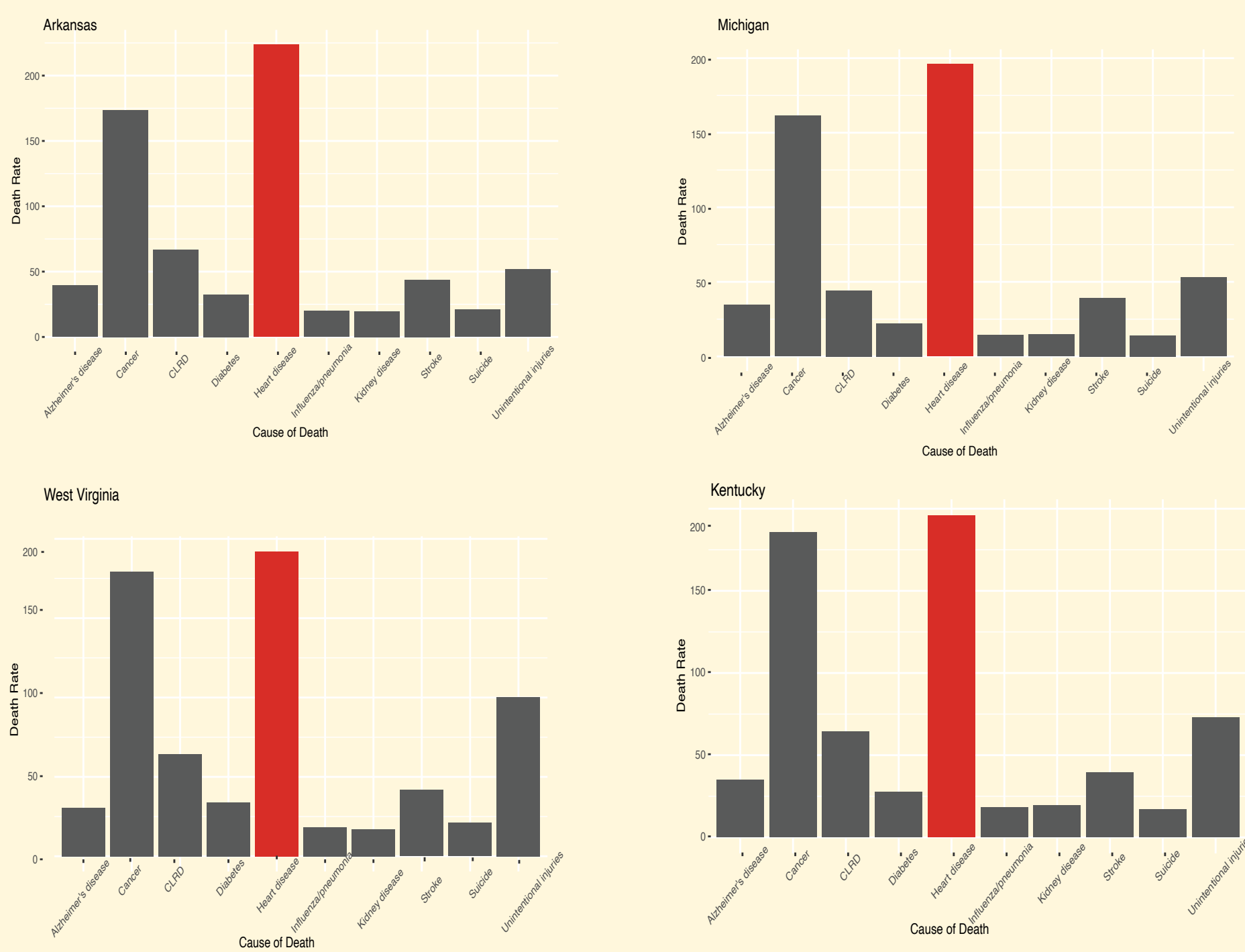


# Eat Your Heart Out: Heart Disease, a McDonald’s menu, and the states saying “I’m Lovin’ It”

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IST 719

Heart disease killed 647,457 Americans in 2017 -- this is the leading cause of death in the United States. A healthy diet is a well-known way to protect yourself from this “silent killer”, but the number of fast-food options in your state can put you at a severe disadvantage.

What is the main cause of death in the states with the most McDonald’s per capita?

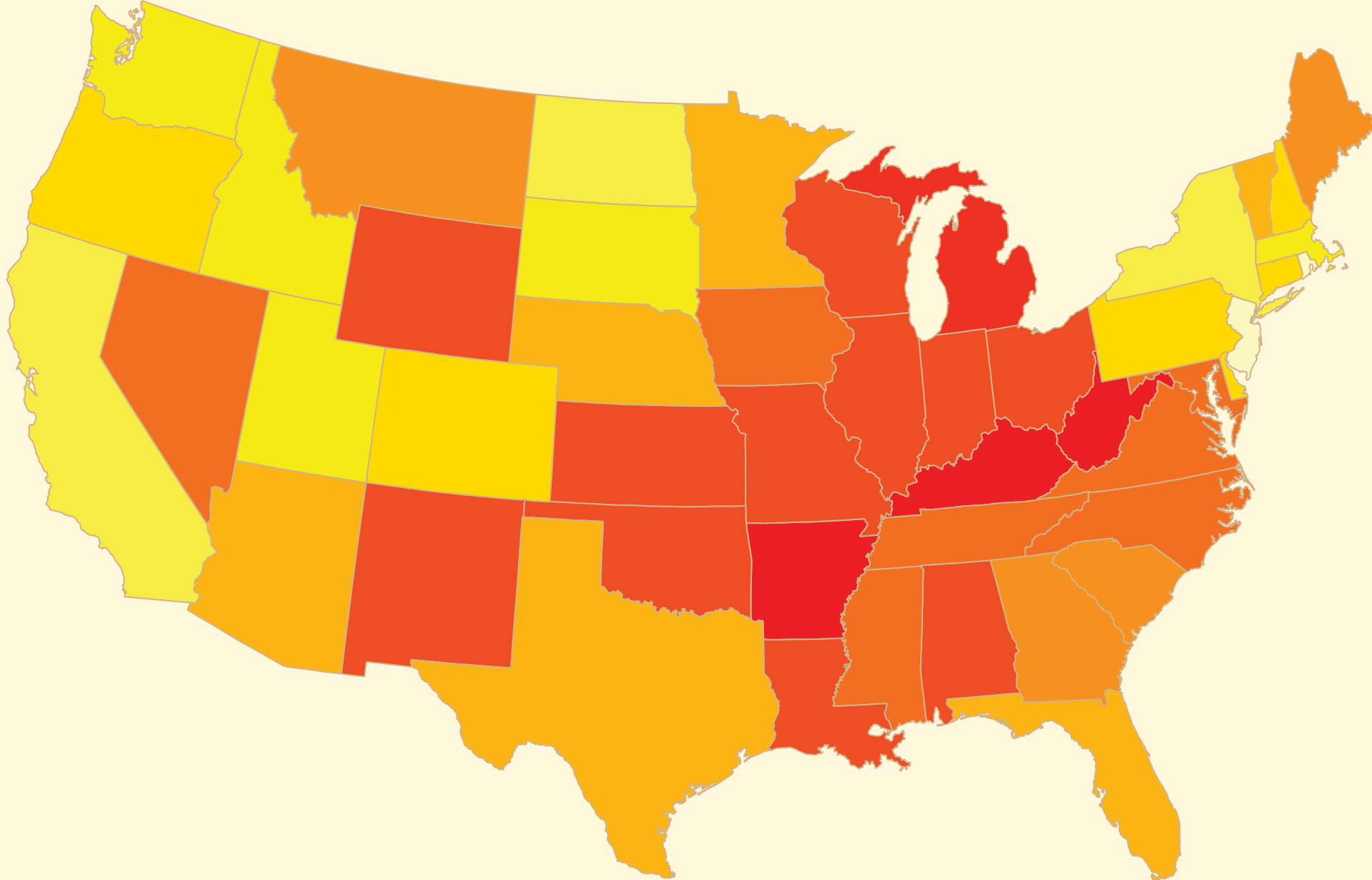


The major cause of death in each of the four states is heart disease followed by cancer. According to the American Heart Association, diet plays a major role in the development of heart disease.

**Motivation:** One person dies every 37 seconds from heart disease. Public health officials, fast-food businesses, and the general public may be interested to understand the role that fast food plays on our community health.

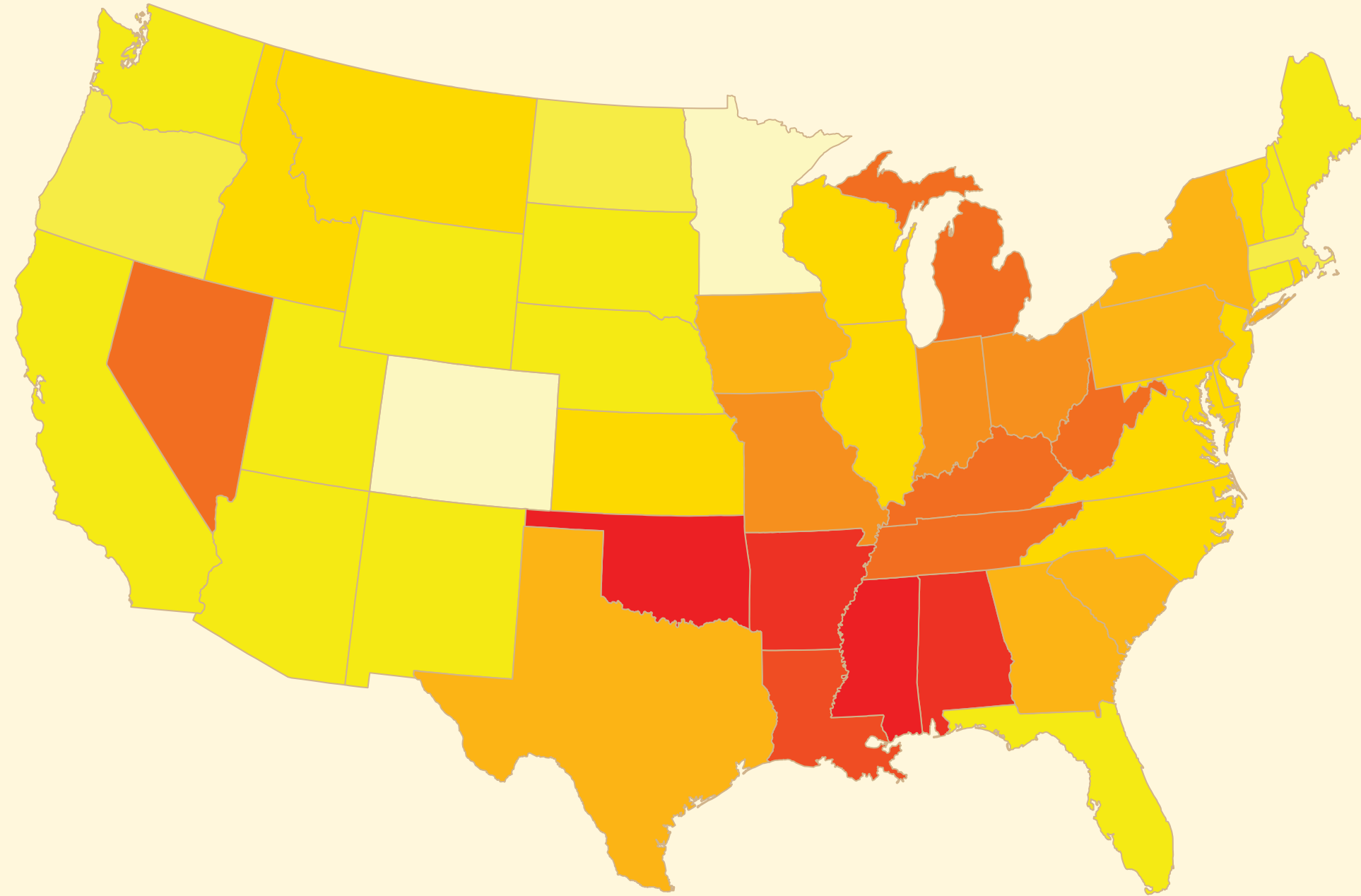
Which states contain the most McDonald's per capita?

Number of McDonald's per Capita by State



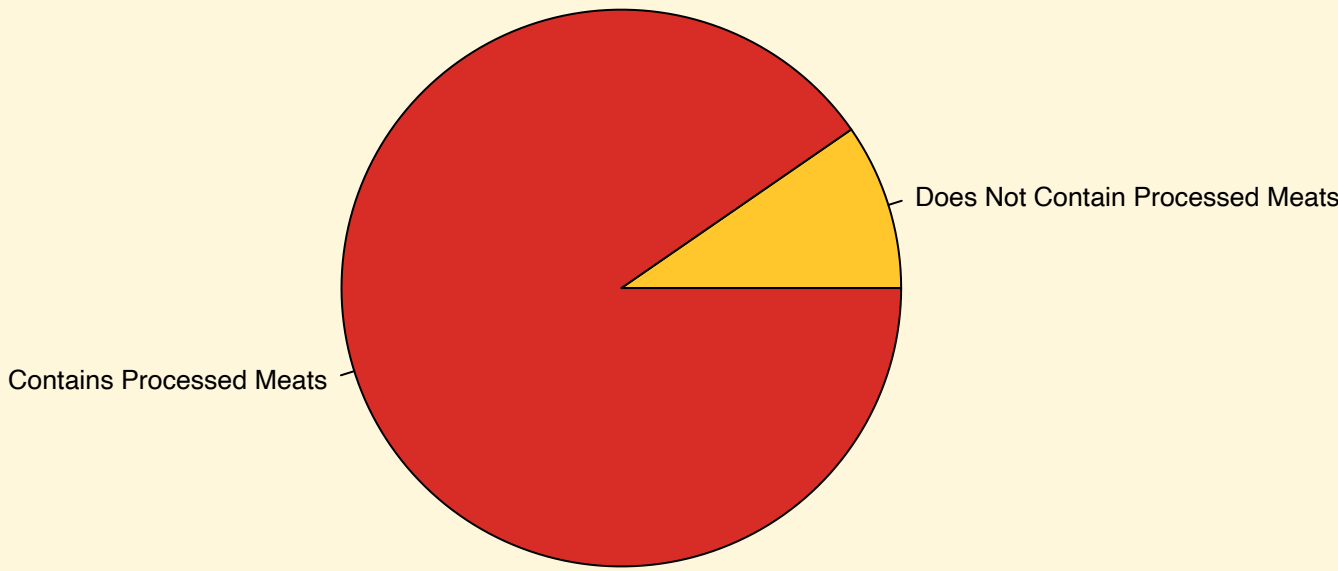
Which states have the worst mortality rates?

Heart Disease Mortality Rates by State



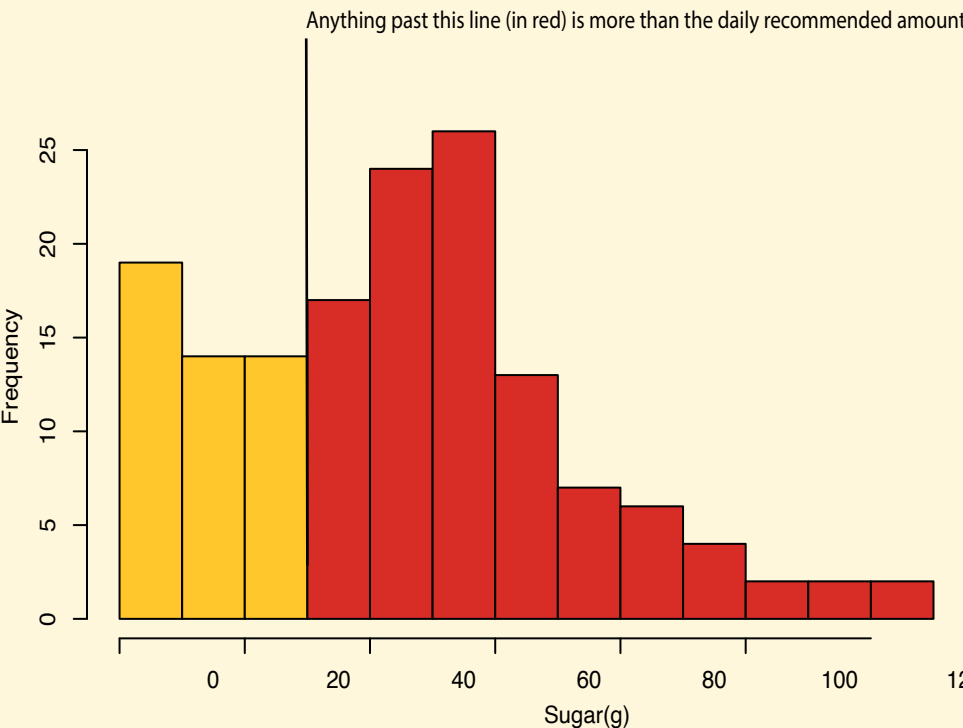
Could the cause be in the menu?

Processed vs Non-processed Foods

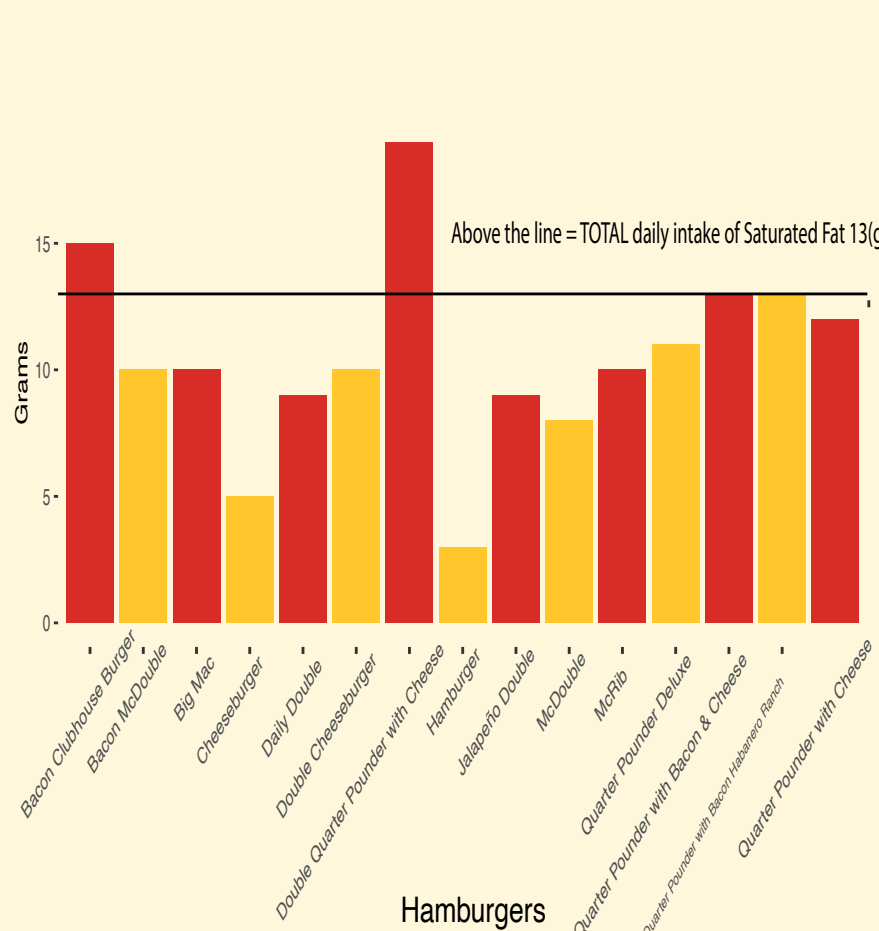


This pie chart represents the number of McDonald's menu items available that either contain processed meats or do not contain processed meats.

Sugar Content of Beverages, Coffee, & Shakes

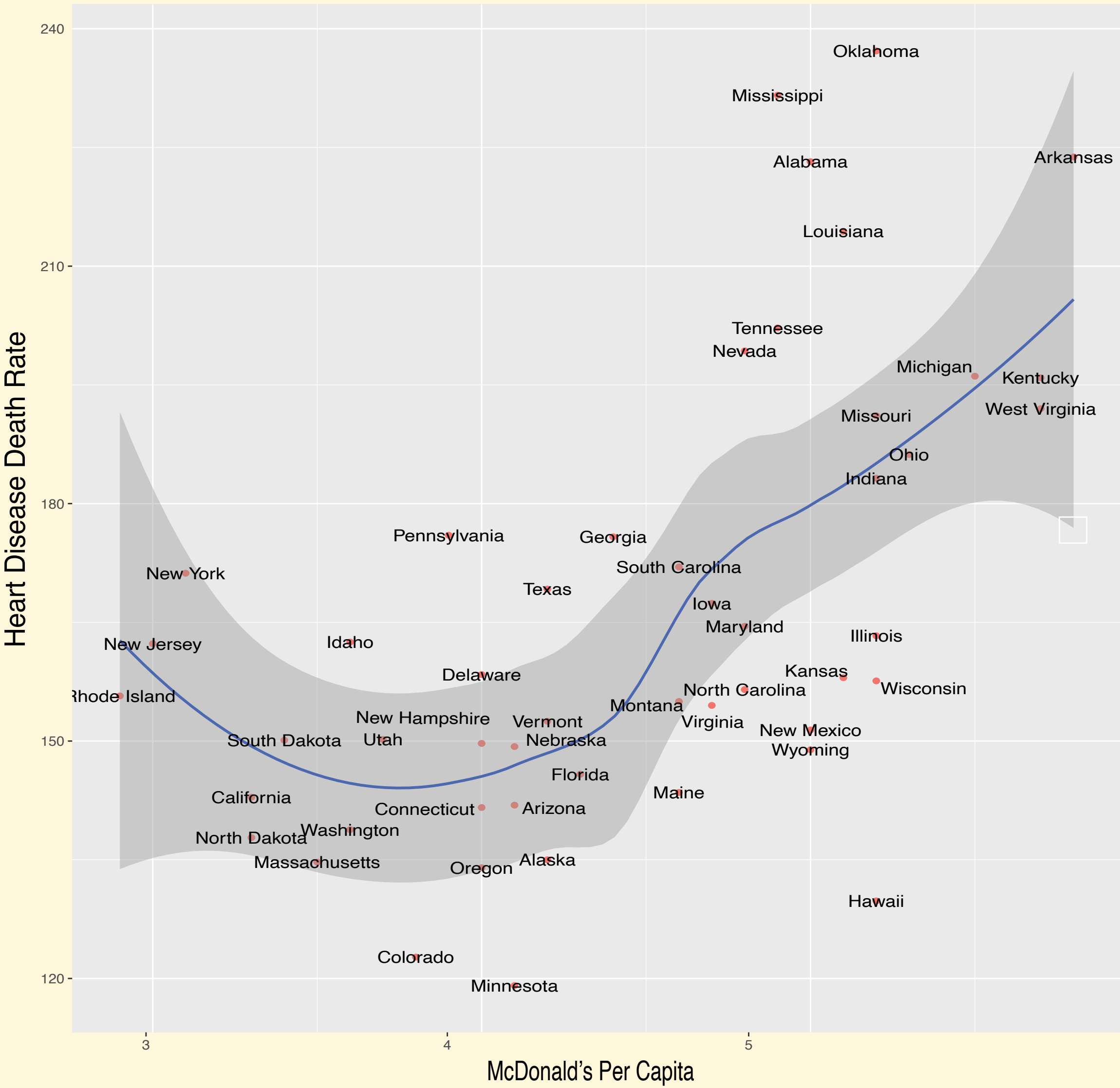


Burgers Saturated Fat in grams



The McDonald's menu is a cardiologist's worst nightmare. The limited options of non-processed food, the heavily sugared drinks, coffee, and shakes, and the high saturated fat content of the burgers would all easily contribute to the rise of heart disease.

Is there a correlation between the two?



Where is the data from?

This dataset was an aggregation of multiple datasets beginning with the McDonald's menu from kaggle: <https://www.kaggle.com/mcdonalds/nutrition-facts>. This dataset contained 24 variables with 260 rows of data.

I also utilized a dataset from the NCHS for mortality rates in America found here: <https://healthdata.gov/dataset/nchs-leading-causes-death-unit.ed-states/resource/f4a0732f-784d-4038-8aa0-2ece1a4ddf32>. This dataset contained 6 variables with 572 rows of data.

Finally I webscraped data from USAToday to gather McDonald's per capita: <https://www.usatoday.com/story/money/business/2018/09/13/mcdonalds-states-most-stores/37748287/>. This data was 50 rows with 2 variables

Dietary Recommendations with regards to sugar, saturated fats, and processed meats were all obtained from the CDC and the American Heart Association.

Packages used include: ggplot2, tidyvers, usmap, maps, plotrix, and dplyr