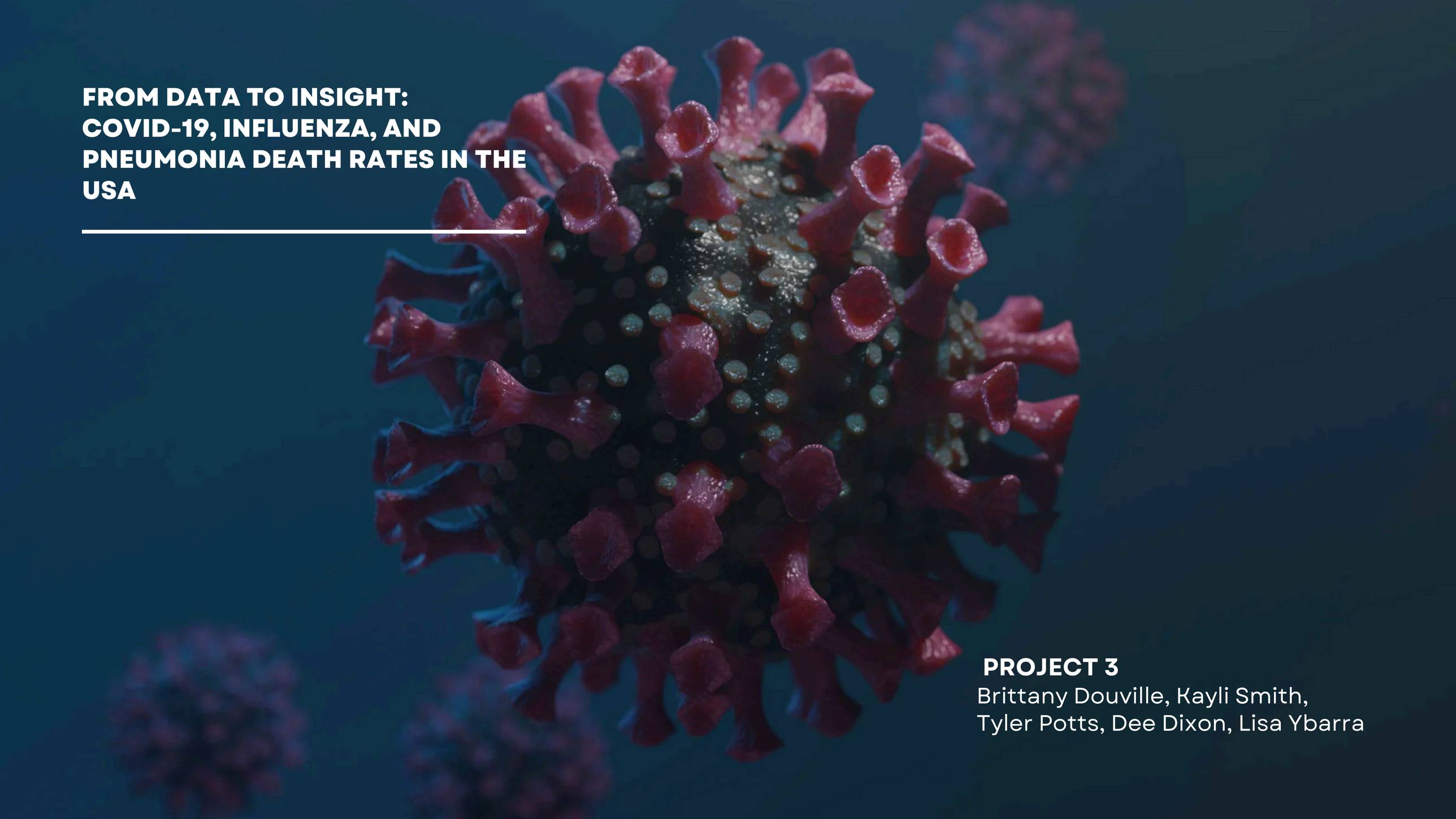
FROM DATA TO INSIGHT: COVID-19, INFLUENZA, AND PNEUMONIA DEATH RATES IN THE USA



PROJECT 3

Brittany Douville, Kayli Smith,
Tyler Potts, Dee Dixon, Lisa Ybarra

INTRODUCTION

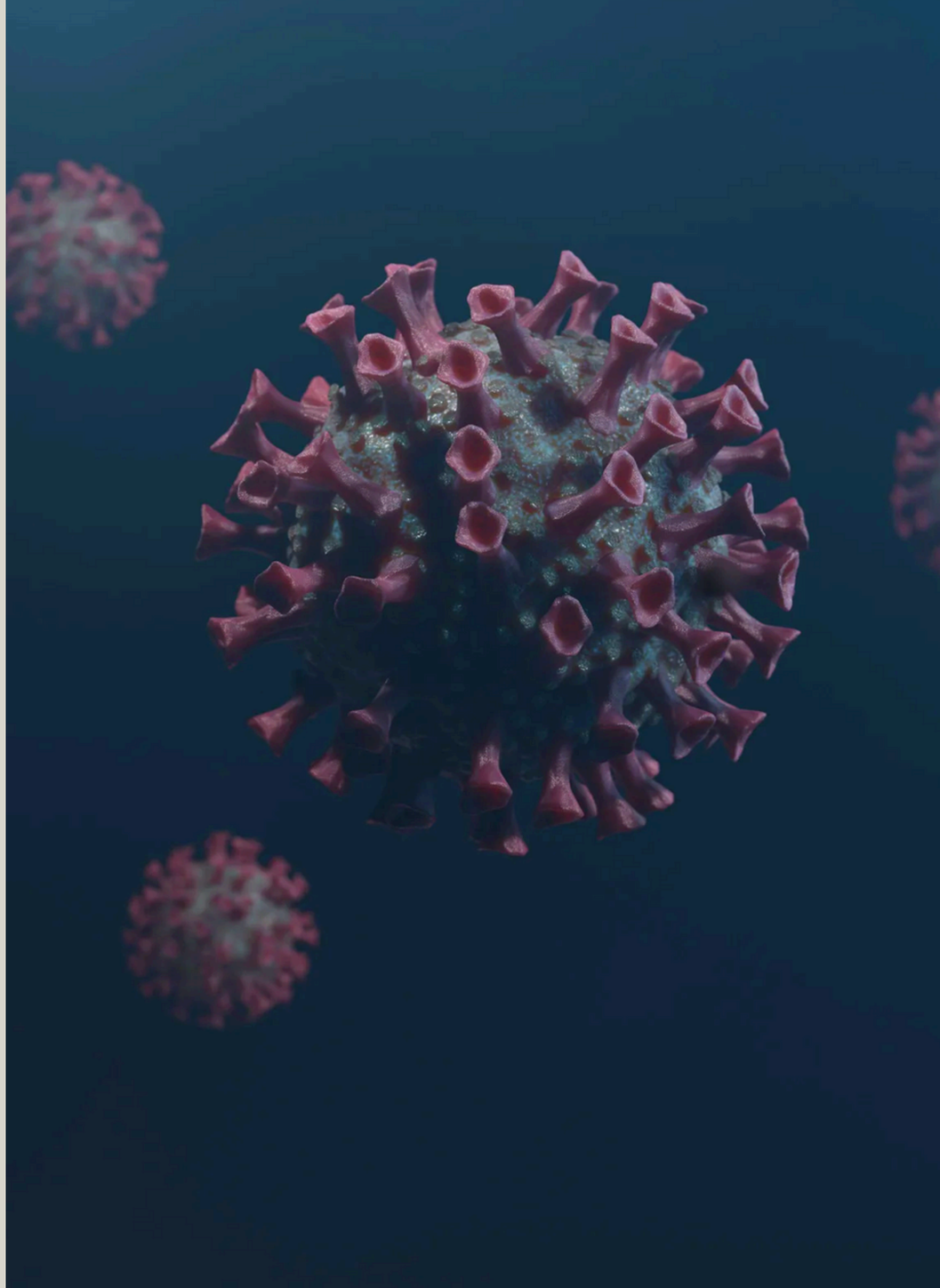
This project aims to compare deaths from Covid-19, Influenza, and Pneumonia in the USA, analyzing data from 2023.

Limitations and Considerations

- **Multiple Data Sources:**
  - Population figures are approximate and may vary slightly due to differing data sources, migration, birth rates, and other demographic factors. Variations in data collection methodologies, reporting standards, and update frequencies can introduce inconsistencies and potential biases.

- **Reporting Delays and Inaccuracies:**
  - Delays in reporting deaths and misclassification of causes of death can affect the accuracy of the data. For example, deaths initially attributed to one cause may later be reclassified.

- **Healthcare Access and Quality:**
  - Differences in healthcare access, quality, and infrastructure across states can influence death rates and reporting accuracy. States with better healthcare systems might have lower death rates and more



Goal and Objectives

TO ANALYZE AND COMPARE DEATHS CAUSED BY COVID-19, INFLUENZA, AND PNEUMONIA IN THE UNITED STATES FROM 2023.

OBJECTIVES:

1. GENDER-BASED ANALYSIS:
   - REVIEW THE TOTAL NUMBER OF DEATHS BY SEX FOR COVID-19, INFLUENZA, AND PNEUMONIA.
2. AGE-BASED ANALYSIS:
   - EXAMINE THE TOTAL NUMBER OF DEATHS BY AGE RANGE FOR COVID-19, INFLUENZA, AND PNEUMONIA.
3. ILLNESS-SPECIFIC MORTALITY:
   - CALCULATE THE TOTAL NUMBER AND PERCENTAGE OF DEATHS FOR EACH ILLNESS INDIVIDUALLY.
4. POPULATION CONSIDERATION:
   - ACCOUNT FOR THE TOTAL POPULATION OF THE UNITED STATES BASED ON THE LATEST US CENSUS DATA (2020) TO CONTEXTUALIZE MORTALITY RATES.

** 2023 POPULATION IS BASED ON 2020 DECENNIAL ESTIMATED PROJECTIONS*

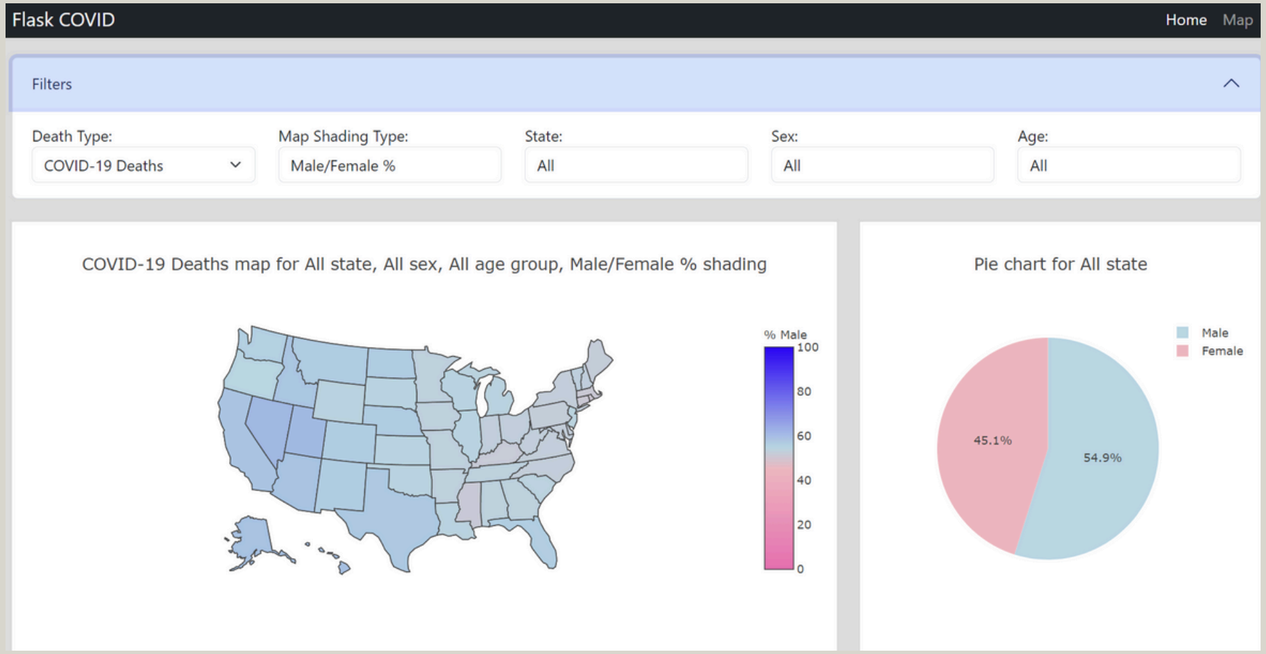
Gender-Based Analysis

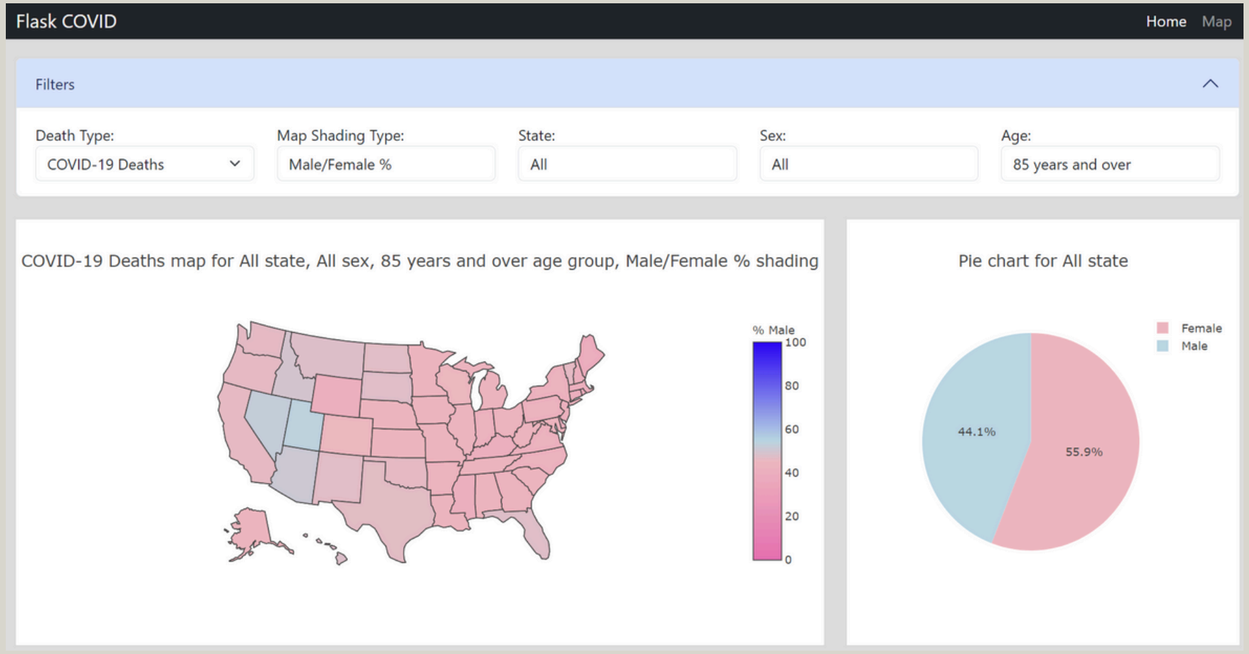
COVID-19 Deaths

Higher among males than females, except in the 85+ age group due to women's longer life expectancy.

Majority of deaths occurred in California and Texas, the most populous states.

Highest deaths per capita in Mississippi and West Virginia, both in the top four states for obesity rates, indicating a strong correlation between obesity and COVID-19 mortality (source).





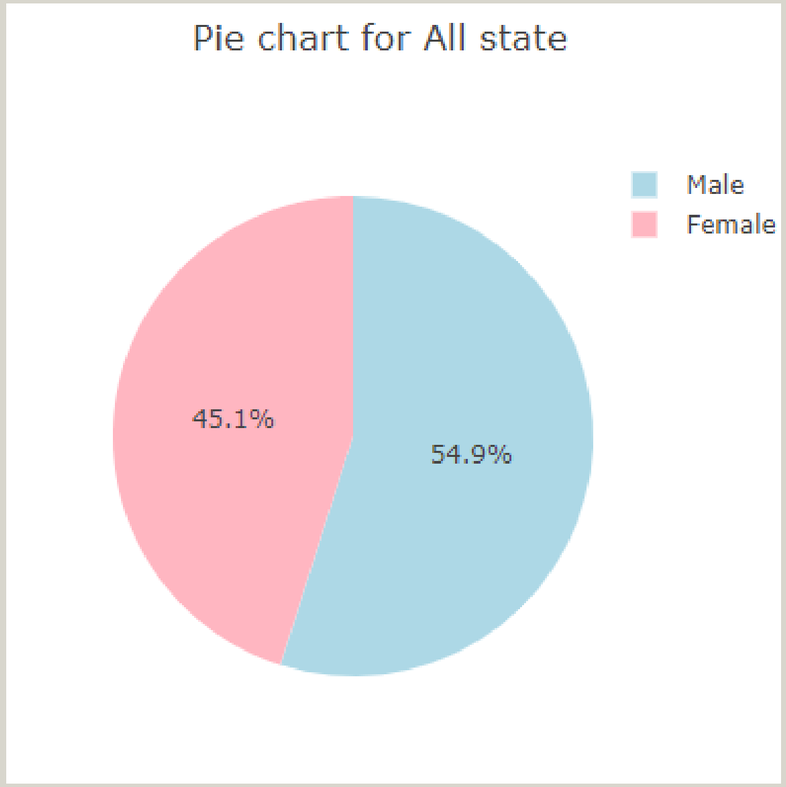
Examples above reference the first comment of life expectancy

Illness-Specific Mortality

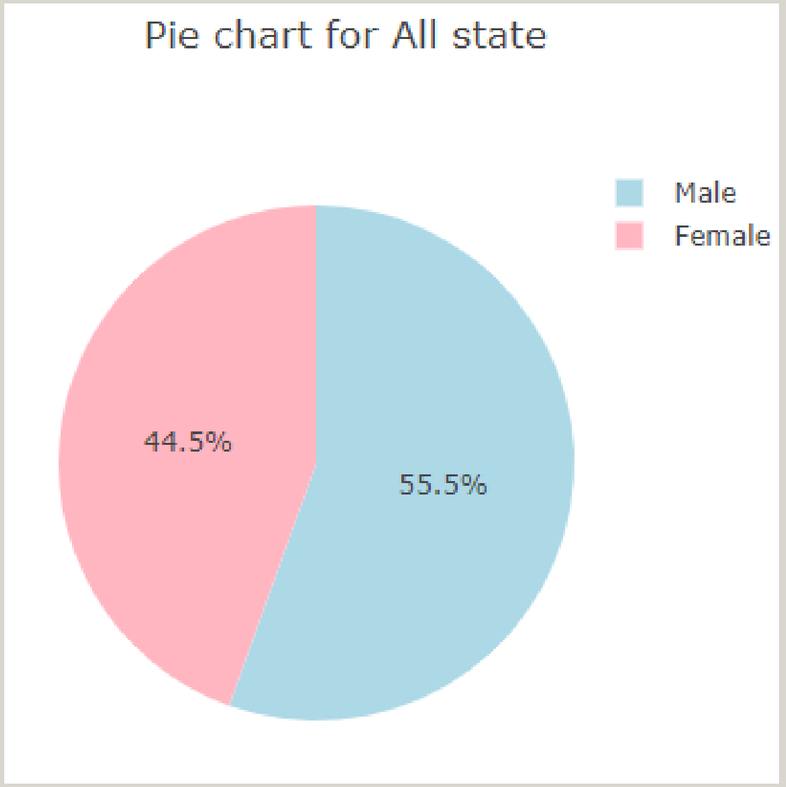
Influenza is higher among females than males.

- *Highest per capita rates in North Dakota and South Dakota, likely due to very cold temperatures.*

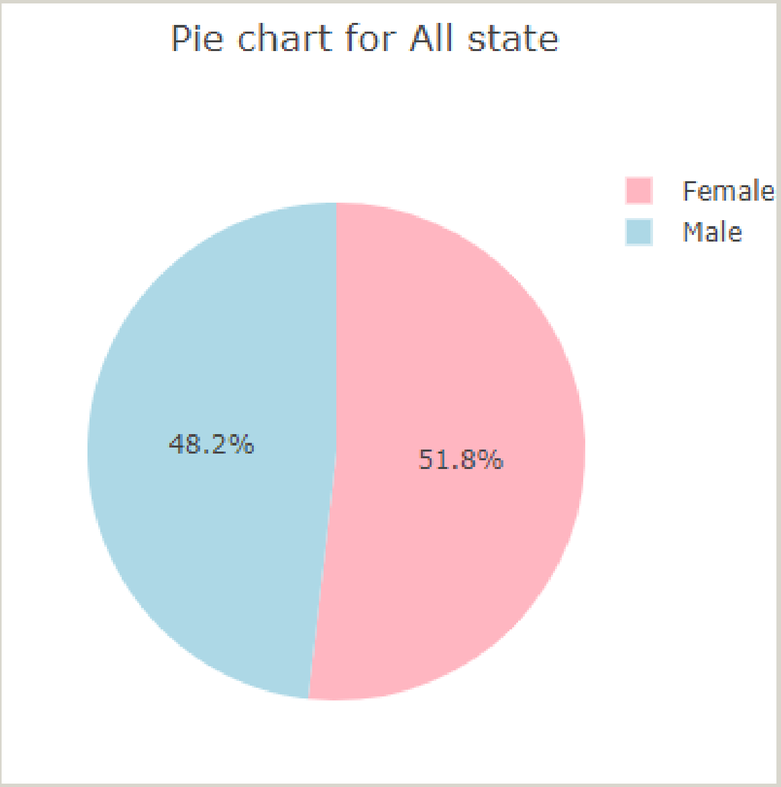
Covid-19 and Pneumonia were more prevalent in males than females.



***Covid-19**



***Pneumonia**



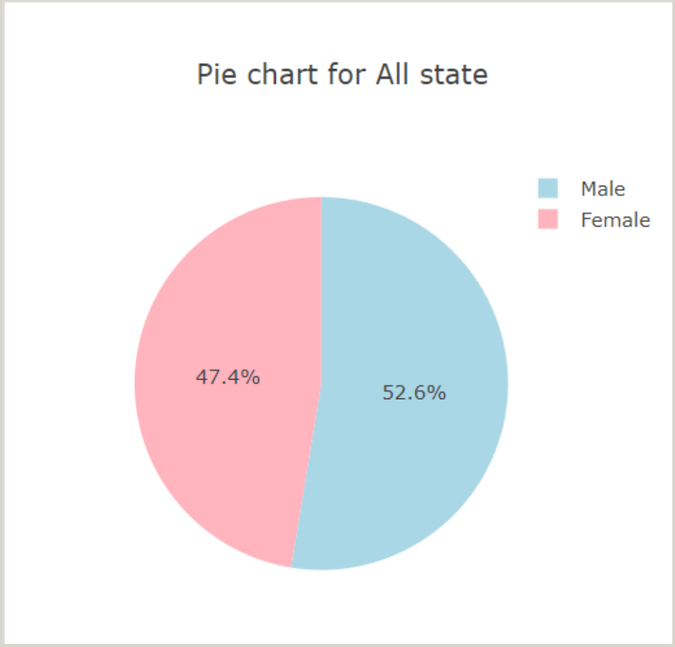
***Influenza**

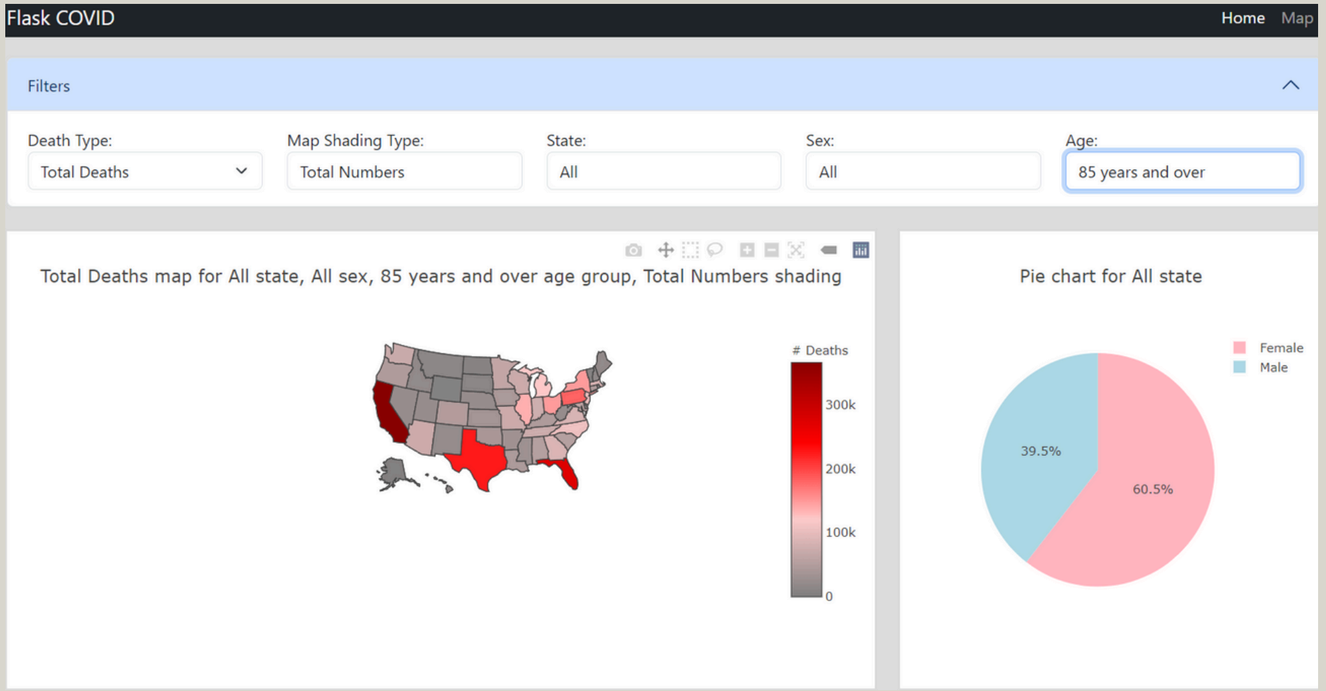
Age-Based Analysis

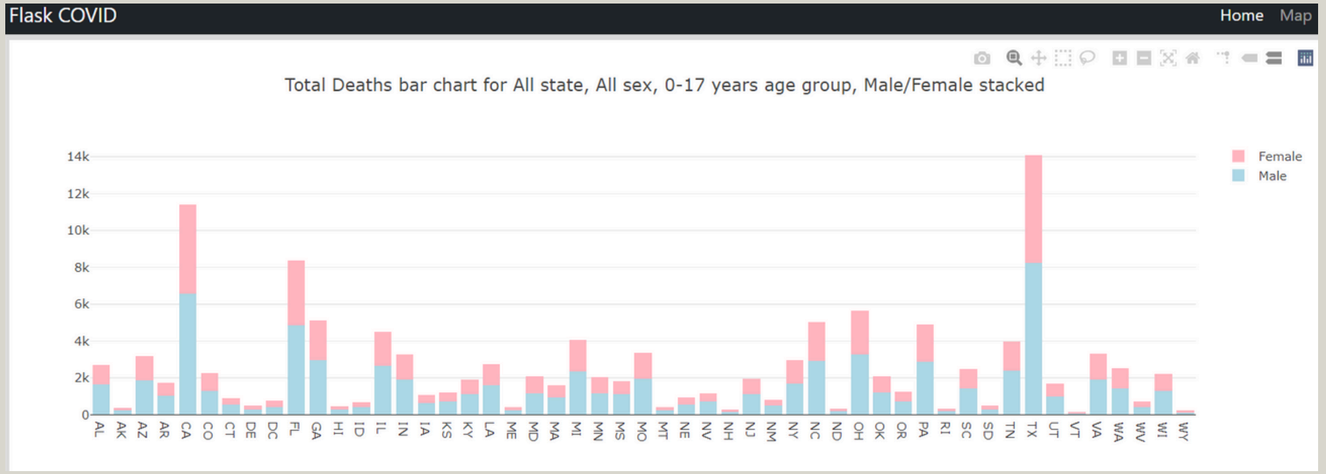
Mortality increases with age for all illnesses.

85+ age group has the highest death rates.

Minimal impact on 0-17 years.



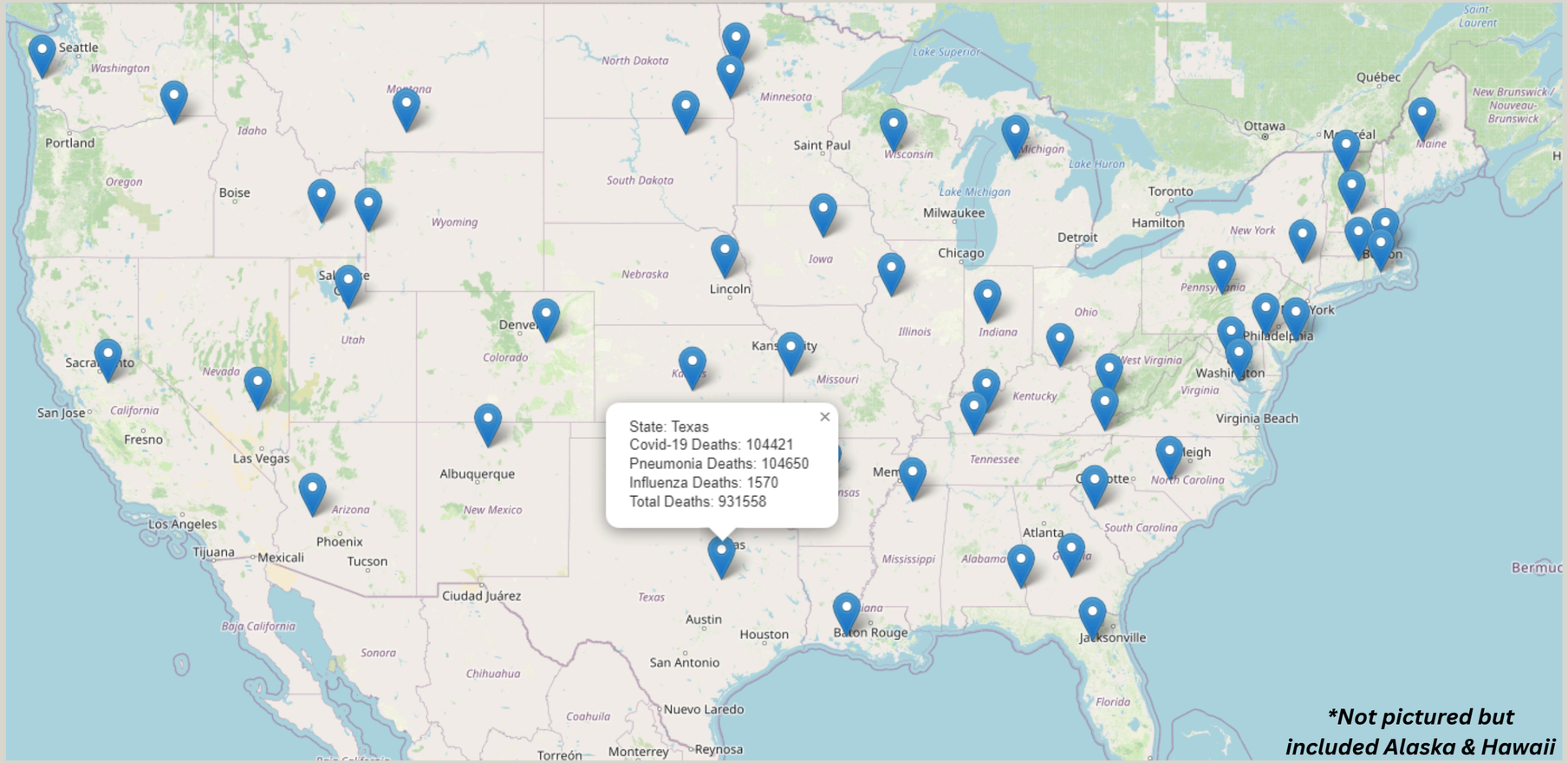




Population Considerations

- High Population States: California, Texas, and Florida have the highest absolute numbers of deaths for all three illnesses due to their large populations.

- Per Capita Analysis: States with smaller populations can exhibit higher per capita death rates, highlighting the relative impact of these illnesses more starkly.



Conclusion and Q&A

The analysis reveals that mortality rates for Covid-19, Pneumonia, and Influenza significantly increase with age, with the highest death rates observed in the 85+ age group. Younger age groups, particularly those aged 0-17 is inconclusive as data for those ages were incomplete. The data suggests there is a heightened vulnerability of older populations, highlighting the need for targeted healthcare interventions and resources to protect and support these age groups. Effective public health strategies must prioritize older adults to mitigate the severe outcomes associated with these diseases.

Live Demo