

Introduction

- *Helicobacter pylori* (*H. pylori*) is one of the leading causes of peptic ulcer disease and gastric cancer worldwide.
- Treatment is typically a combination of antibiotics with a proton-pump inhibitor (PPI).
- Testing for eradication, recommended by the most recent ACG practice guidelines, is paramount as *H. pylori* resistance rates continue to rise and salvage therapy can be offered if initial treatment was unsuccessful.
- Eradication testing may include urea breath testing, stool antigen testing, or biopsy and should be performed at least 4 weeks after completion of *H. pylori* treatment and two weeks after PPI-therapy is held.

Methods

- We performed a retrospective chart review of Catholic Health Initiatives health system between January 2019 and January 2021 to obtain data regarding *H. pylori* eradication testing ordering practices.
- Differences were evaluated using the chi-square test, Fisher's exact test, and lognormal regression models.

Outcomes

Do eradication testing ordering and completion rates vary based on:

- 1) Patient age
- 2) Patient primary payer
- 3) Patient primary language spoken
- 4) Gastroenterology vs. non-GI ordering specialty

Results

- Of 456 patients (41.1% male; 58.9% female), eradication testing was not ordered in 218 patients (47.8%).
- In the 238 (52.2%) patients who had eradication testing ordered, *H. pylori* stool antigen testing was ordered 73.5% of the time.
- GI ordered eradication testing 67.6% (58.3-75.6) of the time compared to 47.3% (42.0-52.5) by non-GI ordering specialty ($p < 0.001$), Table 1.
- When testing was ordered it was completed 89.5% of the time.
- There was no significant difference in eradication ordering practice based on sex, primary payer, or language.
- Eradication testing was most likely to be ordered in patients aged 35-60 ($p = 0.046$), Figure 1.
- Completion rates did not vary significantly based on age, Figure 2.

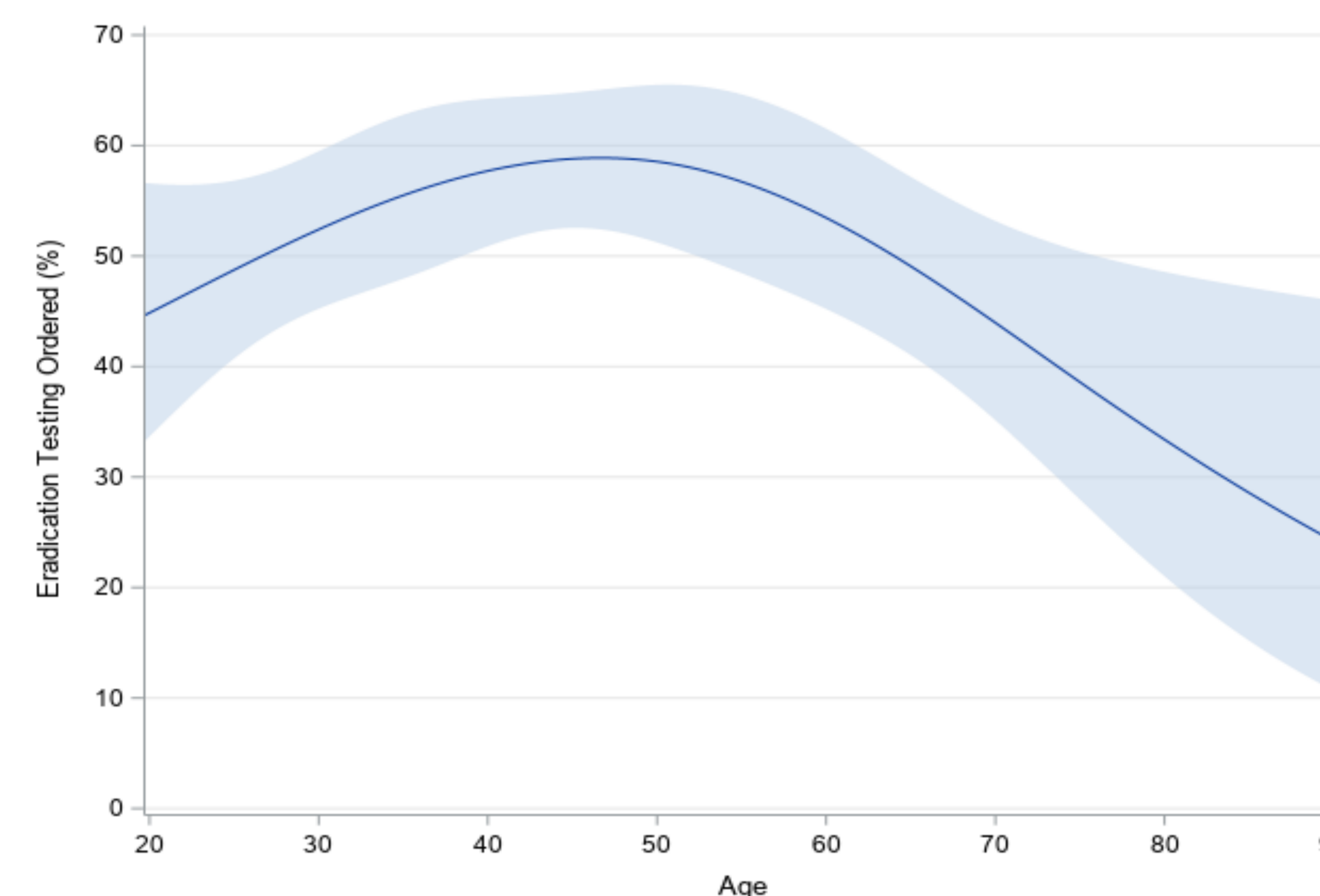


Figure 1. Predicted probability of ordering eradication testing based on age with 95% confidence limits.

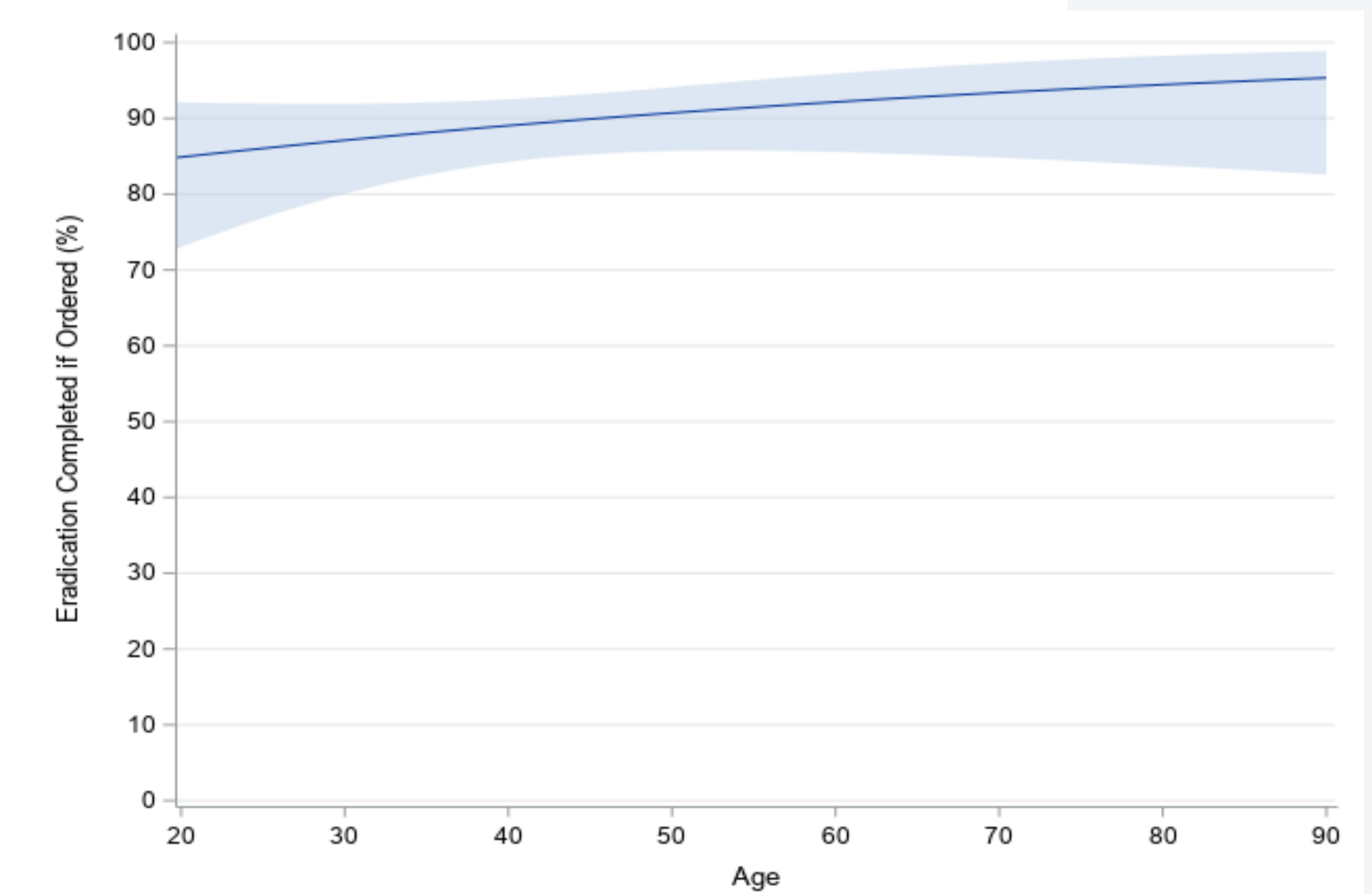


Figure 2. Predicted probability of completing eradication testing based on age with 95% confidence limits.

	Ordered Percent (95% CI)	p	Completed (if ordered) Percent (95% CI)	p
Age	Left Figure	0.046	Right Figure	0.612
Biological Sex				
Male	52.7 (45.5-59.7)	0.867	89.9 (82.2-94.5)	0.864
Female	51.9 (45.9-57.8)		89.2 (82.8-93.4)	
Payer				
Commerical	57.9 (51.4-64.2)	0.051	90.2 (93.7-94.2)	0.502
Medicaid	42.6 (33.9-51.8)		91.8 (80.1-96.9)	
Medicare	47.7 (35.9-59.8)		90.3 (73.8-96.9)	
Self Pay	55.3 (41.0-68.8)		80.8 (61.2-91.8)	
English Speaking				
No	53.1 (45.7-60.4)	0.756	80.4 (82.6-95.0)	0.706
Yes	51.6 (45.7-57.4)		88.9 (82.6-93.1)	
Gastroenterology				
No	47.3 (42.0-52.5)	<.001	88.3 (82.4-92.5)	0.396
Yes	67.6 (58.3-75.6)		92.0 (83.3-96.4)	

Table 1. Ordered percent and 95% confidence intervals stratified by age, payer, language, and ordering specialty.

Discussion

- In a large health system consisting of academic and non-academic hospitals and clinics eradication testing was performed only half the time and was more frequently ordered in middle-aged patients.
- The low number of ordered eradication tests may reflect providers' unfamiliarity with clinical guidelines and may be contributed by additional inherent age bias.
- In our cohort which included 40% non-English speakers, language was not a barrier to test completion.
- Efforts should focus on education about testing for treatment success particularly in primary care and non-GI specialties.