Evaluating the Opioid Crisis Through Data

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Research questions

1. Has there been an increase in opioid related deaths at the federal level over the years?
2. Has there been an increase in opioid prescriptions in CT over the years (beginning in 2014)?
3. Is there a relationship between accidental drug deaths and opioid use in CT?
4. Which locations/towns/places in CT have higher opioid admissions? Is this related to accidental drug deaths?

Hypothesis:

1. There has been an increase in opioid related deaths at the federal level from 2014-2020.
2. As opioid prescriptions increase in Connecticut, accidental drug deaths and opioid use will also increase.
3. More populous areas of CT have higher opioid admissions and higher drug related deaths.

Data we are using

- Question 1: VSRR Provisional Drug Overdose Death Counts (link)
- Question 2: Connecticut Prescriptions Per Year (link)
- Question 3: Accidental Drug Related Deaths (link)
    - Looking at relationships between this & Q2 dataset
- Question 4: Opioid Related Treatment Admissions by Town in Department of Mental Health and Addiction Services Programs (link)
- The data we are using is from the State of Connecticut via data.gov. We want to use public data that covers the whole state.
- * We used data.gov to find some data. The four datasets we found were regarding 1) Opioid Related Treatment Admission by Town in CT; 2) CT Drug Prescriptions by Year; 3) Accidental Drug Related Deaths in CT; 4) Solely Opioid Admissions by Town in CT.
- * The dimensions we think would be most relevant are time (year), location (town, county), and demographic information like race, age, and gender of those who had accidental drug related deaths.

Planned analyses

- We plan to create graphs that show the changing number of opioid prescriptions in the past few years using **regplot**.
- We also plan on delving more into the accidental drug related deaths data to see the average age and most represented race and gender in the dataset using **groupby**.
- We also plan to combine datasets together using **merge** such as prescriptions and deaths by year and use simple regression via **regplot/lmplot** and correlation via **corr** to find the strength of the relationship between those variables.
- We also plan to use **geopandas** to visualize and map out data by location.