2)
 - The proportion of all cases occurring in foreign-born persons was 54% (Table 5)
 - o 22 states had $\geq 50\%$ of total cases among foreign-born persons (Table 23)
 - o 6 states had $\geq 70\%$ of total cases among foreign-born persons (Table 23)
 - o The top five countries of origin of foreign-born persons with TB were Mexico, the Philippines, Viet Nam, India, and China (Table 6)
 - The proportion of cases with primary multidrug-resistant TB remained approximately 1.0%

Tuberculosis in the United States

During 2004, the total of 14,517 TB cases reported to CDC represented a 2.3% decrease from 2003 and a 46% decrease from 1992, when the number of cases and case rate most recently peaked during a resurgence in the United States. The TB case rate in 2004 declined to 4.9 per 100,000 (Table 28). The decline in 2003 (1.4%) was the smallest yearly decline since 1992.

Tuberculosis deaths decreased 10% in 2003 (the most recent year for which data were available) to 704. The 784 TB deaths in 2002 represented the first increase in TB deaths in the United States since 1989 (Table 1).

In 2004, the proportion of total cases occurring in foreign-born persons was 54%, constituting a majority of cases for the third consecutive year. In addition, the case rate among foreign-born persons was more than eight times higher than among U.S.-born persons (Table 5).

Essential elements for controlling TB in the United States include sufficient local resources, interventions targeted to populations with the highest TB rates, and continued collaborative efforts with other nations to reduce TB globally.¹

Age, Race, and Ethnicity

TB case rates, which have been declining since 1993, varied by factors such as age, race/ethnicity, and country of origin. The largest declines occurred in children under 15 years of age (from 2.9 per 100,000 in 1993 to 1.6 in 2004), as well as in adults aged 25 to 44 years (from 11.5 to 5.9), 45 to 64 years (from 12.4 to 5.9), and 65 years and older (from 17.7 to 7.8), each group's rate having decreased approximately 50%. The case rate declined by 25% in those 15 to 24 years of age (from 5.0 to 3.8) (Table 4).

In 2004, Asians and Pacific Islanders had the highest TB rate, 27.2, which was down from 44.1 per 100,000 in 1993. The race category Asian was first reported in 2003; from 1993 to 2002 the category was reported as Asian or Pacific Islander). Asians and Pacific Islanders also had the lowest percentage decline over the decade (38%). Rates declined approximately 50% or more over the decade in the other racial/ethnic groups: among non-Hispanic blacks from 28.5 in 1993 to 11.3 in 2004, among Hispanics from 19.9 to 10.1, among American Indians and Alaska Natives from 14.0 to 7.3, and among non-Hispanic whites from 3.6 to 1.3 (Table 2).

For the first time, the largest percentage of cases occurred in Hispanics (29%) rather than in non-Hispanic blacks (28%) (Table 2).

Two race categories were added to the RVCT in 2003, "Native Hawaiian or Other Pacific Islander and Multiple Race." In 2004, those in the first category, Native Hawaiian or Other Pacific Islander, had the second-highest TB case rate (16.3), and Multiple Race (cases for which two or more races were reported) had the lowest case rate (0.9) for only 34 cases.

Nativity

In 1993, 69% of reported cases were among U.S.-born persons (7.4 cases per 100,000) whereas 29% were in foreign-born persons (34.0 per 100,000). In comparison, in 2004, 54% of reported cases occurred among foreign-born persons, and the respective case rates were 2.6 per 100,000 for U.S.-born persons and 22.8 per 100,000 for foreign-born persons (Table 5).

During 2003–2004, the gap between the number of cases among U.S.- and foreign-born persons widened. Cases among persons born in the United States decreased by 3.0% (from 6,891 in 2003 to 6,683 in 2004). Among foreign-born persons, cases decreased by 1.3% (from 7,910 in 2003 to 7,806 in 2004) (Table 5).

The number of states that have $\geq 50\%$ of their annual total of reported TB cases among foreign-born persons increased from five in 1993 to 22 in 2004, a decrease from 24 states in 2003. Of the 22 states in 2004, six (California, Hawaii, Massachusetts, Minnesota, Nebraska, and New Hampshire) had $\geq 70\%$ of their annual total of cases among foreign-born persons, a decrease from 11 states in 2003² (Table 23).

Country of Origin and World Region

From 2000 through 2004, the top five countries of origin of foreign-born persons with TB were Mexico, the Philippines, Viet Nam, India, and China (Table 6). However, fluxes in immigration patterns are leading to changes in the distribution of TB cases by global region of origin.³ In 2004, of the 7,806 cases of TB in foreign-born persons, 45% occurred among persons from the Americas (Central and South America or the Caribbean), and 29% were in persons from the Western Pacific. During 1993 through 2004, the proportion of cases increased among persons from the Eastern Mediterranean (3% in 1993 and 5% in 2004) and almost doubled among persons from Southeast Asia (6% in 1993 and 10% in 2004), while the proportion of cases among persons from Africa quadrupled (2% in 1993 and 8% in 2004) (Table 19).

Multidrug-Resistant TB

Since 1993, when the case report was expanded to include drug-susceptibility results, the proportion of patients with primary MDR TB (no previous TB and multidrug-resistant, defined as resistance to at least isoniazid and rifampin) has decreased from 2.5% to approximately 1.0%. In 2004, the rate remained 1% but the number of overall MDR TB cases increased to 101. Of these 101 cases, 27 were among U.S.-born persons. Since 2000, the percentage of U.S.-born persons with MDR TB has remained at approximately 0.6%. However, of the total number of reported primary MDR TB cases, the

proportion occurring in foreign-born persons increased from 26% (105 of 410) in 1993 to 73% (74 of 101) in 2004 (Table 10).

Tuberculosis Therapy

The proportion of TB patients placed on an initial treatment regimen of three or more drugs increased during 1993 through 2004 (Table 12). The proportions of patients who completed treatment within 1 year, and of persons who were treated with directly observed therapy (at least for a portion of treatment), also increased from 1993 through 2002, the latest year with available outcome data (Table 12).

Summary

During 1993 through 2004, TB case rates in the United States decreased for U.S.-born and foreign-born persons; however, the decrease among foreign-born persons was less substantial. Despite the decreased case rate among foreign-born persons, more than half of the TB cases in the United States in 2004 occurred in this population, and the case rate was more than eight times greater in this population than among U.S.-born persons. To address the high rate, CDC is collaborating with other national and international public health organizations to 1) improve overseas screening of immigrants and refugees by systematically monitoring and evaluating the screening process; 2) strengthen the current notification system that alerts local health departments about the arrival of immigrants or refugees who have suspected TB to enhance the evaluation and treatment of such persons; 3) improve coordination of TB control activities between the United States and Mexico to ensure completion of treatment among TB patients who cross the border; 4) test recent arrivals from high-incidence countries for latent TB infection and treat them to completion; and 5) survey foreign-born TB patients in the United States to determine opportunities for improving prevention and control interventions. In addition, CDC continues to strengthen

collaborations with international partners, including the Stop TB Partnership of the World Health Organization, to improve TB control in high-incidence countries.¹

Accelerating progress in national TB elimination activities, however, will require broader prevention efforts in other population risk groups such as African or Asian Americans, persons living with HIV, and persons living in poverty with limited access to medical care and adequate housing and nutrition.

In addition, low-incidence areas in the United States need continued support to ensure they maintain the capacity and expertise needed to respond to cases when they occur.⁴ CDC has recently updated its comprehensive national action plan to reflect the alignment of its priorities with the 2000 Institute of Medicine report on TB⁵ and to ensure that priority prevention activities are undertaken with optimal collaboration and coordination among national and international public health partners.⁶

References

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