
PUBLISHED ABSTRACT

Barriers in Completion of *H. Pylori* Eradication Testing in a Predominantly Underserved Hispanic Resident Clinic: A Quality Improvement Project

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Background

Approximately 50% of the world's population, or 4.4 billion people, are infected with *Helicobacter Pylori*. Patients can present with an ulcer, uninvestigated dyspepsia or unexplained iron deficiency. *H. Pylori* is acquired by oral ingestion of the bacteria in childhood, and though US prevalence is relatively low at 35.6%, rates are noted to be higher in lower socioeconomic and immigrant populations. Long-term impacts of chronic *H. Pylori* include gastritis, peptic ulcer disease and gastric cancer. Current non-endoscopic diagnosis of *H. Pylori* includes a serologic test, urea breath test and a fecal antigen test. Given the rise in clarithromycin resistance of *H. Pylori*, current guidelines recommend testing to prove eradication and provide salvage therapy if *H. Pylori* is still present. We present a quality improvement study at Ryan-Nena, a resident clinic serving predominantly underserved Hispanic/Latino patients, to assess physician and patient adherence to completing *H. Pylori* stool test of cure, and provide sustainable interventions to increase rates of eradication.

Methods

A database of patients who had confirmed *H. Pylori* via stool testing from July 9, 2015–June 30, 2017 was created. Demographics, lab orders, stool collection dates and prescriptions were retrospectively reviewed. The primary endpoint was to determine the rate of eradication confirmation, and observe barriers in providing standard of care. Secondary outcomes include delay in collection and treatment. Given the wide range of health literacy and English-proficiency at our clinic, gender and primary language were examined as possible barriers. Data analysis was completed with student's T-Test and Z-test.

Results

A total of 102 patients with confirmed *H. Pylori* were included in this study. Patient population was predominantly identified as Hispanic (72 patients), and English was the primary language in 59 (57.8%) patients. Average delay in collection of primary stool samples to make the diagnosis of *H. Pylori* was 7.14 days. Men vs. women average delay in completion of initial *H. Pylori* testing was noted to be 10 days vs. 4.9 days with a T-Score of 1.01 ($p = 0.312$). Hispanic vs. non-Hispanic patients average delay in completion of initial *H. Pylori* testing was noted to be 8.8 days vs. 3.5 days with a T-Score of 1.40 ($p = 0.165$). Standard of care treatment was prescribed for 90 (89.2%) patients. Primary care physicians ordered confirmation of eradication for 78 (76.4%) patients, and 63 (61.7%) patients successfully completed eradication testing. Men vs. women in completion of eradication testing were noted to be 61% vs. 79% with a Z-Score of -2.19 ($p = 0.02$). Completion rate of stool eradication testing amongst patients was found to be 79.5%.

Conclusions

Key findings based on our QI project are that 24% of patients were not ordered eradication testing, 20% of our patients that were ordered eradication testing did not complete it, and there is potentially a significant difference in men vs. women in completing eradication testing. Residents rotate through the clinic every 2 weeks, and the timeline for test of cure often does not align with the residents' clinic schedule. Residents are now encouraged to order test of cure ahead of time, send telephone encounters to colleagues to facilitate continuity of care, and create a clear plan with patients about the sequence of events to ensure complete eradication. 20% of patients did not undergo repeat eradication testing, and it is thought that many patients reported feeling better after treatment and therefore do not want to

undergo repeat cumbersome stool testing once their symptoms have resolved. We plan to improve compliance through increasing accessibility by offering same day urea breath testing on site, which is a simpler, less time consuming test for patients. We plan to provide this data to providers so they can be aware of possible gender discrepancies in test of cure. Furthermore, other actions such as community outreach, H. pylori education pamphlets in Spanish and English, reminder phone calls, and standardized physician templates for H. pylori testing are also being considered and implemented at our clinic to continue to improve the overall rate of successfully treating H pylori infection.

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