TRACKING CALIFORNIA
INFORMING ACTION FOR HEALTHIER COMMUNITIES

Are socio-economic factors related to emergency department utilization for Californians with sickle cell disease?

In California, people with sickle cell disease (SCD) go to the emergency department (ED) more than twice per year on average, and those with characteristics related to low income and socio-economic status use the ED more frequently. People with fewer means may have significant barriers to receiving quality preventative and supportive care, making their need for ED visits greater.

Defining the problem

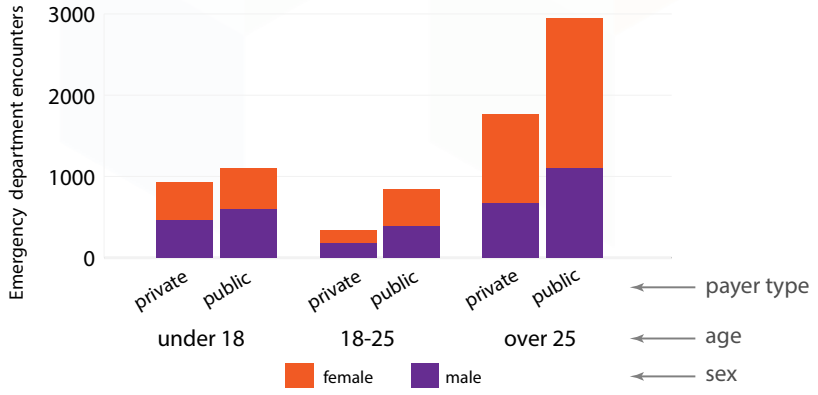
SCD, the most common severe genetic disease, primarily affects persons with familial origins in areas where malaria is common such as Africa, South America, the Middle East, and South Asia. In California, it is most common among Black and Latinx populations, who have documented history of poorer health outcomes linked to social determinates of health than White populations. The impact of socio-economic status on access to quality healthcare for persons with SCD is not well-researched, but high utilization of ED services among those with SCD is well-documented and suggests that many with the disease are challenged to find care that will keep them well.

Understanding the factors that are associated with ED utilization for individuals with SCD can help state and local health agencies and other healthcare systems design programs that increase access to routine health care. In particular those ED visits that do not result in admission and so may be more preventable should be addressed.

What we did

CA SCDC links administrative and clinical data to conduct health surveillance and includes nearly all those in California living with SCD. Persons with SCD (n = 7,911) under the age of 65 were followed over 10 years (2009-2018) to determine, by year, their geography (zip code), insurer, sex, age, and number of ED encounters that did not result in an admission.

Emergency department encounters in the California Sickle Cell Data Collection cohort 2009-2018 by payer type, age, and sex



The California Sickle Cell Data Collection (CA SCDC) Program collects and analyzes population-based, longitudinal data to better understand how people with SCD are accessing and using healthcare. These data are used to understand treatments, health outcomes, and healthcare utilization for everyone in the state with SCD. CA SCDC data also support the development of strategies to improve care and access to the healthcare system and ultimately to improve the health and quality of life of people living with SCD.

What we found

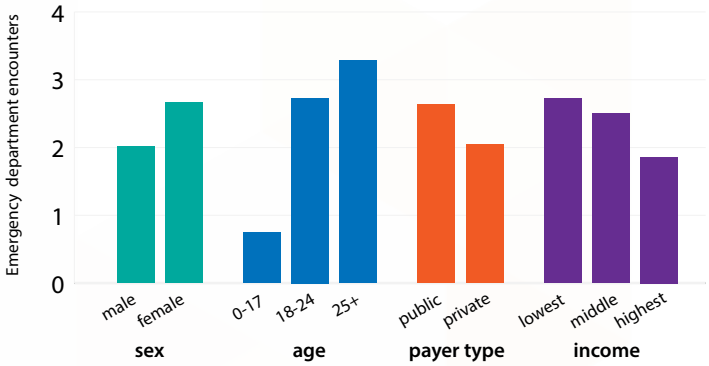
Among our cohort, the average number of ED encounters without hospital admission per year was 2.39, median 1. This compares with an average for all Americans of 0.40 ED encounters per year, median 0.

We found that the biggest predictors of ED encounters were:

- Age: with increasing ED utilization during the pediatric to adult transition period and again in the young and middle-aged adult period, as previous research has shown
- Insurance: those insured by state and county programs have higher ED utilization compared to private insurance or Medicare for disability
- Gender: adult women are more likely to have ED encounters, as is also found in the general population

Living in an area of low median household income also raised the likelihood of having more ED encounters, but not as much as age, insurance, and gender. We also found that those with SCD were more likely to live in lower median household income areas than the general population.

Average number of emergency department encounters for California Sickle Cell Data Collection cohort 2009-2018 by sex, age, payer type, and income



Conclusion

Two of the three indicators we identified for high ED utilization (insurer and gender) may be related to socio-economic status. Those with state or other government insurance generally meet income guidelines relative to the poverty index, and women are more likely to be low income than men. Additionally, living in a zip code with lower median household income was also associated with higher ED utilization.

Gaining access to quality, knowledgeable healthcare for those with SCD in California presents a significant challenge, especially for adults. There are few centers with sickle cell clinics for adults in the state, and travelling long distances to appointments may be impossible for parents with children to care for. SCD advocates report that many who need urgent care delay seeking care until the ED is the only viable option.

Previous analyses by the Agency for Healthcare Research and Quality [bit.ly/ed-visit-trends] found a significant increase in ED utilization among all Americans living in low-income zip codes compared to those living in higher income zip codes, and higher ED utilization for adult women compared to men.

Examination of the factors driving low-income adults and children to use the ED more often than families with private insurance is essential.

More research is needed into the socio-economic factors, access to quality healthcare, and financial and community support required for those with SCD to remain healthy.

There are three important pieces of information that can be drawn from this analysis.

- Californians with SCD go to the ED without being admitted to the hospital more than twice per year on average, compared to 0.4 times per year for all Americans
- Children with SCD who are covered by public insurance have more ED encounters on average than those with private insurance
- Californians with SCD are more likely to live in low-income zip codes than other state residents

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