

Introduction

- Sickel cell disease (SCD) is a genetic hemoglobinopathy that affects 100,00 people in the United States. SCD is commonly complicated by recurrent and severe pain episodes known as vaso-occlusive episodes (VOE)
- The standard treatment for acute SCD pain includes opioid therapy as part of a multimodal pain management plan (3) and are considered a first line treatment for the pain of VOEs
- Side effects of opioids can be severe, including opioid-induced hyperalgesia and respiratory depression
- Studies have shown that SCD patients have a daily opioid use rate of 71 MMEs compared to the national average of 35.2 (7,8). These high rates of opioid prescription in SCD have raised significant concerns, both ethically and clinically, due to potential issues such as addiction, misuse, and the challenges of balancing adequate pain relief while minimizing risks
- Studies have shown that the use of opioids can increase the average number of days that a patient experiences a pain crisis (1)
- Crego et. al (2024) showed that when reviewing the outpatient prescription rates for SCD patients specifically in North Carolina, the factors most associated with increased opioid prescription filling rates were found to be increasing age, male gender, and longer-term Medicaid enrollment (2)
- This review examines the current literature on prevalence of opioid prescription in SCD as it relates to their management of chronic pain; exploring factors influencing prescribing practices, disparities, and the impact of prescription rates on patient outcomes

Images

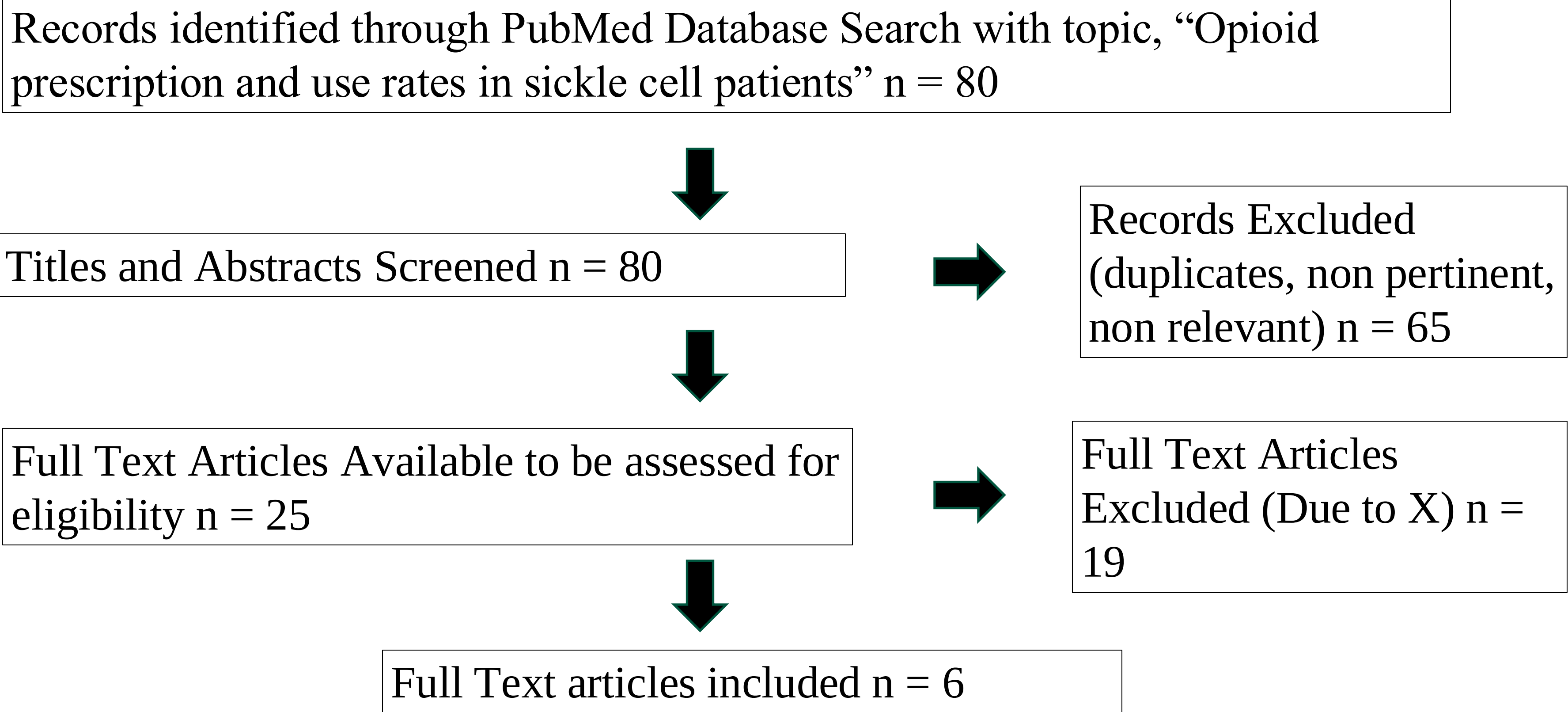


Figure 1 Literature Review Algorithm

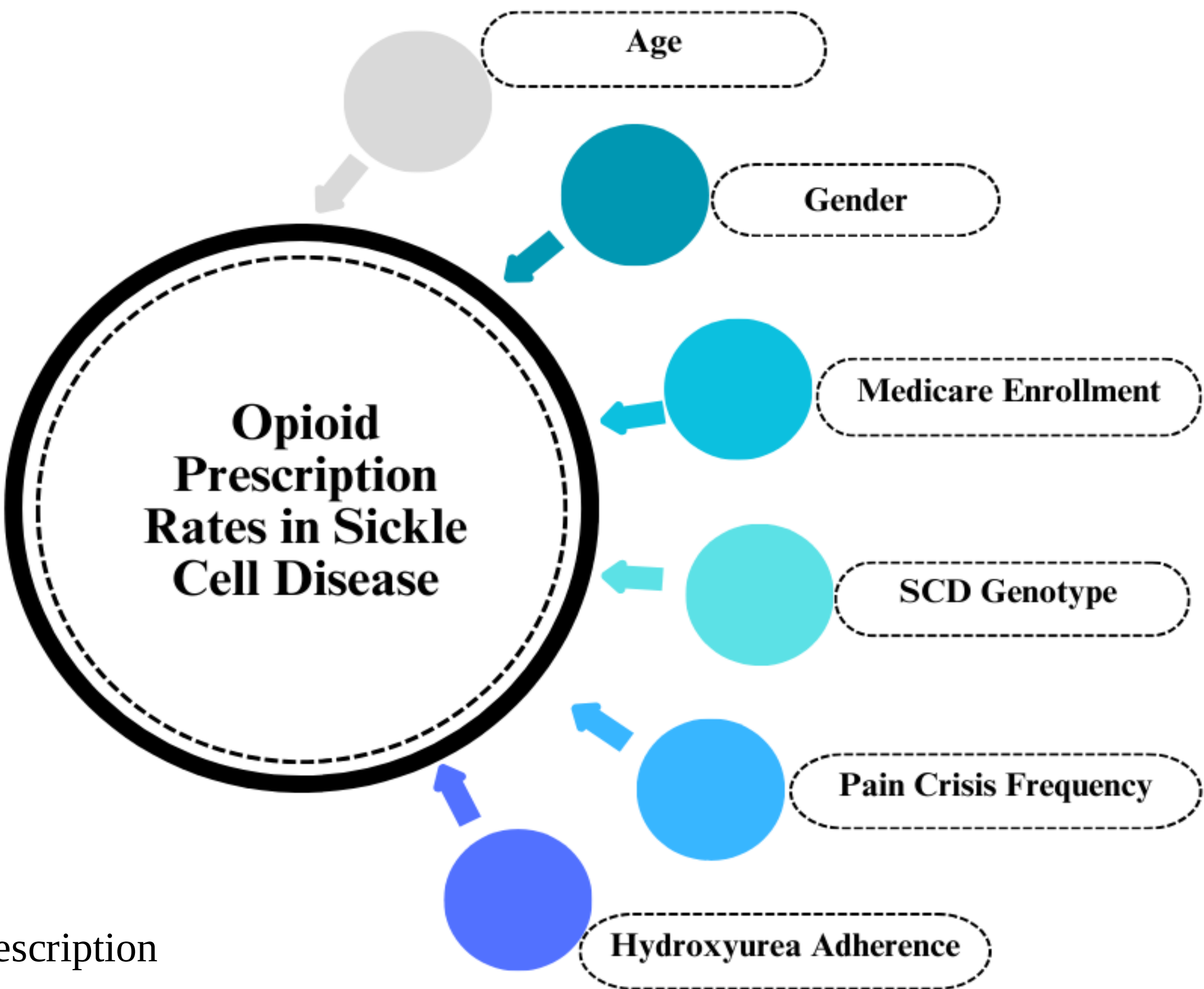


Figure 2 Opioid Prescription Rates in SCD

Discussion

- There have been multiple studies that analyzed the prescription rates in specific settings such as the prescription rates in certain geographical areas or patient subsets. These studies mainly look at an observation of the prescription rates and look at factors that influence increase use or abuse such as > 90 MME daily use or concurrent marijuana use
- There seems to be limited studies on analysis of rates compared to the general population
- These studies do show a trend of a growing emphasis on balancing effective pain relief with minimizing the risks associated with chronic opioid use
- Studies like Kang et. al (2020) showed this through the influence of hydroxyurea use on opioid utilization and concluded that being moderately adherent to hydroxyurea was significantly associated with a lower risk of receiving a prescription for opioids (5).

Conclusion

- Through this literature review, we can conclude that opioid prescription rates among SCD patients average to be high than the general population. Use and abuse among this population are influenced by a multitude of factors
- The breadth of knowledge on this topic can be expanded to further delineate these causes to see how they ultimately affect patient outcomes.

References

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