Executive Commentary

Highlights of 2005 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's DTBE. The highlights of the 2005 report include

1. Updated case counts for each year from 1993 through 2004
2. Change in calculation of case rates for 2005 using unrounded figures
3. A new section of the report that was created this year contains information on U.S.-affiliated Pacific Island jurisdictions.
4. Case counts: 14,097 TB cases were reported to CDC from the 50 states and the District of Columbia, representing a 2.9% decrease from 2004
    - 20 states reported increases in case counts (Table 28)
    - California, New York, Texas, and Florida accounted for 48% of the overall 2005 national case total (Table 28)
    - For the second consecutive year, Hispanics (29%) exceeded non-Hispanic blacks (28%) as the racial/ethnic group with the largest percentage of total cases (Table 2)
    - Blacks or African-Americans represented 45% of TB cases in U.S.-born persons and accounted for more than one fifth of the overall national case total (Tables 17, 18)
    - Hispanics and Asians each represented 40% of TB cases in foreign-born persons and together accounted for almost 45% of the overall national case total (Tables 17, 18)
5. Case rates: The TB case rate declined from 4.9 to 4.8 per 100,000 population, representing a 3.8% decrease from 2004
    - 12 states and DC reported rates above the national average (Table 20)
    - 26 states met the definition for low incidence (≤3.5 cases per 100,000 population) (Table 20)
    - The TB case rate was 2.5 per 100,000 for U.S.-born persons and 21.9 for foreign-born persons (Table 5)
    - Asians and Native Hawaiians or Other Pacific Islanders continue to have the highest case rate among all racial and ethnic groups (Table 2)
6. Burden in the foreign-born: The proportion of all cases occurring in foreign-born persons was 55%
    - 22 states had ≥50% of total cases among foreign-born persons (Table 23)
    - 6 states had ≥70% of total cases among foreign-born persons (Table 23)
    - The top five countries of origin of foreign-born persons with TB were Mexico, the Philippines, Vietnam, India, and China (Table 6)
7. Drug resistance: The proportion of cases with primary multidrug-resistant TB remained approximately 1.0% (Table 10)

Tuberculosis in the United States

The 14,097 TB cases reported to CDC for 2005 represented a 2.9% decrease from 2004 and a 47% decrease from 1992, when the number of cases and the case rate peaked during a resurgence in the United States. Compared with 2004, the TB case rate in 2005 declined 3.8% to 4.8 per 100,000. The decrease in the percent change of the annual case rate has slowed, from an annual average of 5.6% for 1993 through 2002 to an average of 3.1% for 2003 through 2005 (Table 1).

The proportion of total cases occurring in foreign-born persons has been increasing since 1993. In 2005, the proportion of total cases occurring in the foreign-born was 55%, constituting a majority of cases for the fourth consecutive year. Additionally, the case rate among foreign-born persons was more than eight times higher than among U.S.-born persons (Table 5).

Tuberculosis deaths decreased 6.9%, from 711 deaths in 2003 to 662 deaths in 2004. (Table 1).

Age and Race/Ethnicity

TB case rates, which have been declining since 1993, varied by factors such as age, race/ethnicity, and nativity. The largest declines occurred in children under 15 years of age (from 2.9 per 100,000 in 1993 to 1.4 in 2005), as well as in adults aged 25 to 44 years (from 11.5 to 5.6), 45 to 64 years (from 12.4 to 5.7), and 65 years and older (from 17.7 to 7.7), each group's rate having decreased approximately 50%. The case rate declined by 27% in those 15 to 24 years of age (from 5.0 to 3.7) (Table 4).

In 2003, the race/ethnicity category, "non-Hispanic, Asian or Pacific Islander," was split into two categories: "non-Hispanic Asian" and "non-Hispanic Native Hawaiian or Other Pacific Islander." In 2005, non-Hispanic Asians had the highest TB rate, 25.8 per 100,000, which was down from 29.6 in 2003; non-Hispanic native Hawaiians and other Pacific Islanders had the second-highest TB case rate (13.8), down from 16.4 in 2003 (Table 2).

TB rates declined at least 50% from 1993 through 2005 in the other racial/ethnic groups: among non-Hispanic whites from 3.6 to 1.3, among non-Hispanic blacks from 28.5 to 10.9, among Hispanics from 19.9 to 9.5, and among non-Hispanic American Indians and Alaska Natives from 13.9 to 6.9 (Table 2).

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 2005, 55% of reported cases occurred among foreign-born persons, and the respective case rates were 2.5 per 100,000 for U.S.-born persons and 21.9 per 100,000 for foreign-born persons (Table 5).

Cases among persons born in the United States decreased by 63%, from 17,422 in 1993 to 6,371 in 2005. However, among foreign-born persons, the annual case count has fluctuated between 7,404 and 7,989 during the same time period.

The number of states that have ≥50% of their annual total of reported TB cases among foreign-born persons increased from five in 1993 to 22 in 2005. Of these 22 states, six (California, Hawaii, Massachusetts, Minnesota, New Hampshire, and Utah) had ≥70% of their annual state case totals among foreign-born persons in 2005, a decrease from 11 states in 2003[1] (Table 23).

Country of Origin and World Region

From 2001 through 2005, the top five countries of origin of foreign-born persons with TB were Mexico, the Philippines, Vietnam, 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.[2] In 2005, of the 7,693 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 2005, the proportion of cases among persons from the Eastern Mediterranean increased (3% in 1993 and 5% in 2005) and almost doubled among persons from Southeast Asia (6% in 1993 and 11% in 2005), while the proportion of cases among persons from Africa more than tripled (2% in 1993 and 7% in 2005) (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 1.0%. Among the 95 MDR TB cases reported for 2005, 18 were in U.S.-born persons. Since 1998, the percentage of U.S.-born patients with MDR TB has remained ≤0.7%. 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 80% (76 of 95) in 2005 (Table 10).

Tuberculosis Therapy

The proportion of TB patients placed on an initial treatment regimen of three or more drugs increased during 1993 through 2005 (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 2003, the latest year for which complete outcome data are available (Table 12).

Summary

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.[3]

During 1993 through 2005, 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 2005 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.[3]

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 TB[5] and updated major TB guidelines.[5,6,7,8,9] These updates also ensure that priority prevention activities are undertaken with optimal collaboration and coordination among national and international public health partners.[10]

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