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MMWR

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Epidemiologic Notes and Reports

ACQUISITIONS Tuberculosis, Final Data - United States, 1986

In 1986, 22,768 cases of tuberculosis (9.4/100,000 U.S. population) were reported to CDC. These data represent an increase of 2.6% in the number of reported cases, or 567 more than the 22,201 cases reported in 1985 (9.3/100,000 population). If the trend of decline observed between 1981 and 1984 had continued through 1986, 4,832 fewer cases would have been expected during the period 1985-1986 than were actually reported.

The number of reported cases of tuberculosis increased in 25 states and the District of Columbia. The largest increases occurred in New York (+357), New Jersey (+179), Michigan (+75), Arkansas (+63), Florida (+53), and North Carolina (+53). The largest increases in cities with a population of 250,000 or more were reported from New York City (+380), Detroit (+74), New Orleans (+29), Memphis (+27), and Jacksonville (+23).

From 1985 to 1986, the number of tuberculosis cases increased for all racial/ethnic groups except American Indians/Alaskan Natives (Table 1). The largest increases occurred among blacks (+367) and white Hispanics (+123). The 25- to 44-year age group had the most substantial increase in cases (+558). In this group, cases among blacks increased by 250 (from 2,943 to 3,193), or 8.5%; cases among non-Hispanic whites increased by 164 (from 1,520 to 1,684), or 10.8%; and cases among white Hispanics, by 151 (from 1,123 to 1,274), or 13.4%. Increases occurred among both males and females and among persons born in the United States and in foreign countries.

Reported by: Div of Tuberculosis Control, Center for Prevention Svcs, CDC.

Editorial Note: From 1963 to 1985, the incidence rate of tuberculosis in the United States declined an average of 5.9% annually. The average annual decline from 1981 to 1984 was 1,706 cases (6.7%). In contrast, the decrease from 1984 to 1985 was 54 cases (0.2%) (1). 1986 marks the first occurrence of a substantial increase in indigenous tuberculosis morbidity since 1953, the year when uniform national reporting was fully implemented. Previously, increases in the number of cases reported had been due either to changes in reporting criteria (1963 and 1975) or to a sudden influx of refugees from Kampuchea, Laos, and Vietnam (1980).

The most substantial increases in number of cases from 1985 to 1986 occurred among blacks, non-Hispanic whites, and white Hispanics in the 25- to 44-year age

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group. In contrast, the number of reported tuberculosis cases among children under 5 years of age decreased substantially. This age-specific variation in tuberculosis morbidity indirectly suggests that the recent increase in tuberculosis may be the result of endogenous reactivation of latent, subclinical tuberculous infection rather than of increased transmission.

The increase was greater in New York City than in any other locality. For the past several years, New York City has reported a large increase in tuberculosis among 25- to 44-year-old males that has coincided with the epidemic of acquired immunodeficiency syndrome (AIDS) (2). Matching of AIDS and tuberculosis cases on citywide registries revealed that 5% (261) of the first 4,892 adult and adolescent patients reported as having AIDS also had tuberculosis. For the majority of New York City patients, diagnosis of tuberculosis preceded the diagnosis of AIDS. Furthermore, when 58 male patients with tuberculosis in the 25- to 44-year age group were tested,

TABLE 1. Changes in the number of reported tuberculosis cases and the incidence rates (per 100,000 population), by patients' age, race/ethnicity, sex, and country of origin - United States, 1985 and 1986

Patient Characteristics	Tuberculosis Cases					
	1985		1986		Change	
	No.	Rate	No.	Rate	No.	(%)
Age (years)						
0-4	789	4.4	724	4.0	-65	(-8.2)
5-14	472	1.4	490	1.4	+18	(+3.8)
15-24	1,672	4.2	1,719	4.4	+47	(+2.8)
25-44	6,758	9.2	7,316	9.6	+558	(+8.3)
45-64	6,138	13.7	6,119	13.6	-19	(-0.3)
≥65	6,356	22.3	6,393	21.9	+37	(+0.6)
Unknown	16	-	7	-	-	-
Race/Ethnicity						
White, Non-Hispanic	8,453	4.5	8,539	4.6 *	+86	(+1.0)
White, Hispanic	3,032	17.5 †	3,155	17.7 †	+123	(+4.1)
Black‡	7,719	26.7	8,086	27.6	+367	(+4.8)
Asian/Pacific Islander§	2,530	49.6	2,572	50.4 *	+42	(+1.7)
American Indian/ Alaskan Native	397	25.0	335	21.1 *	-62	(-15.6)
Unknown	70	-	81	-	-	-
Sex						
Male	14,496	12.5	14,835	12.6	+339	(+2.3)
Female	7,704	6.3	7,933	6.4	+229	(+3.0)
Unknown	1	-	0	-	-	-
Country of Origin*						
United States	15,641	NA **	16,039	NA **	+398	(+2.5)
Puerto Rico	172	NA **	210	NA **	+38	(+22.1)
Foreign Countries	4,390	NA **	4,513	NA **	+123	(+2.8)
Total	22,201	9.3	22,768	9.4	+567	(+2.6)

*Based on 1985 population estimates.

†Based on total Hispanic population.

‡Includes Hispanics.

§Excludes cases among patients from Texas because that state did not report country of origin in 1985.

**NA = Not available.

Tuberculosis — Continued

53% (31) were positive for human immunodeficiency virus (HIV) antibody (New York City Department of Health, unpublished data).

In Florida, 10% (109) of the first 1,094 patients reported as having AIDS also had tuberculosis (3). The proportion of known AIDS patients with tuberculosis was 2% among non-Hispanic whites, 7% among Hispanics, 15% among blacks (excluding Haitians), and 29% among Haitians (4). In Dade County, Florida, 31% of the consecutively tested patients with tuberculosis were HIV positive (5).

Available data reinforce previous *MMWR* reports (2,3) and suggest that the number of patients known to have both tuberculosis and AIDS may represent only a small proportion of the patients with tuberculosis who are infected with HIV. HIV infection, when acquired by a patient with latent tuberculous infection, seems to allow the progression to overt clinical tuberculosis. Thus, HIV infection may be largely responsible for the increase in tuberculosis in New York City and Florida. Epidemiologic investigations and HIV seroprevalence surveys among patients with tuberculosis will enable investigators to determine the full extent to which HIV is responsible for the increase in tuberculosis morbidity.

Because increases in tuberculosis were also observed among foreign-born persons, Asians/Pacific Islanders, and females, factors other than HIV infection probably contributed to the increased morbidity in 1986. As reported previously, Hispanics and Asians/Pacific Islanders recently arriving in the United States are at high risk for tuberculosis. The number of these patients in younger age groups suggests that many cases among these populations are potentially preventable (6,7).

To reverse the current trend of increasing tuberculosis morbidity, both a more aggressive search for cases and the use of preventive therapy among high-risk populations will be necessary. Although all persons with tuberculous infection should be offered preventive therapy according to current guidelines (8), immigrants and refugees who have recently arrived from areas with a high prevalence of tuberculosis (6) and persons with HIV infection (9) should receive special attention.

Because HIV infection appears to be a significant risk factor for developing tuberculosis, CDC has recommended that HIV-infected individuals be given a tuberculin skin test (9). Although some HIV-infected persons may be anergic, a positive test is meaningful. Because of the risk of developing tuberculosis, HIV-infected persons who have or have had a positive tuberculin skin test should receive preventive therapy with isoniazid after active tuberculosis has been ruled out, regardless of their age. All patients with risk factors for tuberculosis and AIDS should be routinely counseled and tested for HIV antibody. HIV testing of other patients with tuberculosis should also be considered because of the implications of HIV seropositivity for patient management (9).

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Influenza Update – United States

Colorado. The first reported domestic outbreak of influenza in the United States for the 1987-88 season occurred in November among children attending a preschool in Colorado.* The index case occurred in a 3-1/2-year-old boy with a history of asthma. On November 12, he became febrile (38.8 °C [102 °F]) and had a cough. He was hospitalized on November 18 because his symptoms had become more severe. Influenza A(H3N2) was isolated from a culture collected on the patient's admission to the hospital. The child's condition improved, and he was discharged on November 20. Further investigation revealed that an outbreak of influenza-like illness had occurred among the child's preschool classmates during the first 2 weeks of November. The outbreak peaked on November 12, when 10 (67%) of the 15 children were absent. None of the other children were hospitalized. Surveillance in the surrounding community revealed no increase either in school absenteeism or in physician reports of outpatient visits for influenza-like illness.

Other reports. For the report week ending December 19, 3 states[†] reported regional activity of influenza-like illness. So far this season, influenza A(H3N2) has been the predominant strain. Ten states[‡] have now reported isolates of influenza A(H3N2) virus. Influenza A, subtype pending, has also been reported from Hawaii, Louisiana, Utah, and Washington. Sporadically occurring cases of influenza B were reported in Arizona during October and in Hawaii during October and November. One case of influenza B has been reported recently from Tennessee. There have been no reports of influenza A(H1N1) virus isolates so far this season.

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1. Centers for Disease Control. Outbreak of influenza-like illness in a tour group—Alaska. *MMWR* 1987;36:697-8,704.

*This represents the first reported domestic outbreak in the United States, although an outbreak of influenza-like illness among members of a tour group in Alaska was previously reported (1).

[†]Alabama, South Dakota, and Utah.

[‡]California, Colorado, Florida, Missouri, North Dakota, South Dakota, Texas, Tennessee, Wisconsin, and Wyoming.