FirstChoice Next
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Gastroparesis Evaluations

Clinical Policy ID: CCP.1357

Recent review date: 2/2026

Next review date: 6/2027

Policy contains: Gastric emptying breath test; gastric emptying scintigraphy; gastroparesis; wireless motility capsule.

First Choice Next has developed clinical policies to assist with making coverage determinations. First Choice Next's clinical policies are based on guidelines from established industry sources, such as the Centers for Medicare & Medicaid Services (CMS), state regulatory agencies, the American Medical Association (AMA), medical specialty professional societies, and peer-reviewed professional literature. These clinical policies along with other sources, such as plan benefits and state and federal laws and regulatory requirements, including any state- or plan-specific definition of "medically necessary," and the specific facts of the particular situation are considered, on a case by case basis, by First Choice Next when making coverage determinations. In the event of conflict between this clinical policy and plan benefits and/or state or federal laws and/or regulatory requirements, the plan benefits and/or state and federal laws and/or regulatory requirements shall control. First Choice Next's clinical policies are for informational purposes only and not intended as medical advice or to direct treatment. Physicians and other health care providers are solely responsible for the treatment decisions for their patients. First Choice Next's clinical policies are reflective of evidence-based medicine at the time of review. As medical science evolves, First Choice Next will update its clinical policies as necessary. First Choice Next's clinical policies are not guarantees of payment.

Coverage policy

Gastroparesis evaluation is clinically proven and, therefore, may be medically necessary when all of the following criteria are met (American College of Gastroenterology [Camilleri, 2022]; American Gastroenterological Association [Staller, 2025]; American Neurogastroenterology and Motility Society [Schol, 2025]):

- Presence of symptoms of suspected gastroparesis, including, but not limited to, nausea, vomiting, early satiety, postprandial fullness, bloating, and upper abdominal pain.
- Absence of demonstrable mechanical obstruction of the gastric outlet.
- Non-diagnostic basic clinical investigations, including upper endoscopy.
- Documentation of delayed gastric emptying by either:
    - Gastric emptying scintigraphy of a radiolabeled solid meal.
        - If gastric emptying scintigraphy is contraindicated or not feasible, a wireless gastrointestinal motility monitoring capsule or stable isotope breath test may be used.
- Evaluation by a gastroenterologist trained to use and interpret the results.

Limitations

All other modalities of verification of delayed gastric emptying in the absence of demonstrable mechanical obstruction of the gastric outlet are investigational/not clinically proven and, therefore, not medically necessary.

Contraindications to the wireless motility capsule include a history of gastric bezoar, swallowing disorders, dysphagia, suspected strictures/fistulae in the gastrointestinal tract, physiological gastrointestinal obstruction, gastrointestinal surgery within the previous three months, Crohn's disease, diverticulitis, or those who have an implanted electromechanical medical device (such as pacemaker or infusion pump) (Rao, 2011).

The wireless motility capsule is investigational/not clinically proven and, therefore, not medically necessary in pediatric members, as it has not been approved for use in this population (U.S. Food and Drug Administration, 2026).

Alternative covered services

Routine patient evaluation and management by a network health care provider.

Background

Gastroparesis is a gastric motility disorder characterized by delayed gastric emptying of fluids and/or solids without evidence of a mechanical gastric outlet obstruction, lasting for at least three months (Camillieri, 2022). More than 50% of patients with gastroparesis are of idiopathic origin. Gastroparesis is associated with significant psychological distress and poor quality of life (Reddivari, 2024).

Individuals typically present with nonspecific symptoms that may indicate several possible gastric disorders. These symptoms include nausea, vomiting, early satiety, postprandial fullness, bloating, weight loss, and upper abdominal pain. The differential diagnosis can be particularly challenging in children, in whom the most common symptoms are typically age-dependent. For example, nausea and abdominal pain are more frequent in older children and adolescents, while vomiting is more frequent in younger children (Usai-Satta, 2020).

Evaluation and management of suspected gastroparesis requires documentation of delayed gastric emptying and exclusion of other potential causes. Gastric emptying scintigraphy using Technetium-99, gastric emptying C13-spirulina (C13) breath testing, and wireless capsule endoscopy are available diagnostic alternatives. An upper gastrointestinal barium contrast study and esophagogastroduodenoscopy can rule out mechanical obstruction. Tests of gastric, small intestinal, and colonic motor function may provide adjunctive physiologic information for diagnosing and guiding the management of gastrointestinal dysmotilities (Usai-Satta, 2020).

Findings

Current available evidence, which consists of multiple clinical guidelines, systematic reviews, meta-analyses, and narrative reviews of generally moderate quality, collectively endorses scintigraphy as the standard diagnostic method for measuring gastric emptying. Carbon-13 breath testing and wireless motility capsules are alternatives, but lack of standardization and availability limit their use. While consensus exists regarding adult normative values, guidelines acknowledge that normative values for children are limited.

Guidelines

The American College of Gastroenterology recommends gastric emptying scintigraphy of a solid phase meal as the standard test for its ability to provide a noninvasive, direct, and quantifiable measure of gastric emptying, after exclusion of mechanical obstruction. This test is most reliable when measuring emptying of a solid meal over at least three hours (strong recommendation, moderate level of evidence). Additional guidance suggests that radiopaque marker testing is not advised (conditional recommendation, very low level of evidence), and that wireless motility capsule testing or stable isotope carbon-13 breath testing may be considered alternatives to scintigraphy (conditional recommendation, low quality of evidence) (Camilleri, 2022).

In 2025, the American Gastroenterological Association confirmed the diagnostic utility of four-hour gastric emptying scintigraphy and recommended against the use of a two-hour (or shorter) gastric emptying study due to inferior diagnostic test accuracy compared with a four-hour gastric emptying study (low certainty of evidence). The four-hour threshold applies to both scintigraphic and carbon-13 breath testing (Staller, 2025).

A European consensus group, which included members of the American Neurogastroenterology and Motility Society, reached consensus on diagnostic criteria that center on nausea or vomiting as cardinal symptoms, confirm delayed gastric emptying via four-hour solid-meal scintigraphy or carbon-13 breath testing, and exclude mechanical obstruction by endoscopy. The panel endorsed mixed-macronutrient meal testing and did not recommend wireless motility capsule assessment; however, no new coverage changes were indicated (Schol, 2025).

Evidence review

Evidence from systematic reviews and meta-analyses support the use of validated gastric motility scintigraphy that extend beyond two hours when assessing gastric emptying, after mechanical obstruction has been ruled out. Carbon-13 breath testing and wireless capsule monitoring (adults only) may be suitable alternatives, particularly if radiation exposure and availability are concerns.

A systematic review of 23 studies assessed persons with gastric emptying problems or upper gastrointestinal symptoms who were administered promotility agents (Vijayvargiya, 2019a). Outcomes were significantly better (P = .02) in those who received optimal testing (scintigraphy, breath test, or use of a solid meal longer than two hours) compared to those with suboptimal tests. In a meta-analysis of 25 studies (n = 4,287), delayed gastric emptying measured by either scintigraphy or breath tests showed a statistically significant correlation with early satiety and fullness in individuals with gastroparesis (Vijayvargiya, 2019b).

A systematic review and meta-analysis compared gastric emptying scintigraphy at both two and four hours from nine studies of 1,700 children with suspected gastroparesis (Shargo, 2025). About 30% demonstrated delayed gastric emptying at two hours, increasing to 40% at four hours, reflecting a 10% additional diagnostic yield. Twenty percent shifted from normal to delayed (or vice versa) between the two-hour and four-hour time points. Although heterogeneity (I^2 > 90%) was high due to variation in protocols and meal composition, this review reinforces four-hour scintigraphy as beneficial, even in pediatric settings.

Other tests are being evaluated as potential noninvasive options for diagnosing gastroparesis, but either lack clinical validation for this purpose or offer suboptimal results. Examples of noninvasive options include gastric emptying of radiopaque markers, magnetic resonance imaging-based studies, hepatobiliary iminodiacetic acid scan, and electrogastrography (Ghazanfar, 2022).

Two systematic reviews and meta-analyses examined gastric electrical activity monitoring in adults and children with delayed gastric emptying. Peralta-Palmezano (2024) included 31 studies (1,545 adults with the condition and 340 controls) and found that delayed gastric emptying correlated with lower rates of normal gastric electrical patterns, higher rates of slow and fast electrical patterns, and reduced post-meal electrical response. Peralta-Palmezano (2025) included four studies comprising 70 pediatric participants with gastroparesis and 15 controls. Compared to controls, children with gastroparesis during fasting had a significantly lower percentage of normal gastric electrical activity, a significantly higher percentage of slow-wave gastric electrical activity, and significantly lower postprandial changes in gastric muscle activity. In both analyses, the overall risk of bias was high with wide variation in methods and reporting, which limits the clinical use of this monitoring.

Additional studies

A prospective comparison of 150 participants with gastroparesis symptoms demonstrated that wireless motility capsule testing produced more treatment changes, fewer ancillary tests, and increased prescription of prokinetics and laxatives compared to scintigraphy (Hasler, 2019). These results reinforce the potential utility of wireless motility capsule as either a supplementary or alternative diagnostic method.

In 2025, the findings section was condensed and revised thematically. We also added an international consensus statement on idiopathic gastroparesis (Schol, 2025), a systematic review and meta-analysis comparing two-hour versus four-hour gastric emptying scintigraphy protocols in pediatric participants (Shargo, 2025), and a

systematic review and meta-analysis examining electrogastrography in adults with gastroparesis (Peralta-Palmezano, 2024).

In 2026, we updated the references and added a new guideline from the American College of Gastroenterology. No policy changes are warranted.

References

On January 6, 2026, we searched PubMed and the databases of the Cochrane Library, the U.K. National Health Services Centre for Reviews and Dissemination, the Agency for Healthcare Research and Quality, and the Centers for Medicare & Medicaid Services. Search terms were “Gastroparesis/diagnosis” (MeSH), “Gastric Emptying” (MeSH), “Breath Tests” (MeSH), “gastroparesis evaluation,” “impedance,” “intestinal motility,” and “wireless endoscopy.” We included the best available evidence according to established evidence hierarchies (typically systematic reviews, meta-analyses, and full economic analyses, where available) and professional guidelines based on such evidence and clinical expertise.

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Policy updates

1/2018: initial review date and clinical policy effective date: 3/2018

3/2019: Policy references updated. Wireless motility capsule added and policy ID changed.

2/2020: Policy references updated. Policy coverage modified.

2/2021: Policy references updated.

2/2022: Policy references updated.

2/2023: Policy references updated.

2/2024: Policy references updated.

2/2025: Policy references updated.

2/2026: Policy references updated.

Related Codes

Below are the most commonly submitted codes for the service(s)/item(s) subject to this policy CCP.1357. This is not an exhaustive list of codes. Providers are expected to consult the appropriate coding manuals and bill accordingly.

Code	Code Description
78264	Gastric emptying imaging study (e.g., solid, liquid, or both);
78265	Gastric emptying imaging study (e.g., solid, liquid, or both); with small bowel transit
78266	Gastric emptying imaging study (e.g., solid, liquid, or both); with small bowel and colon transit, multiple days
91020	Gastric motility (manometric) studies
91022	Duodenal motility (manometric) study
91112	Gastrointestinal transit and pressure measurement, stomach through colon, wireless capsule, with interpretation and report
0106U	Gastric emptying, serial collection of 7 timed breath specimens, non-radioisotope carbon-13 (13C) spirulina substrate, analysis of each specimen by gas isotope ratio mass spectrometry, reported as rate of 13CO2 excretion