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Progress Report

## Visualization and Analysis of the Opioid Epidemic in the United States of America

The data for the Opioid Epidemic was derived from various websites ranging from the Center for Disease Control and Prevention (CDC), Center for Medicare and Medicaid Services as well as the National Institute on Drug Abuse (NIDA). The NIDA had data ranging from 1999-2018 readily available in the form of a CSV file for download. The CDC website on the other hand did not have all the data in the form of a CSV file. Most of the data was available on the website under different sections and had to be copied onto a google sheet directly. The remainder of the data was available in a pdf format which was copied onto new sheets. All the files were then merged together under different sheets of the same workbook. There was no data cleaning required as there were no missing values.

The data was categorized in such a way that the initial sheets give a basic introduction to the opioid epidemic and how serious a problem it is in the United States. Using a map, the number of deaths by State for the year 2018 is visualized marking the states with the highest opioid related deaths darker than the rest. The mortality rate for all overdoses associated with any form of prescription opioids between 1999-2018 is then analyzed in the form of a bar chart, with the years marking the X-axis and the number of deaths marking the Y-axis. There is a general rise in death with 2016 and 2017 marking the highest and 2018 recording a fall in that number. I then used trendlines to focus on certain demographic aspects of the dataset, like the male and female deaths across all age groups from the years 1999-2018. Using a stacked bar graph, I then focus on opioid overdose deaths categorized by age groups.

HTML and CSS were used in the design of my introduction page as well as my bar charts and maps. Moving forward I do plan on using gapminder to form a time series of deaths in the United States from 1999-2018 based on the type of opioids (Any opioid, Heroin, Natural and Semisynthetic opioids, Methadone and other Synthetic opioids) as well Tableau for maps.