America's Health at a Glance, 2020

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Correlations but not Causations

Story

Interesting facts about America's health are observed and as follows and these metrics can be grouped into 3 clusters

Metrics in Cluster 1 shows high Positive correlation between themselves are Drug overdose deaths, Firearm fatalities, Alcohol impaired driving deaths, Motor vehicle deaths, Single parent households, Homeowners, Injury deaths, Non-Hispanic white, Average violent crimes, Unemployed, Workers who drive alone and Uninsured.

Metrics in Cluster 2 that shows high Positive correlation between themselves are Asians, Percent with access to exercise opportunities, Median household income, Life expectancy
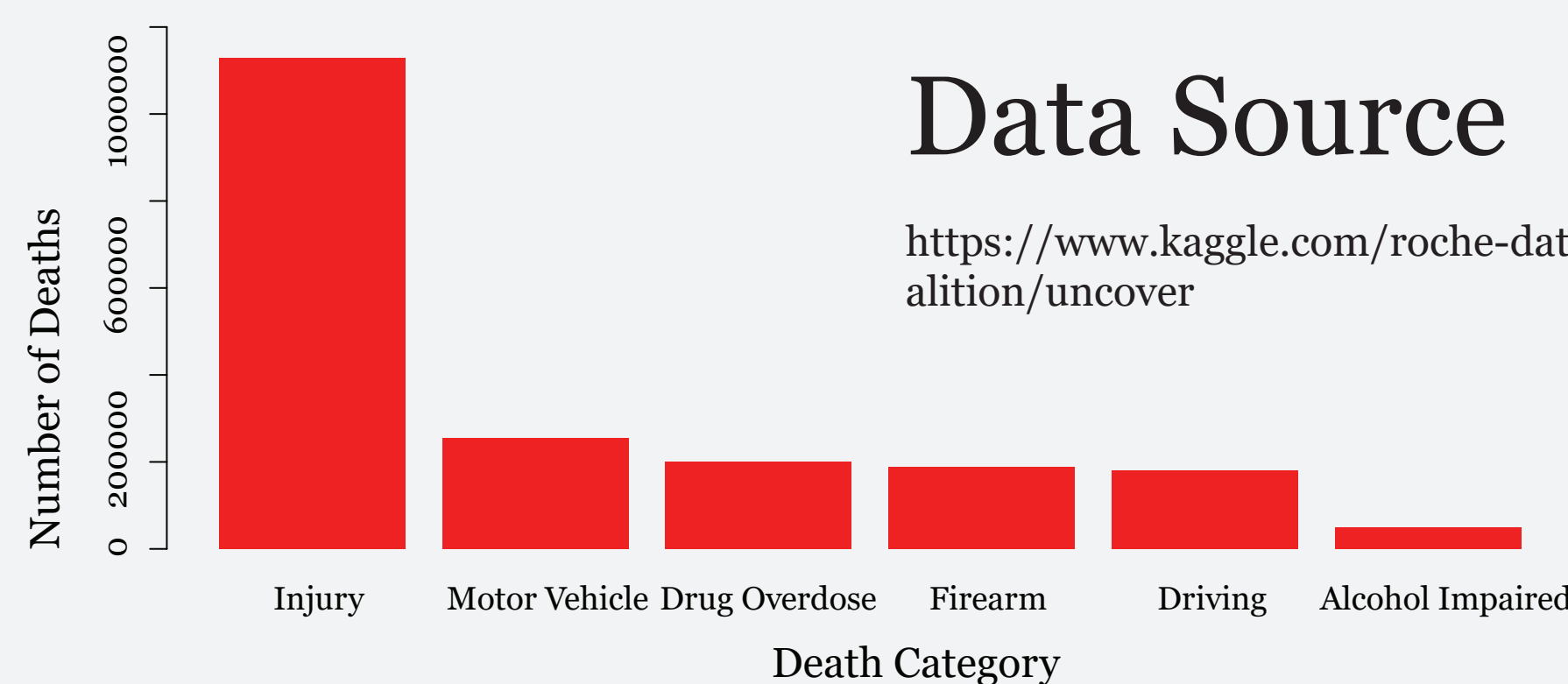
Metrics in Cluster 3 that shows high correlation between themselves are Percent smokers, Percent adults with obesity, Percent physically inactive, Percent adults with diabetes, Injury death rate, Percent fair or poor health, Percent children in poverty, Percent limited access to healthy foods, Firearm fatalities rate, Teen birth rate, Motor vehicle mortality rate

Metrics in Cluster 2 and Cluster 3 exhibits Negative correlation with the metrics in the other cluster

Top Death Reasons?
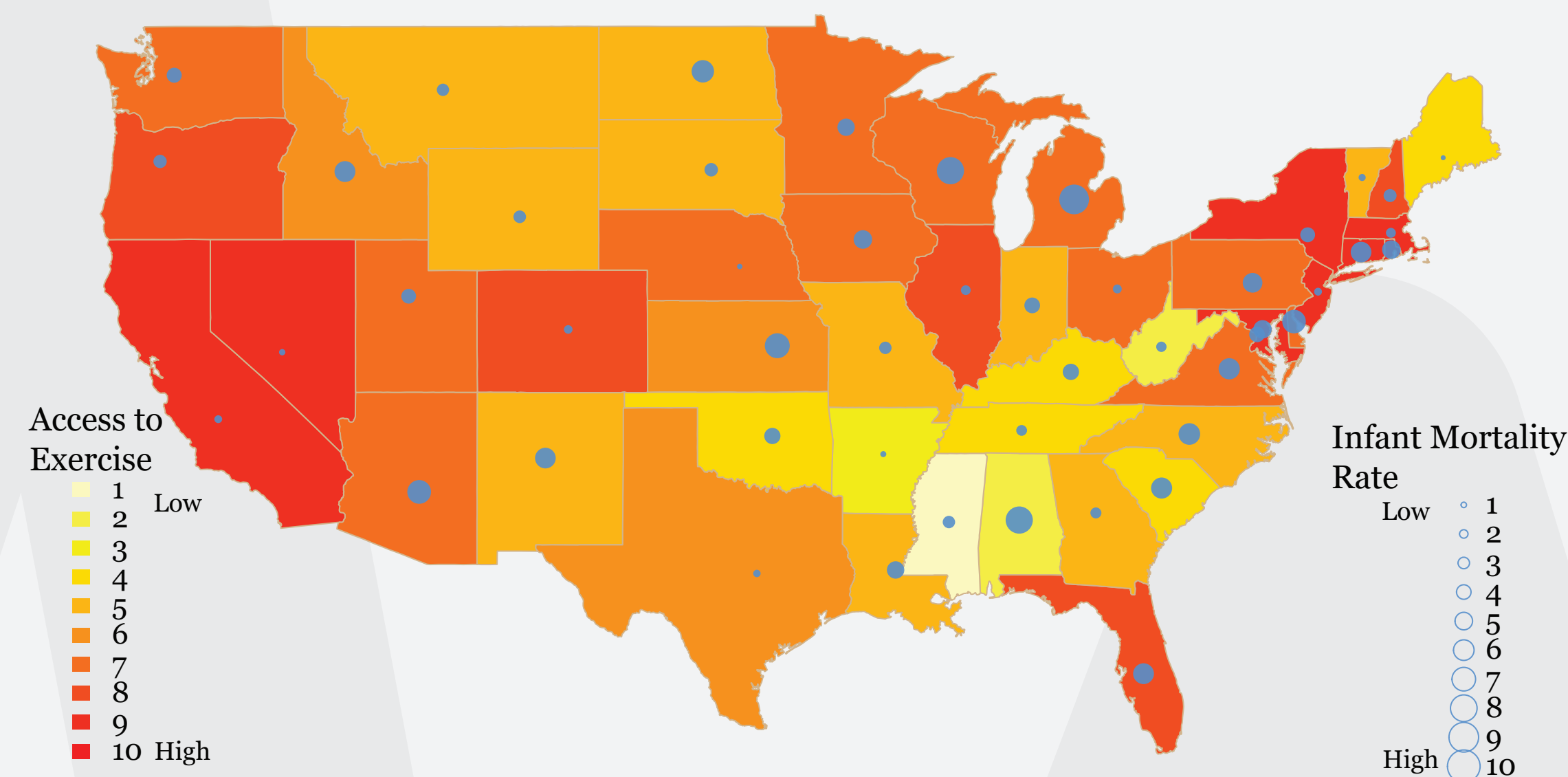

Data Source

https://www.kaggle.com/roche-data-science-coalition/uncover

Data Description

330 Million People

Exercise Vs Infant Mortality Rate

Access to Exercise — Low 1 2 3 4 5 6 7 8 9 10 High

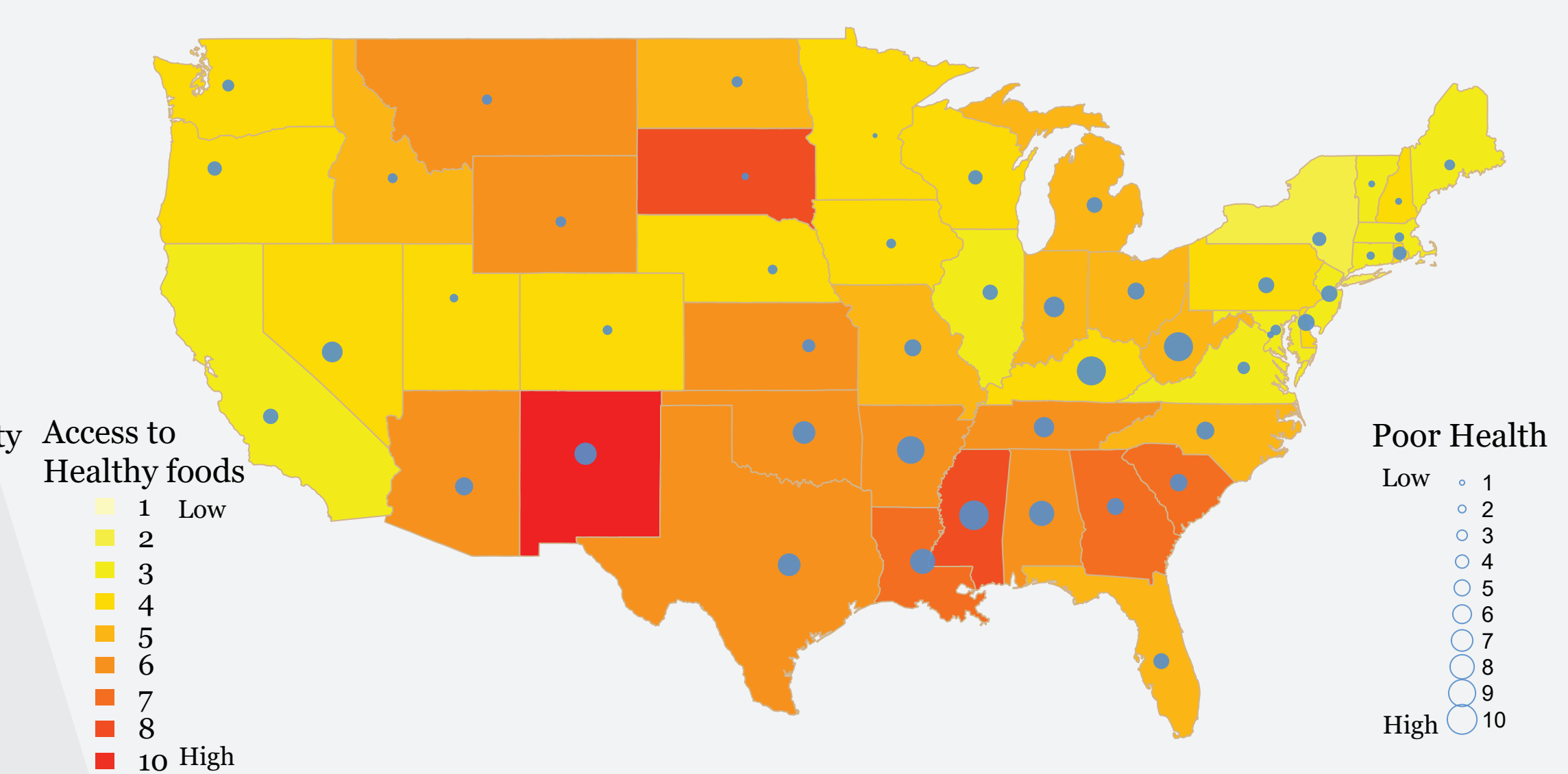**Infant Mortality Rate** — Low 1 2 3 4 5 6 7 8 9 10 High

Increased access to Exercise shows reduced Infant Mortality Rate :

* California , New Jersey, New York, Massachusetts, Nevada and Connecticut are the top states with more population % that has access to exercise and the Infant Mortality Rates are lower .
* Similarly Mississippi, Alabama, Louisiana, Arkansas and West Virginia are the states with least population % that has access to exercise and the Infant Mortality Rate is higher

Mental and Physical unhealthy days exibit same behavior?

Category
- Mentally unhealthy days
- Physically unhealthy days
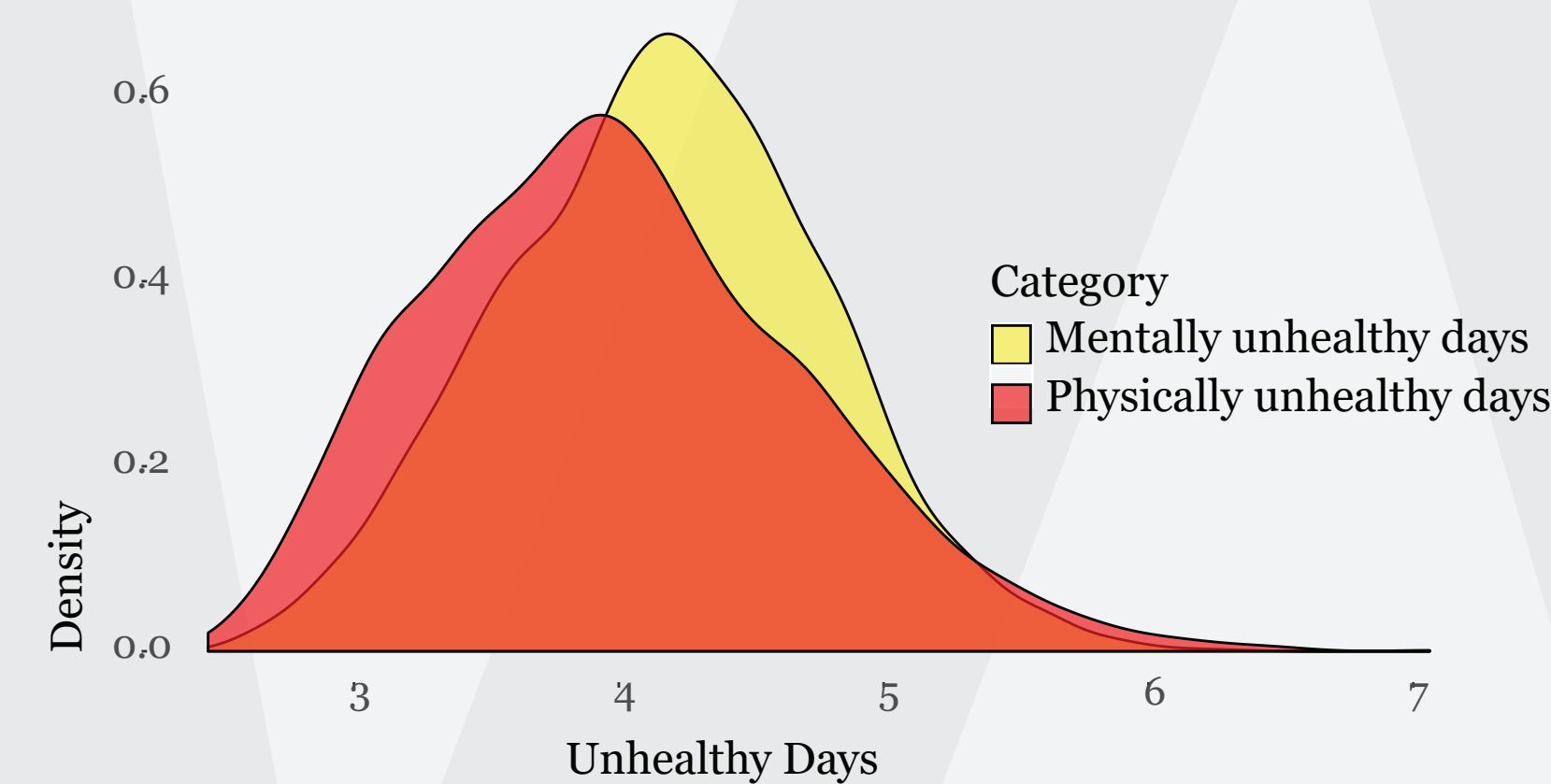
The distribution of physically and mentally unhealthy days are shows that the average mentally unhealthy days are longer (4.1 days) than average physically unhealthy days (3.9 days).

Also, the physically unhealthy days has a bigger range of 2.4 days to 7 days whereas the mentally unhealthy days ranges from 2.5 to 6.3 days.

Motivation

Outbreak of COVID-19 has led to the collaboration among AI communities to discover hidden pattern from variety of datasets from 20 global sources

500+ Health Metrics

Access to Healthy Foods Vs Health

Access to Healthy foods — Low 1 2 3 4 5 6 7 8 9 10 High

Poor Health — Low 1 2 3 4 5 6 7 8 9 10 High

Increased access to Healthy foods shows decreased population % with poor health :

* New Mexico, Mississippi, Louisiana, Arkansas , Texas and Oklahoma are the top states with limited access to healthy foods which has high % population with fair or poor health.
Similarly District of Columbia, Vermont, Maryland, New Jersey, New York and California are the states with the least * population % that has limited access to healthy foods and also show less population % with fair or poor health.

Smoking , Life Expectancy and Low Income Counties Related?

Life Expectancy — 100 90 80 70

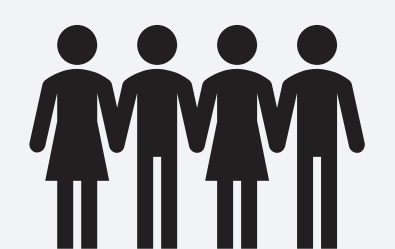**Moto Vehicle Mortality Rate** — 20 40 60
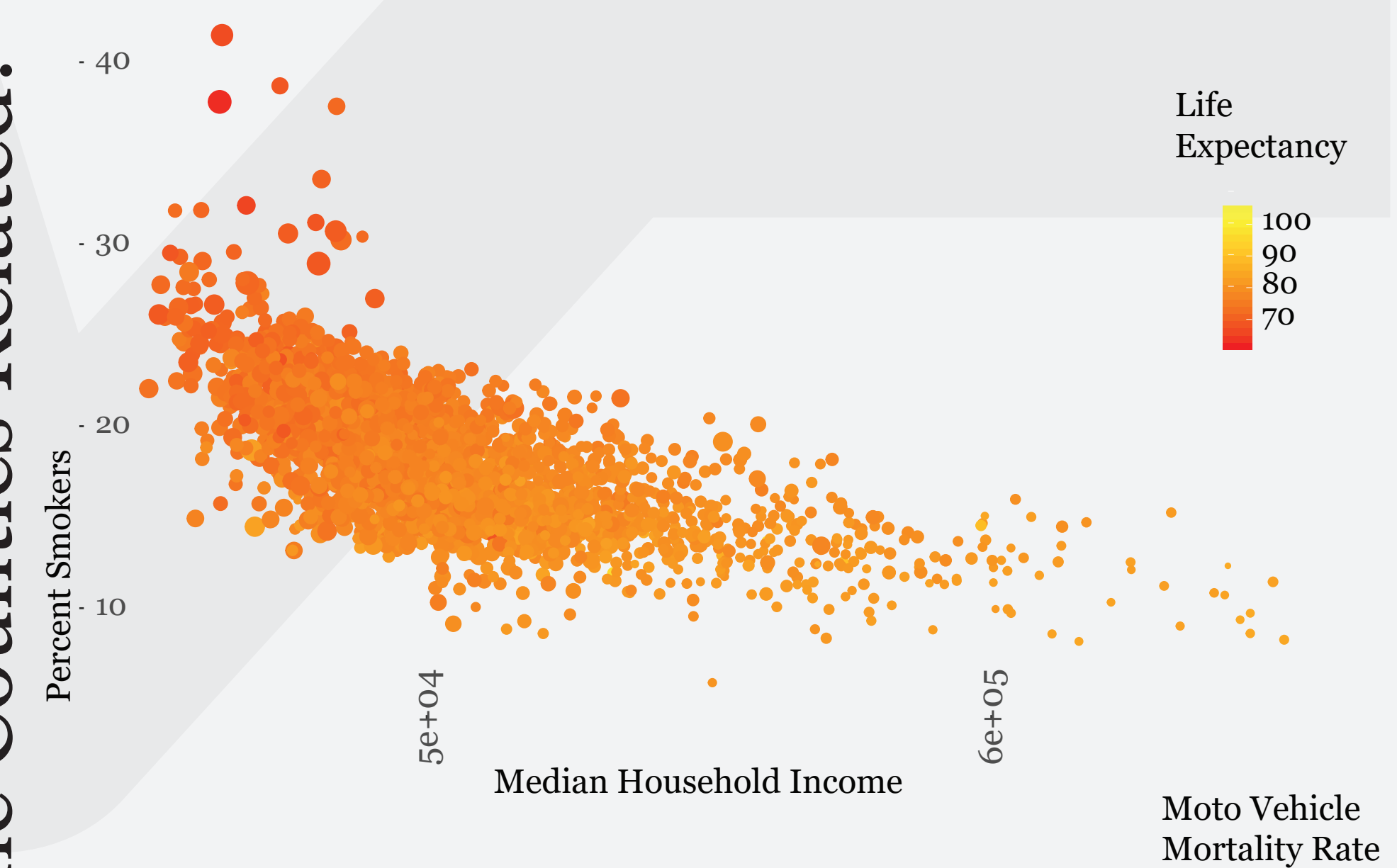
High percentage of smoking and Motor Vehicle accidents are observed in counties which has less median income. Also, counties with high median income shows increased life expectancy

Package

dplyr, corrplot, scales, ggmap, raster, maps, mapproj, plotrix, raster

50 States & 3,000+ Counties