

Sociodemographic Factors Associated with Hospital Readmission in Patients with Peptic Ulcer Disease in the State of Florida

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INTRODUCTION

- Hospitalization rates due to peptic ulcer disease (PUD) have decreased, but rebleeding remains an important consideration as it is associated with higher mortality.
- Prior studies indicate there may be racial disparities in the incidence of PUD. Black patients are more likely to have gastroduodenal ulcers and possibly increased mortality and rebleeding when compared to White patients.
- We aimed to determine whether the risk of 30-day readmission among patients with PUD varies by patient- and county-level sociodemographic and clinical variables.

METHODS

- We conducted a retrospective cohort study using hospital admission data from the Florida State Inpatient Database (Quarter 4 2015 to Quarter 3 2019) to identify patients aged 18-85 with an index admission for PUD [ICD-10-CM: gastric (K25), duodenal (K26), and peptic ulcer unspecified (K27)] who underwent esophagogastroduodenoscopy (EGD).
- Sociodemographic exposures are detailed in **Table 1**.
- The primary outcome was 30-day readmission after the index admission for PUD.
- We performed the student's t-test for descriptive comparisons of continuous variables and the Chi-square test for categorical variables. Factors significant in the univariate analysis ($p < 0.05$) were included in the multivariate logistic regression (**Table 2**).

RESULTS

Table 1. Patient sociodemographic variables at index admission.

Demographics	Index Admission N=8033 (%)
Female	3658 (45.5%)
Age in years (median; IQR)	66 (20)
18-44	827 (10.3%)
45-64	2840 (35.4%)
65-84	4196 (52.2%)
>85	170 (2.1%)
Race/Ethnicity	
White	5728 (71.3%)
Black	1116 (13.9%)
Hispanic	913 (11.4%)
Other/Missing	276 (3.4%)
Elixhauser Comorbidities (IQR)	4 (3)
Length of Stay (IQR)	4 (6)
Primary Payer	
Medicare	4750 (59.1%)
Medicaid	668 (8.3%)
Private Insurance	1546 (19.2%)
Self-pay	621 (7.7%)
No charge	214 (2.7%)
Other	234 (2.9%)
Patient Location	
Large Metropolitan areas	4402 (54.8%)
Small Metropolitan areas	3172 (39.5%)
Micropolitan areas	215 (2.7%)
Median Household Income	
First Quartile (<\$39,000)	2230 (27.8%)
Second Quartile (\$39,000-47,999)	2171 (27.0%)
Third Quartile (<\$48,000-62,999)	1950 (24.3%)
Fourth Quartile (>=\$63,000)	1528 (1.9%)

Table 2. Sociodemographic characteristics and odds of 30-day readmission after index admission for PUD.

	Readmit within 30 days N=1439 (%)	No Readmit within 30 days N=6594 (%)	OR* (95% CI)	OR** (95% CI)
Race				
White	1087 (75.5%)	4641 (70.4%)	Ref	Ref
Black	177 (12.3%)	939 (14.2%)	0.82 (0.69 - 0.98)	0.79 (0.66 - 0.95)
Hispanic	132 (9.17%)	781 (11.8%)	0.73 (0.60 - 0.89)	0.72 (0.59 - 0.89)
Other/Missing	43 (2.99%)	233 (3.53%)	NS	NS
Primary Payer				
Medicare	911 (63.3%)	3839 (58.2%)	Ref	Ref
Medicaid	131 (9.10%)	537 (8.14%)	NS	NS
Private	243 (16.9%)	1303 (19.8%)	0.79 (0.67 - 0.92)	0.69 (0.57 - 0.83)
Self-pay	84 (5.84%)	537 (8.14%)	0.68 (0.54 - 0.87)	0.57 (0.43 - 0.75)
No charge	35 (2.43%)	179 (2.71%)	NS	NS
Other	35 (2.43%)	199 (3.02%)	NS	NS

Abbreviations: CI = confidence interval, NS = not significant, OR = odds ratio, Ref = reference

*Model includes sociodemographic factors with $p < 0.05$ on univariate analysis: race (White, Black, Hispanic, Asian/Native American/Other/Missing & primary payer (Medicare, Medicaid, Private, Self-pay, no charge, other)

**Model includes sociodemographic factors from *Model and controls for sex (male, female), age (continuous), length of stay (continuous), urban/rural location (large metropolitan, small metropolitan, micropolitan, not metro- or micropolitan), median income by zipcode (4 quartiles)

CONCLUSIONS

- In the state of Florida, White patients and patients with Medicare who initially received an EGD during an index admission for PUD were more likely to be readmitted.
- White patients and those with Medicare may be more likely to receive optimal medical care for complications from PUD.

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