**Paper Summary:**

**Correlation of Opioid Mortality with Prescriptions and Social Determinants: A Cross-sectional Study of Medicare Enrollees**

This paper shows relation of opioid prescription rates with various social economic determinants which impacted opioid mortality rates. The overall national prescription rate was 3.84 prescription per beneficiary. Certain factors like population of whites, blacks and poverty affected the prescription rates and mortality rates. Generally, it was a misbelief that black population tend to misuse the prescription. So black population were not allotted a lot of prescriptions. Also, overall data shows that poverty and mortality are positively correlated. This is totally opposite to general idea of poverty. We use of think that poor people cannot afford drug/medicine which is totally opposite in the case of opioid prescriptions. People who don’t have money were consuming more opioids as compared to those who can afford. Additionally, prescribers also played an important role in contributing to mortality rate. Out of which family medicine practitioners prescribe maximum opioids, 5.32 claims per beneficiary which cause an abundant increase to the number of opioid overdose mortality rate.

To sum up, gender, race, opioid prescription rate, poverty under line data are major factors for determining the mortality rate. Increase in poverty resulted in decrease in opioid prescription rates but mortality rates increased as poverty increases. Also % of white population, poverty and opioid prescription rates have positive correlation with mortality rates. Population also played a major role in mortality rates. Areas with higher overall population contributed to higher death rates. Poverty was negatively correlated with high opioid prescription rates, but high poverty level in the county added to the correlation between high opioid prescription rates and opioid-related deaths.

**An Analysis of the Root Causes for Opioid-Related Overdose Deaths in the United States**

A penal of experts convened to determine the root cause of opioid related deaths and propose recommendations to reduce death rates. Initially methadone related deaths weas noted in early 2000s. This contributed to opioid related deaths even though methadone represented less than 5% of opioid prescriptions. Other drugs such as nervous system depressant drugs and sleep disorder breathing also contributed to mortality rates. It clarifies that opioid mortality rates are multi factorial.

In 2006, deaths reached at peak, where 100 deaths occurred in a day. Reports reveal certain pattern of increasing opioid related deaths:

1. Lack of standardized national definition among death investigators
2. State level variations in determining the manner of death
3. Poorly defined toxicology categories to classify deaths

Certain other factors like prescriber behaviors, patient’s contributory factors, non-medical use patterns, and systematic failures. Physician’s error due to knowledge deficit, patient’s mistake like mixing opioids with alcohol and escalating doses without advice also adds to the contributing factor for opioid deaths.

As methadone is cheaper as compared to other opioids mortality rates because of methadone contribute more.

Results showed that most of postmortem report showed that many other substances were found in blood of the patients along with opioids. One of most common is alcohol and certain other drugs. Deaths can occur because of inappropriate high dosage of opioids and mixing it with unauthorized substances or using some. Studies showed that middle aged is most vulnerable time for opioid overdose. Unexpected medical and mental comorbidities, policies that suggest methadone as first-line therapy, additional CNS depressant drugs contributed to mortality rate along with other mentioned factors.

**References:**

1. [**Correlation of Opioid Mortality with Prescriptions and Social Determinants: A Cross-sectional Study of Medicare Enrollees**](https://link.springer.com/article/10.1007/s40265-017-0846-6)
2. [**An Analysis of the Root Causes for Opioid-Related Overdose Deaths in the United States**](https://academic.oup.com/painmedicine/article/12/suppl_2/S26/1917917)