

October 2026: EMS 9-1-1 Responses for Sickle Cell Disease Patients

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Background

Sickle cell disease (SCD), although rare, is an important condition for prehospital clinicians to recognize in the field.¹ An inherited blood disorder, SCD disproportionately affects non-Hispanic Black and African American individuals, who make up over 90% of the 100,000 cases in the U.S.² Vaso-occlusion caused by SCD can lead to severe pain crises as well as life-threatening emergencies due to its impact across organ systems.² Individuals with SCD have higher and more frequent ED utilization than general population.³ EMS clinicians provide a critical access point to care in SCD crises, with one study estimating almost 15% are transported to EDs by ambulance.⁴

Scope and Patient Characteristics

In 2025 data from the biospatial platform, there were **9,757** (or **5 per 10,000**) EMS 9-1-1 responses with sickle cell disease documented as the primary provider impression. **42%** of these patients had generalized or unspecified pain documented as the primary symptom, followed by **12%** documented as “sickle cell, with crisis.”



SCD responses were made up of **similar** proportions of male and female patients



Over **60%** of SCD responses were for patients between **20-39** years old

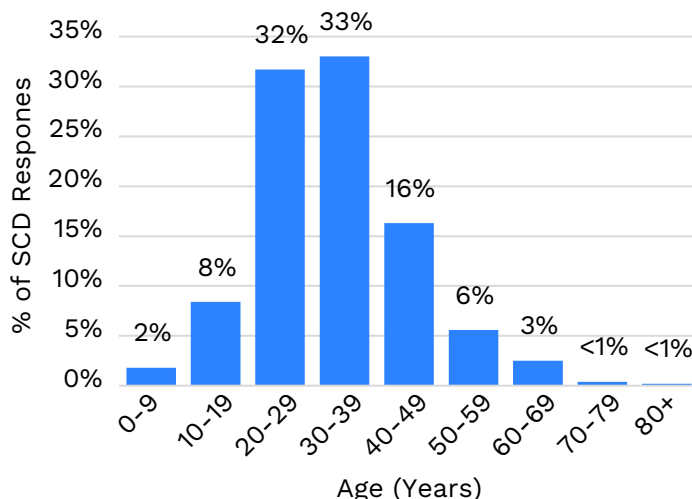


Nearly **4 in 5** SCD responses occurred at a **private residence**

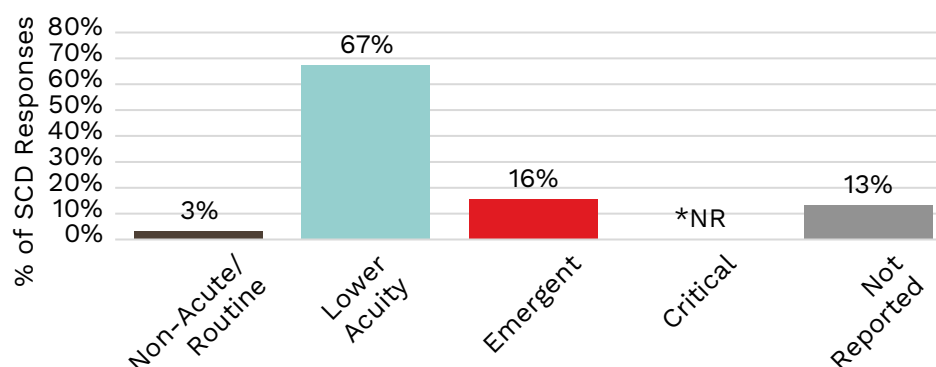


92% of SCD patients were documented as **Black or African American**, consistent with national estimates

Age Distribution of SCD Responses



Initial Patient Acuity

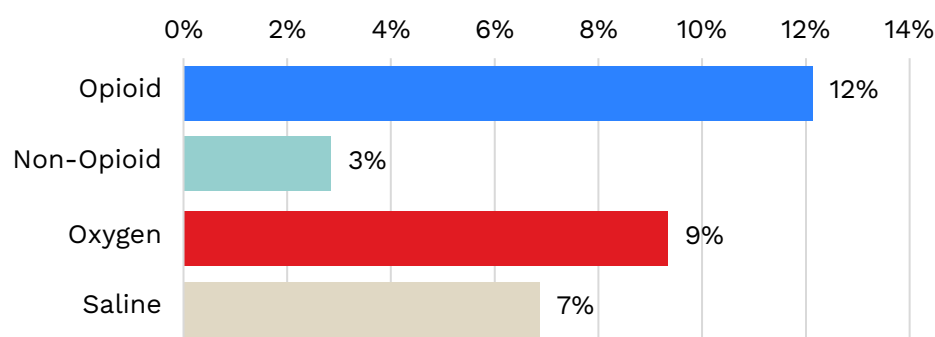


While **67%** of SCD responses were documented as low-acuity, **almost all** were **transported**, offering a potential education point for clinician awareness



50% of SCD transports were taken to the hospital of patients' choice

Medications Given by EMS in SCD Responses



Approximately **1 in 10** SCD response patients were **administered opioids** by the responding EMS unit, and a similar proportion received **oxygen**

About the data:

This report used data from the ImageTrend biospatial platform between January 1, 2025 and December 31, 2025 to assess emergency responses with a primary provider impression of Sickle Cell Disease (ICD-10: D57) where the reporting unit was first on scene. For more information on ImageTrend's biospatial platform visit:

<https://www.imagetrend.com/press-releases/imagetrend-acquires-biospatial/>

Citations:

1. Sickle Cell Disease Association of America, Inc. (n.d.). For Providers. Retrieved October 13, 2026, from <https://sicklecelldisease.org/national-sickle-cell-awareness-month/>
2. Centers for Disease Control and Prevention. (2026, August 7). Data and statistics on sickle cell disease. <https://www.cdc.gov/sickle-cell/data/index.html>
3. Centers for Medicare & Medicaid Services. (2021, January). Medicaid and CHIP sickle cell disease report: T-MSIS Analytic Files (TAF) 2017. <https://www.medicare.gov/sites/default/files/2021-01/scd-rpt-jan-2021.pdf>
4. Attell, B. K., Barrett, P. M., Pace, B. S., McLemore, M. L., McGee, B. T., Oshe, R., DiGirolamo, A. M., Cohen, L. L., & Snyder, A. B. (2024). Characteristics of emergency department visits made by individuals with sickle cell disease in the U.S., 1999–2020. *AJPM Focus*, 3(1), 100158. <https://doi.org/10.1016/j.focus.2023.100158>

Call to Action

1. Strengthen education on prehospital SCD care.

Equip EMS clinicians to recognize SCD and vaso-occlusive pain during 9-1-1 responses, address stigma and assumptions about drug-seeking, and select timely, patient-centered pain management strategies.

2. Leverage interoperability to improve SCD patient care.

Access to individualized pain management plans for SCD patients through health information exchange between EMS and hospital systems can help improve patients' continuity and quality of care.

3. Build patient and community trust.

Partner with patients, caregivers, and community organizations to understand care experiences, communicate respectfully, reduce stigma, and design EMS practices that support reliable, equitable, and patient-centered care.

Work With Us:

ImageTrend's Clinical & Research Services team partners with EMS and healthcare organizations to uncover actionable insights and drive data-informed public health initiatives.

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[> Learn more about participating in or conducting research with the ImageTrend Collaborate Dataset here:](#)

