Motivation & Summary Slide

* Is there a stronger correlation between new covid cases and new covid deaths before the vaccine was widely released?
  + We asked this question to because we were interested in covid’s impact on Amazon’s stock over the course of the pandemic. This question specifically, helped us get a baseline of covid data and how it changed over time.
  + We were able to answer this question satisfactorily and found that there was a stronger correlation between new cases and new deaths before the vaccine was released, with an r squared value of 0.62, as opposed to 0.26 after the vaccine was widely released.

Questions & Data

* To answer the question we asked about whether covid cases and deaths were correlated, we needed to gather data about covid cases and deaths over time.
  + This data was gathered from a CSV provided by WHO

Data Cleanup & Exploration

* The data came as a CSV from who containing data about new covid cases, cumulative covid cases, new covid deaths, and cumulative covid deaths over the period of 2 years for all countries that reported it.
  + The cleanup came by removing all countries except the USA
  + Also removing all rows that did not report new cases
    - New cases were only reported once a week in the US
  + Data was split by Date on 4/19/2021 as the established date as the wide release for the vaccine

Data Analysis

* The first steps to analyze the data was to make line plots comparing new covid cases and new covid deaths before and after the vaccine
  + The amount of cases skewed the y-axis so that new covid deaths was a straight line at the bottom and nothing of significance could be determined.
* After the line plots, scatter plots were created to determine if there was any correlation between covid cases and deaths before and after the vaccine.
  + The r squared value was 0.62 before the vaccine and 0.26 after the wide release of the vaccine.

Discussion

* After the completion of the data analysis, the results were in line with what we expected. Deaths had a higher correlation to cases before the vaccine was released. This makes sense because after the vaccine was released the death rate for covid dropped. Based on the analysis we can conclude that covid cases and deaths were more highly correlated in the US before the release of the vaccine.

Post Mortem

* If there was more time to do research on this topic I would have compared the data to other countries aside from the US. This would help us to better determine the vaccine’s effect on the correlation between covid cases and death.