Wyoming Drug Utilization Review

The Importance of *H. Pylori* Treatment

Written by Thaxton Cook, PharmD 2026

Helicobacter pylori is a bacterial pathogen that afflicts 50% of the world's population (1). While 90% of these people are carriers for the bacteria, the other 10% can be greatly affected (1). Initial infection is innocuous with symptoms like nausea, dyspepsia, upset stomach, gastritis, and peptic ulcers. What is unknown by most, is that *H. pylori* accounts for 5.5% of total cancers diagnosed worldwide (4). *H. pylori* is also the most common cause of gastric cancers. There is enough evidence to support this: the World Health Organization (WHO) has listed *H. pylori* as a group 1 carcinogen (1).

Infection of *H. pylori* is unpleasant, but often people feel the side effects are tolerable, even preferable to the actual treatment. The concern with infection comes from the chronic inflammation caused by the organism. Prolonged inflammation drastically increases the risk of cancer (1). The more commonly associated gastric cancers are gastric adenocarcinoma, and mucosa-associated lymphoid tissue (MALT) non-Hodgkin lymphoma (4). There is even emerging evidence connecting *H. pylori* to colorectal cancer (4). The current recommendation is to treat symptomatic patients that test positive for *H. pylori* infection.

There are multiple ways that a patient can be tested for *H. pylori* infection. Obtaining a biopsy during upper endoscopy remains the gold standard. This allows for direct staining of the specimen, though it is an invasive procedure (5). A urea breath test (UBT) is less invasive and offers 90% sensitivity in detection. A UBT detects excess carbon dioxide exhaled, which is a byproduct of *H. pylori* infection (5). Patients will have needed to be off their proton pump inhibitor (PPI) for at least 2 weeks prior. Stool antigen test provide another means of testing (5). Antigens produced by the body are excreted in the feces; if these are present the patient is *H. pylori* positive. Patients also need to have been off antibiotics for 4 weeks, and their PPI 2 weeks prior to testing.

H. pylori is a gram-negative bacterium that thrives in harsh acidic environments. This aids in its survival because it is difficult for antibiotics to survive long enough to kill the bacteria. *H. pylori* is also highly adaptable and quickly forms resistances that protect it from medications. Treatment normally uses two antibiotics that act on the bacteria using separate mechanisms. A proton pump inhibitor (PPI) is added to lessen the acidic content, allowing the antibiotics to act more effectively.

The concern with treatment is that *H. pylori* has developed many drug resistances worldwide. The initial first line therapy relied on clarithromycin, which most strains of *H. pylori* are now resistant to (3). The current recommendation is for bismuth-based quadruple therapy (BQT) (2).

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There are multiple therapy options that still have value, the prime determinant is what resistances are present. The initial triple therapy regimen with clarithromycin is still acceptable for use if resistances are known to be less than 15-20% (1). There are multiple established regimens for treating *H. pylori*, due in part to allergies and drug resistances. There are also several combination therapies available that can be used. However, these are expensive and still place a high pill burden on the patient. It's important that the patient finish their regimen to ensure they have effectively killed off the infection. Table 1 listed below summarizes different regimens utilized in treatment of *H. pylori*.

Quadruple Therapy	
Bismuth, PPI, tetracycline, metronidazole	10 to 14 days
Triple Therapy	
Clarithromycin, PPI, amoxicillin or metronidazole	14 days
Levofloxacin, PPI, amoxicillin	10 to 14 days
Talicia® (Omeprazole, amoxicillin, rifabutin)	14 days
Pylera® (bismuth, metronidazole, tetracycline) + PPI	10 days
Voquezna TriplePak® (vonoprazan-clarithromycin-amoxicillin)	14 days
Dual Therapy	
Voquezna DualPak® (vonoprazan-amoxicillin)	14 days
Concomitant Therapy (non-bismuth)	
Clarithromycin, PPI, amoxicillin, metronidazole	10 to 14 days
LOAD Therapy	
Levofloxacin, omeprazole, nitazoxanide, doxycycline	7 to 10 days
Sequential Therapy	
• PPI and amoxicillin, then • PPI, clarithromycin, metronidazole	• 5-7 days • 5-7 days
Hybrid Therapy	
• PPI and amoxicillin, then • Clarithromycin, metronidazole	• 7 days • 7 days

Following completion of therapy patients should be tested to confirm therapeutic success (1). This should be done one month following therapy to get accurate results. Both the UBT and stool antigen test are accepted in confirmatory testing. If the treatment was unsuccessful, the patient should be treated again (2). If able, antimicrobial data should be consulted regarding resistances. These patients should be started on a bismuth or levofloxacin regimen, utilizing different medications from their previous therapy. It's important to note that *H. pylori* spreads easily within households. Patients living with someone *H. pylori* positive or at increased risk of gastric cancer, should be tested as well (2).

H. pylori doesn't quite get the negative acclaim it should have regarding health outcomes. It is important to remember that symptomatic patients who test positive should be treated. Proper selection of therapy is critical when drug resistances could be involved. There are multiple regimens that have been shown to effectively treat *H. pylori* infection. Remember to educate patients on the importance of this therapy and how it will help prevent risk of cancer outcomes. It may seem small now, but if left untreated *H. pylori* can be detrimental to our overall health.

References

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5. Parikh NS, Ahlawat R. Helicobacter pylori. Updated 2023. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025. Available from: https://www.ncbi.nlm.nih.gov/books/NBK534233/. Accessed May 6, 2025.

The P&T Committee met for its quarterly business meeting on November 13, 2025.

Highlights of this meeting include:

Jill Van Cleave, PharmD has been selected to fill the pharmacist vacancy on the P&T Committee.

The Department of Health has been actively working on the Rural Health Transformation program. Additional information can be found at https://health.wyo.gov/admin/rural-health-transformation-program/.

Wegovy will be covered for metabolic associated steatohepatitis (MASH) for patients with stage F2 or F3 fibrosis who are using the medication in conjunction with diet and exercise.

Mavyret will be approved for the treatment of acute hepatitis C infection.

Botox use in migraine prevention will require a 12-week trial and failure of a CGRP or gepant. If a patient continues to have four or more headaches per month, combination therapy will be allowed.

Continuous glucose monitors will be allowed for pregnant women with gestational diabetes, regardless of type. Treatment will be covered until 6-weeks post-partum.

Kerendia, Tezspire, Tryptyr, Ekterly, Orlynvah, Anzupgo, Dawnzera, Exxua, and Rhapsido were limited to indication and referred to the Department of Health for cost analysis and PDL placement.

Harliku, Brinsupri, Wayrilz, Palsonify, Forzinity and Papzimeos were limited to indication.

Vizz will require a trial and failure of non-pharmacologic therapies along with confirmation of medical necessity for approval.

The draft 2026 will be posted at www.uwyo.edu/DUR for public comment. In addition, all prior authorization criteria are open for public comment. Comments should be sent by email to alewis13@uwyo.edu by December 15, 2025.

The next P&T Committee meeting will be held February 12, 2026 in Cheyenne. An agenda will be posted approximately two weeks prior to the meeting.

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