(Describing the datasets)

The data used in these graphs came from two different datasets. The first dataset was from the New York Times and tracked new cases and deaths across each county in the United States. The second dataset was population data per county. The data did not have information from the 2020 census, so the best available was projected populations in 2019 based on the 2010 census.

(First two graphs)

These two graphs show the fatality rate and percent infected of COVID-19 in Douglas County. Fatality rate was calculated by taking total number of deaths caused by COVID-19 in each county divided by total number of cases of COVID-19 in each county. Infection rate was calculated by taking total number of cases in each county divided by the total population of each county. In the fatality rate graph, we see a massive uptick around April and May, possibly due to the high-risk population being exposed and the community at-large failing to take proper precautions in a sufficient manner. Afterwards, there is a significant drop off, possibly due to the most at-risk people already dying from the disease. In the percent infected graph, we see a steady increase for most of the year, with a significant increase in the slope around November. This is most likely due to it being the start of flu season.

(Third graph)

This graph compares the percent infected in the top 8 most populated counties in Nebraska. This was calculated by taking the total number of cases in each county divided by that county’s population. Here we can see that the biggest counties of Douglas, Lancaster, and Sarpy all have comparable percentages to the rest of the top 8 counties. The other counties in this graph are excluded for the sake readability. We can get another perspective on this with a heat map, shown below.

(Fourth and fifth graph)

These heat maps compare death rate and percent infected across all counties. The death rate heat map shows dark colors for Douglas, Sarpy, and Lancaster, indicating relatively low death rates compared to smaller counties. The percent infected heat map shows those same counties to have colors towards the middle of the scale, indicating moderate percent infected compared to other counties.

(Limitations)

There are limitations in the data that we used for these graphs. By county may not necessarily be precise enough when considering population density. Within any given county, there are more dense sections and less dense sections, which may have further variability. Also, due to lack of testing, particularly early on, it is hard to be sure that the number of cases is accurate.

(Conclusion)

Coming into this project, an assumption was made that more densely populated counties would be more affected by COVID-19. However, looking at the data, it seems that a county being densely populated does not put it at a significant disadvantage.