

Underlying Factors Contributing to Higher Incidence of Tuberculosis Among American Indian and Alaska Native Communities

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Background

- The burden of Tuberculosis, TB, among American Indians and Alaska Native (AI/AN) populations has declined since the mid-1990s¹⁴
- TB incidence rate among non-Hispanic AI/AN persons, 3.4 cases per 100,000 persons in 2019, was 6.8 times higher than the rate among non-Hispanic White persons¹⁴
- Compared to White persons, TB-associated mortality rate was 13 times higher among American Indian persons and 48 times higher among Alaska Natives during 1990-2009¹⁴

Methodology

Literature Review: Conducted a study of peer reviewed, academic, and grey literature on tuberculosis incidence in AI/AN communities.

Health Records Analysis: Utilized data from CDC Wonder, the Online Tuberculosis Information System, and National Tuberculosis Surveillance System, to explore patterns and trends in tuberculosis among AI/AN communities

Secondary Data Analysis: Analyzed data from CDC Wonder to identify underlying determinants of health

Objective: Identify underlying factors that contribute to higher Tuberculosis in AI/AN communities

Tuberculosis Incidence Rate per 100,000 1993-2020

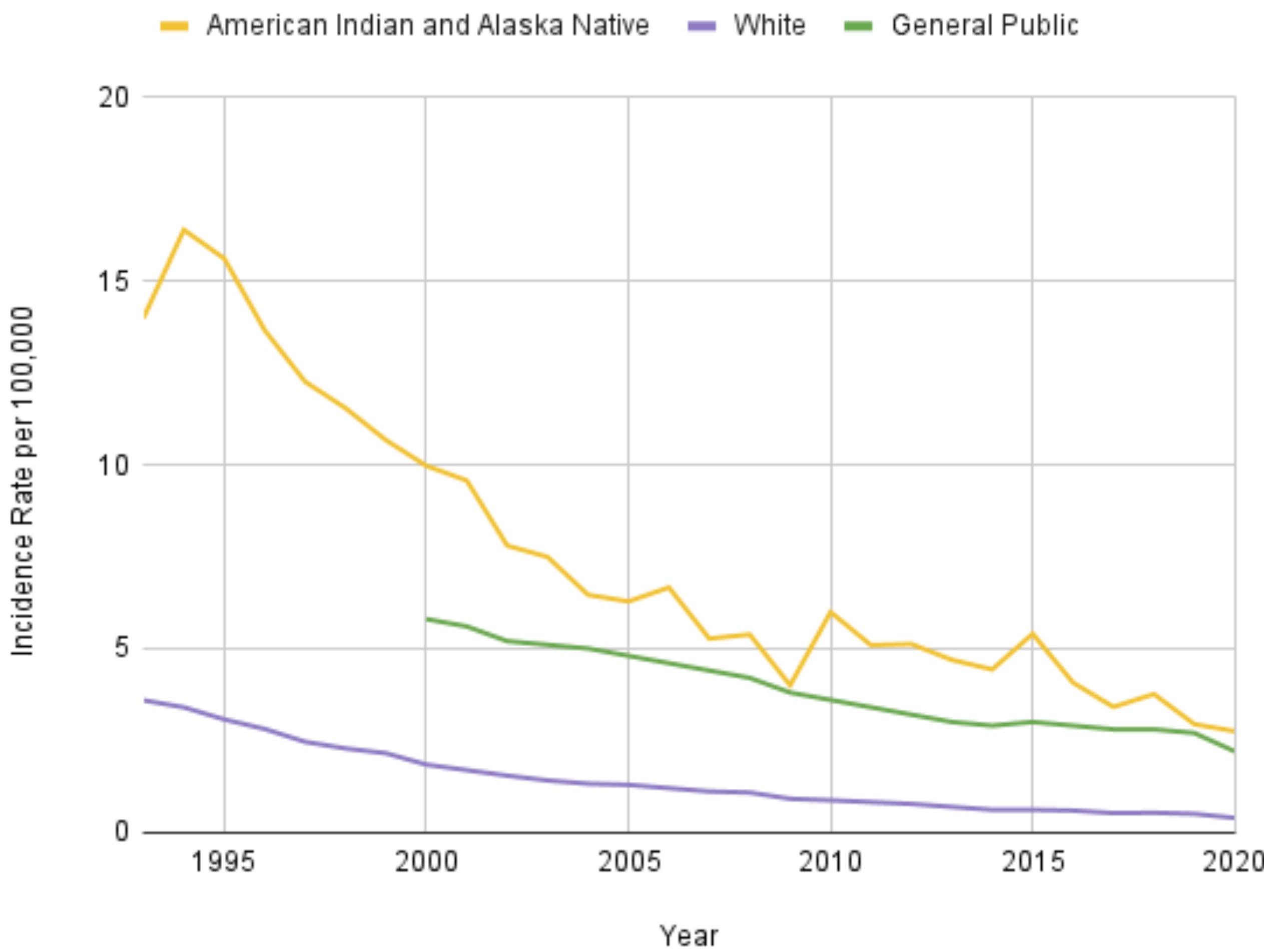


Figure 1: Data sourced from National Tuberculosis Surveillance System

Findings

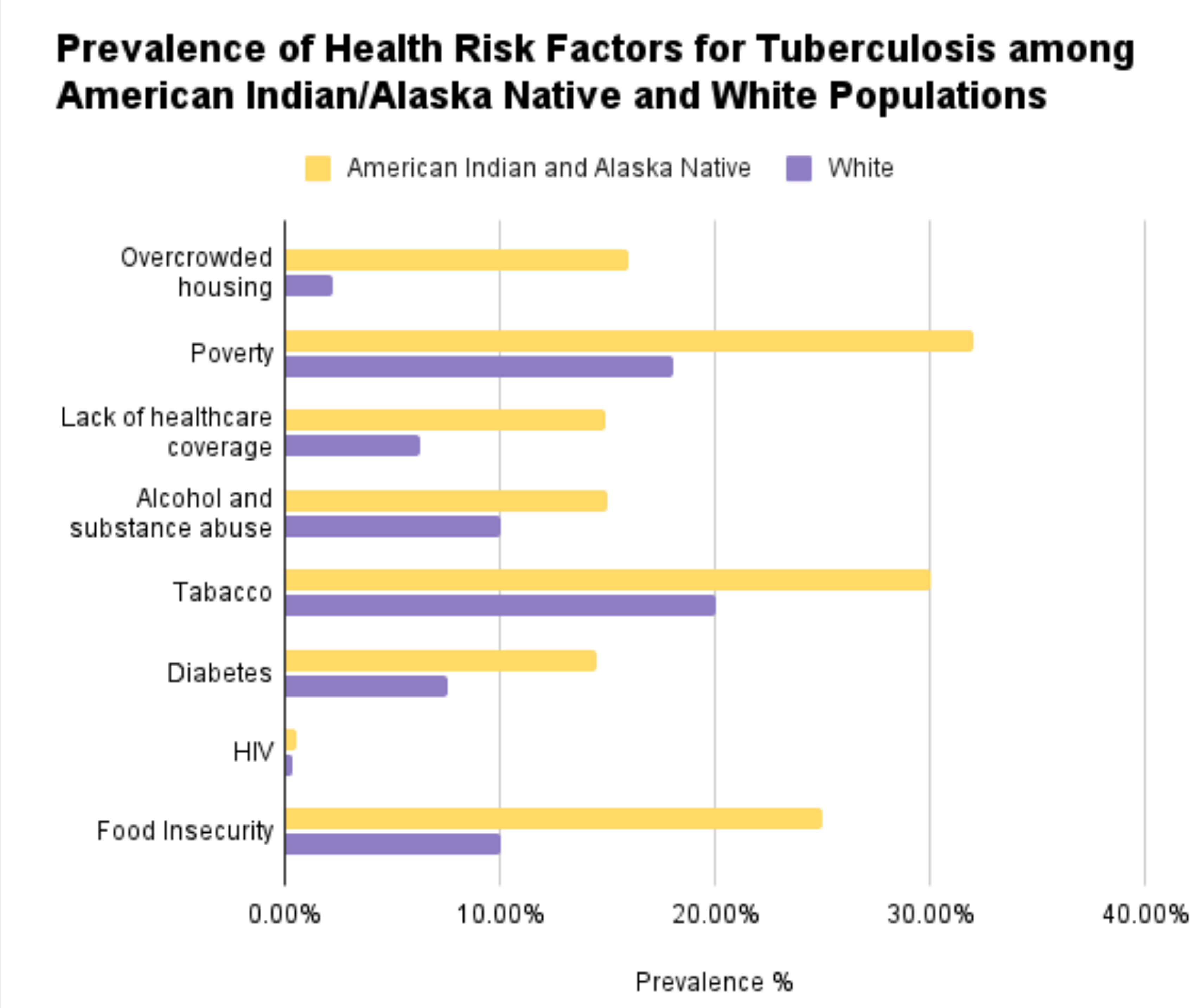


Figure 2: Data sourced from Census Bureau and CDC Wonder

Underlying factors of Tuberculosis in AI/AN communities

Historical Trauma and Distrust	Impedes TB diagnosis and treatment for AI/ANs
Overcrowded housing and poor living conditions	Increases TB transmission
Limited access to healthcare and health care coverage	Geographic isolation and underfunded healthcare systems impede TB diagnosis and treatment for AI/ANs
Alcohol or substance abuse	Impair immunity and increase TB susceptibility
Tobacco	Increases TB risk 2-3 times ⁵
Diabetes	Increases TB risk by about 3 times ¹⁵
HIV co-infection	HIV positive persons are 20 times as likely to develop TB and have an increased mortality risk ¹⁶
Food insecurity and malnutrition	Impair immunity and increase TB susceptibility

Conclusion

- This literature review highlights persistent and multifaceted disparities that are linked to the disparities in TB incidence and mortality rates among AI/AN populations compared to non-Hispanic White populations with significant public health implications.
- To face this public health challenge, public health officials should look to the case studies that focus on the importance of a multi-faceted approach to TB prevention and treatment in AI/AN communities.

Limitations

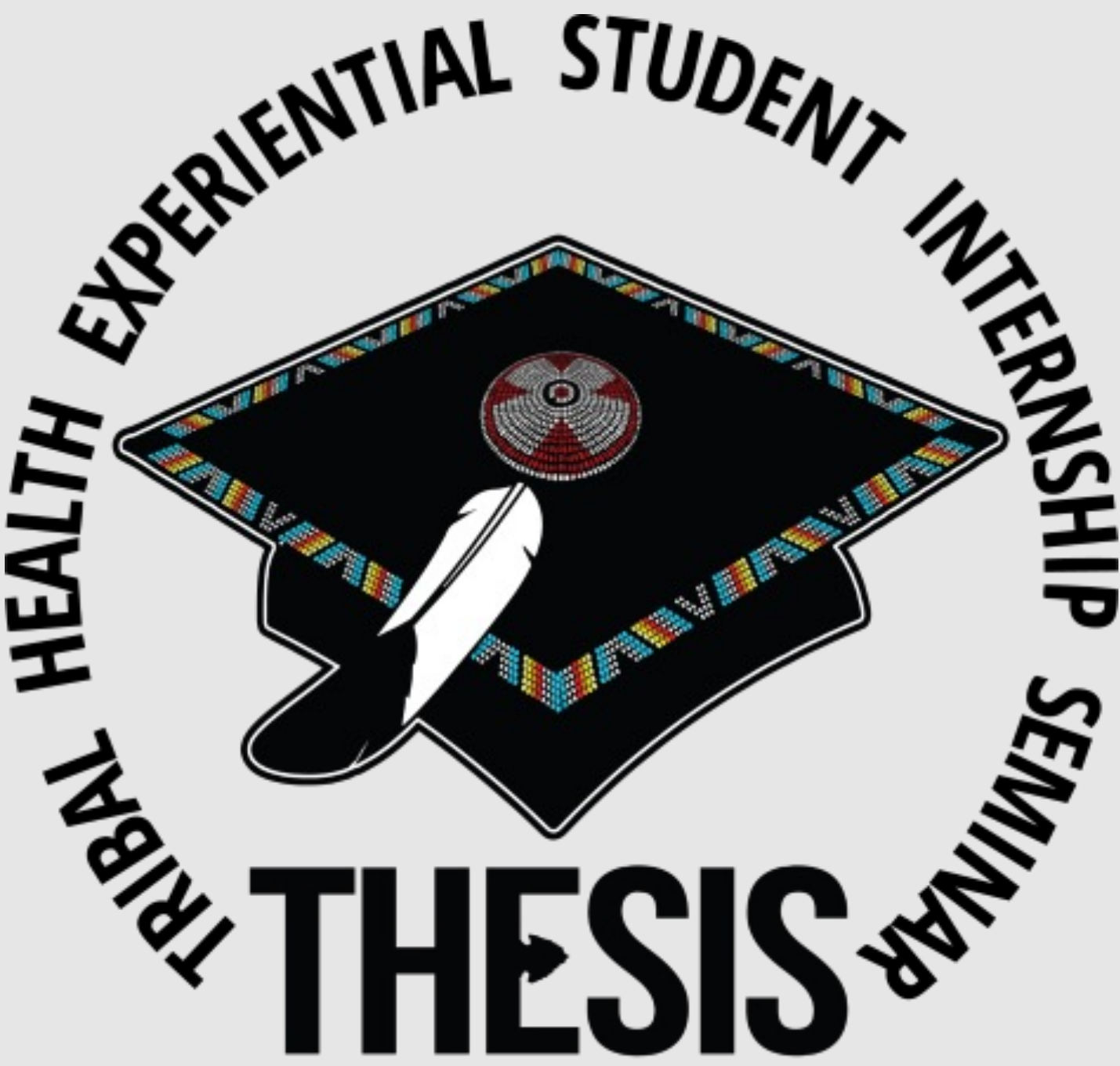
- Limited time frame
- Data errors due to misclassification of race
- Lack of access to the crude data

References and Acknowledgments



For a bibliography of the literature review and data sources

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