

RACIAL DISPARITIES IN BLOOD TRANSFUSION UTILIZATION AMONG HOSPITALIZED PATIENTS WITH MYELODYSPLASTIC SYNDROMES: NIS STUDY 2022-2023

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BACKGROUND

Myelodysplastic syndromes (MDS) are characterized by ineffective hematopoiesis leading to transfusion dependence, a major driver of morbidity and healthcare utilization. Persistent transfusion dependence in MDS is associated with iron overload, reduced quality of life, and worse overall outcomes. Whether racial disparities exist in transfusion utilization among hospitalized MDS patients at the national level remains unknown.

METHODS

We analyzed the 2022-2023 National Inpatient Sample (NIS). Adult hospitalizations with a primary or secondary diagnosis of MDS (ICD-10-CM D46.x) were included. Race/ethnicity was analyzed using the 2022 cohort, as race data were unavailable in NIS 2023. Blood transfusion receipt was identified by ICD-10-PCS procedure codes: any transfusion (302x), red blood cell (RBC) transfusion (30233N, 30243N), and platelet transfusion (30233R, 30243R). Survey-weighted logistic regression estimated adjusted odds ratios (aOR) for transfusion receipt by race (ref: White), adjusting for age, sex, insurance type, ZIP income quartile, and admission type.

CONCLUSIONS

Non-White patients with MDS are significantly more likely to receive blood transfusions during hospitalization compared to White patients, independent of socioeconomic and demographic factors. These findings may reflect disparities in access to disease-modifying therapies that reduce transfusion dependence, such as erythropoiesis-stimulating agents and hypomethylating agents, and warrant further investigation.

RESULTS

We identified 145,105 weighted MDS hospitalizations (29,021 unweighted) across 2022-2023; the 2022 race-analytic cohort comprised 69,645 weighted admissions. Overall, 31.5% of MDS hospitalizations involved any transfusion, including RBC transfusion in 27.9% and platelet transfusion in 9.5%. Unadjusted transfusion rates were lowest among White patients (30.6%) and highest among Asian/Pacific Islander patients (41.7%), followed by Hispanic (40.9%), Other/Unknown (40.1%), and Black (37.6%) patients. On multivariable analysis, all non-White racial groups had significantly higher adjusted odds of RBC transfusion compared to White patients: Black (aOR 1.43, 95% CI 1.23-1.66, p<0.001), Hispanic (aOR 1.47, 95% CI 1.24-1.76, p<0.001), and Asian/PI (aOR 1.63, 95% CI 1.22-2.18, p=0.001).

REFERENCES

1. Healthcare Cost and Utilization Project (HCUP). National Inpatient Sample (NIS). Agency for Healthcare Research and Quality. <https://www.hcup-us.ahrq.gov/nisoverview.jsp>
2. Houchens RL, et al. HCUP National Inpatient Sample (NIS) database documentation. 2023. <https://www.hcup-us.ahrq.gov/db/nation/nisdocumentation.jsp>
3. Siddique J, et al. Using the National Inpatient Sample to estimate time-trends. Health Serv Outcomes Res Methodol. 2014;14(2-3):231-245