

Collins Mbonu MD¹, Thuy-Van P. Hang MD², Anudeep Neelam MD¹, Jason Brown MD²
¹Department of Medicine, Emory University School of Medicine, Atlanta, GA, United States
²Division of Digestive Diseases, Emory University School of Medicine, Atlanta, GA, United States

BACKGROUND

- Helicobacter pylori* (*H. pylori*) is a common infection in the United States, with a lifetime prevalence of ~33%.
- H. pylori* is a strong risk factor for dyspepsia, peptic ulcer disease, and gastric adenocarcinoma.
- Studies have shown that numerous socioeconomic and clinical factors influence *H. pylori* eradication success.
- However, there is a paucity of studies that assess the correlation of such factors on eradication test ordering and completion practices.

AIM

- The aim of our study was to assess demographic, socioeconomic, and clinical factors that may influence eradication testing practices of patients with *H. pylori* in a large safety-net hospital.

METHODS

- Retrospective, single-center chart review study.
- Inclusion criteria: Biopsy-proven *H. pylori* infection after upper endoscopy.
- Exclusion criteria: Age < 18 years.
- Time range: November 2015 to May 2021.
- Demographic data:** Sex, age, and race/ethnicity.
- Socioeconomic data:** Insurance type/status, preferred language, Gini index, and distance from hospital.
- Clinical data:** Setting of endoscopy and clinic follow-up after diagnosis.
- Primary Outcomes:**
 - Ordering of *H. pylori* eradication testing
 - Completion of *H. pylori* eradication testing
 - Successful eradication of *H. pylori* infection
- Statistical analyses included the Pearson chi-squared test and T-test. Statistical significance was defined as $P \leq 0.05$.

RESULTS: FIGURES & TABLES

Figure 1. Distribution of Primary Outcomes

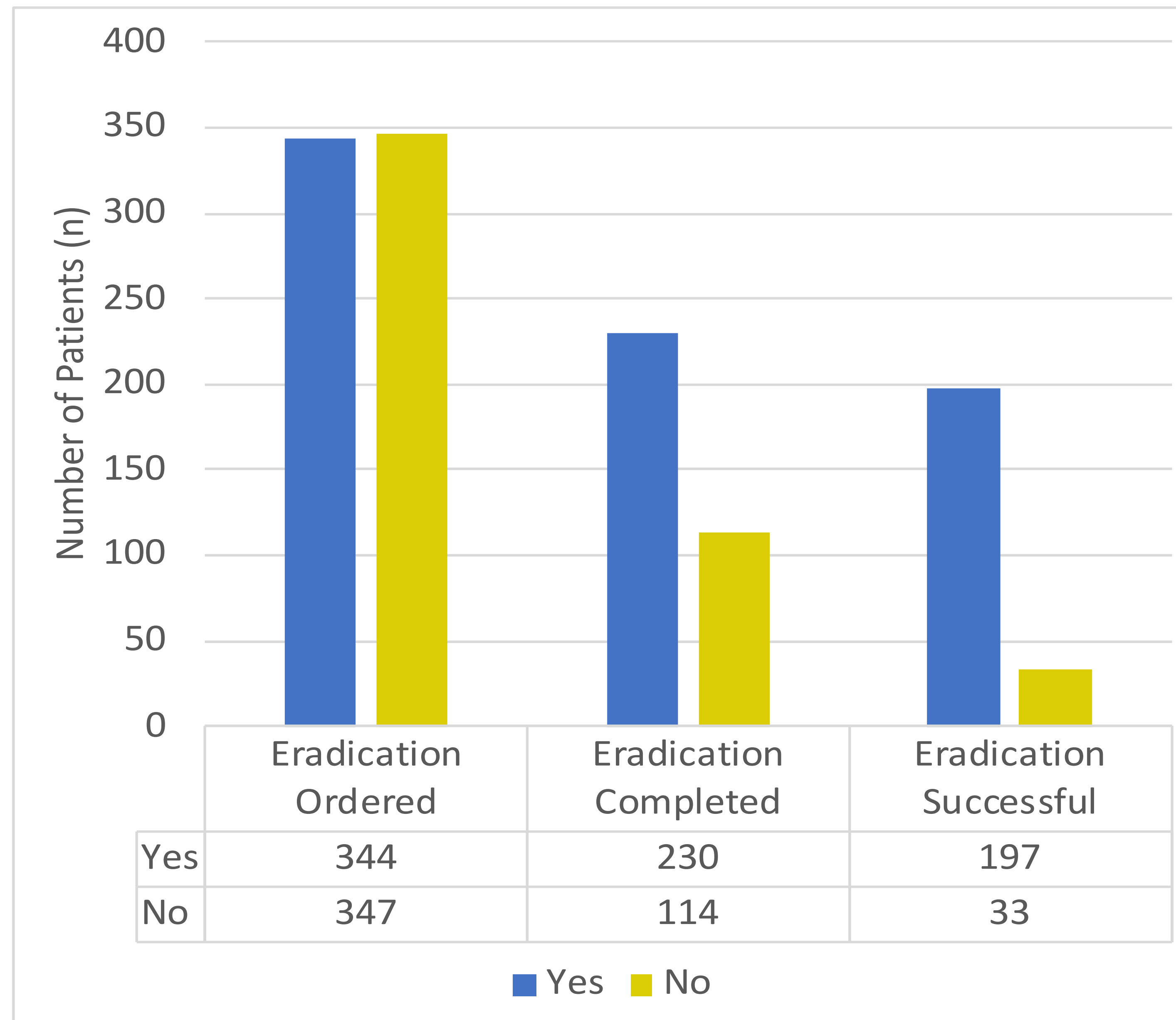


Table 1. Cohort Baseline Demographic Characteristics

Demographics	N = 694
Sex, n (%)	
Male	370 (53.3)
Female	324 (46.7)
Age, mean (SD)	55.9 (13.1)
Race/Ethnicity, n (%)	
Asian	21 (3.0)
Black	585 (84.3)
Hispanic	64 (9.2)
White	22 (3.2)
Other	1 (0.1)
Multiracial	1 (0.1)
Insurance Type, n (%)	
Private	121 (17.7)
Public	325 (47.5)
Uninsured	239 (34.9)

Table 2. Comparison of Patient Factors for Eradication Test Ordered vs Not Ordered Status

Demographic /Socioeconomic/Clinical Characteristics	Eradication Test Ordered (n=344)	Eradication Test Not Ordered (n=347)	P-value
Sex, n (%)			0.003
Male	164 (47.7)	204 (58.8)	
Female	180 (52.3)	143 (41.2)	
Race/Ethnicity, n (%)			0.13
Asian	15 (4.4)	6 (1.7)	
Black	280 (81.4)	303 (87.3)	
Hispanic	35 (10.2)	29 (8.4)	
White	12 (3.5)	9 (2.6)	
Other	1 (0.3)	0 (0)	
Multiracial	1 (0.3)	0 (0)	
Insurance Type, n (%)			0.46
Private	65 (19.2)	55 (16)	
Public	154 (45.6)	170 (49.4)	
Uninsured	119 (35.2)	119 (34.6)	
Preferred Language, n (%)			0.002
English	287 (83.7)	316 (91.6)	
Non-English	57 (16.3)	31 (8.4)	
Endoscopy Setting, n (%)			<0.0001
Inpatient	100 (29.1)	181 (52.2)	
Outpatient	244 (70.9)	166 (47.8)	
Follow-up Scheduled, n (%)			<0.0001
Inpatient	296 (86.3)	183 (52.7)	
Outpatient	44 (12.7)	166 (47.8)	
Distance from Hospital in Miles, mean (SD)	18.4 (118.9)	16.3 (41.2)	0.76
Gini Index, mean (SD)	0.46 (0.05)	0.47 (0.05)	0.02

RESULTS

- Eradication testing was ordered for ~50% of patients in the overall cohort (Figure 1).
- Of patients who had eradication testing ordered, 67% completed testing (Figure 1).
- 34% of the total cohort completed eradication testing (Figure 1).
- 86% of patients who completed eradication testing achieved successful cure of *H. pylori* infection (Figure 1).
- Male sex, non-English preferred language, inpatient endoscopy, lack of scheduled patient follow-up, and living in areas of higher income disparity (higher Gini index) were all associated with less likelihood of ordering of eradication testing by providers (Table 2).
- Male sex, non-English preferred language, and inpatient endoscopy were all associated with a lower likelihood of eradication testing completion.
- There were no significant predictors of successful eradication of *H. pylori* infection.

CONCLUSIONS

- Patients that (1) were male, (2) had a non-English preferred language, (3) received inpatient endoscopy, (4) did not have scheduled follow-up, and/or (5) lived in areas of higher income disparity were at increased risk of failure of eradication test ordering and/or completion.**
- Study Strength:**
 - Examines a unique set of socioeconomic and clinical factors.
- Study Limitation:**
 - Cohort had a high percentage of black patients which limits generalizability.
- Study results suggest that processes that improve scheduling of follow-up after diagnosis, particularly for inpatient diagnosis, male patients, non-English speaking patients, and patients in areas of higher income disparity may improve eradication test ordering and completion practices.

REFERENCES

- Eusebi LH, et al. Helicobacter 2014;19:1-5.
- Peña-Galo E, et al. Gastroenterol Hepatol Bed Bench;14(1):53-58.
- Kim BJ, et al. Helicobacter 2019;24(5):12646.