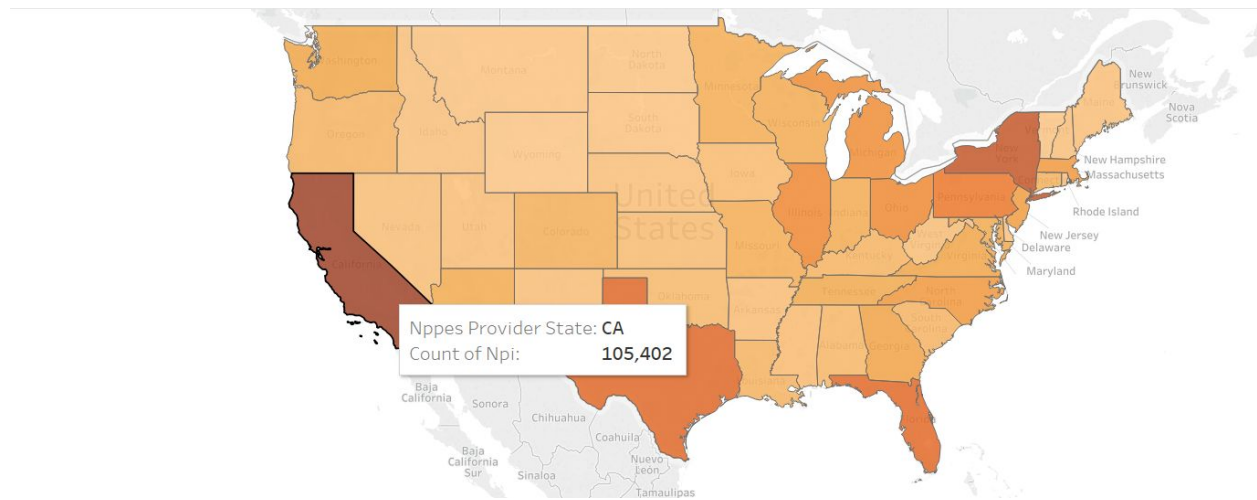


# Exploratory Data Analysis

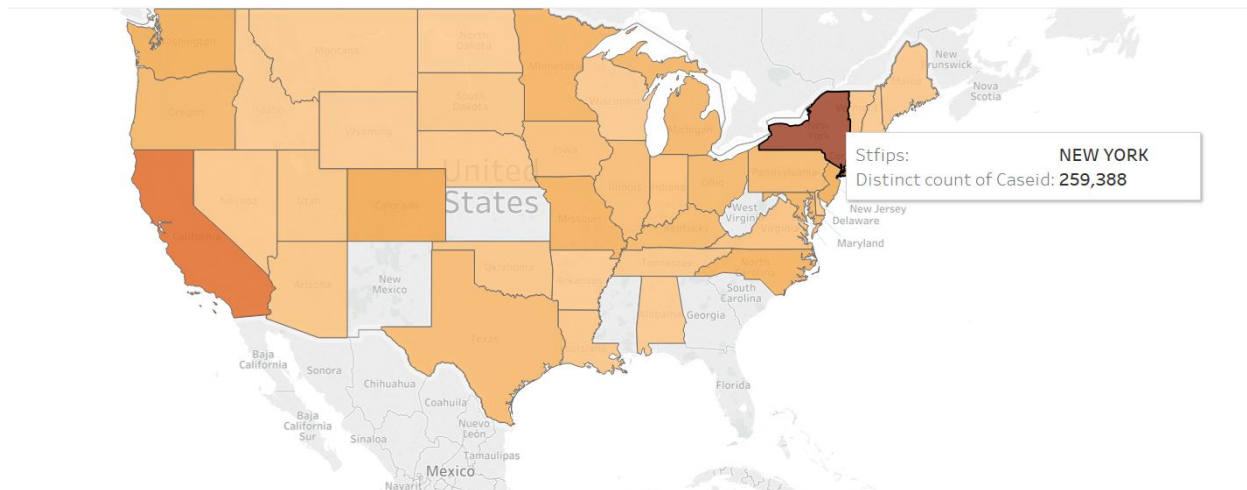
## Substance Abuse:

Drug overdose is a serious national crisis that affects public health as well as social and economic Welfare. Every day, more than 130 people in the United States die due to overdosing of opioids. Prescriber and Client data was given for analysis. When the demographics of the prescribers and clients are analysed we found that,



## Regions vs Prescriptions

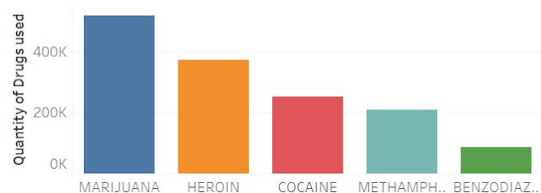
Higher count of prescriptions was recorded in the states of California, New York, Texas and Florida but patients count was not the same. Instead, New York has the highest count of patients followed by California, Massachusetts, North Carolina, etc. From this we can clearly say that the states do not have the regulation on the prescriptions given.



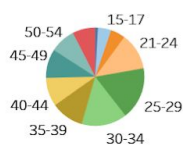
### Regions vs Patients

While digging deep into the patient history we had few interesting findings. Marijuana, Heroin, Cocaine were the most used drugs before the patient was admitted to the rehab treatment. However, the consumption of cocaine by the patients has come after their first visit to the treatments. And the consumptions of other drugs had reduced gradually after 5-6 visits. Substance abuse has significantly affected the people of the age groups 21-24, 25-29 and 30-34. It has varied across various races and ethnicities, Whites were the ones that are suffering from the drug overdose. Patients education and employment also played an important feature for drug addiction, people with less educational years and people who are unemployed and not in the labor force are ranked top in this abuse.

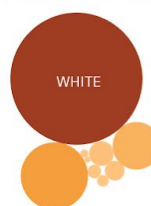
Drug Utility



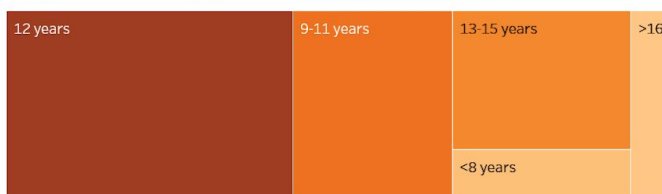
Patients vs Age



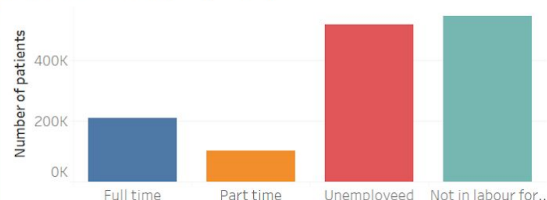
Patients vs Race



Patients vs Education

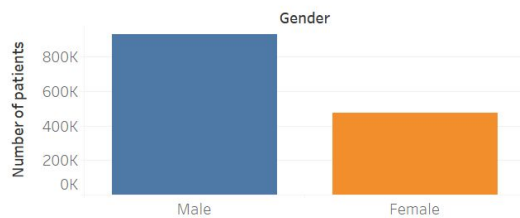


Patients vs Employment

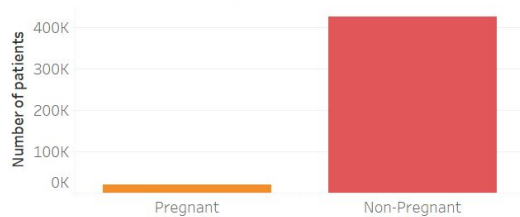


It is also way too high in male population when compared to female population. And fortunately, its effect on pregnant women was not significant when compared to the other women.

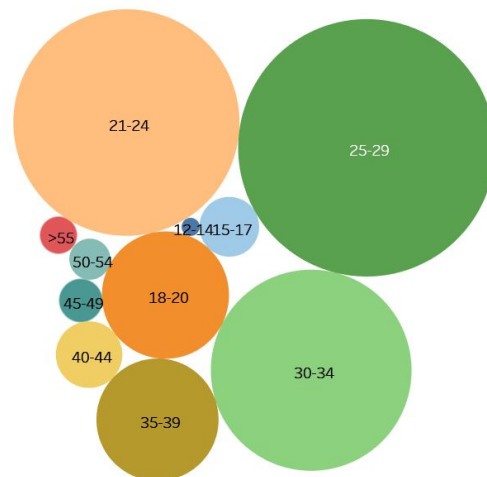
Patients vs Gender



Effect on Pregnancy

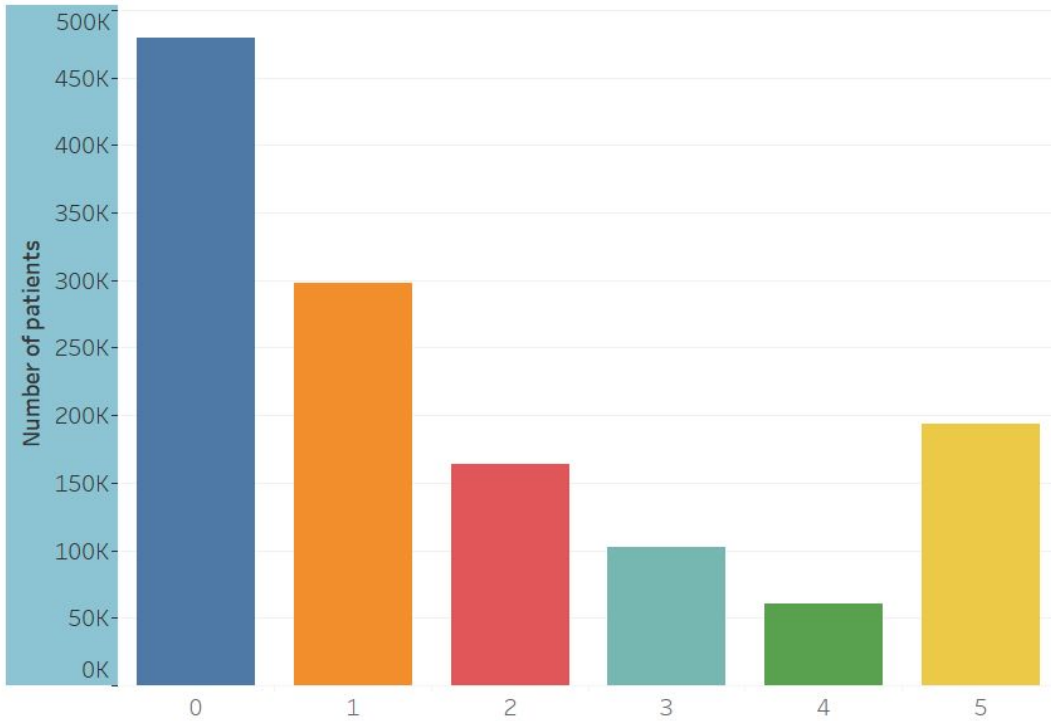


Pregnancy by Age Group



The deeper we go into the patients' behavior, the patient who was not accused of any crime or have not been arrested at least once are high in numbers, when compared to the ones who were arrested more than once. However, the numbers has risen after the fifth arrest.

## Patients vs Arrest History



Medical Insurance also has a major part in the opioid crisis. People who are enrolled on the Medicare policy are more prone to take refills for thirty days, followed by the ones who are not enrolled.

From our analysis we could suggest on government taking strict regulations on the prescriptions. Providing awareness to public about the opioid abuse and letting them know it's ill effects on the future generations.

