Executive Commentary

Since 1953, when CDC began conducting public health surveillance for TB in the United States, the TB case rate has declined tenfold from 53 cases per 100,000 to 5.6 per 100,000 in 2001 (Table 1). During 2001, a total of 15,989 cases (5.6 cases per 100,000 population) of TB were reported to CDC from the 50 states and the District of Columbia (DC), representing a 2% decrease from 2000 and a 40% decrease from 1992 when the number of cases and case rate most recently peaked in the United States. However, the case rate among foreign-born persons is now at least eight times higher than among U.S.-born persons (Table 4). To address the high rate, CDC is collaborating with public health partners to implement TB control initiatives among recent international arrivals and residents along the border between the United States and Mexico and to strengthen TB programs in countries with a high incidence of TB disease (1).

The declining numbers of TB cases and TB case rates during the last decade varied by factors such as age, race/ethnicity, and country of origin. The largest declines occurred in children under 15 years of age (from 3.0 per 100,000 in 1991 to 1.5 in 2001) and in adults aged 25 to 44 years (from 12.5 to 6.6), 45 to 64 years (from 13.5 to 7.2), and 65 years and older (from 19.1 to 9.1), each group having decreased approximately 50%. The case rate declined by approximately 25% in those 15 to 24 years of age (from 5.4 to 4.0), and the rate has remained at 4 per 100,000 for the past 4 years (Table 2). Asians and Pacific Islanders had the highest TB case rates, which declined from 44 per 100,000 in 1991 to 33 in 2001. Non-Hispanic blacks had the most substantial decline from 32 in 1991 to 14 in 2001 (Table 3).

In 1991, 73% of reported cases were among U.S.-born persons (8.2 cases per 100,000) while 27% were in foreign-born persons (33.9 per 100,000). In comparison in 2001, there was an equal distribution (50%) in the number of TB cases among these two groups; the respective case rates were 3.1 per 100,000 for U.S.-born persons and 26.6 for foreign-born persons (Table 4). The number of states with $\geq$50% of their annual total of reported TB cases among foreign-born persons increased from four in 1991 to 23 in 2001. Of these 23 states, California, Hawaii, Massachusetts, Minnesota, New Hampshire, Vermont, and Washington had $\geq$70% of their annual total of cases among foreign-born persons (Table 20).

During 1997 through 2001, the top five countries of origin of TB cases among foreign- born persons were Mexico, the Philippines, Vietnam, India, and China (Table 5). However, expected cycles in immigration patterns have led to changes in the distribution of TB cases by global region of origin (as designated by the World Health Organization [WHO]) (2). In 2001, of the 7,865 cases of TB in foreign-born persons, 42% occurred among persons from the Americas (Central and South America or the Caribbean), and 31% were in persons from the Western Pacific. These regions also had the largest number of cases in 1991 (48% and 37%, respectively). During 1991 through 2001, the number of cases approximately doubled among persons from the Eastern Mediterranean (2% in 1991 and 5% in 2001) and among persons from Southeast Asia (5% in 1991 and 11% in 2001), while the number of cases among persons from Africa more than tripled (2% in 1991 and 7% in 2001) (Table 16).

Since 1993, when the case report was expanded to include drug susceptibility results, the proportion of patients with MDR TB decreased from 3% to 1% in 2001. However, of the total number of reported MDR TB cases, the proportion occurring in foreign-born persons increased from 31% (150 of 482) in 1993 to 73% (101 of 138) in 2001 (Tables 8 and 9). The proportion of TB patients placed on a recommended initial treatment regimen (i.e., isoniazid, rifampin, pyrazinamide, and streptomycin or ethambutol [3]), increased during 1993 through 2001 (Table 10). 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 1999, the

latest year with available outcome data (Table 10).

During 1991 through 2001, 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. Decreases in the number and proportion of MDR TB cases also occurred. The overall improvement is consistent with the finding of an increasing proportion of patients receiving initial four drug regimens, completing treatment within 1 year, and being treated with directly observed therapy.

Despite the decreased case rate among foreign-born persons, half of the TB cases in the United States in 2001 occurred in this population, and the case rate was 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 developing systematic tools for monitoring and evaluating the screening process; 2) improve the current notification system that alerts local health departments about the arrival of immigrants or refugees with suspected TB to assist patients in obtaining a medical evaluation and, if necessary, in completing a course of recommended drugs; 3) improve coordination of and communication about TB control activities between the United States and Mexico to ensure completion of treatment among TB patients who cross the border; and 4) test recent arrivals from high-incidence countries for latent TB infection and ensure completion of treatment. In addition, CDC continues to strengthen collaborations with international partners, including the World Health Organization, to improve TB control in high-incidence countries.

Accelerating progress in national TB elimination activities, however, will require broader prevention efforts to evaluate and address unmet needs in other population risk groups such as 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 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 Institute of Medicine report (5) and to ensure that priority prevention activities are undertaken with optimal collaboration and coordination among national and international public health partners (6). Commitment and participation by CDC in efforts towards curtailing the global TB epidemic remains a critical component of the national plan.

References

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