

# Chronic Disease Risk Prediction Tool

Lidet Alemu

# Chronic Diseases in the U.S

- ❏ 6 in 10 Americans live with a chronic condition
- ❏ 4 out of 5 leading causes of death
- ❏ 6 % of the nation's GDP is spent on treatment



Kidney Disease



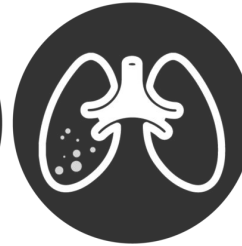
Cancer



Diabetes



Heart Disease



Lung Disease



Alzheimer's

# Solving the Problem

- ❑ A chronic disease risk prediction tool using various determinants of health.

## Who can use it?

- ❑ Individuals
- ❑ Health care professionals



# Data

- The Behavioral Risk Factor Surveillance System (BRFSS) .
- A telephone survey conducted by the CDC about U.S. residents regarding their health-related risk behaviors, chronic health conditions, and use of preventive services.



# Prevalence

❑ 63% Chronic Condition

❑ 35% Comorbid

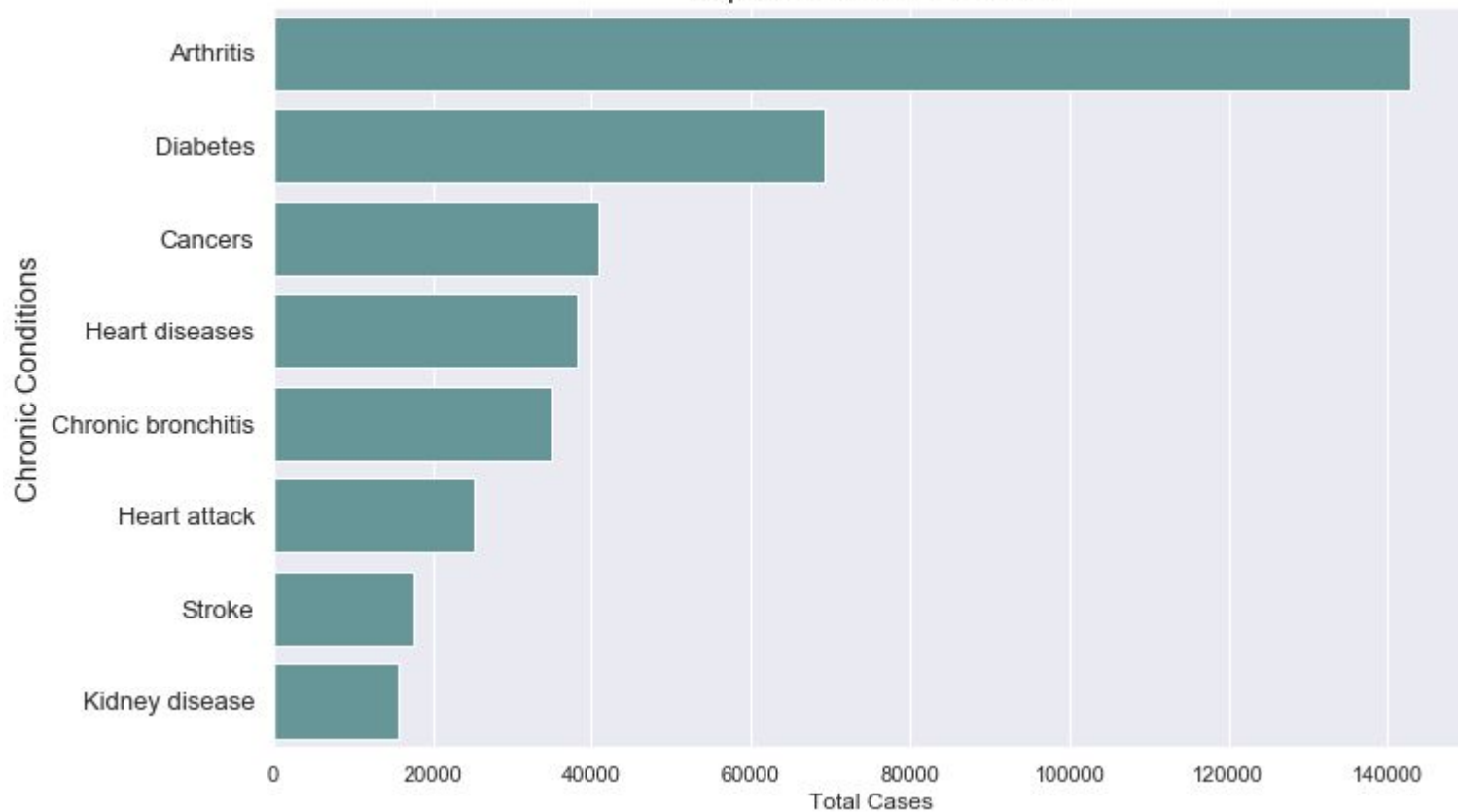
❑ 53% Female

❑ 46 % Male

50% U.S population



## Top Chronic Conditions



# Chronic Disease Risk factors

- ❑ Smoking
- ❑ Alcohol consumption
- ❑ Exercise/lack of
- ❑ Sleep habits



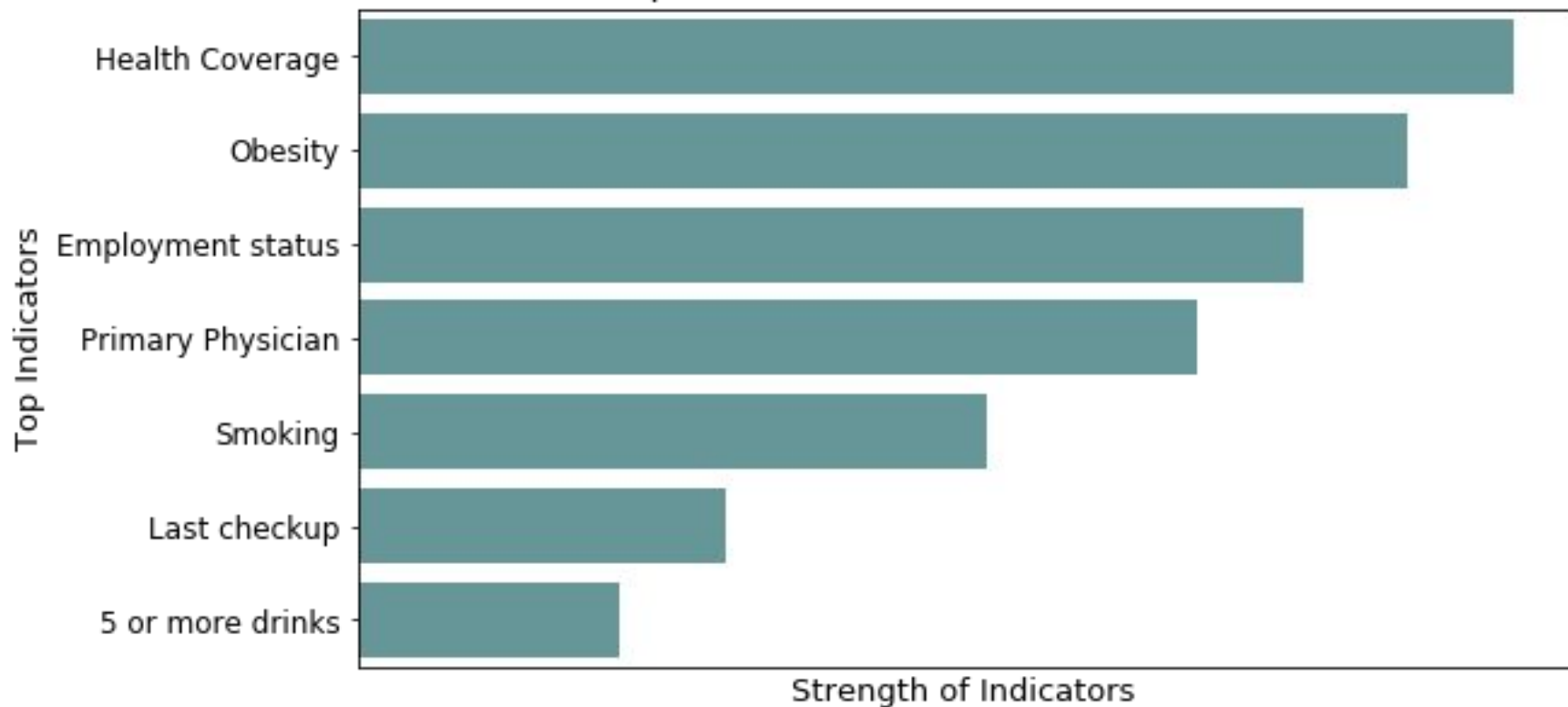
# Chronic Disease Risk Factors

- ☐ Income
- ☐ Education level
- ☐ Access to healthcare
- ☐ Physical check up frequency






## Top Risk Factors for Chronic Conditions





Accuracy

76%



# Next steps

- ❑ Ask more questions
  - ❑ Diet such as fruit and vegetable, soda, and fast food consumption
- ❑ Survey collection instrument design



Linkedin = <https://www.linkedin.com/in/lidet-alemu>

Github = <https://github.com/Lidetsal>

# Source

- ❑ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5876976/#B1-ijerph-15-00431>
- ❑ <https://www.cdc.gov/chronicdisease/index.htm>