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Large Increase in Tuberculosis Activity — Alaska, 2022

Background

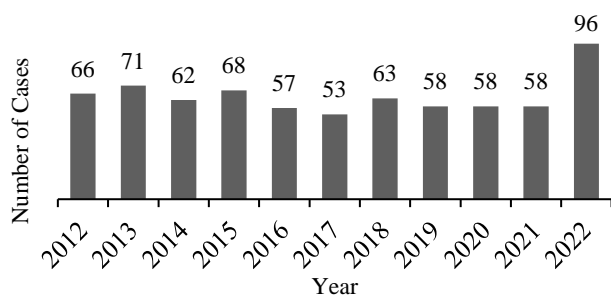
TB is an airborne bacterial disease that most commonly affects the lungs but can affect almost any part of the body. It is typically transmitted through prolonged close contact and sharing of air space with someone who has active TB disease. Most people who become infected with TB have a 5–10% lifetime risk of developing active disease. The risk of progression to active disease is amplified in young children, persons with immunocompromising conditions like diabetes and HIV, and in persons taking immunosuppressive therapy.

For decades, Alaska has consistently had one of the highest rates of tuberculosis (TB) in the Nation. This is due primarily to the lingering effects of a devastating TB epidemic in the 19th and 20th centuries, coupled with ongoing challenges with TB control in many rural Alaska communities.¹

Alaska had a 66% increase in active TB cases in 2022 when compared to the prior 3 years (Figure). The 2019–2021 case counts had remained steady at 58 active TB cases per year. The average TB case count during 2012–2021 was 61 cases per year. The previous highest annual case count in the recent past was 71 cases occurring in 2013.^{2,3} The current *provisional* count for 2022 is 96 cases. In keeping with trends seen in recent years, the Southwest region and, to a lesser extent, the Northern region have seen the most cases.

This recent uptick in cases is likely due at least in part to the effects of the COVID-19 pandemic, which has caused delays in TB diagnosis and treatment and diminished public health capacity for TB control globally.⁴

Figure. Tuberculosis Cases, by Year — Alaska, 2012–2022



Treatment of TB infection (TBI) can prevent the development of active TB disease. Treatment of active TB disease typically requires 4–9 months of multidrug therapy. Without appropriate treatment, active TB disease can be fatal.

Public Health Response

The Alaska Division of Public Health has maintained core TB control activities throughout the pandemic, including monitoring and case management of all active TB cases, contact investigations, full microbiology services at the State Public Health Laboratory, provision of medications for active TB, and TB surveillance. However, as is true globally, the pandemic response in Alaska required a shift in public health staff priorities, which resulted in delays in timely contact investigations and diminished capacity to provide directly observed therapy (DOT) for those with active TB. Moreover, public health staffing shortages in rural areas were worsened during the pandemic. The current surge in TB activity has put an added strain on the system. State, local, and tribal partners are all working diligently to improve TB control statewide.

Broader community-wide TB screening activities, largely suspended for 2 years due to the pandemic, have resumed. In collaboration with community and tribal health partners, public

health personnel performed TB screenings in eight at-risk communities last summer and fall.

Recommendations

- *Think TB.* TB can be challenging to diagnose. For Alaska's esteemed medical providers – always consider a patient's risk factors for TB and include TB in their differential diagnosis list, when appropriate, to avoid missed or delayed diagnosis. Report suspected or confirmed cases of active TB disease to the Section of Epidemiology (SOE; 907-269-8000). SOE TB experts are also available for consultation.
- People living in Alaska who are at highest risk for TB include those exposed to someone with active TB, Alaska Native people residing in the Southwest or Northern regions of the state, foreign-born individuals, persons experiencing homelessness, and those living in congregate settings (e.g., correctional facilities and shelters). People with medical conditions that weaken the immune system (e.g., HIV, diabetes mellitus, and substance abuse) are also at increased risk.
- Common symptoms of active TB disease include a cough lasting >2–3 weeks, hemoptysis, sweats, fevers, and weight loss. Not all these symptoms are present in every case, especially with extrapulmonary disease; young children and immunocompromised individuals are more likely to have an atypical presentation.
- Diagnosis of active pulmonary TB involves medical evaluation, physical exam, interferon gamma release assay (IGRA) or tuberculin skin test (TST), chest imaging, and sputum studies.
 - A negative IGRA or TST does not rule out active TB.
 - Note: the two IGRAs that are commercially available in the U.S. are QuantiFERON®-TB Gold In-Tube test and T-SPOT®.TB test.
 - Sputum studies should include acid-fast bacillus (AFB) smears, nucleic acid amplification tests (commonly GeneXpert TB PCR), and *Mycobacterium tuberculosis* culture.
 - It is important to remember that any of these tests can be negative in active disease, so a high clinical suspicion is essential to arrive at the diagnosis.
- The diagnosis and treatment of Alaska's large reservoir of people with TB infection is a crucial component of TB control and elimination.
 - Testing for TB infection should be a component of routine preventive care, based on risk factors.
 - The availability of shorter-course, well-tolerated medication regimens has simplified TB infection treatment.

Additional Resources

- CDC TB webpage: <https://www.cdc.gov/tb/default.htm>
- DOH TB webpage: <https://health.alaska.gov/dph/Epi/id/Pages/tb.aspx>
- Curry International Tuberculosis Center website and TB Warmline: <https://www.currytbcenter.ucsf.edu>, 1-877-390-6682
- TB Project ECHO: <https://doh.wa.gov/you-and-your-family/illness-and-disease-z/tuberculosis-tb/training-and-education/tb-echo>

References

1. Alaska Epidemiology Recommendations and Reports. "Alaska's Ongoing Journey with Tuberculosis." No. 1, April 11, 2017. Available at http://www.epi.alaska.gov/bulletins/docs/r2017_01.pdf
2. Tuberculosis in Alaska—[Summary Brief 2020](#), Alaska TB Program
3. Tuberculosis in Alaska—[Summary Brief 2021](#), Alaska TB Program
4. Pai M, Kasaeva T, Swaminathan S. Covid-19's devastating effect on tuberculosis care – a path to recovery. *N Engl J Med* 2022. Available at: [10.1056/NEJMp2118145](https://doi.org/10.1056/NEJMp2118145), published online Jan 5, 2022.