

Comparisons of Health, Wellness and Food Accessibility in the United States

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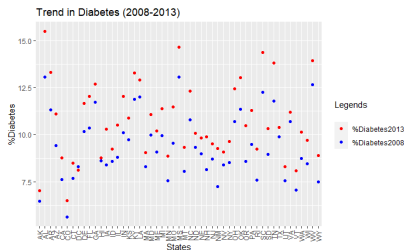
5th December 2021

Looking at Obesity, Diabetes and Recreation Facilities Data

- ▶ Question 1: What are the general trends of Diabetes?
- ▶ Question 2: How is US doing at Obesity?
- ▶ Question 3: How does the obesity change in context to the availability of Recreation facilities?

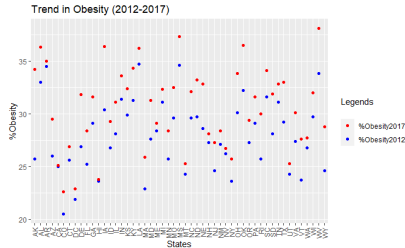
General trends of Diabetes (2008-2013)

- Majority of the states got increasing Diabetes problem!
- Interesting fact about Washington D.C.



General trends of Obesity (2012-2017)

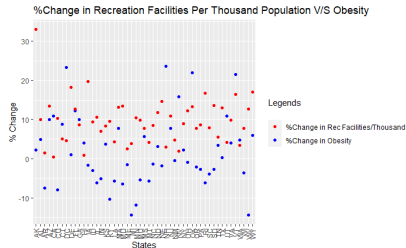
■ Highlighted States: Alaska and California



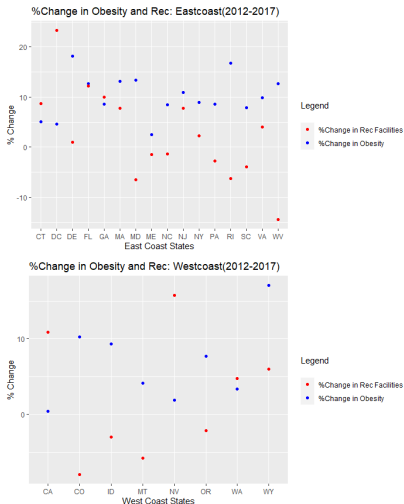
Looking at change in Recreation facilities and Obesity on same page

■ Highlight States:

- ▶ Good: Alaska, Colorado, Nebraska, Illinois, Kentucky, Delaware
- ▶ Bad: Washington D.C.



Looking at plots of East Coast and West Coast



Spatial Analysis: Introduction

- ▶ Question 1: Does obesity correlate to areas with easy access to food?
- ▶ Question 2: Is access to food effected by if the region is urban or rural?

Data

- ▶ Food Access Data
 - ▶ Percent of population that is obese (2017)
 - ▶ Percent of population with low access to food (2015)
- ▶ Census Data
 - ▶ Shape-files: State, County, Urban Clusters

Looking at data Spatially

■ Constructing Maps

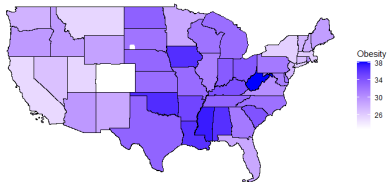
- ▶ Packages: ggplot2, sf
- ▶ Overlaid geometry of the 2-3 spatial scales
- ▶ centered the map on the US or state by adjusting coordinates

■ Urban vs. Rural

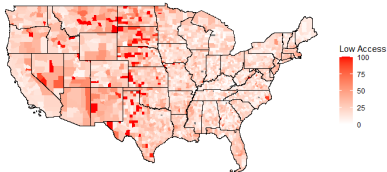
- ▶ According to the US Census Bureau: "There are two types of urban areas: urbanized areas (UAs) that contain 50,000 or more people and urban clusters (UCs) that contain at least 2,500 people, but fewer than 50,000 people"

Obesity and Food Access Maps

Percent of Obesity 2017

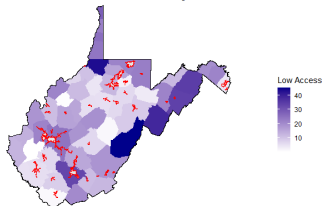


Percent of Low Access to Food by County 2015

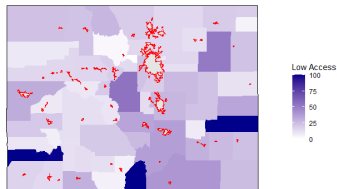


Comparing Urban and Rural

Percent of Low Access to Food for West Virginia 2015



Percent of Low Access to Food for Colorado 2015



Continuation

Percent of Low Access to Food for Nebraska 2015

