Spread of COVID-19 in Essex County, NJ

# Visualization

Chart, line chart, histogram

Description automatically generated

# Analysis

The plot traces both infection rates, as well as total infected population count for the time period between Feb 2020 and Oct 2021. Furthermore, the time period when there was a mask mandate in effect was highlighted on the plot in light green.

From the visualization, we can observe the following characteristics about the spread of COVID-19 in **Essex County, NJ** between Feb 2020 and Oct 2021:

* The infection rate shows uneven spikes outside of mask mandate period. However, the infection rate stayed flat at approximately 1.0 to 1.25 during the mask mandate period. From this data, we can conclude that the total new infections each day were mostly in single digits or tens of new infections, rather than hundreds or even thousands of new infections.
* Although we do see a spike in the total infected population count during the mask mandate period, the infection rate itself stayed constant hovering at a maximum of about 1.25. This means that the mask mandates were effective in containing the intraday infection spread. The spike in total infections was more gradual over many days rather than a sudden spike in a single day.
* The total infected population at any given day maxed out at around 7000 cases over this entire time period. Considering the county’s total population of over 860K, this means that the mask mandates were able to keep the COVID-19 spread in check to within 1% of the population.

# Conclusion

From the analysis, we can see that the mask mandates were indeed effective in keeping the rate of infections at check, which in turn, would have made it easier on the county officials and the hospitals in handling the new cases coming in each day.