

Alaska ID ECHO: HCV-HIV-PrEP-STIs



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM



NPAIHB

Indian Leadership for Indian Health

This monthly ECHO is to share knowledge about prevention, screening, diagnosing, treatment and management of HCV, HIV, PrEP and STIs.

The ANTHC Liver Disease and Hepatitis Program, HIV Clinical Services, Behavioral Health Department and Southcentral Foundation's Pharmacists have partnered to host this ECHO, and it's funded by a grant from the Northwest Portland Area Indian Health Board.

Welcome to Alaska Infectious Disease ECHO – HCV, HIV, PrEP, STIs

Approved Provider Statements:



In support of improving patient care, Alaska Native Medical Center (ANMC) is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Contact Hours:

ANMC designates this activity for a maximum of 12 contact hours, including 3 total pharmacotherapeutics contact hours, commensurate with participation.

Financial Disclosures:

Youssef Barbour, MD & Lisa Townshend-Bulson, APRN / faculty for this educational event, are primary investigators in an ANTHC sponsored hepatitis C study funded in part by Gilead Sciences. All of the relevant financial relationships listed have been mitigated.

Requirements for Successful Completion:

To receive CE credit please make sure you have actively engaged in the entire activity, your attendance is recorded by the facilitator, and complete the course evaluation form found here: <https://forms.gle/18t4EgvN2WdnM4P77>



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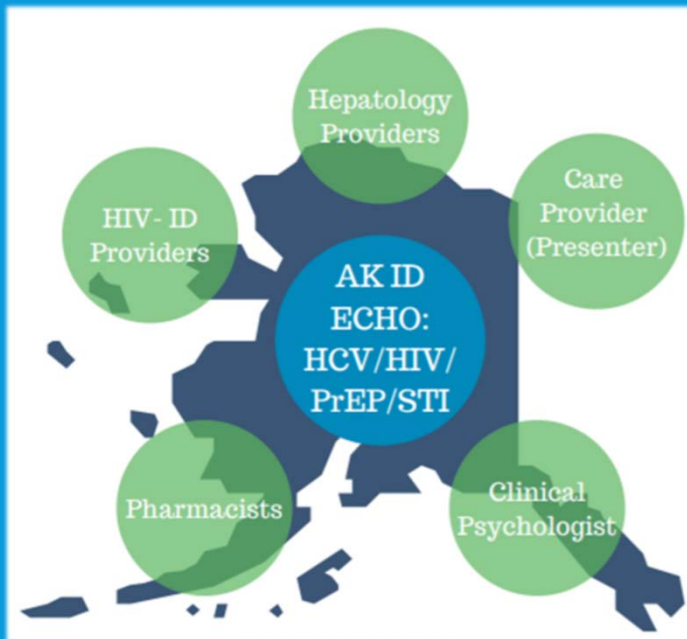


We acknowledge the Dena'ina people,
on whose traditional lands we gather.
We also acknowledge the Creator and all
Indigenous people of Alaska. Thank you for
your past and present stewardship of the
waters, plants, animals and spiritual
practices of this place.



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AK ID ECHO: CONSULTANT TEAM



- Youssef Barbour, MD Hepatologist
- Leah Besh, PA-C HIV/Hepatology Provider
- Terri Bramel, PA-C HIV/STI Provider
- Rod Gordon, R.Ph. AAHIVP Pharmacist
- Jacob Gray, MD Infectious Disease Provider
- Annette Hewitt, ANP Hepatology Provider
- Brian McMahon, MD Hepatologist
- Lisa Rea, RN HIV/STI Case Manager
- Rebecca Robinson, PhD Clinical Psychologist
- Lisa Townshend, ANP Hepatology Provider

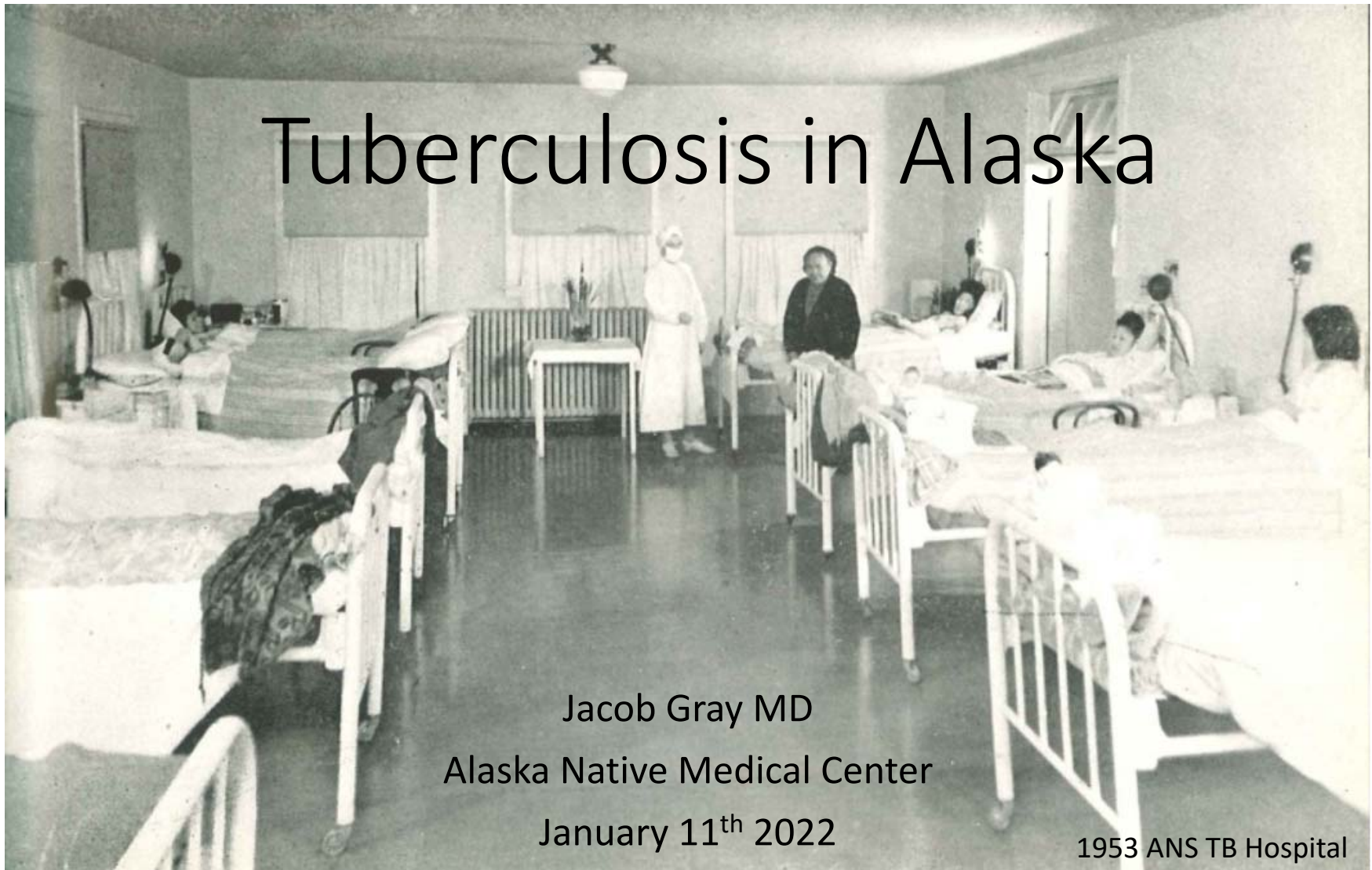
TUBERCULOSIS IN ALASKA

Jacob Gray, MD

Alaska Native Medical Center

January 11, 2022

Tuberculosis in Alaska



Jacob Gray MD
Alaska Native Medical Center
January 11th 2022

1953 ANS TB Hospital

Tuberculosis in Alaska

- TB epidemiology in Alaska
- Latent TB testing
- Latent TB treatment options
- Active TB cases

PUBLIC HEALTH REPORTS

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MORTALITY IN THE NATIVE RACES OF THE TERRITORY OF ALASKA, WITH SPECIAL REFERENCE TO TUBERCULOSIS

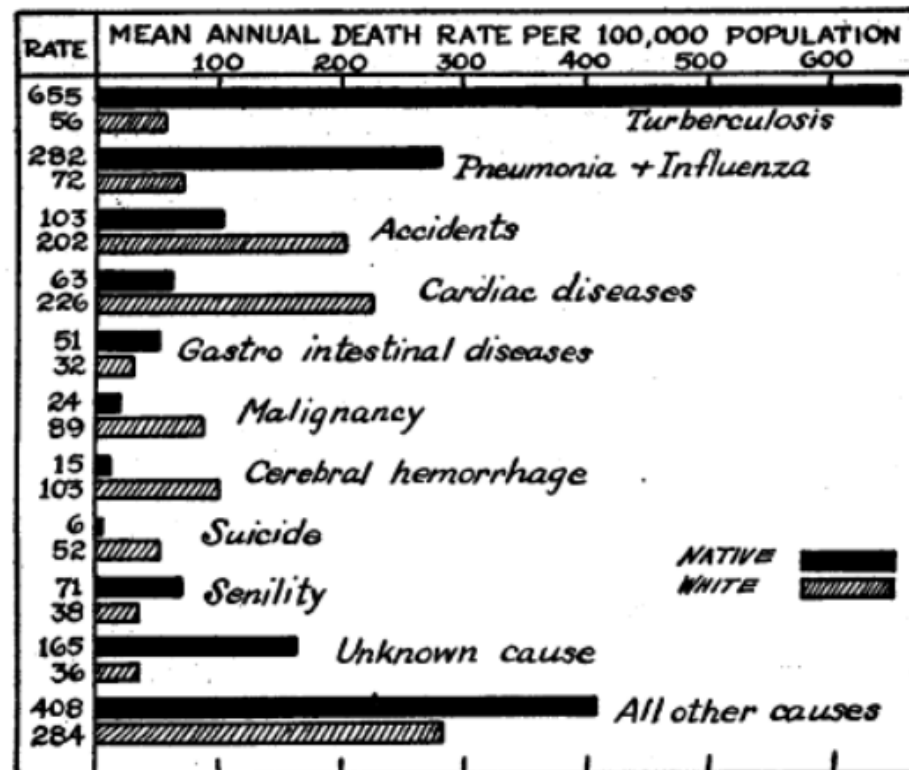


FIGURE 4.—Mortality from important causes among native Indians and Eskimos and among whites in Alaska during the years 1926-1930.

Epidemiology:

Historically very high TB case rates in Alaska

Figure 2. Prevalence of tuberculin sensitivity among Eskimo children tested in three successive surveys, by age

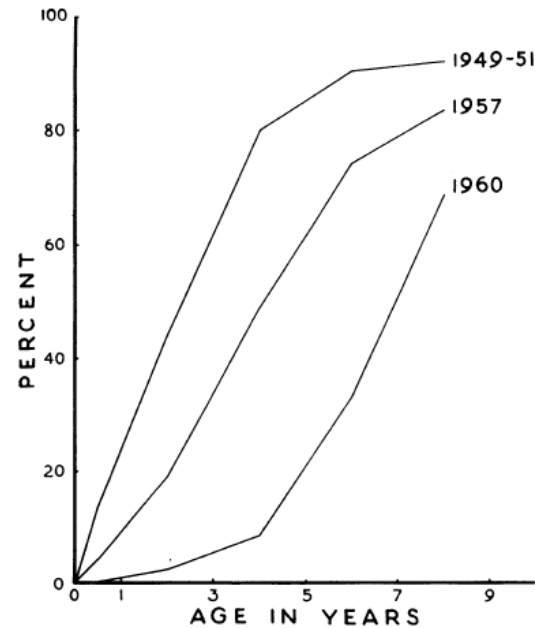
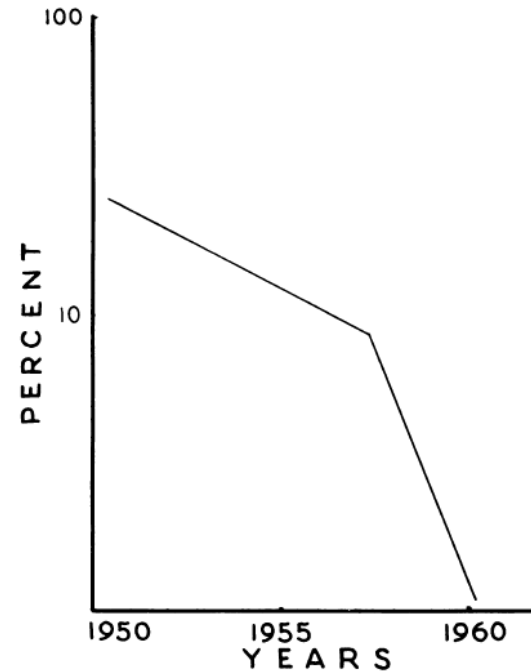


Figure 3. Average rate of decline in tuberculosis infection rates among Eskimo children 0-3 years of age in two periods: 1949-57 and 1957-60

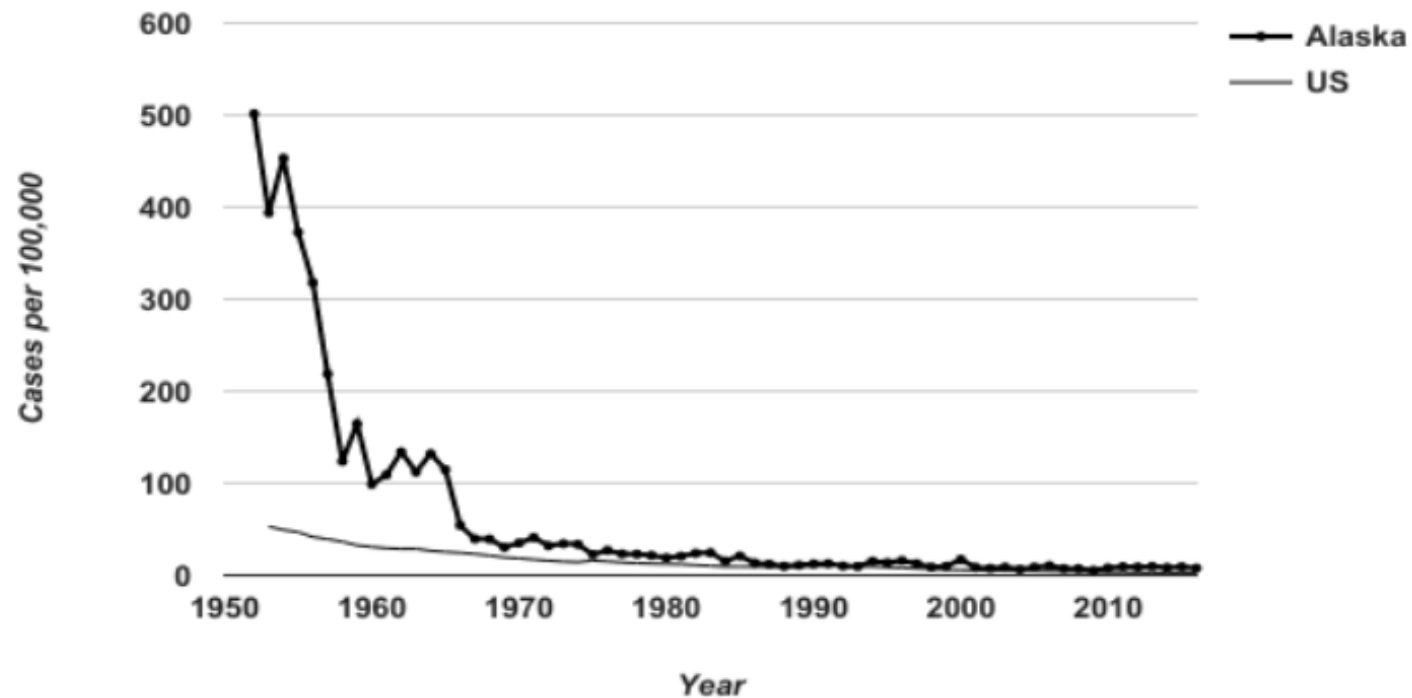


Decline of the Tuberculosis Epidemic in Alaska. Comstock GW, Philip RN. 1961

Epidemiology:

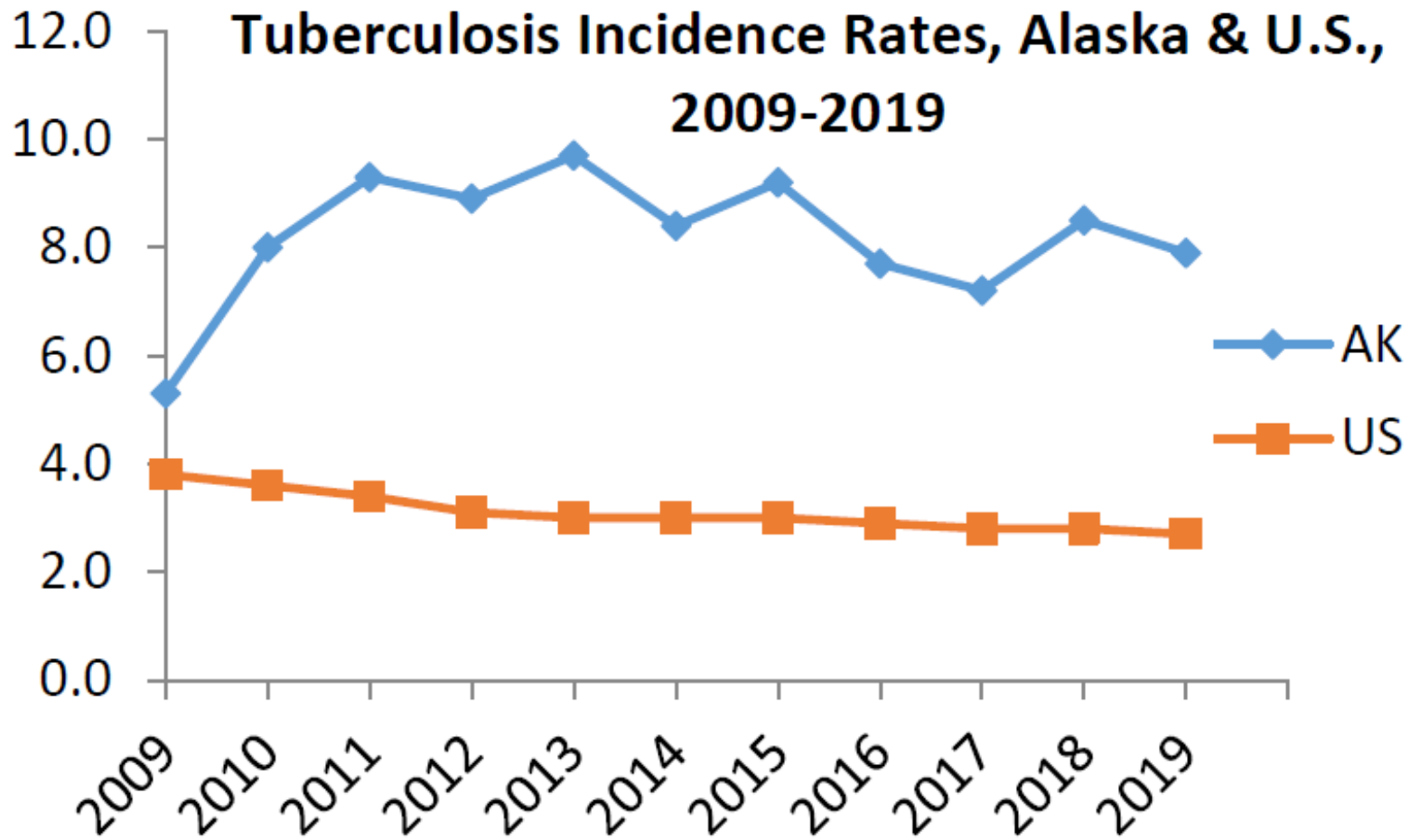
Declining case rates in Alaska

Figure 1. Alaska and the United States TB Incidence Rates, 1952–2016



Alaska's Ongoing Journey with Tuberculosis. Bruce Chandler. 2017

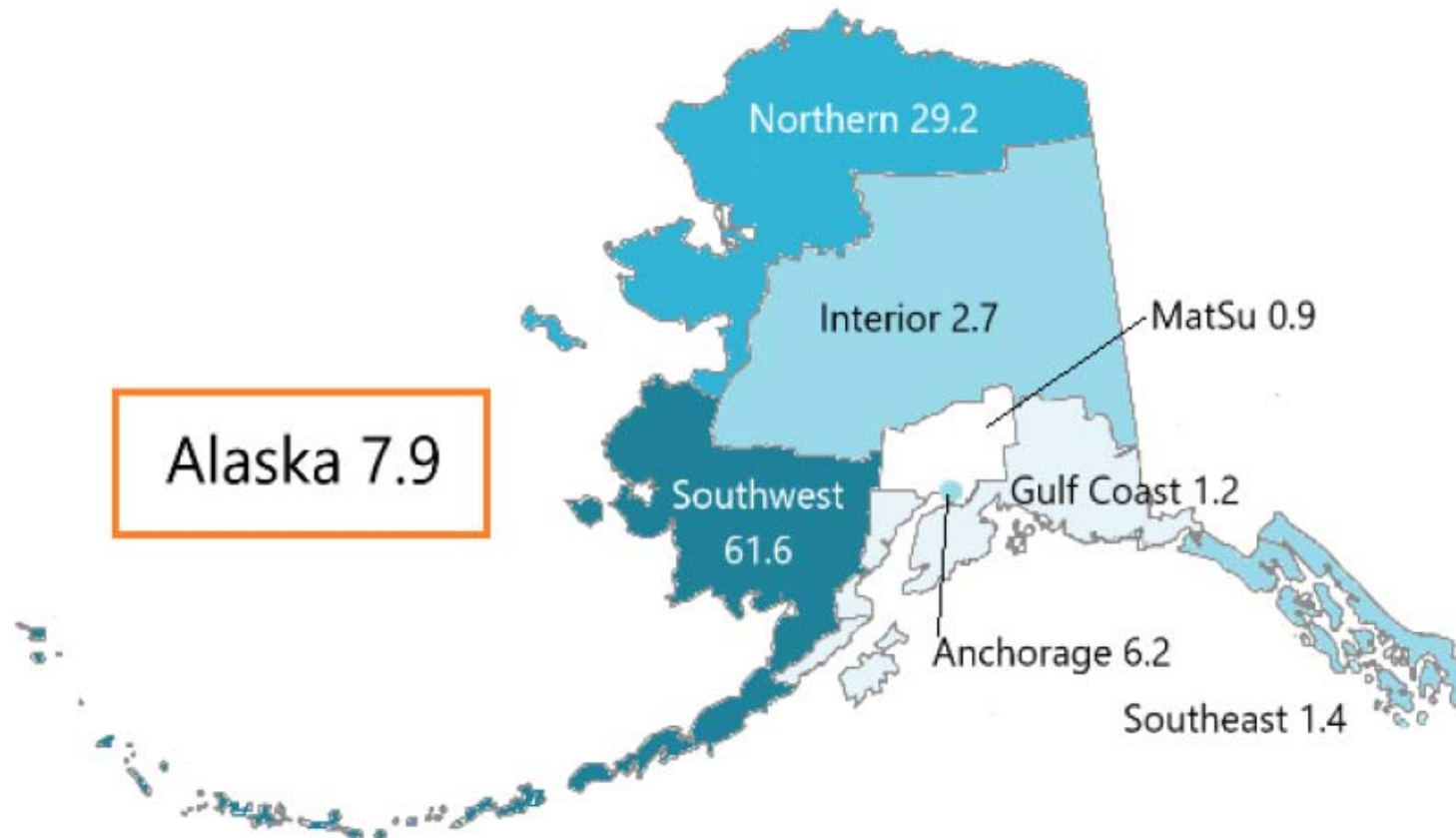
Epidemiology



<https://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/TB/2019%20AK%20TB%20Summary.pdf>

Epidemiology

Regional Incidence per 100,000 population



<https://dhss.alaska.gov/dph/Epi/id/SiteAssets/Pages/TB/2019%20AK%20TB%20Summary.pdf>

Latent TB Screening



Latent TB Screening

- Who to test?
 - High risk of exposure:
 - Known TB exposure
 - From country where TB disease is common
 - Residential risk: homeless shelter, long-term care, correctional facility
 - Occupational risk: health-care workers if increased risk
 - High risk of disease progression:
 - HIV infection
 - Biologic immunosuppressive therapy

Latent TB Screening – Healthcare Workers

- Annual TB testing no longer recommended
 - Consider if
 - ongoing transmission at a healthcare facility
 - very high occupational risk
- Target testing of exposed healthcare workers
- Untreated healthcare workers receive an annual TB symptom screen

Y-K Delta INH Study

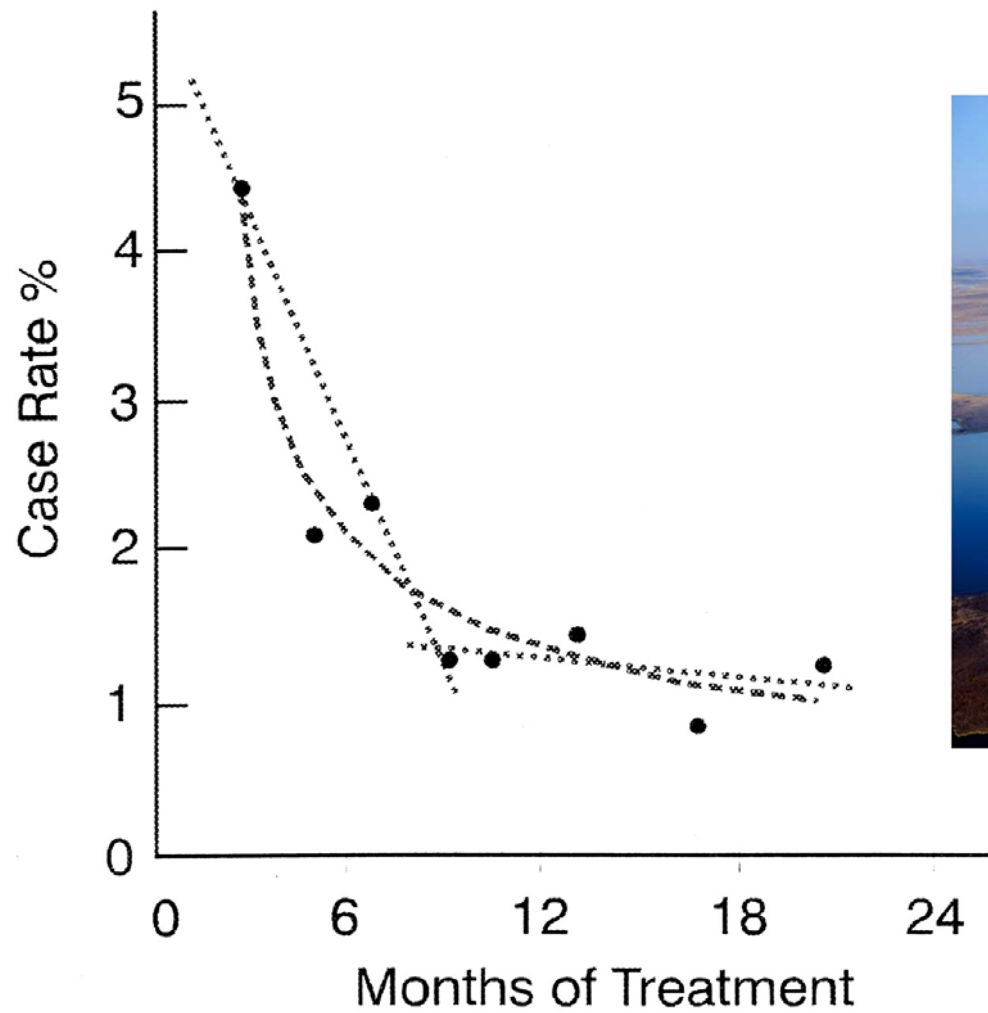
- Study:
 - Randomized adults to INH or placebo x 12 months
 - Analysis on TST result

TST status	Placebo		INH		Relative Risk Reduction
	TB cases (n)	Case Rate (%)	TB cases (n)	Case Rate (%)	
Total	38/845	4.5%	4/845	0.5%	88.9%
TST < 5mm	6/275	2.2%	1/299	0.3%	86.4%
TST ≥ 5mm	32/570	5.6%	3/546	0.6%	89.3%

- Results:
 - 7,333 people enrolled 1957 – 1959
 - 6 year follow up: **89% Risk Reduction**
 - 19 year follow-up: **60% Risk Reduction**

Latent TB Treatment

Y-K Delta INH Study



Online TB risk calculator

Please select the best response for each field:

TST Size:

Select... ▼

IGRA Result:

IGRA Not Done ▼

Age:

Select... ▼

Age at immigration (if person immigrated to a low TB incidence country):

N/A ▼

Country of birth:

Select... ▼

BCG status:

Select... ▼

For more info, visit: [BCG World Atlas](#).

Recent contact with active TB:

No Contact ▼

Please select all the conditions that currently apply to the patient:

(If none of these conditions apply, please leave boxes unchecked)

- | | |
|---|--|
| <input type="checkbox"/> AIDS | <input type="checkbox"/> Abnormal chest x-ray: granuloma |
| <input type="checkbox"/> Abnormal chest x-ray: fibronodular disease | <input type="checkbox"/> Carcinoma of head and neck |
| <input type="checkbox"/> Chronic renal failure requiring hemodialysis | <input type="checkbox"/> Cigarette smoker(>1 pack/day) |
| <input type="checkbox"/> Diabetes Mellitus (all types) | <input type="checkbox"/> HIV infection |
| <input type="checkbox"/> Recent TB infection (TST conversion ≤ 2 years ago) | <input type="checkbox"/> Transplantation (requiring immune-suppressant therapy) |
| <input type="checkbox"/> Silicosis | <input type="checkbox"/> Treatment with glucocorticoids |
| <input type="checkbox"/> Tumor Necrosis Factor (TNF)-alpha inhibitors(e.g. Infliximab/Etanercept) | <input type="checkbox"/> Underweight (< 90 per cent ideal body weight or a body mass index (BMI) ≤ 20) |
| <input type="checkbox"/> Young age when infected (0-4 years) | |

Below are the results for a patient with a TST reaction of **10-14 mm** and a **Negative** QFT Test, who is **43** years old, born in **United Kingdom of Great Britain and Northern Ireland**, whose BCG status is **Never vaccinated or unknown**, and who has had **no contact** with active TB.

The likelihood that this is a true positive test (PPV) is: **79.9%**

The annual risk of development of active tuberculosis disease is estimated to be **0.08%**.

The cumulative risk of active tuberculosis disease, up to the age of 80, is: **2.96%**

If treated with INH, the probability of clinically significant drug-induced hepatitis is **1.2%**, and the associated probability of hospitalization related to drug-induced hepatitis is **0.2%**.

<https://www.tstin3d.com/en/calc.html>

Latent TB Treatment Options

Preferred Treatment Options

- 4 months daily rifampin
- 3 months weekly INH/rifapentine
- 3 months daily INH/rifampin
 - Be aware of drug-drug interactions

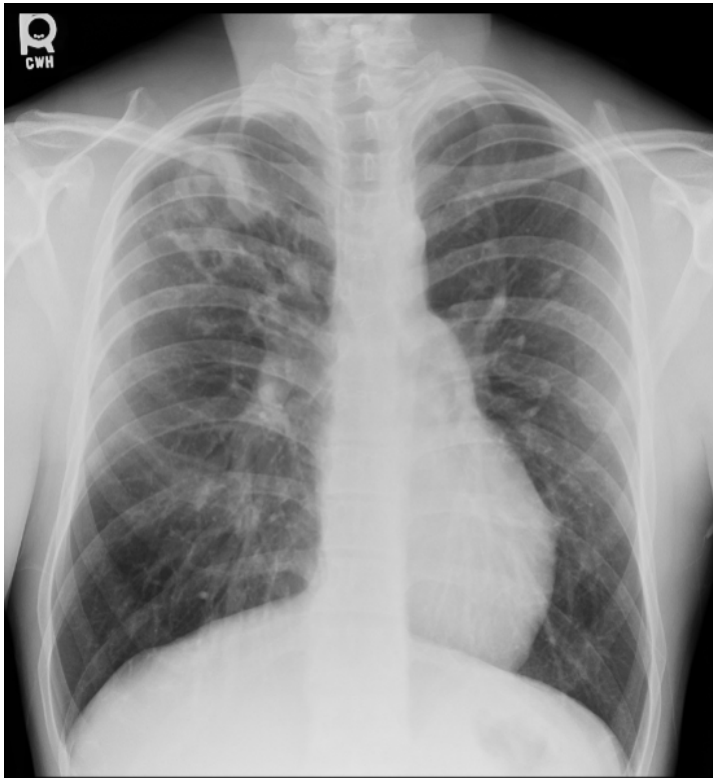
Alternative Treatment Option

- 6-9 months daily INH
 - Lower completion rates and increased liver toxicity

<https://www.cdc.gov/tb/topic/treatment/ltbi.htm>

Case 1

28 year old man falls off a ladder



4+ AFB smear positive

GeneXpert MTB +/-RIF resistance not detected

Culture grew drug susceptible TB

Treated with:

INH x 9 months

Rifampin x 9 months

Ethambutol x first 8 weeks until susceptibility confirmed

Pyrazinamide x first 8 weeks

Clinically improved

Sputum smear negative and cultures negative 3 months into treatment

Case 1

8 months into TB treatment fever, chills,
cough return



4+ smear positive

GeneXpert MTB +/-RIF resistance detected

Pyrosequencing Drug report demonstrated RIF
resistance (rpoB 170) without other resistance

Conventional resistance testing now demonstrates

INH 0.1 ug/mL resistant

INH 0.4 ug/mL resistant

Rifampin Resistant

Ethambutol Susceptible

Pyrazinamide Susceptible

Streptomycin Susceptible

Moxifloxacin Susceptible

Amikacin Susceptible

Capreomycin Susceptible

Ethionamide Susceptible

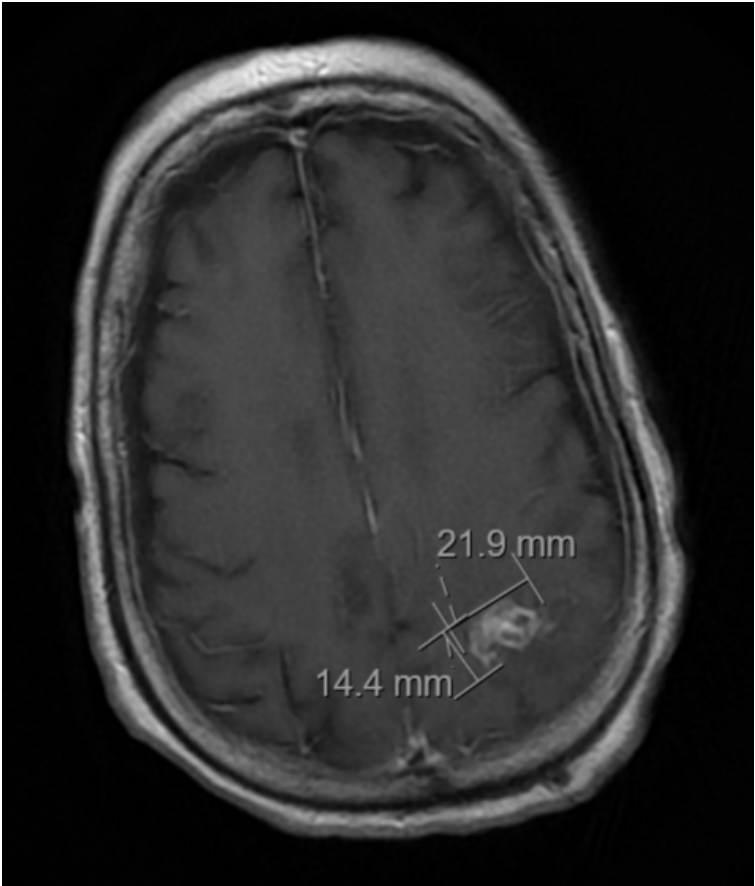
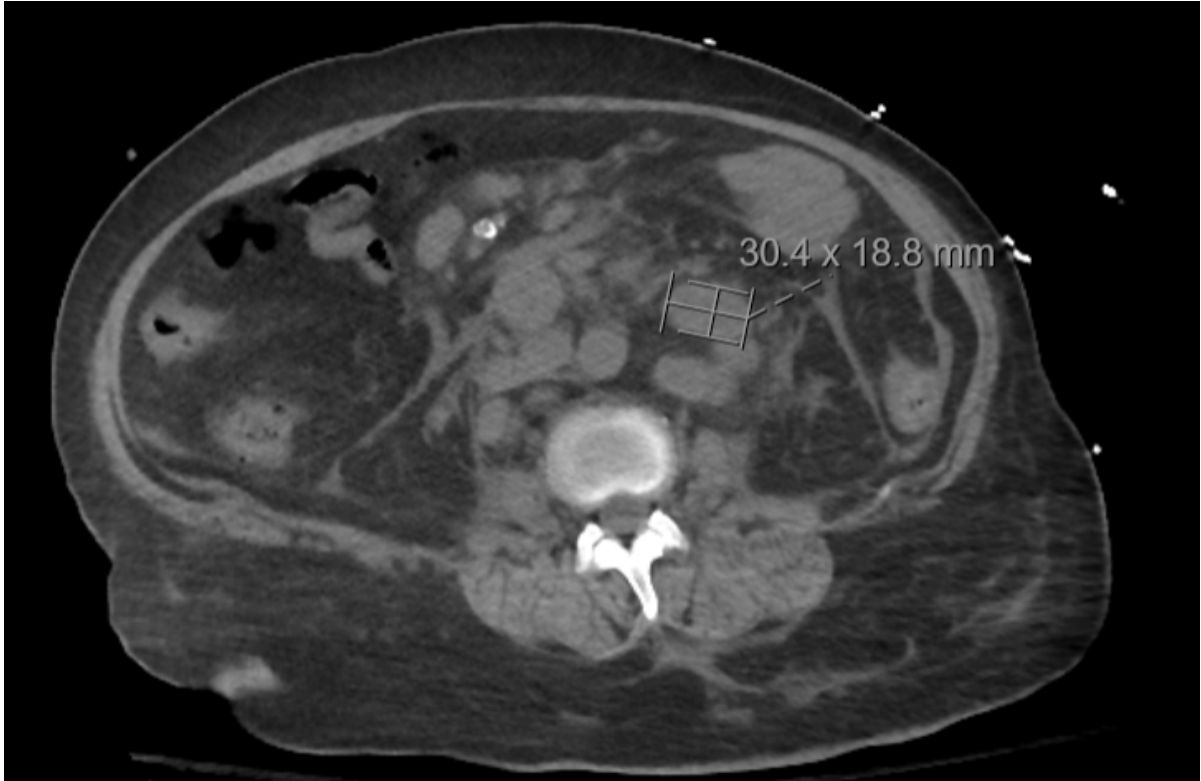
Rifabutin 0.5 ug/mL Susceptible

Case 2

66 year old woman from Sudan brought to ED
encephalopathic after seizure



Case 2



Disseminated and CNS tuberculosis

- Sputum AFB smear, MTB PCR negative
- Lymph node biopsy: necrotizing granulomatous inflammation, AFB stain negative, MTB PCR positive
- LP: Protein 60, WBC 60 (75% neutrophils), Glucose 80
- Treatment
 - IV Levofloxacin, IV rifampin
 - NG INH, ethambutol, pyrazinamide
 - Dexamethasone

QUESTIONS?

Please share questions in the chat or use the raise hand icon and unmute yourself.

CASE PRESENTATION



DIDACTIC TOPICS FOR 2022

- January 11: TB in Alaska
- February 8: Congenital Syphilis
- Other 2022 topics:
 - HCV - Insurance Changes and Abbreviated Treatment
 - HIV Treatment and Prevention - new injectable drugs
 - HCV Reinfection vs Treatment Failure
 - Public Health Reporting

What topics would you like to learn about?

ADDITIONAL LEARNING OPPORTUNITIES

ANTHC Liver Disease ECHO

- Third Thursday of every month from 12:00-1:00 PM AKST
- anthc.org/project-echo/alaska-liver-disease-echo

ANTHC LiverConnect

- Second Tuesday of every month 8:00-9:00AM AKST
- anthc.org/what-we-do/clinical-and-research-services/hep/liverconnect



ADDITIONAL LEARNING OPPORTUNITIES

Addiction Medicine ECHO

- Second and fourth Thursday of every month from 12-1:00 PM
- January 13: Psychiatric Medication and MAT
- January 27: Treating ADHD & OUD at the Same Time
- anthc.org/project-echo/addiction-medicine-echo

Indian Country ECHO Programs

- Harm Reduction ECHO and more!
- www.indiancountryecho.org/teleecho-programs



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ADDITIONAL RESOURCES

AASLD HCV Guidance: Recommendations for Testing, Managing and Treating Hepatitis C

- hcvguidelines.org

Hepatitis C Online (curriculum), University of Washington

- hepatitisc.uw.edu

National HIV Curriculum, an ATEC Program led by the University of Washington

- hiv.uw.edu

CDC's 2015 Sexually Transmitted Diseases Treatment Guidelines

- cdc.gov/std/treatment-guidelines/toc.htm

CDC's Pre-Exposure Prophylaxis (PrEP) overview and guidelines

- cdc.gov/hiv/clinicians/prevention/prep

UCSF Transgender Care

- transcare.ucsf.edu/guidelines



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ANTHC Liver Disease and Hepatitis Program: 907-729-1560

ANTHC Early Intervention Services/HIV Program: 907-729-2907

Northwest Portland Area Indian Health Board

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Thank you!

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