Sickle Cell Disease – Bridging the Gap Post Discharge

Atrium Health· Main
Levine Cancer Institute Sickle Cell Enterprise and CHG Transition Clinic

**Introduction**

- Sickle cell disease (SCD) is an inherited blood disorder that disproportionately affects persons of African descent and is caused by a genetic difference in the coding of genes for hemoglobin, resulting in red blood cells that contain Hemoglobin S and/or other variant hemoglobin instead of Hemoglobin A. There are about 100,000 Americans affected by SCD.
- Approximately 1,400 adults and 400 children with SCD receive their care within the Atrium Health system. SCD results in frequent unpredictable severe pain episodes and can affect and damage multiple organs, leading to early death and significant morbidity. Pain is the most common complication of sickle cell disease (SCD) and a frequent cause of acute care utilization.
- Hospital admissions and readmissions are very high for individuals with SCD, with approximately 60,000 hospital admissions per year in the US, with 90% of admissions related to acute pain. One cross-section cohort study showed a 64% admission rate and 28% readmission rate in adults with SCD. Missing follow-up appointments with SCD provider was associated with increased rates of readmission (4). Historically, the management of a sickle population has been the responsibility of the sickle cell provider/expert with no involvement from primary care or hospitalist post-discharge. As people with sickle cell disease are living longer, over 60% are 18 and older.
- There are not enough sickle cell disease experts available to manage this volume of patients without collaboration with primary care providers. This is the first know program of its kind, with intentional collaboration between sickle cell providers and hospitalists to provide coordinated and timely follow up for this population.

**Project Goals**

- The CHG – SCD Transition Clinic Collaboration was established to provide prompt outpatient follow-up appointments for individuals living with SCD with a sentinel admission. We hypothesized that SCD followed in the CHG Transition program and who were seen by a provider within 72 hours of discharge would experience a 20% reduction in their 14-day and 30-day readmission rates, resulting in improved quality of life, reduced mortality, and improved patient experience.

**Results and Outcomes**

- There have currently been over 39 patients with SCD who have been followed in our CHG – SCD Transition Clinic. By December 31, 2018 the readmission rate for SCD at Atrium Health Main reduced from 23.7% during 2017 to 15.27%. This represented a 35.6% reduction in 30-day readmission rates far exceeding our proposed goal of a 20% reduction.

**Lessons Learned**

- Collaboration is critical to success of this program. SCD patients respond best to people they know and are suspicious of healthcare. Therefore, leveraging the CBO was a vital part of engaging patients to participate in this intervention. Awareness of the program was initially slow; therefore intentional actions were implemented to advertise the services that highlight the specific benefits to the SCD patient (i.e.: getting an appointment sooner, getting medication refilled, and avoiding the need to go to the ED were all important to the also leads to decreased strain on the acute care system patient).
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**Carolina Medical Center Sickle Cell Disease Readmission Rate**

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