

U.S. CHRONIC DISEASE INDICATORS

A COMPREHENSIVE OVERVIEW

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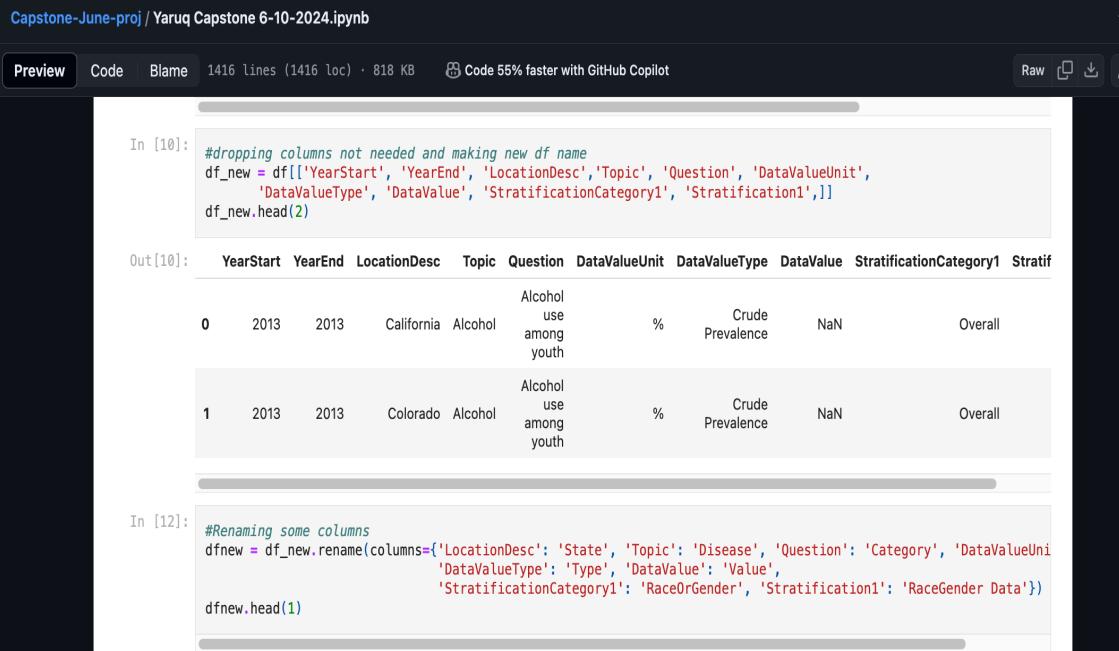
INTRODUCTION TO CHRONIC DISEASES

- Chronic diseases are long-lasting conditions with persistent effects.
- Major causes of death and disability in the U.S.

Importance of Chronic Disease Indicators

- Help monitor and understand public health trends.
- Inform policy-making, resource allocation, and prevention strategies.
- Do factors such as demographics, gender, ethnicity, or race play a role?

DATA CLEANUP IN PYTHON



The screenshot shows a Jupyter Notebook interface with the following details:

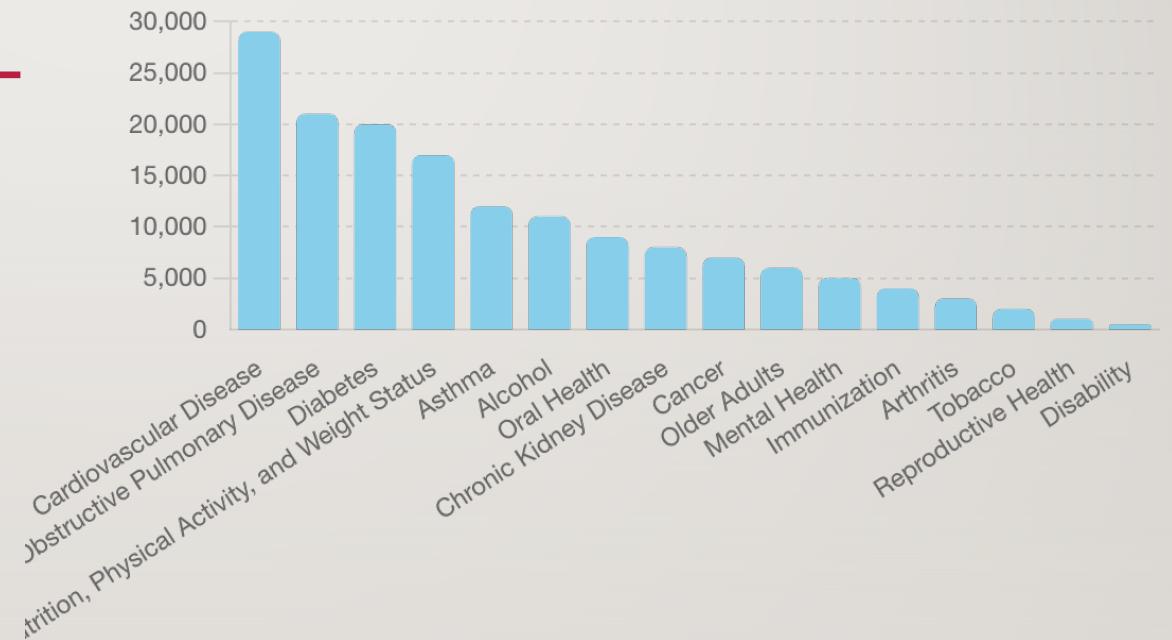
- File:** Capstone-June-proj / Yaruq Capstone 6-10-2024.ipynb
- Code Cell 10:** Contains Python code for dropping columns and creating a new DataFrame. The output shows the first two rows of the cleaned dataset.
- Code Cell 12:** Contains Python code for renaming columns. The output shows the first row of the renamed DataFrame.

	YearStart	YearEnd	LocationDesc	Topic	Question	DataValueUnit	DataValueType	DataValue	StratificationCategory1	Stratif
0	2013	2013	California	Alcohol	Alcohol use among youth	%	Crude Prevalence	NaN	Overall	
1	2013	2013	Colorado	Alcohol	Alcohol use among youth	%	Crude Prevalence	NaN	Overall	

- Overview:** Conducted several operations to clean a dataset containing over 250,000 records across 17 columns.
- Handling Missing Data:** Removed rows with missing or blank values and renamed columns for better clarity.
- Results:** After cleaning, the dataset was reduced to 158,419 records with 10 columns.

TOP 3 CHRONIC DISEASES IN THE U.S.

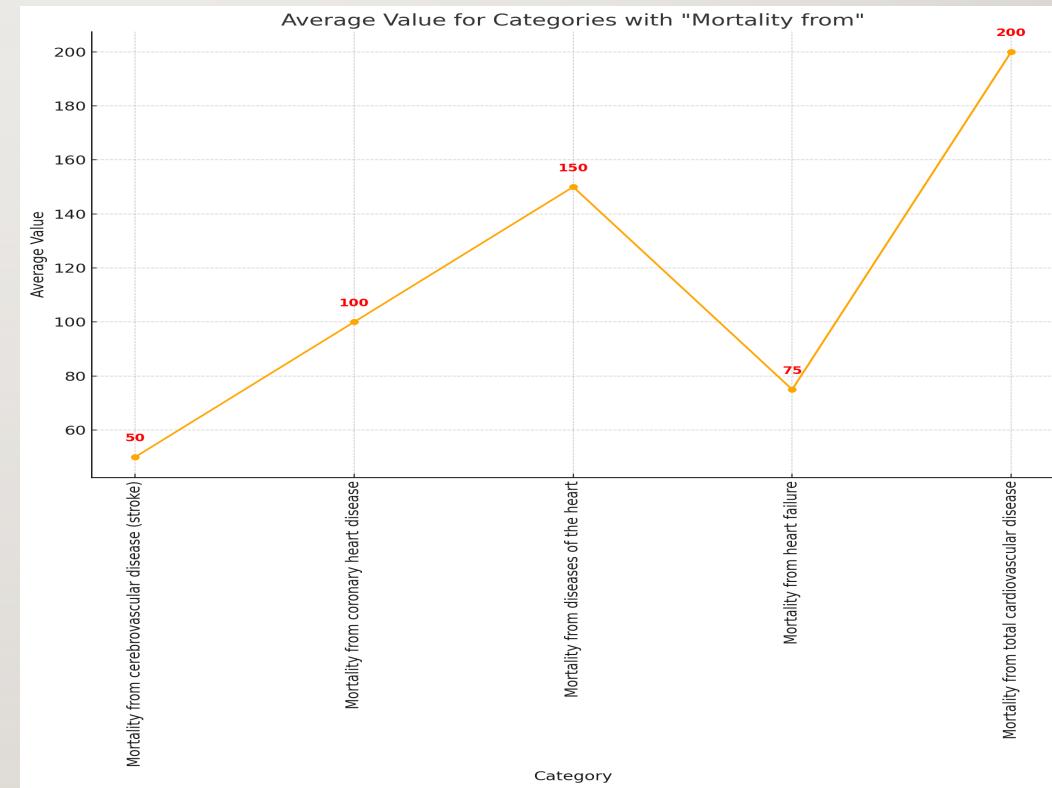
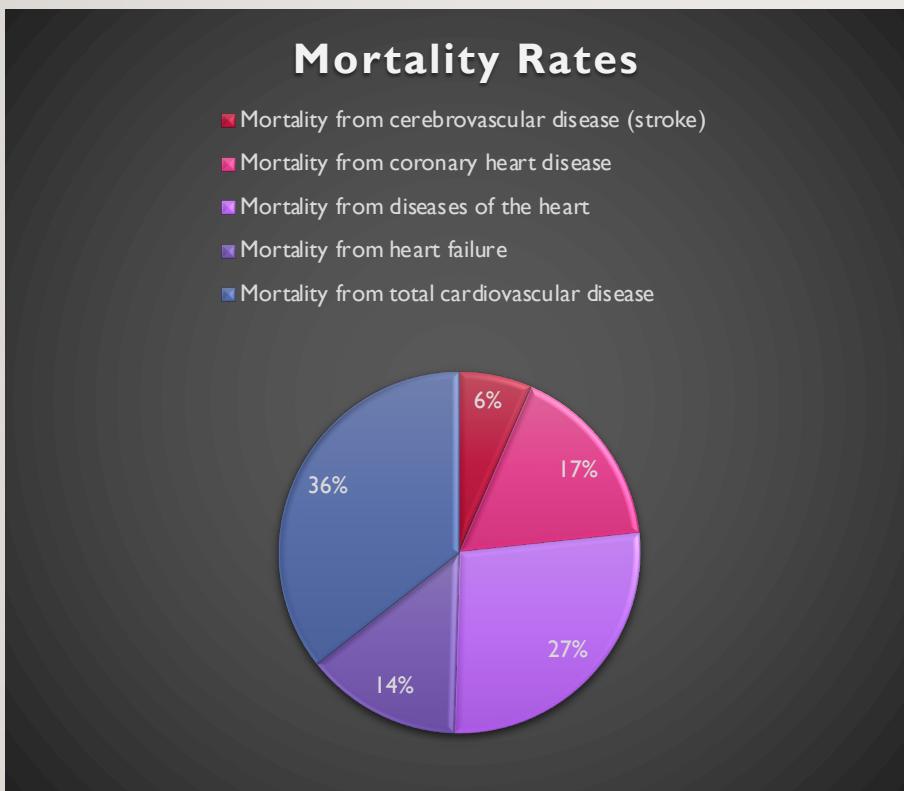
- 1. Cardiovascular Disease: 29,000 cases**
- 2. Chronic Obstructive Pulmonary Disease: 21,000 cases**
- 3. Diabetes: 20,000 cases**



PREVALENCE OF CARDIOVASCULAR DISEASE

- 29,000 cases reported in the U.S.
- Data was limited but showed Mortality factors due to CVD.
- Compared Gender, Race/Ethnicity and Demographics as potential factors

MORTALITY FACTORS IN CVD



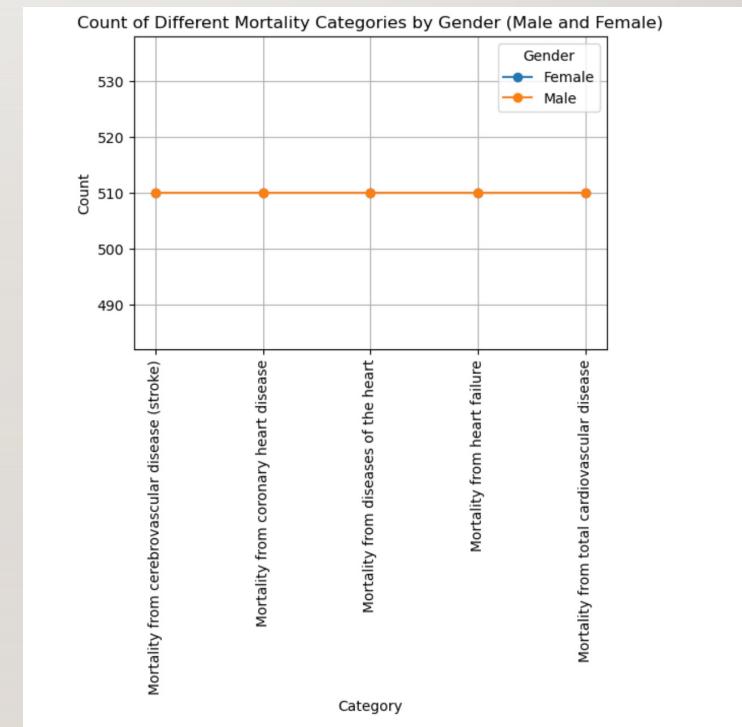
GENDER COMPARISON IN CARDIOVASCULAR DISEASE MORTALITY

Observations

- **Consistency:** The counts for males and females in all categories are remarkably similar, suggesting uniform mortality rates across genders for these conditions.
- **Implications:** Indicates that both genders are equally affected by cardiovascular diseases in terms of mortality.

Conclusion:

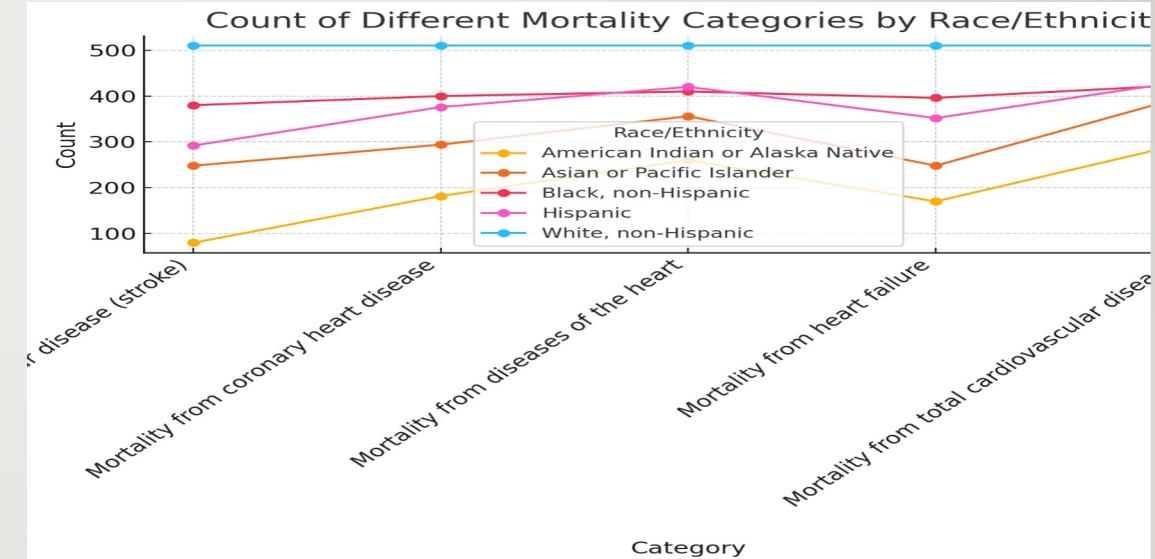
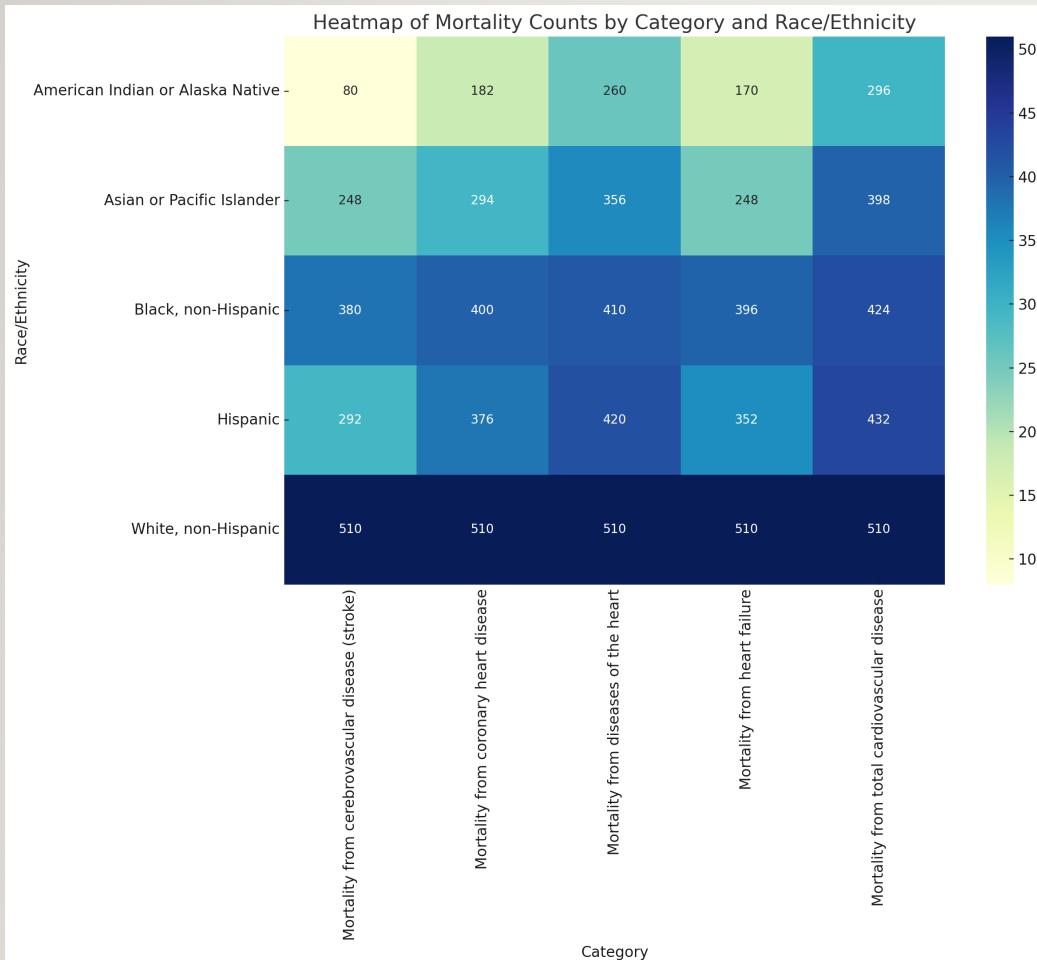
- **Equal Impact:** Cardiovascular diseases pose a similar mortality risk for both men and women, highlighting the importance of targeted prevention and treatment efforts for all populations.



MORTALITY COUNTS BY RACE/ETHNICITY

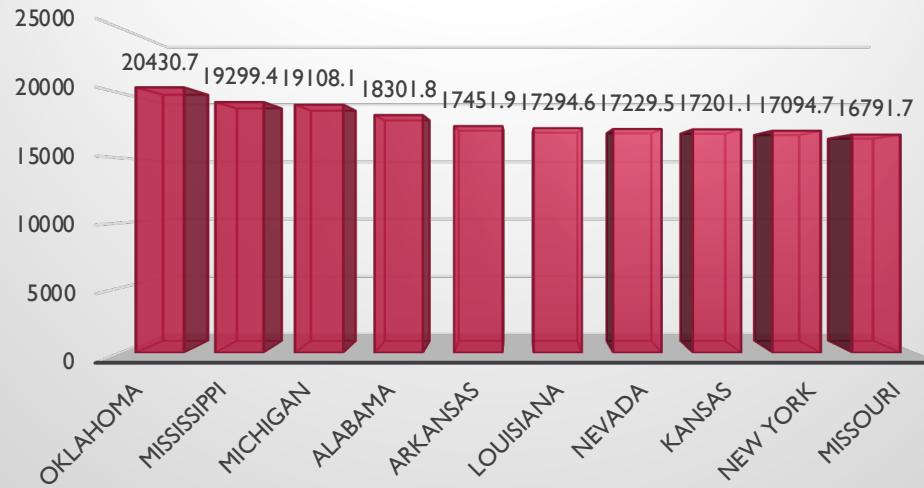
- **Key Insights:**
 - White, non-Hispanic consistently shows high mortality counts across all categories.
 - American Indian or Alaska Native has the lowest counts in most categories.
 - Hispanic populations have varied counts, with notably lower counts in stroke and higher in coronary heart disease.
 - Black, non-Hispanic shows significant counts, particularly in stroke and heart failure.
- **Implications:** Identifying these disparities can help target public health interventions more effectively to the communities most at risk.

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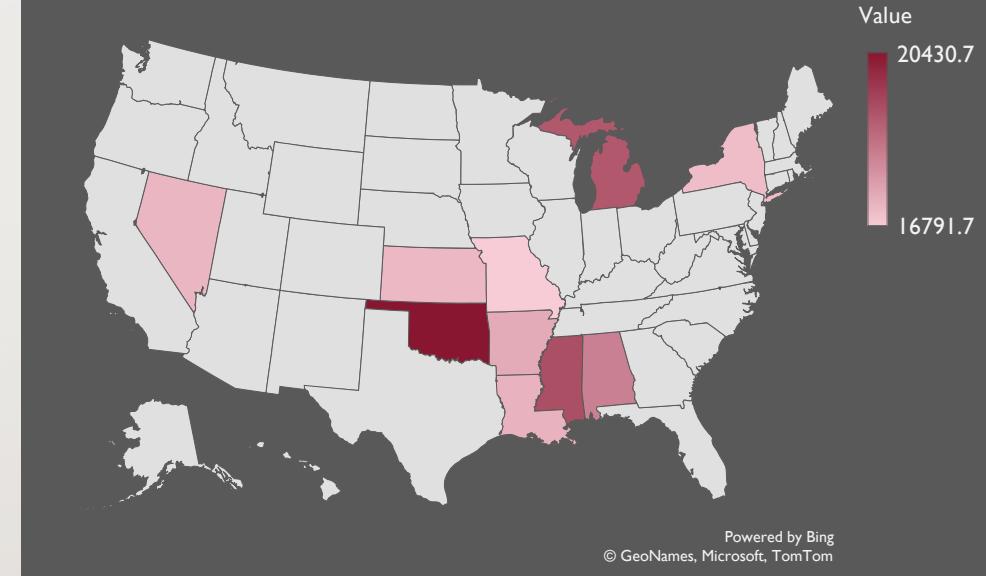
Top 10 States with Mortality from CVD



Regional Variations: States like Oklahoma and Mississippi have significantly higher mortality rates from cardiovascular disease.

Implications: Indicates the need for targeted public health interventions in these states.

Top 10 States with Mortality from CVD Title



There is a considerable variation in cardiovascular disease mortality across different states.

Focus on prevention and treatment efforts in states with higher mortality rates to reduce overall cardiovascular disease burden.

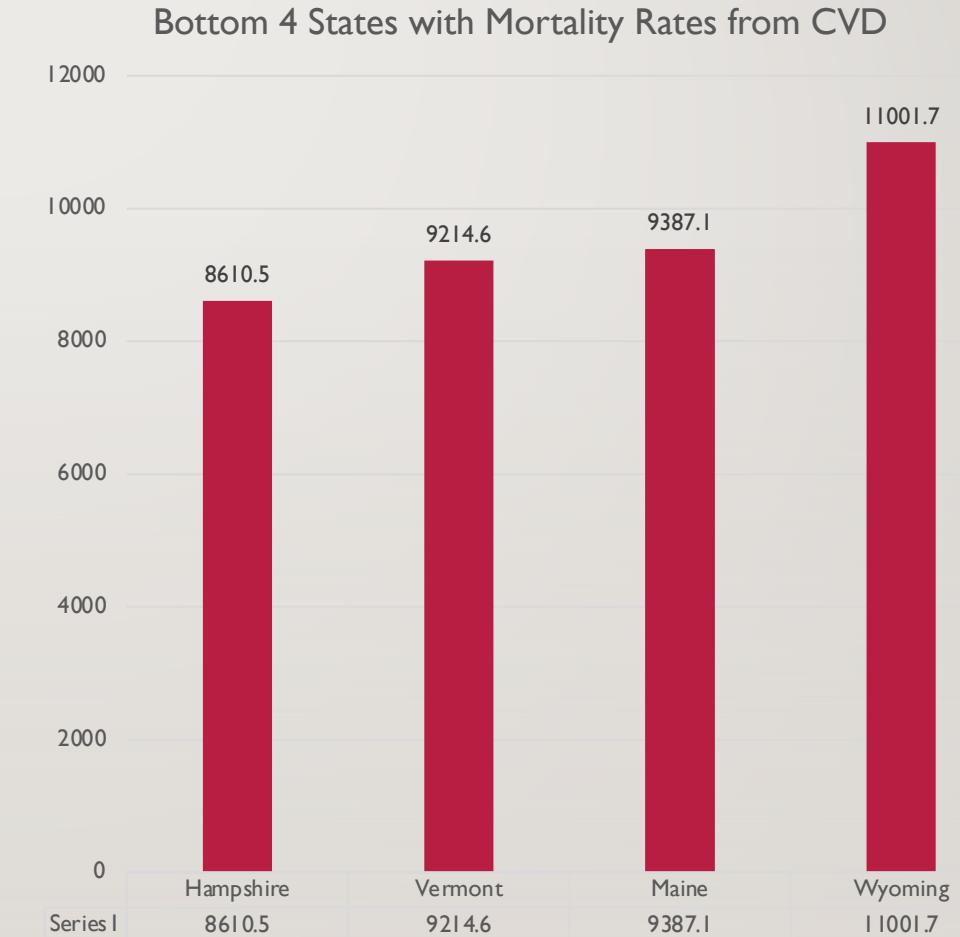
TOP 10 STATES WITH MORTALITY FROM CARDIOVASCULAR DISEASE

BOTTOM 4 STATES WITH MORTALITY FROM CVD

- **Lower Mortality Rates:** States like New Hampshire and Wyoming have significantly lower mortality rates from cardiovascular disease compared to other states.
- **Implications:** Indicates potentially better healthcare access, prevention measures, or lower prevalence of risk factors in these states.

Conclusion

- Utilize insights from states with lower mortality rates to develop and apply effective prevention and treatment strategies on a national scale.



CONCLUSION

- **Data Quality:** The data is not clean and requires some improvement.
- **Leading Chronic Disease:** According to the provided data, cardiovascular diseases top the chart as the leading chronic diseases in the U.S.
- **State Leading Mortality Factors:** The leading factor is mortality from total cardiovascular disease, followed by diseases of the heart, coronary heart disease, heart failure, and stroke.
- **Mortality Rates:** Oklahoma has the highest mortality rate, while New Hampshire has the lowest.
- **Gender Rates:** Gender impact is equal.
- **Demographic Insights:**
 1. White, non-Hispanic shows consistently high mortality.
 2. American Indian or Alaska Native has the lowest counts.
 3. Hispanic counts vary, lower in stroke, higher in coronary heart disease.
 4. Black, non-Hispanic shows high counts in stroke and heart failure.