

Sickle cell disease in southwest Virginia: an analysis of morbidity, acute care utilization, and the effects of social determinants of health in a mixed rural/urban medically underserved community

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March 30, 2022

Abstract

Background: Sickle cell disease (SCD) is a lifelong disease characterized by both acute and chronic morbid conditions that often result in acute care utilization. There is limited data on SCD patients in medically underserved areas of the United States. Methods: We conducted a retrospective analysis of SCD patients in a mixed rural/nonrural partially medically underserved area in southwest Virginia without access to an adult comprehensive sickle cell center to describe patterns of disease-related morbidities and acute care utilization, as well as the effects of other comorbid diseases. Results: Of the 71 patients who met inclusion criteria, the majority (59.1%) were insured by Medicaid, 15.5% were insured by Medicare, 14.1% through a commercial insurer, and 11.3% were self-pay. Medicare- and Medicaid-insured patients utilized acute care services more often than those insured by other means. Medicare patients had 124% more acute pain crises than patients insured by other means. Obesity was a risk factor for direct admission to the hospital. Additionally, admissions from the ED were 18.3% lower in females than males, despite the average age of the female cohort being approximately 8 years older than males. Conclusion: For this patient cohort without access to an adult comprehensive sickle cell center, public insurance status through Medicare or Medicaid was associated with more acute care utilization. Obesity and male sex were identified as risk factors for hospitalization. Further study of and targeted interventions for SCD patients in rural and medically underserved communities is warranted.

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