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Bulletin No. 31 December 1, 2009

Tuberculosis in Alaska, 1999–2008

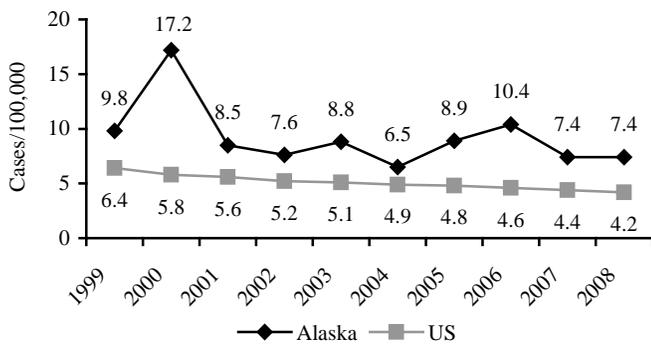
Background

Alaska continues to have one of the highest tuberculosis (TB) rates in the United States and considerable disparities remain. This Bulletin reports TB trends in Alaska over the past 10 years.

Incidence of TB

Fifty cases of TB were reported in Alaska in 2008, a rate of 7.4 cases/100,000 population. This rate, unchanged from 2007, was 76% greater than the national average (Figure 1). Only Hawaii and the District of Columbia had higher rates of TB in 2008.¹

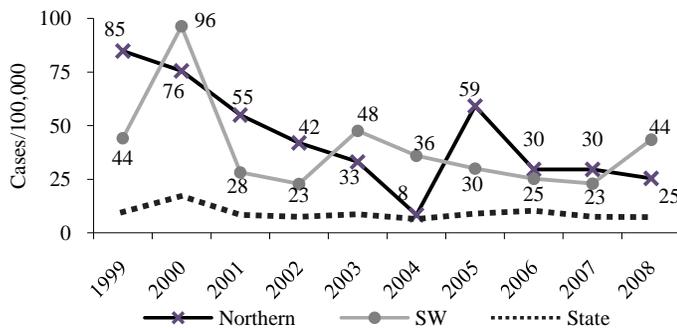
Figure 1. Alaska TB Incidence by Year, 1999–2008



Geographic Variation

The incidence of TB is not evenly distributed throughout the state. In 2008, the highest rates were found in the Northern and Southwestern regions with rates that were nearly 3.5 times and 6 times greater than the statewide rate, respectively (Figure 2).

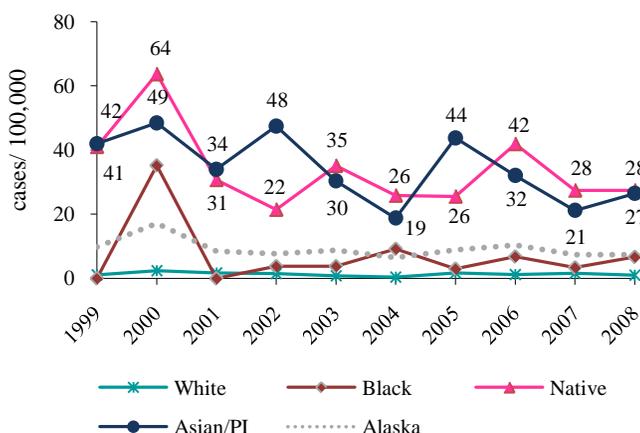
Figure 2. Alaska TB Incidence by Region, 1999–2008



Racial Disparity

Alaska Native people continue to bear a disproportionate burden of TB; however, Asian/Pacific Islanders have similarly elevated rates (Figure 3). White and black rates are equal to or less than the U.S. average.

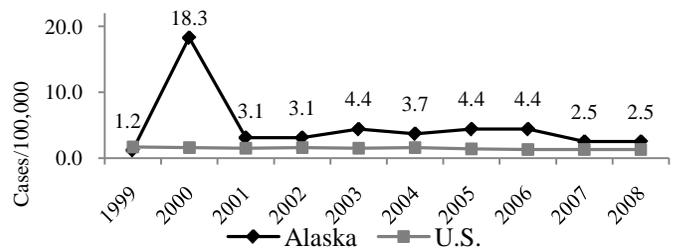
Figure 3. Alaska TB Incidence by Race, 1999–2008



TB among Children Aged 0–14 Years

Compared to the U.S., Alaska had higher TB rates in children aged 0–14 years; TB rates in Alaska children ranged from 1.2 to 18.3 cases per 100,000 (Figure 4). Higher pediatric rates are seen when community outbreaks occur, as was seen in 2000.²

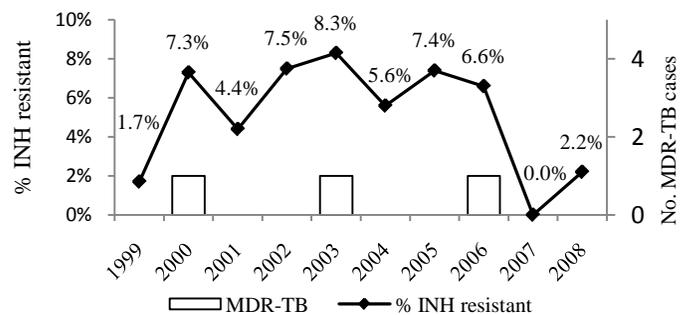
Figure 4. Alaska and U.S. TB Incidence in Children Aged 0–14 Years, 1999–2008



Drug Susceptibility Patterns

The proportion of *M. tuberculosis* isolates with isoniazid resistance in Alaska has varied between 0 to 8.3%; three cases of multidrug resistant TB (MDR-TB) have been identified (Figure 5). No cases of extensively drug resistant TB (XDR-TB) have been reported.

Figure 5. Alaska *M. tuberculosis* Drug Resistance, 1999–2008



Tuberculosis Treatment

A high proportion of Alaska TB patients met three primary objectives for adequate treatment (Table).

Table: The Average Proportion of TB Patients who Met Three Primary Treatment Objectives — Alaska, 1999–2008

Primary Treatment Objectives	% Cases that Met Objective	National 2015 Goal*
Four drugs used at treatment initiation	95%	93.4%
Treatment completed ≤ 12 months	91%	93.0%
Directly observed therapy used	89%	NA

* See: <http://www.cdc.gov/tb/programs/Evaluation/Indicators/default.htm>
NA = Not applicable

Summary

1. Tuberculosis remains a major public health challenge in Alaska, particularly in the Northern and Southwestern regions of the state, and in Alaska Native and Asian/Pacific Islander people.
2. Children continue to have high rates of TB, particularly during outbreaks.
3. While most TB patients met the three primary objectives for adequate treatment, room for improvement remains.
4. A full report of the Alaska TB Program can be found at: <http://www.epi.hss.state.ak.us/pubs/webtb/TBReport2008.pdf>

References:

1. CDC. Reported Tuberculosis in the United States, 2008. Atlanta, GA: U.S. Department of Health and Human Services, CDC, September 2009. <http://www.cdc.gov/tb/statistics/reports/2008/default.htm>
2. Alaska Epidemiology Bulletin No. 9; May 15, 2000. Available at: http://www.epi.alaska.gov/bulletins/docs/b2000_09.htm