

STRONG CHILDREN'S RESEARCH CENTER

Summer Research Scholar

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ABSTRACT

Title: *Teaching versus Non-Teaching Hospitals Among Patients with Sickle Cell Disease*

Sickle cell disease (SCD) is the most commonly inherited blood disorder in the US. The most hallmark characterization of SCD are Vaso-occlusive episodes (VOEs), which are extremely painful episodes that occur due to the sickling of red blood cells. VOEs are the most common cause of hospitalization among patients with SCD and can result in acute complications such as acute chest syndrome, stroke, and even death

Resources vary at teaching hospitals and non-teaching hospitals, which affects care delivery and opportunities for improvement. The general pediatric population is more likely to be in a teaching hospital than adults, which is a cause of concern for youth with SCD as they must transition from pediatric care to adult care as they age. It is unknown if hospital type, teaching versus non-teaching, changes as patients with SCD age. The goals of this study are 1) Identify the proportion of patients with SCD admitted to teaching versus non-teaching hospitals 2) Assess if age is associated with differing odds of admission to a teaching hospital.

The data used for this study was the National Inpatient Sample (NIS) 2020 dataset from the HCUP. This dataset includes information from more than seven million hospital stays, making it a useful tool to obtain national estimates. The study population were patients of all age with SCD, who were identified using the International Classification of Diseases, 10th revision (ICD-10). Patients with sickle cell trait were not included in the final sample. R studio was used for all data analysis, and the association of age with hospital type was tested using a logistical regression.

When comparing the odds ratios, with the age group 1-11 as the reference, the 12-17 group were equally as likely to be in a teaching hospital ($p=0.264$). However, all the adult groups, 18-25, 26-40, 40+, were significantly less likely to be in a teaching hospital. This observation remained true even when adjusting for patient-level differences including sex, race/ethnicity, payer, residence, and income.