**Variable Discussion**

Dependant variable – average cases over 14 days

Independent variables

* Density per county
* Mobility for groceries – Emily

The mobility dataset provided by Google demonstrates how visits and length of stay at different places change compared to a baseline. So changes for each day is compared to a baseline value for that day of the week where the baseline is a mediane value for the corresponding day of the week during the 5-week period Jan 3-Feb 6 2020. The 'Residential' category shows a change in duration-the other categories measure a change in total visitors.

Google’s guidance on reading this data recommends to not compare day to day changes and instead, the index is smoother to a rolling 7 day average.

Place categories we shall analyse include:

Grocery and pharmacy: Mobility trends for places like grocery markets, food warehouses, farmers markets, specialty food shops, drug stores, and pharmacies.

Transit stations: Mobility trends for places like public transport hubs such as subway, bus, and train stations.

Workplaces: Mobility trends for places of work.

Particularly, the descriptive analysis is to be a plot of changes in visitors to 3 different places relative to a baseline day with the index smoothed to the rolling 7-day average.

* Percent over 65
* Transit scores; public transport - Emily
* Climate data - Emily
* Active physicians per 100,000

**Stationary Model**

**(total covid cases for county) ~ amt that’s 65, active physicians, density of county, transit scores**

**Time Series model**

**Covid cases per date ~ mobility data and climate data**