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Tuberculosis Update**Morbidity Data**

During 1991, a total of 70 cases of tuberculosis (TB) disease were reported among Alaska residents--an incidence rate of 12.3 cases per 100,000 population. Alaska's rate was the eighth highest among the 50 states; the rate for the entire U.S. was 10.4. Alaska's case-rate has increased since 1988, during which a rate of 9.5 cases per 100,000 was recorded, but rates have remained below 15 cases per 100,000 since 1986 (Figure).

The mean age of the reported cases was 35.6 years (range: 6 weeks - 98 years). Forty-one (59%) were male. Fifty-six (80%) of the cases were Alaska Native or American Indian; eight (11%) were Asian; four (6%) were Caucasian; and two (3%) were Black. Five (7%) had previously been treated for TB, none more recently than 15 years ago.

Fifty-five (79%) of the cases were confirmed by mycobacterial culture. Fifty-six (80%) of the patients had a pulmonary focus of disease. Five persons had lymphatic TB; four had pleural disease; three had genitourinary disease; and one each had tuberculous meningitis and peritonitis.

The greatest number of cases--30 (43% of the total)--were residents of Western Alaska. Twenty-six (37%) lived in Southcentral Alaska; seven (10%), in the Aleutian and Pribilof Islands; six (8.5%), in Interior Alaska; and one (1.5%), in Southeast Alaska. Clusters of presumably related TB cases occurred in Savoonga (7 cases), Nome (6 cases), Togiak (6 cases), and the Pribilofs (6 cases). Anchorage had 22 cases, none of which appeared to be related.

Fifty-three (96%) of the 55 *Mycobacterium tuberculosis* isolates from TB patients reported in Alaska in 1991 were tested for antibiotic susceptibility. Three (5.7%) of the 53 were drug-resistant; all were resistant to isoniazid alone. Each patient with isoniazid-resistant TB had been inappropriately given isoniazid preventive therapy for unrecognized pulmonary TB.

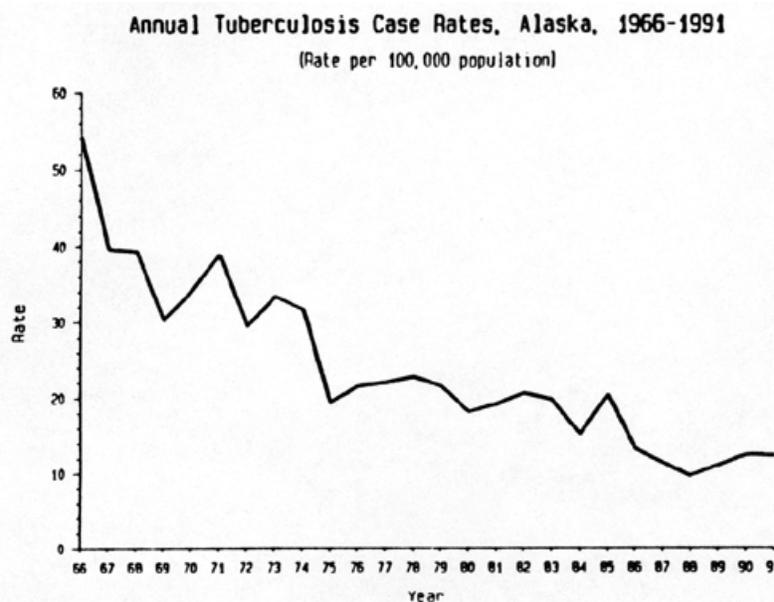
No TB case-patients in 1991 were known to be HIV-infected. No individuals with concomitant AIDS and TB disease have been identified in Alaska since 1988.

Epidemiologic Patterns

With the decline in TB morbidity in Alaska, village-based outbreaks have become more prominent. From 1987 through 1991, 13 villages--all located in Western Alaska--had clusters of three or more apparently related TB cases (range: 3-23). During 1990, three villages, each with fewer than 800 residents, accounted for 23 (34%) of the 68 TB cases identified in Alaska during that year.

Four substantial TB outbreaks have occurred in Alaska during the past 5 years: in Holy Cross (12 cases, 1987), Chevak (9 cases, 1989), the Pribilof Islands (10 cases, 1990-91), and Savoonga (23 cases, 1990-91). In each of these outbreaks, a delay in the diagnosis of an infectious pulmonary TB case led to extensive transmission of *M. tuberculosis* and evolution to TB disease in some infected persons. The index case-patient in one outbreak had been treated in the village clinic for "acute bronchitis" 9 months--and again 4 months--before being diagnosed as having far-advanced pulmonary TB.

Health-care providers should consider the diagnosis of pulmonary TB in persons with persistent respiratory symptoms, especially in Asian and Alaska Native patients. Early diagnosis and treatment will prevent transmission. **Cases of suspected or confirmed TB disease should be reported promptly to the Section of Epidemiology at 561-4406 (or via the Rapid Telephonic Reporting System, 800-478-1700).**



(Contributed by Michael Jones, MD, Section of Epidemiology)