

PHP_2.01.106	Percutaneous Electrical Nerve Field Stimulation for Disorders of Gut-Brain Interaction		
Original Policy Date:	December 1, 2025	Effective Date:	October 1, 2026
Section:	2.0 Medicine	Page:	Page 1 of 15

Policy Statement

- I. Percutaneous electrical nerve field stimulation for abdominal pain in individuals with disorders of gut-brain interaction, including but not limited to irritable bowel syndrome and functional dyspepsia, is considered **not medically necessary**.

NOTE: Refer to [Appendix A](#) to see the policy statement changes (if any) from the previous version.

State Guideline Resources

Applicable State Guideline resources as of the effective date of this policy:

- I. Department of Managed Health Care (DMHC) All Plan Letter (APL) Guideline:
 - N/A
- II. Department of Health Care Services (DHCS) Provider Manual Guideline:
 - [TAR and Non-Standard Benefits List: Codes 60000 thru 69999 \(tar and non cd6\)](#)
 - [Surgery: Nervous System \(surg nerv\)](#)
- III. Department of Health Care Services (DHCS) All Plan Letter (APL) Guideline:
 - N/A

Policy Guidelines

Coding

See the [Codes table](#) for details.

Description

Percutaneous electrical nerve field stimulation involves the transmission of electrical impulses to cranial nerve bundles in the ear targeting brain areas involved in processing pain. In the case of patients with abdominal pain-related disorders of gut-brain interaction, nerves processing pain for the abdominal region are targeted.

Summary of Evidence

For individuals with abdominal pain-related disorders of gut-brain interaction who receive percutaneous electrical nerve field stimulation (PENFS), the evidence includes a single randomized controlled trial (RCT) and observational, uncontrolled studies. Relevant outcomes are symptoms, functional outcomes, quality of life, and treatment-related morbidity. The RCT (N=115) included a heterogeneous population of adolescent patients aged 11 to 18 years with pain-related functional gastrointestinal disorders. Treatment was administered for 3 weeks, and reductions in pain were observed with the active device compared with a sham PENFS device at end of treatment and end of follow-up (maximum of 12 weeks). The subgroup of patients with irritable bowel syndrome (IBS) also

had improved pain at the end of treatment with the active device compared with the sham device. However, the trial is limited by its small sample size, heterogeneous population of gastrointestinal disorders, lack of bowel habit measurement, and the short duration of follow-up. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

Additional Information

Not applicable.

Related Policies

- Medical Services Committee Policy and Procedure: Utilization Management Decision Making & Timeframes

Benefit Application

Blue Shield of California Promise Health Plan is contracted with L.A. Care Health Plan for Los Angeles County and the Department of Health Care Services for San Diego County to provide Medi-Cal health benefits to its Medi-Cal recipients. In order to provide the best health care services and practices, Blue Shield of California Promise Health Plan has an extensive network of Medi-Cal primary care providers and specialists. Recognizing the rich diversity of its membership, our providers are given training and educational materials to assist in understanding the health needs of their patients as it could be affected by a member's cultural heritage.

The benefit designs associated with the Blue Shield of California Promise Medi-Cal plans are described in the Member Handbook (also called Evidence of Coverage).

Regulatory Status

In 2019, the IB-Stim device (previously known as Neuro-Stim; Innovative Health Solutions, Inc.) was cleared for marketing by the U.S. Food and Drug Administration (FDA) through the de novo 513(f)(2) process (DEN180057). Both the IB-Stim and the similar NSS-2 BRIDGE device (Innovative Health Solutions, Inc.) are derivatives of the Electro Auricular Device (Navigant Consulting, Inc.). As of October 2025, the IB-Stim device (NeurAxis) is indicated for patients 8 years of age and older with functional abdominal pain associated with IBS and functional dyspepsia when combined with other therapies. It is intended to be used for 120 hours per week for 4 consecutive weeks. The expanded indication for use in adults was based on extrapolation of clinical data. The First Relief v1 (DyAnsys, Inc.) device was deemed substantially equivalent to the IB-Stim device in 2020 and the TEA Device (Transtimulation Research, Inc.) was deemed substantially equivalent to the IB-Stim device in 2023. FDA product code: QHH.

Health Equity Statement

Blue Shield of California Promise Health Plan's mission is to transform its health care delivery system into one that is worthy of families and friends. Blue Shield of California Promise Health Plan seeks to advance health equity in support of achieving Blue Shield of California Promise Health Plan's mission.

Blue Shield of California Promise Health Plan ensures all Covered Services are available and accessible to all members regardless of sex, race, color, religion, ancestry, national origin, ethnic group identification, age, mental disability, physical disability, medical condition, genetic information, marital status, gender, gender identity, or sexual orientation, or identification with any other persons or groups defined in Penal Code section 422.56, and that all Covered Services are provided in a culturally and linguistically appropriate manner.

Rationale

Background

Abdominal Pain-Related Disorders of Gut-Brain Interaction

The Rome IV diagnostic criteria (published in 2016) provide definitions for the abdominal pain-related disorders of gut-brain interaction (Table 1).¹ This family of conditions has historically been called functional gastrointestinal disorders, but the Rome IV criteria proposed updated terminology based on newer understanding of pathophysiology and lack of clarity about the word "functional". The Rome V diagnostic criteria are expected to be released in 2026.²

Table 1. Abdominal Pain-Related Disorders of Gut-Brain Interaction According to Rome IV Criteria

Categorization of Disorders	Specific Disorder Names
Esophageal disorders	Functional chest pain Functional heartburn Reflux hypersensitivity Globus Functional dysphagia
Gastrointestinal disorders	Functional dyspepsia (includes postprandial distress syndrome, epigastric pain syndrome) Belching disorders (includes excessive supragastric belching, excessive gastric belching) Nausea and vomiting disorders (includes chronic nausea vomiting syndrome, cyclic vomiting syndrome, cannabinoid hyperemesis syndrome) Rumination syndrome
Bowel disorders	Irritable bowel syndrome Functional constipation Functional diarrhea Functional abdominal bloating/distension Unspecified functional bowel disorder Opioid-induced constipation
Centrally mediated disorders of gastrointestinal pain	Centrally mediated abdominal pain syndrome Narcotic bowel syndrome/opioid-induced gastrointestinal hyperalgesia
Gallbladder and sphincter of Oddi disorders	Biliary pain (including functional gallbladder disorder, functional biliary sphincter of Oddi disorder) Functional pancreatic sphincter of Oddi disorder
Anorectal disorders	Fecal incontinence Functional anorectal pain (including levator ani syndrome, unspecified functional anorectal pain, proctalgia fugax) Functional defecation disorders (including inadequate defecatory propulsion, dyssynergic defecation)
Childhood functional gastrointestinal disorders: neonate/toddler	Infant regurgitation Rumination syndrome Cyclic vomiting syndrome Infant colic Functional diarrhea Infant dyschezia Functional constipation
Childhood functional gastrointestinal disorders: child/adolescent	Functional nausea and vomiting disorders (including cyclic vomiting syndrome, functional nausea and functional vomiting, rumination syndrome, aerophagia) Functional abdominal pain disorders (including functional dyspepsia, postprandial distress syndrome, epigastric pain syndrome)

Categorization of Disorders	Specific Disorder Names
	Irritable bowel syndrome
	Abdominal migraine
	Functional abdominal pain - not otherwise specified
	Functional defecation disorders (including functional constipation, nonretentive fecal incontinence)

Irritable Bowel Syndrome

Irritable bowel syndrome (IBS) is estimated to affect 5% to 10% of the population globally, and accounts for between 2.4 and 3.5 million physician visits in the United States each year.³ Up to two-thirds of patients with IBS are female, and it is most common in patients less than 50 years of age. The cause of IBS remains unknown, but is believed to be due to a dysfunction in gut-brain interaction.⁴ Symptoms of IBS can include diarrhea, constipation, or both. Abdominal pain and bloating are also common IBS symptoms. These symptoms decrease patient quality of life and create a significant healthcare burden.⁵ The American College of Gastroenterology (ACG) recommends that patients diagnosed with IBS are categorized by subtypes: IBS with constipation (IBS-C), IBS with diarrhea (IBS-D), IBS with mixed symptoms (IBS-M), or IBS without abnormal stools (IBS-U).

Treatment

First-line treatment of patients with IBS generally involves dietary changes. If dietary changes fail to achieve therapeutic goals, there are numerous pharmacotherapeutic options for patients with IBS. Pharmacologic treatment is based on the IBS subtype, and the predominance of either constipation or diarrhea (Table 2).⁵⁻⁷ Notably, many IBS treatments are not Food and Drug Administration (FDA)-approved for children or adolescents. The American College of Gastroenterology recommends that gut-directed psychotherapy such as cognitive-behavior therapy and gut-directed hypnotherapy may be beneficial for global IBS symptoms.⁵

Table 2. Pharmacologic Treatment of Irritable Bowel Syndrome

IBS-D	IBS-C	Abdominal Pain
Antidiarrheal agents (e.g., loperamide)	Laxatives (e.g., polyethylene glycol)	Antispasmodics (e.g., dicyclomine, hyoscyamine, peppermint oil)
Mu-opioid receptor agonist (eluxadoline for refractory patients only)	Chloride channel activator (lubiprostone)	TCA
5-HT3 receptor antagonist (alosetron or ondansetron)	Guanylate cyclase agonists (linaclotide or plecanatide)	SSRI
Antibiotic (rifaximin)	Sodium/hydrogen exchanger 3 (tenapanor)	

HT: hydroxytryptamine (serotonin); IBS-C: irritable bowel syndrome with constipation; IBS-D: irritable bowel syndrome with diarrhea; SSRI: selective serotonin reuptake inhibitor; TCA: tricyclic antidepressant.

Functional Dyspepsia

According to the Rome IV criteria, functional disorders are diagnosed based on symptoms reported by the patient, rather than based on objective structural or motility findings.¹ Dyspepsia affects about 12% of the US population.⁸ The most common symptoms are postprandial gastrointestinal distress (feeling full during or after a meal) as well as epigastric pain.⁹ The American College of Gastroenterology published guidelines for management of dyspepsia in 2017.¹⁰ Treatment of dyspepsia includes empiric proton pump inhibitor therapy or treatment for *Helicobacter pylori* infection in patients with *H. pylori* infection. If first-line treatment is not effective, prokinetic or tricyclic antidepressant therapy are second-line options.

Percutaneous Electrical Nerve Field Stimulation

Because there are few pharmacologic treatments for children and adolescents with abdominal pain-related disorders of gut-brain interaction, nonpharmacologic options are commonly explored.

Percutaneous electrical nerve field stimulation (PENFS) is a potential treatment option for these patients. PENFS involves a non-implantable device which stimulates nerves remotely from the site of pain and has been studied for a variety of musculoskeletal or neuropathic pain conditions or for patients with opioid withdrawal.¹¹ The IB-Stim device is a type of PENFS that is intended for use only in patients with IBS. The device is disposable and battery-operated. Key components of the device include a percutaneous electrical nerve field stimulator placed behind the ear which connects to a multi-wire electrode array consisting of 4 leads. The electrodes have thin needles and attach to the ear at points (preauricular, lobule, and superior crus) where cranial nerve peripheral branches are located just beneath the skin. A pen light included with the device is used to visualize the neurovasculature features and aid in proper electrode placement.

Literature Review

Evidence reviews assess the clinical evidence to determine whether the use of a technology improves the net health outcome. Broadly defined, health outcomes are length of life, quality of life, and ability to function, including benefits and harms. Every clinical condition has specific outcomes that are important to patients and to managing the course of that condition. Validated outcome measures are necessary to ascertain whether a condition improves or worsens; and whether the magnitude of that change is clinically significant. The net health outcome is a balance of benefits and harms.

To assess whether the evidence is sufficient to draw conclusions about the net health outcome of a technology, 2 domains are examined: the relevance and the quality and credibility. To be relevant, studies must represent 1 or more intended clinical use of the technology in the intended population and compare an effective and appropriate alternative at a comparable intensity. For some conditions, the alternative will be supportive care or surveillance. The quality and credibility of the evidence depend on study design and conduct, minimizing bias and confounding that can generate incorrect findings. The randomized controlled trial is preferred to assess efficacy; however, in some circumstances, nonrandomized studies may be adequate. Randomized controlled trials (RCTs) are rarely large enough or long enough to capture less common adverse events and long-term effects. Other types of studies can be used for these purposes and to assess generalizability to broader clinical populations and settings of clinical practice.

Abdominal Pain-Related Disorders of Gut-Brain Interaction

Clinical Context and Therapy Purpose

The purpose of percutaneous electrical nerve field stimulation (PENFS) in individuals who have abdominal pain-related disorders of gut-brain interaction is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The following PICO was used to select literature to inform this review.

Populations

The relevant population of interest is individuals with abdominal pain-related disorders of gut-brain interaction.

Interventions

The therapy being considered is PENFS.

Comparators

The following therapies are currently being used to treat abdominal pain-related disorders of gut-brain interaction: dietary modification, behavior modification, and pharmacotherapy.

Outcomes

The general outcomes of interest are pain, bowel function, and quality of life. Follow-up at 3 months is of interest to monitor outcomes.

Study Selection Criteria

Methodologically credible studies were selected using the following principles:

- To assess efficacy outcomes, comparative controlled prospective trials were sought, with a preference for RCTs;
- In the absence of such trials, comparative observational studies were sought, with a preference for prospective studies.
- To assess long-term outcomes and adverse events, single-arm studies that capture longer periods of follow-up and/or larger populations were sought.
- Consistent with a 'best available evidence approach,' within each category of study design, studies with larger sample sizes and longer durations were sought.
- Studies with duplicative or overlapping populations were excluded.

Review of Evidence

Irritable Bowel Syndrome

Randomized Controlled Trials

Kovacic et al (2017) conducted an RCT comparing the Neuro-Stim PENFS device with a sham device in adolescent patients with abdominal pain-related functional gastrointestinal disorders including IBS (Table 3).¹² Patients 11 to 18 years of age with abdominal pain (pain score ≥ 3 on an 11-point scale) occurring at least twice weekly for at least 2 months were included. Various diagnoses were represented in the study population, including IBS (49%), abdominal migraine (31%), functional dyspepsia (25%), and functional abdominal pain syndrome (16%); 26 patients met criteria for multiple disorders. The devices were worn for 5 days each week for 4 weeks. Baseline medications were continued with the exception of antispasmodics which were not allowed during the study period. Enrolled patients were primarily female (91%) and White (90%). Pain, as measured on the Pain Frequency-Severity-Duration (PFSD) scale, was the primary outcome. The PFSD scale incorporates several aspects of the pain experience and is generally calculated over a 14-day period, but was modified as a weekly score in this trial with a high composite score of 70. Both "worst pain" and median PFSD composite scores were better with PENFS than placebo (Table 3). The Symptom Response Scale (-7 to +7 [with negative scores as worse and positive scores as better]) was used to assess the overall symptoms. Although the authors reported statistically significantly improved scores with the Neuro-Stim device at 3 weeks (Table 3), numerical differences between groups were small. Longer-term pain scores obtained at a median of 9.2 weeks after treatment remained improved from baseline in the active treatment group with a decrease of composite PFSD scores of -8.4 compared with 0.0 in the sham group. Adverse events including ear discomfort and adhesive allergy were similar between groups. The study is limited by the small sample size, the heterogeneous population of gastrointestinal disorders, lack of bowel habit measurement, and short duration of follow-up. Krasaelap et al (2020) evaluated a subgroup of 50 patients with IBS from the Kovacic et al (2017) RCT (Table 2).¹³ At 3 weeks there were more responders with the active treatment (response defined as $\geq 30\%$ reduction in worst abdominal pain) than with the sham device (Table 4). At the extended follow-up (8 to 12 weeks), the percentage of responders was similar between groups (32% vs. 18%; $p=.33$).

Table 3. Summary of Key Randomized Controlled Trial Characteristics

Study	Countries	Sites	Dates	Participants	Interventions	
					Active	Comparator
Kovacic et al (2017) ¹²	US	1	2015-2016	Adolescents (11 to 18 years of age) with abdominal pain related to a functional GI disorder	Neuro-Stim (n=60)	Sham (n=55)
Krasaelap et al (2020) ^{13,a}	US	1	2015-2016	Adolescents (11 to 18 years of age) with	Neuro-Stim (n=27)	Sham (n=23)

Study	Countries	Sites	Dates	Participants	Interventions
				abdominal pain related to IBS	

GI: gastrointestinal; IBS, irritable bowel syndrome.

^a A subgroup analysis of Kovacic et al (2017).

Table 4. Summary of Key Randomized Controlled Trial Results

Study	Worst Pain (Week 3)	PFSD Composite Score (Week 3)	Worst Pain Decrease of $\geq 30\%$ from Baseline to Week 3	Average Pain decrease of $\geq 30\%$ from Baseline to Week 3	SRS (Week 3)
<i>Kovacic et al (2017)</i> ¹²	<i>N=104</i>	<i>N=104</i>	<i>N=93</i>	<i>N=93</i>	<i>N=104</i>
PENFS	Median, 5.0 (IQR, 4.0 to 7.0)	Median, 8.4 (IQR, 3.2 to 16.2)	29 (60%)	28 (58%)	Median, 3.0 (IQR, 1.0 to 4.8)
Sham	Median, 7.0 (IQR, 5.0 to 9.0)	Median, 15.2 (IQR, 4.4 to 36.8)	10 (22%)	13 (29%)	Median, 1.0 (IQR, 0.0 to 2.3)
LSM (95% CI); p-value	2.15 (1.37 to 2.93); <.0001	11.48 (6.63 to 16.32); <.0001	NR;.00031	NR;.007	NR;.0003
<i>Krasaelap et al (2020)</i> ¹³	<i>N=50</i>	<i>N=50</i>	<i>N=50</i>		<i>N=50</i>
PENFS	Median, 5.0 (IQR, 4.0 to 7.0)	Median, 7.5 (IQR, 3.6 to 14.4)	16 (59%)		Median, 3.0 (IQR, 2 to 4)
Sham	Median, 7.0 (IQR, 5.0 to 9.0)	Median, 14.4 (IQR, 4.5 to 39.2)	6 (26%)		Median, 0 (IQR, 0 to 2)
LSM (95% CI); p-value	NR;.0074	NR;.026	NR;.024		NR;.003
NNT			3		

CI: confidence interval; IQR: interquartile range; LSM: least squares mean; NNT: number needed to treat; NR: not reported; PENFS: percutaneous electrical nerve field stimulation; PFSD: Pain Frequency-Severity-Duration; SRS: symptom response scale.

The purpose of the study limitations tables (see Tables 5 and 6) is to display notable limitations identified in each study. This information is synthesized as a summary of the body of evidence following each table and provides the conclusions on the sufficiency of evidence supporting the position statement. Limitations are only reported from the Kovacic et al (2017) study as those in the subgroup analysis by Krasaelap et al (2020) mirror the parent study.

Table 5. Study Relevance Limitations

Study	Population ^a	Intervention ^b	Comparator ^c	Outcomes ^d	Duration of Follow-up ^e
Kovacic et al (2017) ¹²	4. Largely White, female population			1. No bowel habit outcomes included; 4. Use of modified PFSD for pain outcomes	1,2. Median follow-up duration of 9.2 weeks

PFSD: Pain Frequency-Severity-Duration.

The study limitations stated in this table are those notable in the current review; this is not a comprehensive gaps assessment.

^a Population key: 1. Intended use population unclear; 2. Study population is unclear; 3. Study population not representative of intended use; 4. Enrolled populations do not reflect relevant diversity; 5. Other.

^b Intervention key: 1. Not clearly defined; 2. Version used unclear; 3. Delivery not similar intensity as comparator; 4. Not the intervention of interest (e.g., proposed as an adjunct but not tested as such); 5. Other.

^c Comparator key: 1. Not clearly defined; 2. Not standard or optimal; 3. Delivery not similar intensity as intervention; 4. Not delivered effectively; 5. Other.

^d Outcomes key: 1. Key health outcomes not addressed; 2. Physiologic measures, not validated surrogates; 3. Incomplete reporting of harms; 4. Not established and validated measurements; 5. Clinically significant difference not prespecified; 6. Clinically significant difference not supported; 7. Other.

^e Follow-Up key: 1. Not sufficient duration for benefit; 2. Not sufficient duration for harms; 3. Other.

Table 6. Study Design and Conduct Limitations

Study	Allocation ^a	Blinding ^b	Selective Reporting ^c	Data Completeness ^d	Power ^e	Statistical ^f
Kovacac et al (2017) ¹²				6. Modified intention-to-treat analysis excluding patients with <1 week of data or diagnosis of organic disease after enrollment		

The study limitations stated in this table are those notable in the current review; this is not a comprehensive gaps assessment.

^a Allocation key: 1. Participants not randomly allocated; 2. Allocation not concealed; 3. Allocation concealment unclear; 4. Inadequate control for selection bias; 5. Other.

^b Blinding key: 1. Participants or study staff not blinded; 2. Outcome assessors not blinded; 3. Outcome assessed by treating physician; 4. Other.

^c Selective Reporting key: 1. Not registered; 2. Evidence of selective reporting; 3. Evidence of selective publication; 4. Other.

^d Data Completeness key: 1. High loss to follow-up or missing data; 2. Inadequate handling of missing data; 3. High number of crossovers; 4. Inadequate handling of crossovers; 5. Inappropriate exclusions; 6. Not intent to treat analysis (per protocol for noninferiority trials); 7. Other.

^e Power key: 1. Power calculations not reported; 2. Power not calculated for primary outcome; 3. Power not based on clinically important difference; 4. Other.

^f Statistical key: 1. Analysis is not appropriate for outcome type: (a) continuous; (b) binary; (c) time to event; 2. Analysis is not appropriate for multiple observations per patient; 3. Confidence intervals and/or p values not reported; 4. Comparative treatment effects not calculated; 5. Other.

Section Summary: Irritable Bowel Syndrome

One RCT was identified evaluating the use of PENFS for patients with abdominal pain-related functional gastrointestinal disorders including IBS. Despite finding improved pain and symptoms at the end of the treatment period (3 weeks) with the active device compared with sham, the differences between groups by 12 weeks were minimal. A subgroup analysis limited to patients with IBS (N=50) had similar results. The study is limited by its small sample size, heterogeneous population of gastrointestinal disorders, lack of bowel habit measurement, and the short duration of follow-up.

Functional Dyspepsia
Nonrandomized Studies

Waheed et al (2026) conducted a retrospective review of 90 patients (aged 9 to 28 years) with functional dyspepsia who restricted oral intake.¹⁴ Many patients had other disorders of gut-brain interaction, including IBS (49%), rumination (7.8%), functional abdominal pain not otherwise specified (6.7%), and functional nausea/vomiting (4.4%). All patients received PENFS for at least 4 weeks. After 3 months of follow-up, scores for abdominal pain, nausea severity, functional disability, insomnia, pain coping, and somatic symptoms were significantly improved compared to baseline (all p<.0001). These results are limited by lack of a control group.

Santucci et al (2024) conducted a retrospective review of 84 children and adolescents who received PENFS therapy, with or without a behavioral intervention, for at least 4 weeks for functional dyspepsia.¹⁵ A mixed effects proportional odds model for the entire cohort showed that mean scores for scales of abdominal pain, nausea severity, functional disability, somatic symptoms, sleep quality, anxiety, and depression decreased numerically from baseline, but statistical comparison to baseline was not performed. Subjective patient-reported symptoms for abdominal pain, nausea, anxiety, and sleep were statistically similar at 3 months compared to week 1. These results are limited by lack of a control group.

Chogle et al (2024) conducted a multicenter, prospective, open-label registry study of children (n=292) aged 8 to 18 years who received treatment with a PENFS device for an abdominal pain-

related disorder of gut-brain interaction.¹⁶ Functional dyspepsia was the most common diagnosis (68% of patients) followed by functional constipation (64.0%) and irritable bowel syndrome (IBS, 19.2%). However, a majority of patients had overlapping Rome criteria (74.3%). At 3 months, scores for abdominal pain, nausea severity, and functional disability were significantly improved compared to baseline ($p < .001$, $p < .001$, and $p = .01$, respectively). At 6 months, abdominal pain and nausea severity scores were still significantly better than baseline (both $p < .001$). At 12 months, only abdominal pain scores were significantly decreased compared to baseline ($p < .001$). These results are limited by lack of a control group.

Santucci et al (2023) conducted a retrospective review of 101 adolescents (aged 11 to 21 years) with functional abdominal pain disorders who received 4 weeks of PENFS, cyproheptadine, or amitriptyline.¹⁷ After 3 months of follow-up, patients in the PENFS group reported significant differences in abdominal pain and functional disability scores from baseline ($p = .001$ and $p = .048$, respectively), but there was no difference in nausea severity scores ($p = .059$). Linear mixed models with subject as a random effect were used for between-treatment comparisons at 3 months. Least squares mean abdominal pain scores were significantly different ($p = .04$) between cyproheptadine and PENFS at 3 months; all other comparisons between PENFS, cyproheptadine, and amitriptyline were not significant.

Section Summary: Functional Dyspepsia

Evidence for PENFS in patients with functional dyspepsia is limited to 1 prospective, open-label registry and several retrospective, cohort studies. These studies have reported symptom improvements compared to baseline, but are limited by lack of a control group.

Other Disorders

One small prospective, uncontrolled study has reported symptom improvement in children with cyclic vomiting syndrome who received 6 weeks of PENFS therapy.¹⁸

Supplemental Information

The purpose of the following information is to provide reference material. Inclusion does not imply endorsement or alignment with the evidence review conclusions.

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in 'Supplemental Information' if they were issued by, or jointly by, a U.S. professional society, an international society with U.S. representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American College of Gastroenterology

The American College of Gastroenterology (ACG) updated their recommendations for irritable bowel syndrome (IBS) management in 2021.⁵ The ACG recommendations do not include percutaneous electrical nerve field stimulation. Similarly, the ACG guideline on management of dyspepsia from 2017 does not mention percutaneous electrical nerve field stimulation.¹⁰

The American Gastroenterological Association

The American Gastroenterological Association (AGA) updated guidelines for both IBS with constipation and IBS with diarrhea in 2022.^{7,6} Neither of these guidelines include recommendations for percutaneous electrical nerve field stimulation.

European Society for Paediatric Gastroenterology Hepatology and Nutrition and North American Society for Pediatric Gastroenterology, Hepatology and Nutrition

The European Society for Paediatric Gastroenterology Hepatology and Nutrition (ESPGHAN) and the North American Society for Pediatric Gastroenterology, Hepatology and Nutrition (NASPGHAN)

developed guidelines for the treatment of IBS and functional abdominal pain in children age 4 to 18 years.¹⁹ The guidelines include 10 best practice statements for these patients, with one statement relevant to use of percutaneous electrical nerve field stimulation. The guidelines suggest auricular percutaneous electrical nerve field stimulation for patients with abdominal pain-related disorders of gut-brain interaction as a conditional recommendation (moderate certainty of evidence, moderate effect size). The recommendation is based on only one single-center study and its post hoc analysis (see Review of Evidence).

U.S. Preventive Services Task Force Recommendations
Not applicable.

Medicare National Coverage
There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials
Some currently unpublished trials that might influence this review are listed in Table 7.

Table 7. Summary of Key Trials

NCT No.	Trial Name	Planned Enrollment	Completion Date
<i>Unpublished</i>			
NCT04428619	Neuromodulation With Percutaneous Electrical Nerve Field Stimulation for Adults With Irritable Bowel Syndrome: A Randomized, Double-Blind, Sham-Controlled Pilot Study	15 (actual)	Feb 2023

NCT: national clinical trial.

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Documentation for Clinical Review

Please provide the following documentation:

- History and physical and/or consultation notes including:
 - Clinical findings (i.e., pertinent symptoms and duration)
 - Comorbidities
 - Activity and functional limitations
 - Family history, if applicable
 - Reason for procedure/test/device, when applicable
 - Pertinent past procedural and surgical history
 - Past and present diagnostic testing and results
 - Prior conservative treatments, duration, and response

- Treatment plan (i.e., surgical intervention)
- Consultation and medical clearance report(s), when applicable
- Radiology report(s) and interpretation (i.e., Magnetic Resonance Imaging [MRI], Computed Tomography [CT], discogram)
- Laboratory results
- Other pertinent multidisciplinary notes/reports: (i.e., psychological or psychiatric evaluation, physical therapy, multidisciplinary pain management), when applicable

Post Service (in addition to the above, please include the following):

- Results/reports of tests performed
- Procedure report(s)

Coding

The list of codes in this Medical Policy is intended as a general reference and may not cover all codes. Inclusion or exclusion of a code(s) does not constitute or imply member coverage or provider reimbursement policy.

Type	Code	Description
CPT®	0720T	Percutaneous electrical nerve field stimulation, cranial nerves, without implantation (Deleted code effective 1/1/2026)
	64567	Percutaneous electrical nerve field stimulation, cranial nerves, without implantation (Code effective 1/1/2026)
HCPCS	None	

Policy History

This section provides a chronological history of the activities, updates and changes that have occurred with this Medical Policy.

Effective Date	Action
12/01/2025	New policy.
06/01/2026	Administrative update. Definitions of Decision Determinations section updated.
10/01/2026	Annual review. Policy statement, state guideline resources, and literature review updated. Definitions of Decision Determinations section updated. Policy title changed from Percutaneous Electrical Nerve Field Stimulation for Irritable Bowel Syndrome to current one.

Definitions of Decision Determinations

Healthcare Services: For the purpose of this Medical Policy, Healthcare Services means procedures, treatments, supplies, devices, and equipment.

Medically Necessary or **Medical Necessity** means reasonable and necessary services to protect life, to prevent significant illness or significant disability, or alleviate severe pain through the diagnosis or treatment of disease, illness, or injury, as required under W&I section 14059.5(a) and 22 CCR section 51303(a). Medically Necessary services must include services necessary to achieve age-appropriate growth and development, and attain, maintain, or regain functional capacity.

For Members less than 21 years of age, a service is Medically Necessary if it meets the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) standard of Medical Necessity set forth in 42

USC section 1396d(r)(5), as required by W&I sections 14059.5(b) and 14132(v). Without limitation, Medically Necessary services for Members less than 21 years of age include all services necessary to achieve or maintain age-appropriate growth and development, attain, regain or maintain functional capacity, or improve, support, or maintain the Member's current health condition. Contractor must determine Medical Necessity on a case-by-case basis, taking into account the individual needs of the Child.

Criteria Determining Experimental/Investigational Status

Blue Shield of California Promise Health Plan may use the following criteria and definitions to make decisions about procedures, treatments, supplies, devices, and equipment.

The following reference may be used to help guide determinations for members over 21 years of age and/or non-California Children's Services (CCS) Program members:

- California Code of Regulations. Title 22 § 51056.1. Experimental Services. Accessed September 9, 2026 from [https://govt.westlaw.com/calregs/Document/I542BE1835B6111EC9451000D3A7C4BC3?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Document/I542BE1835B6111EC9451000D3A7C4BC3?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default))

The following reference may be used to help guide determinations for Medi-Cal members, as this framework has been approved by the Department of Health Care Services (DHCS) for use by California Children's Services (CCS):

- Department of Healthcare Services Numbered Letter 05-1020. Accessed September 9, 2026, from <https://www.dhcs.ca.gov/services/ccs/Documents/CCS-NL-05-1020-Experimental-and-Investigational-Services.pdf>

The following policy language applies to the California Children's Services (CCS) Program and the Genetically Handicapped Persons Program (GHPP) found in the above link for DHCS Numbered Letter 05-1020:

Policy

- A. The California Children's Services (CCS) Program and the Genetically Handicapped Persons Program (GHPP) will not provide coverage for experimental services unless specifically authorized by law.
- B. The CCS Program and GHPP may provide coverage for an investigational service if:
 1. It is approved by the FDA under any Investigational New Drug (IND) Application; or
 2. It is authorized for use under the State of California's Right to Try Act; and
 3. Its use is consistent with its FDA-approved IND Application or the State of California's Right to Try Act;
- C. Additional criteria that will be considered in the adjudication process include:
 1. Conventional therapy will not adequately treat the intended patient's condition;
 2. Conventional therapy will not prevent progressive disability or premature death;
 3. The provider of the proposed service has a record of safety and success with it or equivalent to that of other providers of the investigational services;
 4. Other criteria (e.g., cost and availability) may be considered in the adjudication of a given request in cases in which more than one investigational service is available;
 5. There is reasonable expectation that the investigational service will significantly prolong the patient's life or will maintain or restore a range of physical and social function suited to activities of daily living; and
 6. The service is not being performed as part of a research study protocol. For a beneficiary with cancer who participates in a clinical trial for cancer, California Health and Safety Code (HSC) § 1370.6 requires that all routine patient care costs related to the clinical trial be covered if the beneficiary's CCS-paneled treating physician recommends participation in the clinical trial after determining that participation in the clinical trial has a

meaningful potential to benefit the enrollee. The coverage does not include investigational services that have not been approved by the FDA and that are associated with the clinical trial.

Feedback

Blue Shield of California Promise Health Plan is interested in receiving feedback relative to developing, adopting, and reviewing criteria for medical policy. Any licensed practitioner who is contracted with Blue Shield of California Promise Health Plan is welcome to provide comments, suggestions, or concerns. Our internal policy committees will receive and take your comments into consideration. Our medical policies are available to view or download at www.blueshieldca.com/en/bsp/providers.

For medical policy feedback, please send comments to: MedPolicy@blueshieldca.com

Questions regarding the applicability of this policy should be directed to the Blue Shield of California Promise Health Plan Prior Authorization Department at (800) 468-9935, or the Complex Case Management Department at (855) 699-5557 (TTY 711) for San Diego County and (800) 605-2556 (TTY 711) for Los Angeles County or visit the provider portal at www.blueshieldca.com/en/bsp/providers.

Disclaimer: Blue Shield of California Promise Health Plan may consider published peer-reviewed scientific literature, national guidelines, and local standards of practice in developing its medical policy. Federal and state law, as well as member health services contract language, including definitions and specific contract provisions/exclusions, take precedence over medical policy and must be considered first in determining covered services. Member health services contracts may differ in their benefits. Blue Shield of California Promise Health Plan reserves the right to review and update policies as appropriate.

Appendix A

Policy Statement	
BEFORE <u>Red font: Verbiage Removed</u>	AFTER <u>Blue font: Verbiage Changes/Additions</u>
Percutaneous Electrical Nerve Field Stimulation for Irritable Bowel Syndrome PHP_2.01.106 State Guidelines: As of the publication of this policy, there are no applicable Medi-Cal guidelines (Provider Manual or All Plan Letter). Please refer to the Policy Statement section below. Policy Statement: In the absence of any State Guidelines, please refer to the criteria below. I. Percutaneous electrical nerve field stimulation for abdominal pain in individuals with irritable bowel syndrome is considered investigational.	Percutaneous Electrical Nerve Field Stimulation for Disorders of Gut-Brain Interaction PHP_2.01.106 Policy Statement: I. Percutaneous electrical nerve field stimulation for abdominal pain in individuals with disorders of gut-brain interaction, including but not limited to irritable bowel syndrome and functional dyspepsia, is considered not medically necessary. State Guideline Resources: Applicable State Guideline resources as of the effective date of this policy: I. Department of Managed Health Care (DMHC) All Plan Letter (APL) Guideline: - N/A II. Department of Health Care Services (DHCS) Provider Manual Guideline: TAR and Non-Standard Benefits List: Codes 60000 thru 69999 (tar and non cd6) Surgery: Nervous System (surg nerv) III. Department of Health Care Services (DHCS) All Plan Letter (APL) Guideline: - N/A