Suboptimal Rates of *H. pylori* Treatment and Eradication in an Academic Medical Center: A Pilot Study.

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BACKGROUND

-*Helicobacter pylori* (HP) is the most common chronic bacterial infection with an estimated global prevalence surpassing 50% of the world's population.[1]

-In 2018, 36.8% of the 2.2 million new infection-attributable cancer cases were driven by HP.[2]

-The 2022 Maastricht VI/Florence Consensus recommends a >90% eradication rate with a complete test, treat and retest schedule.[3-4]

-Scarce U.S. data exists regarding national HP eradication and resistance rates; a recent meta-analysis demonstrated that in the last decade only seven states reported resistance rates (exceeding 30%).[5]

-A Multidisciplinary Treatment Program for HP (MTP-HP) was implemented by the Division of Gastroenterology at BIDMC in July 2018; due to the lack of baseline HP testing, treatment, and eradication rates, a baseline pilot was performed.

METHODS

-A non-probabilistic sample from pathology reports was extracted using the key phrase “helicobacter-like organisms seen” on gastric biopsies taken via esophagogastroduodenoscopy (EGD) between October 2016 and May 2017.

-Our aim was to evaluate baseline pre-program characteristics of HP testing, treatment, and eradication rates.

-Patient-level, institutional and test-specific variables were collected using a modified structured previously validated RedCap tool.

Table 1. Patient Characteristics.

		Demographics
		% (n=134)
Gender	Male	41.8
	Female	58.2
Race	White	42.5
	Black	29.9
	Asian	8.9
Ethnicity	Hispanic	25.6
Preferred language	English	70.1
	Spanish	9.7
	Russian	5.9
	Mandarin	5.2
	Cape Verdean	2.2

Figure 1. Pre-program *H. pylori* Testing, Treatment, and Eradication Rates.

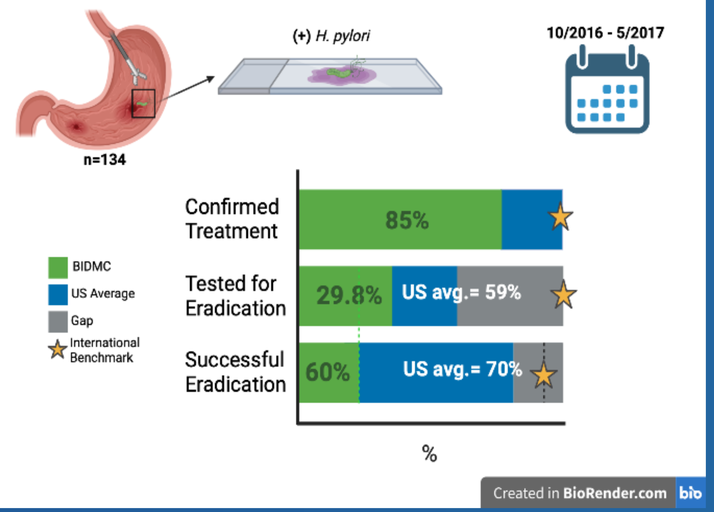
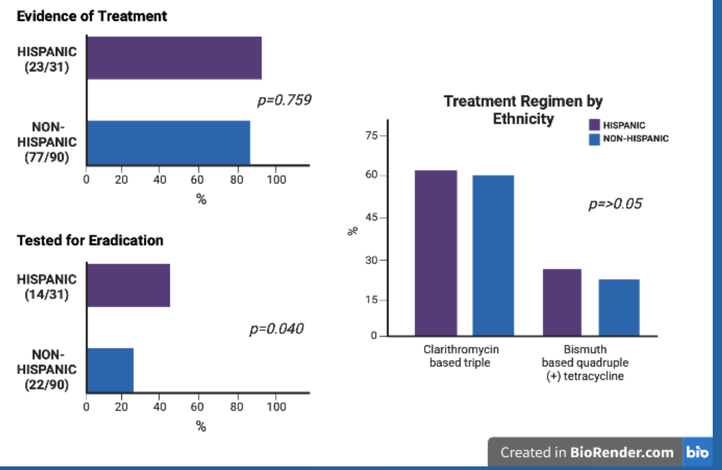


Figure 2. Treatment and Testing Characterisitcs by Ethnicity.



RESULTS

-A total of 134 patients had a bimodal age distribution with peaks at 39 and 71 years old.
-The most common initial HP diagnostic test was EGD (95.5%); abdominal pain (47%) was the most common coded indication for EGD.
-Gastric erythema (39.6%), gastritis (35.8%) and normal findings (27.6%) were the most common endoscopic findings.
-A 14 day regimen with either clarithromycin based triple therapy (60.9%) or bismuth based quadruple + tetracycline (21.7%) were the most common treatment regimens.

Table 2. High Risk Endoscopic Findings Test, Treat and Eradication Rates.

High risk patients	Gastric or duodenal erosions / ulcerations	+anemia	+ overt blood per rectum
n	24	3	4
Evidence of treatment	100%	100%	100%
Tested for eradication	33%	33%	75%
Successful eradication	75%	100%	66.70%

DISCUSSION

-These data provide a snapshot of our pre-program rates which demonstrate suboptimal standards compared to international benchmarks [depicted with a star in figure 1.].

-Our data suggest more intense testing for eradication in Hispanics (45.2%, *p=0.04*) with similar evidence of treatment rates and treatment type. *(figure 2.)*

-Key intervenable areas of underperformance should be monitored by systematic benchmarks; including high-risk groups for adverse outcomes that can benefit from targeted quality interventions.

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