BlueCross BlueShield of Alabama

Name of Blue Advantage Policy:

Helicobacter Pylori Testing

Policy #: 258
Latest Review Date: May 2022
Category: Medicine/Laboratory

BACKGROUND:

Blue Advantage *medical policy does not conflict with Local Coverage Determinations (LCDs), Local Medical Review Policies (LMRPs) or National Coverage Determinations (NCDs) or with coverage provisions in Medicare manuals, instructions or operational policy letters. In order to be covered by Blue Advantage the service shall be reasonable and necessary under Title XVIII of the Social Security Act, Section 1862(a)(1)(A). The service is considered reasonable and necessary if it is determined that the service is:*

1. *Safe and effective;*
2. *Not experimental or investigational*;*
3. *Appropriate, including duration and frequency that is considered appropriate for the service, in terms of whether it is:*
   - *Furnished in accordance with accepted standards of medical practice for the diagnosis or treatment of the patient's condition or to improve the function of a malformed body member;*
   - *Furnished in a setting appropriate to the patient's medical needs and condition;*
   - *Ordered and furnished by qualified personnel;*
   - *One that meets, but does not exceed, the patient's medical need; and*
   - *At least as beneficial as an existing and available medically appropriate alternative.*

Routine costs of qualifying clinical trial services with dates of service on or after September 19, 2000 which meet the requirements of the Clinical Trials NCD are considered reasonable and necessary by Medicare. Providers should bill* ***Original Medicare* *for covered services that are related to* ***clinical trials*** *that meet Medicare requirements (Refer to Medicare National Coverage Determinations Manual, Chapter 1, Section 310 and Medicare Claims Processing Manual Chapter 32, Sections 69.0-69.11).*

POLICY:

Blue Advantage will treat **urea breath testing using the carbon isotope (13C or 14C) or fecal antigen testing for Helicobacter pylori (H. pylori)** as a **covered benefit** in patients who meet **one** of the following criteria below:

1. Evaluation of new onset dyspepsia in persons younger than 60 years of age **without** alarm symptoms (anemia, weight loss, vomiting, lymphadenopathy); OR
2. Evaluation of persons with persistent symptoms of dyspepsia despite 2 weeks of appropriate medication therapy for H. pylori; OR
3. Evaluation of persons with a prior history of untreated H. pylori infection and with recurrent symptoms.
4. Before starting proton pump inhibitor therapy for dyspepsia; OR
5. Before bariatric surgery for obesity; OR
6. Re-evaluation to assess success of eradication of H. pylori infection (Note: testing to ensure eradication should occur no sooner than 4 weeks post treatment).

Blue Advantage will treat **serologic testing for H. pylori** as a **covered benefit** in patients who meet one of the following criteria below:

1. Evaluation of new onset dyspepsia in patients younger than 60 years of age **without** alarm symptoms (anemia, weight loss, vomiting, lymphadenopathy); OR
2. Before bariatric surgery for obesity

Blue Advantage will treat **urea breath testing using the carbon isotope (13C or 14C), fecal antigen testing, or serological testing for Helicobacter pylori (H. pylori)** as a **non-covered benefit** and **investigational for all other indications, including but not limited to, the following:**

1. Assessing the risk of developing dementia
2. Dyspepsia associated with alarm markers (Endoscopy is recommended)
3. Evaluating infantile colic
4. Managing recurrent aphthous stomatitis
5. New onset dyspepsia in persons aged 60 years or older (upper GI endoscopy is indicated because of concern for gastric neoplasia)
6. Screening of asymptomatic person for H. pylori infection

Blue Advantage will treat **any combination of simultaneous urea breath testing, fecal antigen testing, and/or serological testing for H. pylori** as a **non-covered benefit** and as **investigational**.

Blue Advantage does not approve or deny procedures, services, testing, or equipment for our members. Our decisions concern coverage only. The decision of whether or not to have a certain test, treatment or procedure is one made between the physician and his/her patient. Blue Advantage administers benefits based on the members' contract and medical policies. Physicians should always exercise their best medical judgment in providing the care they feel is most appropriate for their patients. Needed care should not be delayed or refused because of a coverage determination.

DESCRIPTION OF PROCEDURE OR SERVICE:

The recognition of the role of the bacterium Helicobacter Pylori (H. Pylori) in the pathogenesis of peptic ulcer disease has revolutionized the therapy of peptic ulcer. Specifically, 80% to 95% of patients with duodenal ulcers and 70% to 90% of patients with gastric ulcers have coexisting H. Pylori gastritis. Eradication of H. Pylori infection using a variety of combinations of antibiotics, bismuth compounds, and acid suppression therapy has emerged as a basic treatment strategy for these ulcers. However, it is important to realize that the majority of patients positive for H. Pylori do not develop ulcer symptoms. In addition, the role of H. Pylori therapy in non-ulcer dyspepsia alone is uncertain. Dyspepsia refers to a group of symptoms which include epigastric pain or discomfort, indigestion, upset stomach, bloating or nausea. Some dyspepsia symptoms (e.g. postprandial gnawing or burning relieved by foods or antacids) are suggestive of ulcers. Other symptoms (e.g. belching, bloating, or fullness) may be related to non-ulcer dyspepsia. Nevertheless, there is considerable overlap between ulcer and non-ulcer dyspepsia. Invasive detection of H. Pylori involves upper GI endoscopy with a biopsy. Non-invasive methods include serologic identification of anti-H. Pylori antibodies, detection of H. Pylori antigens in the feces, or the urea breath test (UBT). While serologic tests indicate either past or present infection, fecal antigens and UBT indicates active disease.

Noninvasive Testing for H. pylori
Urea Breath Test (UBT)

Urea breath testing is based on the high urease activity of H. pylori, which hydrolyzes urea to carbon dioxide and ammonia. In the urea breath test, the patient ingests urea labeled with a carbon isotope, either 13C or 14C, and then the concentration of the isotope is measured in the expired CO2. Analysis of the concentration of 13C requires the use of mass spectrometry, and the sample must be submitted to the manufacturer's reference laboratory for analysis. In contrast, 14C is radioactive, and while its use exposes the patient to a small dose of radiation, its presence can be measured using scintillation counting.

Fecal Antigen Test

H. pylori antigens can be detected in the stool by applying antibodies to a diluted stool sample complexed to a detection molecule.

Serological Test
Serological testing for H. pylori does not dependably differentiate between active and past infections, and additionally, it requires validation at the local level. The sensitivity and specificity of serological testing has been reported to be 85% and 79% respectively.

KEY POINTS:
A literature search was performed through May 4, 2022.

Summary of Evidence
For individuals undergoing testing for H. pylori for new onset dyspepsia evaluation in those age 60 and under with no alarm symptoms, evaluation of persistent symptoms of dyspepsia despite 2 weeks of medication therapy, evaluation of those with a history of untreated H pylori with recurrent symptoms, prior to starting PPI therapy, prior to bariatric surgery, or re-evaluation to assess H. pylori status, the evidence consists of meta-analyses and prospective studies.

The sensitivity and specificity of the UBT is reported to be 88% and 95-100%, respectively. False positive results are uncommon. The sensitivity and specificity of the fecal antigen test is reported to be 94% and 97%, respectively. This testing can be affected by PPIs, bismuth, and/or antibiotics as well and should be discontinued prior to testing. The evidence is sufficient to determine the effects of the technology on health outcomes.

For individuals undergoing testing for H. pylori for the risk of developing dementia, dyspepsia with alarm markers, evaluating infantile colic, managing recurrent aphthous stomatitis, new onset dyspepsia older than 60 years, and the screening of asymptomatic patients for HP infection, the evidence consists of cohort studies and case control studies. Overall, the evidence is weak and only hypotheses are presented in several of the studies. High quality and long-term data are needed to determine the net health outcome. The evidence is insufficient to determine the effects of the technology on health outcomes.

Practice Guidelines and Position Statements
American College of Gastroenterology (ACG)
In 2017, the ACG and the Canadian Association of Gastroenterology published a joint guideline on the management of dyspepsia.

The summary and strength of recommendations are in Table 1.
Table 1: Management of dyspepsia

We suggest dyspepsia patients aged 60 or over have an endoscopy to exclude upper gastrointestinal neoplasia.	Conditional recommendation, very low quality evidence.
We do not suggest endoscopy to investigate alarm features for dyspepsia patients under the age of 60 to exclude upper GI neoplasia.	Conditional recommendation, moderate quality evidence

We recommend dyspepsia patients under the age of 60 should have a non-invasive test for H. pylori , and therapy for H. pylori infection if positive.	Strong recommendation, high quality evidence
We recommend dyspepsia patients under the age of 60 should have empirical PPI therapy if they are H. pylori -negative or who remain symptomatic after H. pylori eradication therapy.	Strong recommendation, high quality evidence.
We suggest dyspepsia patients under the age of 60 not responding to PPI or H. pylori eradication therapy should be offered prokinetic therapy.	Conditional recommendation very low quality evidence.
We suggest dyspepsia patients under the age of 60 not responding to PPI or H. pylori eradication therapy should be offered TCA therapy.	Conditional recommendation low quality evidence.
We recommend FD patients that are H. pylori positive should be prescribed therapy to treat the infection.	Strong recommendation, high quality evidence.
We recommend FD patients who are H. pylori -negative or who remain symptomatic despite eradication of the infection should be treated with PPI therapy.	Strong recommendation, moderate quality evidence.
We recommend FD patients not responding to PPI or H. pylori eradication therapy (if appropriate) should be offered TCA therapy.	Conditional recommendation, moderate quality evidence.
We suggest FD patients not responding to PPI, H. pylori eradication therapy or tricyclic antidepressant therapy should be offered prokinetic therapy.	Conditional recommendation, very low quality evidence
We suggest FD patients not responding to drug therapy should be offered psychological therapies.	Conditional recommendation, very low quality evidence.
We do not recommend the routine use of complementary and alternative medicines for FD.	Conditional Recommendation, very low quality evidence.
We recommend against routine motility studies for patients with FD.	Conditional recommendation, very low quality evidence.

We suggest motility studies for selected patients with FD where gastroparesis is strongly suspected.	Conditional recommendation, very low quality evidence.

FD, functional dyspepsia; H. pylori , Helicobacter pylori ; PPI, proton pump inhibitor; TCA, tricyclic antidepressant.

Also in 2017, the ACG updated their clinical guidelines regarding the treatment of Helicobacter pylori.

The indications to test for, and to treat, H. pylori infection are in Table 2.

Table 2: Indications to test for and treat H. Pylori

Since all patients with a positive test of active infection with H. pylori should be offered treatment, the critical issue is which patients should be tested for the infection	strong recommendation, quality of evidence: not applicable
All patients with active peptic ulcer disease (PUD), a past history of PUD (unless previous cure of H. pylori infection has been documented), low-grade gastric mucosa-associated lymphoid tissue (MALT) lymphoma, or a history of endoscopic resection of early gastric cancer (EGC) should be tested for H. pylori infection. Those who test positive should be offered treatment for the infection	strong recommendation, quality of evidence: high for active or history of PUD, low for MALT lymphoma, low for history of endoscopic resection of EGC
In patients with uninvestigated dyspepsia who are under the age of 60 years and without alarm features, non-endoscopic testing for H. pylori infection is a consideration. Those who test positive should be offered eradication therapy	Conditional recommendation, quality of evidence: high for efficacy, low for the age threshold
When upper endoscopy is undertaken in patients with dyspepsia, gastric biopsies should be taken to evaluate for H. pylori infection. Infected patients should be offered eradication therapy	Strong recommendation, high quality of evidence
Patients with typical symptoms of gastroesophageal reflux disease (GERD) who do not have a history of PUD need not be tested for H. pylori infection. However, for those who are tested and found to be infected, treatment should be offered, acknowledging that effects on GERD symptoms are unpredictable	strong recommendation, high quality of evidence
In patients taking long-term low-dose aspirin, testing for H. pylori infection could be considered to reduce the risk of ulcer bleeding. Those who test positive should be offered	conditional recommendation, moderate quality of evidence

eradication therapy	
Patients initiating chronic treatment with a non-steroidal anti-inflammatory drug (NSAID) should be tested for H. pylori infection	strong recommendation, moderate quality of evidence
Those who test positive should be offered eradication therapy. The benefits of testing and treating H. pylori in patients already taking NSAIDs remains unclear	conditional recommendation, low quality of evidence
Patients with unexplained iron deficiency (ID) anemia despite an appropriate evaluation should be tested for H. pylori infection. Those who test positive should be offered eradication therapy	conditional recommendation, high quality of evidence
Adults with idiopathic thrombocytopenic purpura (ITP) should be tested for H. pylori infection. Those who test positive should be offered eradication therapy	conditional recommendation, very low quality of evidence
There is insufficient evidence to support routine testing and treating of H. pylori in asymptomatic individuals with a family history of gastric cancer or patients with lymphocytic gastritis, hyperplastic gastric polyps and hyperemesis gravidarum	no recommendation, very low quality of evidence

KEY WORDS:
Helicobacter Pylori (H. Pylori), urea breath test (UBT), 13C isotope, 14C isotope, dyspepsia, peptic ulcer disease, fecal antigen test, serological testing

APPROVED BY GOVERNING BODIES:
The FDA has approved multiple tests for urea breath testing and fecal antigen testing.

BENEFIT APPLICATION:
Coverage is subject to member's specific benefits. Group specific policy will supersede this policy when applicable.

CURRENT CODING:

CPT Codes:

78267	Urea breath test, C-14 (isotopic); acquisition for analysis
78268	Urea breath test, C-14 (isotopic); analysis
83009	Helicobacter Pylori, blood test analysis for urease activity, non-radioactive isotope (e.g., C-13)
83013	Helicobacter Pylori; breath test analysis for urease activity, non-radioactive isotope (e.g., C-13)
83014	Helicobacter Pylori; drug administration
86677	Antibody; Helicobacter pylori
87338	Infectious agent antigen detection by enzyme immunoassay technique, qualitative or semi-quantitative, multiple step method; Helicobacter Pylori, stool

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POLICY HISTORY:

Adopted for Blue Advantage, October 2005
Available for comment December 27, 2005-February 9, 2006
Medical Policy Group, February 2006
Available for comment March 10-April 24, 2006
Key Points updated with ACG guidelines, no policy change, February 2008
Medical Policy Group, February 2010
Medical Policy Group, February 2013
Medical Policy Group, October 2013
Medical Policy Group **(4):** Updates to Description, Policy, Key Points, Key Words, Approved by Governing Bodies, Current Coding and References. Updated policy section by adding bariatric surgery under UBT/fecal antigen testing, updated age for evaluation of new onset dyspepsia to younger than 60, added additional IV criteria. Added Key Word serological testing. Added CPT code 86677 to Current Coding.
Medical Policy Administration Committee, August 2018.
Available for comment July 27 through September 9, 2018.
Medical Policy Group, May 2021
Medical Policy Group, May 2022: Reviewed by consensus. There is no new published peer-reviewed literature available that would alter the coverage statement in this policy.

common medical practices in the treatment and diagnosis of disease as of the date hereof. Physicians and other providers are solely responsible for all aspects of medical care and treatment, including the type, quality, and levels of care and treatment.

This policy is intended to be used for adjudication of claims (including pre-admission certification, pre-determinations, and pre-procedure review) in Blue Cross and Blue Shield's administration of plan contracts.