

Mapping Sickle Cell Disease Care in Los Angeles County

Defining the problem

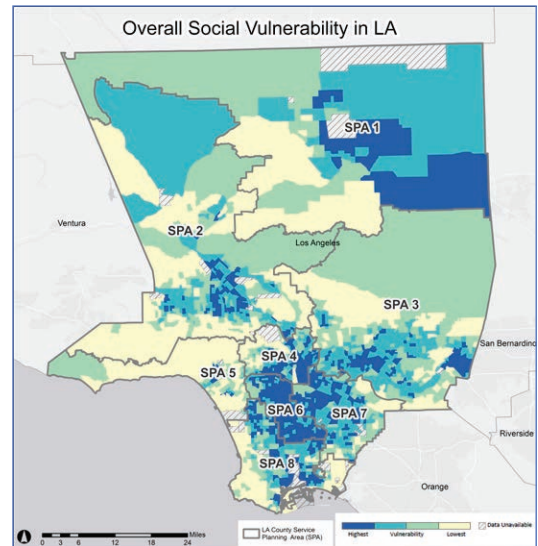
Sickle Cell Disease (SCD) is a complex disease that requires active management by medical providers knowledgeable in SCD care to prevent serious complications that reduce life expectancy and quality of life. In the US, because SCD primarily affects Black persons and other persons of color, there are significant barriers in access to care that stem from institutional and systemic racism, such as lower insurance reimbursement to providers than other similar diseases affecting White populations. We explored how access to care varied by geography in one area of Los Angeles County: Service Planning Area 6 (SPA 6).

Why focus on one area in Los Angeles County?

- Los Angeles County is divided into eight Service Planning Areas (SPAs). The Los Angeles County Dept. of Public Health uses these regions to develop and provide targeted public health and clinical services.
- Los Angeles County has the largest population of individuals living with SCD among all counties in California; 37% of Californians living with SCD reside in Los Angeles County. This region is also an area with high social vulnerabilities.

What we did

We identified people living with SCD who had continuous Medicaid enrollment for three years, from 2016 to 2018, and were living in the zip codes within SPA 6 (Map 1). Using Medicaid claims data for these individuals, we identified outpatient visits with providers who are experienced in SCD care. We defined “experienced providers” as either (a) a hematologist or (b) a primary care provider that saw 20+ Medicaid patients living with SCD in the three-year period. We then calculated the percentage of people in each zip code that did not see an experienced provider in the three-year period (Map 2). Locations of “experienced providers” that saw Medicaid patients living with SCD in SPA 6 were overlaid onto this map. Separate maps were created for adults (21+ yrs.) and pediatric (<21 yrs.) due to differences in the healthcare systems available to these two groups.



The CDC's Social Vulnerability Index identifies vulnerable neighborhoods based on 15 factors including poverty, unemployment, income, education, age, disability, single-parent household, race, ethnicity, English language ability, housing, and transportation access.

Table 1: Individuals living with SCD by SPA, 2018

Service Planning Areas	Individuals living with SCD	Adult (21+ years old)	Pediatric (< 21 years old)
SPA 1: Antelope Valley	203	117	86
SPA 2: San Fernando	193	131	62
SPA 3: San Gabriel	164	113	51
SPA 4: Metro	159	128	31
SPA 5: West	50	N.A.	
SPA 6: South	672	480	192
SPA 7: East	119	75	44
SPA 8: South Bay	411	255	156

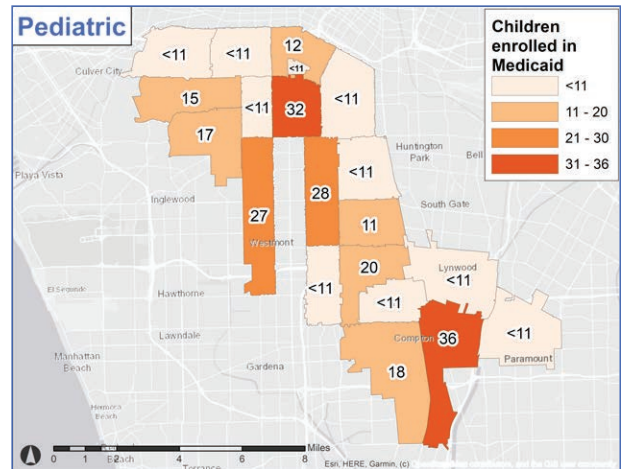
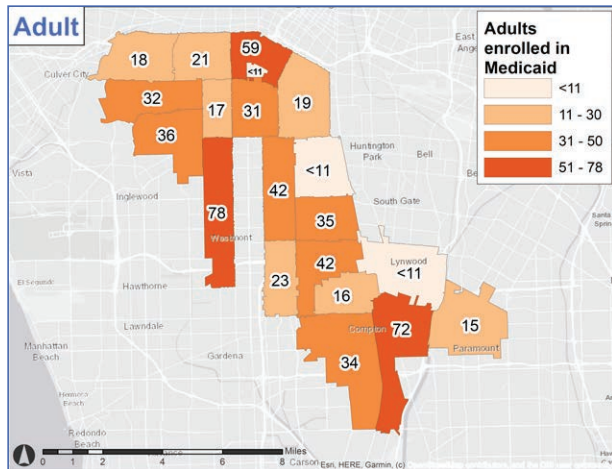


The California Sickle Cell Data Collection (CA SCDC) Program collects and analyzes population-based, longitudinal data to better understand how people with SCD are accessing and using healthcare. These data are used to understand treatments, health outcomes, and healthcare utilization for everyone in 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.

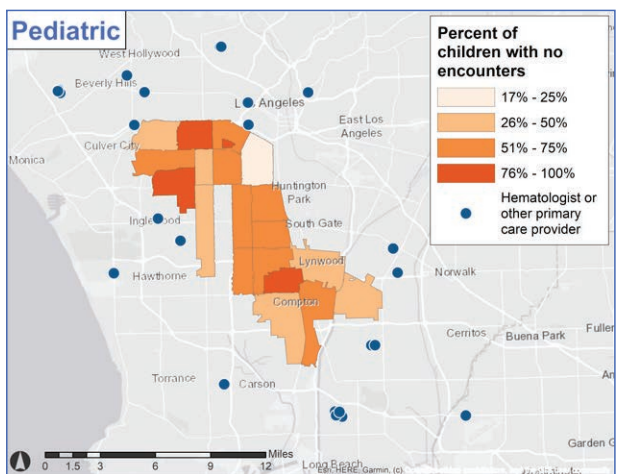
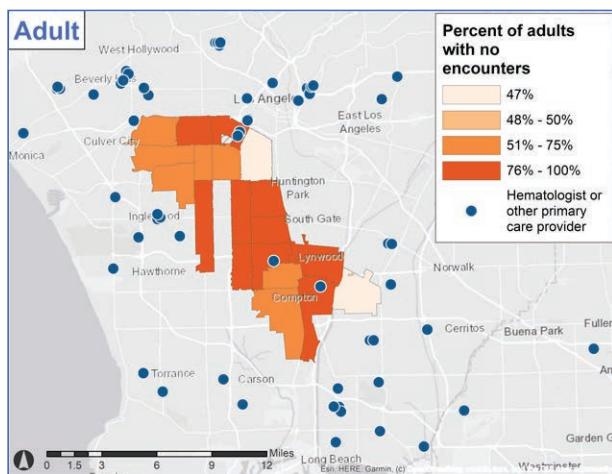
What we found

Map 1: Individuals living with SCD and enrolled in Medicaid living in each zip code of SPA6.

Counts < 11 are suppressed



Map 2: Percentage of Individuals that did not see an experienced provider from 2016-2018



Key Take-aways:

- Overall, 76% of the adult and 59% of the pediatric population in SPA 6 did not see an experienced provider in a three-year period. However, this percentage varied geographically across zip codes.
- These percentages are significantly higher than the statewide percentages. For California, 46% of the adult and 26% of the pediatric population did not see an experienced provider in the same period.¹ This difference may be related to the high social vulnerability of people living in SPA 6.
- Most experienced providers for adults and all pediatric experienced providers were located outside of SPA 6, which places an added burden of transportation on those traveling to providers with knowledgeable care for SCD.

Conclusion

SCD is a life-threatening blood disorder requiring specialized medical expertise, yet in SPA 6, the proportion of SCD patients with Medicaid health insurance who were not seen by a hematologist or primary care provider experienced in SCD care is alarmingly high. Even among pediatric patients, who are often thought to have better care due to better access to comprehensive care centers, over half were not seen by a hematologist or an experienced primary care physician over a three-year period. The results highlight an opportunity to improve access to care for SCD patients enrolled in Medicaid. Additionally, visualizing disparities in access to care across geographies can provide insight into possible barriers to care, including the dearth of providers where individuals with SCD live.

1. Horiuchi SS, Zhou M, Snyder A, Paulukonis S. Hematologist Encounters Among Medicaid Patients who have Sickle Cell Disease. Blood Adv. 2022 Jul 12