

# Prevalence of Unmet Social Needs and Post-Transplant Outcomes Among Adult Sickle Cell Patients Undergoing Allogeneic Hematopoietic Stem Cell Transplant

Monika Rao Mandava<sup>1</sup>, Zacharie Paul Charles Hamilton<sup>2</sup>, Lisa Sharp<sup>1,3</sup>, Karen Sweiss<sup>4</sup>, Santosh L. Saraf<sup>2</sup>

1. Department of Pharmacy Systems, Outcomes and Policy, University of Illinois, Chicago, IL 2. Division of Hematology/Oncology, University of Illinois, Chicago, IL 3. Department of Biobehavioral Nursing Science, University of Illinois, Chicago, IL 4. Department of Pharmacy Practice, University of Illinois, Chicago, IL

## INTRODUCTION

Sickle cell disease (SCD), a genetic blood disorder, presents life-altering complications, including chronic pain and organ damage that affects around 100,000 Americans. Hematopoietic stem cell transplant (HSCT), which replaces faulty stem cells with healthy ones, promises a future free from the burdens of SCD and is the only curative therapy for SCD. HSCT is a complex procedure that requires extensive care and support and is only selectively available<sup>1</sup>. Hence, HSCT outcomes can be influenced by social determinants of health, highlighting the need for equitable access to this transformative treatment.<sup>2-3</sup>

## OBJECTIVE

The main objective of this study is to explore the unmet social needs of a cohort receiving allogenic HSCT in a minority-serving transplant center and their post-transplant outcomes

## METHODS

A secondary qualitative analysis was conducted on evaluations completed by the social worker for adults seeking HSCT between 2014 and 2021 at a single minority serving medical center. Evaluations focused on the patient's unmet social needs (i.e., living arrangement, support system, financial status) with the intent to offer resources. The coding of interviews was completed using a standardized codebook, with two reviewers individually coding the data onto REDCap Electronic capture tool hosted at University of Illinois Chicago. Discrepancies were addressed with the team. Clinical and demographic variables were extracted from the electronic health records. The derived dataset was analyzed, and descriptive statistics were reported.

## RESULTS

40 patients (21 female) were included in this study with a median age of 33 (SD=10.03) years at the time of transplant.

Among patients, 150 unmet social needs were found (median =5), with the top concerns being government subsidy dependency (n = 18), housing dependency (n = 18), financial dependency (n = 17), and transportation vulnerability (n = 17).

The social worker offered resources to address needs for 20 out of 40 patients.

Table 1: Demographics	
	N (%)
Age (mean(SD))	32.93(10.03)
Gender	
Female	21 (52.5%)
Male	19 (47.5%)
Race	
White	1 (2.5%)
Black	36 (90%)
Other/Unknown	3 (7.5%)
Insurance	
Medicare only	1 (2.5%)
Medicaid only	11 (27.5%)
Medicare/Medicaid	5 (12.5%)
Private	20 (50%)
Missing	3 (7.5%)
Marital status	
Married/partnered	14 (35%)
Not married	13 (32.5%)
Divorced	1 (2.5%)
Not mentioned	12 (30%)
Education	
High school	17 (42.5%)
Ceritificate program	5 (12.5%)
College degree	13 (32.5%)
Work status	
Unemployed	16 (40%)
Employed	24 (60%)

Table 2: Unmet social needs among SCD HSCT recipients	
	N (%)
Government subsidy dependency	18 (45%)
Housing dependency	18 (45%)
Financial dependency	17 (42.5%)
Transportation vulnerability	17 (42.5%)
Housing vulnerability	13 (32.5%)
Unstable housing	4 (10%)
Crowded housing	1 (2.5%)
Stressful relationships	1 (2.5%)
Caregiving responsibilities	6 (15%)
Stairs or other structural factors	6 (15%)
Infestation	0 (0%)
Finances (difficulty paying rent/mortgage)	1 (2.5%)
Interpersonal issues with family	3 (7.5%)
Issues/disagreement/animosity	2 (5%)
Domestic violence	1 (2.5%)
Caregiver	
Caregiver available	34 (85%)
Caregiver well informed	31 (91.2%)
Caregiver attending appointments	27 (79.4%)

## RESULTS (contd.)

After transplantation, re-hospitalization within 100 days occurred in 40% (4 out of 10) of patients with fewer than three unmet social needs, 50% (7 out of 14) of those with three to five unmet social needs, and 62.5% (10 out of 16) of those with greater than five unmet social needs. Additionally, three deaths were recorded post-transplant in this study.

## DISCUSSION

- We observed many unmet social needs within the entire cohort, with rehospitalizations being more common in patients with a higher number of social needs.
- Given that our study was conducted using a secondary data source at a single center among a small group of patients, our study could be subject to bias and limited in generalizability.
- Confirming these findings in a larger cohort to assess the impact on specific transplant outcomes is warranted.

## REFERENCES

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