

Patients with sickle cell disease have high rate of acute care usage and rehospitalization

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Patients with sickle cell disease average about 2.5 hospital visits per year, with 18- to 30-year old patients more likely to require acute care or rehospitalization, according to a study in the April 7 issue of *JAMA*.

Sickle cell disease is characterized by episodic periods of [severe pain](#), leading to high use of health care resources. "Although previous studies have described the magnitude of this health care utilization, they have generally been restricted to select populations of patients with [sickle cell disease](#) and therefore have limited generalizability and an inability to provide population-based estimates," the authors write.

David C. Brousseau, M.D., M.S., of the Medical College of Wisconsin, Milwaukee, and colleagues examined acute care utilization patterns for patients with sickle cell disease. The study included data on sickle cell disease-related emergency department (ED) visits and hospitalizations from eight states in the 2005 and 2006 Healthcare Cost and Utilization Project State Inpatient Databases and State [Emergency Department](#) Databases. These states were Arizona, California, Florida, Massachusetts, Missouri, New York, South Carolina, and Tennessee; together they have 33 percent of the U.S. population with sickle cell disease.

The analysis included 21,112 patients with sickle cell-related treat-and-release ED visits or inpatient hospitalizations (termed encounters). From these patients, there were 109,344 acute care encounters, yielding an acute care utilization rate of 2.59 encounters per patient per year (1.52

for hospitalizations and 1.08 for treat-and-release ED visits). Among different age brackets, the rate of acute care utilization was highest, 3.61 encounters per patient per year, for 18- to 30-year-olds, before decreasing throughout middle and older age.

Patients with [public insurance](#) had more encounters than those with [private insurance](#), 3.22 encounters per year vs. 1.76. Patients with no insurance had 1.42 encounters per year. The highest acute care utilization rate was 4.80 encounters per patient per year for publicly insured 18- to 30-year-olds.

Approximately 29 percent of the population had no encounters while 16.9 percent had 3 or more encounters per year.

The 30-day rehospitalization rate was 33.4 percent; the 14-day rehospitalization rate was 22.1 percent. The 30-day rehospitalization rate was highest for 18- to 30-year-olds, for whom almost half of all hospitalizations resulted in a return for sickle cell-related acute care within 30 days. The highest 14-day rehospitalization rate was also for 18- to 30-year-olds.

"In conclusion, rates of acute care utilization and rates of return for acute care are both high in the sickle cell population. This is especially true for young adults who may be particularly at risk as their disease worsens and they transition from pediatric to adult care. By providing comprehensive, generalizable benchmarks and identifying high-risk subpopulations, these data can be used to inform efforts to improve quality of care and reduce morbidity in sickle cell disease," the authors write.

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