

Power BI Analysis

Our initial assumptions about the policies and COVID-19 were that masks, public information campaigns, and closing public transportation were the most effective policies in reducing the spread of COVID-19. For all of our graphs, we viewed the change in COVID-19 cases and the implementation of the policy over time. After conducting analysis of the NHTSA data using Power BI, we have discovered that workplace closures, school policies, and vaccine policies are the most impactful measures in the spread of COVID-19.

The most impactful policy out of the 3 was workplace closures. The relationship between the number of workplace closures related to change in cases, the x variables, and time, the y variable, showed a strong correlation relationship in all countries. As the number of workplace closings decreased, the number of COVID-19 cases increased. As workplace closures increased, covid cases remained relatively unchanged, or decreased from peaks. We also identified some potential reasons for the results. By staying out of workplaces and working from home, people were less likely to come into contact with others who had been exposed to COVID-19, and therefore would lessen transmission.

Our analysis also revealed a clear relationship between school closures and COVID-19 cases. The most frequent relationship between the countries was that an increase in school closures led to a decrease in COVID-19 cases, and an increase in school closures led to a decrease in COVID-19 cases. This indicated a strong correlation between COVID-19 and school closings. Some potential reasons for this result may be because school closures are a policy that affects a large population of people who are more susceptible to COVID-19: children. By closing schools and transitioning to a virtual model, students are less likely to come into contact with others, which therefore reduces the spread of the virus.

In regards to vaccine policies, we observed that an increase in vaccination policies did lead to a decrease in COVID-19 cases. However, this trend was observed later, as it took time

for the vaccine to be developed, and only really began being distributed once cases had reached a peak. However, after the vaccine was distributed, a steep decrease in change in cases was observed. People were still getting COVID-19, but many were now less likely to.

As for our assumptions that were incorrect, we saw that generally, the policies were implemented quickly at the beginning of COVID-19, but cases rose anyway. With masks and public information policies, it became clear that even though these policies were implemented on a large scale, people were either ignoring the information given to them, or were using masks incorrectly, or not at all, etc. As for closure of public transportation. It seemed that for some countries it was an effective policy, and for others it was not. But given the fact that the usage of public transportation varies from country to country, we decided that closing public transportation was mildly effective, but not as effective as the 3 policies described above.

In conclusion, our Power BI report shows that workplace closures, school policies, and vaccine policies are the most impactful policies in reducing the spread of COVID-19. This analysis provides valuable insights that can be used to inform policymakers and governments on the most effective measures that manage the spread of COVID-19 and help for better preparation and implementation for policies in situations such as the pandemic.