Zeb Moffat
Individual Project
10/14/2025

INFO 511: Final Project Milestone 1 Proposal

Research Question

Do cancer incidence rates differ significantly between demographic groups (sex, race/ethnicity) across US states?

Guiding Framework

This project's guiding framework will be the Health Disparities and Equity Framework in public health. This framework examines health outcomes across different subgroups. Understanding how these health outcomes vary allows for targeted interventions, resource allocation, and creation of new policies. The framework recognizes that social, biological, and environmental factors contribute to health disparities. Identifying these patterns is the first step towards addressing inequities in cancer prevention and treatment (Braveman et al., 2011; Healthy People 2030, 2020).

Research Question Justification

Cancer remains a leading cause of mortality in the United States and research shows variation in cancer incidence among demographic groups. This exploratory analysis will examine whether there are statistically significant differences in cancer rates when grouped by sex and race/ethnicity across different states. Understanding these patterns can inform targeted programs, prevention initiatives, and health policy decisions at both state and national levels.

Dataset Information

Dataset: U.S. Chronic Disease Indicators (CDI)

Source: Centers for Disease Control and Prevention (CDC)

Access: Publicly available via data.gov

URL: https://catalog.data.gov/dataset/u-s-chronic-disease-indicators

Data Type: Public health surveillance data

Time Period: 2015-2020 (most recent available years)

The dataset contains 115 chronic disease indicators collected uniformly across US states and territories. For this project, I will filter the data to focus specifically on cancer-related indicators.

Variables/Features Required

- DataValue: Cancer incidence rates
- Topic: Filtered to "Cancer" indicators only
- Question: Specific cancer type
- LocationDesc: Location
- Stratification1: Demographic groups

Citation Style

APA 7th Edition will be used consistently throughout the project for all in-text citations and references.

Feasibility Statement

This project is feasible within the given timeline because:

- The dataset is readily accessible and well-documented
- The research question is focused and answerable with statistical methods covered in class

- The scope is manageable (single dataset, clear variables, straightforward comparisons)
- The project allows for demonstration of data preprocessing, EDA, statistical modeling, and professional communication skills

References

Braveman, P. A., Kumanyika, S., Fielding, J., LaVeist, T., Borrell, L. N., Manderscheid, R., & Troutman, A. (2011). Health disparities and health equity: The issue is justice. *American Journal of Public Health, 101*(S1), S149-S155. https://doi.org/10.2105/AJPH.2010.300062

Centers for Disease Control and Prevention. (2023). *U.S. Chronic Disease Indicators* [Data set]. https://data.cdc.gov/Chronic-Disease-Indicators/U-S-Chronic-Disease-Indicators/hksd-2xuw

Office of Disease Prevention and Health Promotion. (2020). *Healthy People 2030: Health equity in Healthy People 2030*. U.S. Department of Health and Human Services. https://odphp.health.gov/healthypeople