Percutaneous Electrical Nerve Stimulation (PENS) and Percutaneous Neuromodulation Therapy (PNT)

Policy Number: 7.01.29  Last Review: 3/2019

Policy
Blue Cross and Blue Shield of Kansas City (Blue KC) will not provide coverage for PENS or PNT. This is considered investigational.

Please note that this is a type of electrical stimulation that is considered a benefit exclusion in many health plan contracts.

When Policy Topic is covered
Not Applicable

When Policy Topic is not covered
Percutaneous electrical neurostimulation or percutaneous neuromodulation therapy is considered investigational.

Considerations
The correct CPT code to use for PENS and PNT is the unlisted CPT code 64999. CPT codes for percutaneous implantation of neurostimulator electrodes (i.e., 64553-64565) are not appropriate since PENS and PNT use percutaneously inserted needles and wires rather than percutaneously implanted electrodes. The stimulation devices used in PENS and PNT are not implanted so CPT code 64590 is also not appropriate.

Description of Procedure or Service

<table>
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<th>Interventions</th>
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<td>Individuals:</td>
<td>Interventions of interest are:</td>
<td>Comparators of interest are:</td>
<td>Relevant outcomes include:</td>
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<td>▪ With chronic pain conditions (eg, back, neck, neuropathy, headache, hyperalgesia)</td>
<td>▪ Percutaneous electrical nerve stimulation</td>
<td>▪ Continued medical management</td>
<td>▪ Symptoms</td>
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<td>▪ Medication use</td>
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Individuals:
- With chronic pain conditions (knee osteoarthritis)

Interventions of interest are:
- Percutaneous neuromodulation therapy

Comparators of interest are:
- Continued medical management

Relevant outcomes include:
- Symptoms
- Functional outcomes
- Quality of life
- Medication use

Percutaneous electrical nerve stimulation (PENS) and percutaneous neuromodulation therapy combine the features of electroacupuncture and transcutaneous electrical nerve stimulation. PENS is performed with needle electrodes while percutaneous neuromodulation therapy uses very fine needle-like electrode arrays placed near the painful area to stimulate peripheral sensory nerves in the soft tissue.

For individuals who have chronic pain conditions (eg, back, neck, neuropathy, headache, hyperalgesia) who receive PENS, the evidence includes primarily small controlled trials. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. In the highest quality trial of PENS conducted to date, no difference in outcomes was found between the active (30 minutes of stimulation with 10 needles) and the sham (5 minutes of stimulation with 2 needles) treatments. Smaller trials, which have reported positive results, are limited by unclear blinding and short-term follow-up. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have chronic pain conditions (eg, knee osteoarthritis) who receive percutaneous neuromodulation therapy, the evidence consists of a randomized controlled trial. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. The single trial is limited by lack of investigator blinding, unclear participant blinding, and short-term follow-up. The evidence is insufficient to determine the effects of the technology on health outcomes.

**Background**

**Chronic Pain**
A variety of chronic musculoskeletal or neuropathic pain conditions, including low back pain, neck pain, diabetic neuropathy, chronic headache, and surface hyperalgesia, presents a substantial burden to patients, adversely affecting function and quality of life.

**Treatment**
These chronic pain conditions have typically failed other treatments, and percutaneous electrical nerve stimulation (PENS) and percutaneous neuromodulation therapy (PNT) have been evaluated as treatments to relieve unremitting pain.

PENS is similar in concept to transcutaneous electrical nerve stimulation (see evidence review 1.01.09) but differs in that needles are inserted either around or immediately adjacent to the nerves serving the painful area and are then stimulated. PENS is generally reserved for patients who fail to get pain relief from
transcutaneous electrical nerve stimulation. PENS is also distinguished from acupuncture with electrical stimulation. In electrical acupuncture, needles are also inserted just below the skin, but the placement of needles is based on specific theories regarding energy flow throughout the human body. In PENS, the location of stimulation is determined by proximity to the pain.

PNT is a variant of PENS in which fine filament electrode arrays are placed near the area causing pain. Some use the terms PENS and PNT interchangeably. It is proposed that PNT inhibits pain transmission by creating an electrical field that hyperpolarizes C fibers, thus preventing action potential propagation along the pain pathway.

**Regulatory Status**

In 2002, the Percutaneous Neuromodulation Therapy™ (Vertis Neuroscience) was cleared for marketing by the U.S. Food and Drug Administration (FDA) through the 510(k) process. The labeled indication is: “... for the symptomatic relief and management of chronic or intractable pain and/or as an adjunctive treatment in the management of post-surgical pain and post-trauma pain.” In 2006, the Deepwave® Percutaneous Neuromodulation Pain Therapy System (Biowave) was cleared for marketing by FDA through the 510(k) process. FDA determined that this device was substantially equivalent to the Vertis neuromodulation system and a Biowave neuromodulation therapy unit. The Deepwave® system includes a sterile single-use percutaneous electrode array that contains 1014 microneedles in a 1.5-inch diameter area. The needles are 736 μm (0.736 mm) in length; the patch is reported to feel like sandpaper or Velcro. FDA product code: NHI.

**Rationale**

This evidence review was created in November 1996 and has been updated regularly with searches of the MEDLINE database. The most recent literature update was performed through April 9, 2018.

The review was initially informed by a TEC Assessment (1996) on percutaneous electrical nerve stimulation (PENS) for the treatment of chronic pain.1

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 function3•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 one 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 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.

**Percutaneous Electrical Nerve Stimulation and Percutaneous Neuromodulation Therapy**

**Clinical Context and Therapy Purpose**
The purpose of PENS and percutaneous neuromodulation therapy (PNT) in patients who have pain is to provide a treatment option that is an alternative to or an improvement on existing therapies.

The question addressed in this evidence review is: Do PENS or PNT improve the net health outcome in patients with chronic musculoskeletal or neuropathic pain?

The following PICOTS were used to select literature to inform this review.

**Patients**
The relevant populations of interest are patients with chronic musculoskeletal or neuropathic pain conditions including low back pain, neck pain, diabetic neuropathy, chronic headache, surface hyperalgesia, and knee osteoarthritis.

**Interventions**
The therapies being considered are PENS and PNT.

**Comparators**
The following practice is currently being used: continued medical management of chronic musculoskeletal or neuropathic pain conditions.

**Outcomes**
The general outcomes of interest are pain as measured by a visual analog score (VAS) or numeric rating scale (NRS) and function may be measured by physical activity and sleep quality. For example, pain and function in osteoarthritis are measured by the Western Ontario and McMaster Osteoarthritis Index.

**Timing**
The time of assessment is immediately after treatment for acute effects, with follow-up for months to evaluate the effects of chronic pain.

**Setting**
The setting is a pain clinic.
**Percutaneous Electrical Nerve Stimulation**

**Chronic Low Back Pain**
Weiner et al (2008) reported on a randomized controlled trial with 200 older adults, which was funded by the National Institutes of Health. Subjects with chronic low back pain were randomized to PENS or sham-control treatment, with or without physical conditioning/aerobic exercise, twice a week for 6 weeks. Thus, the 4 treatment groups were PENS alone, sham PENS alone, PENS plus physical conditioning, or sham PENS plus physical conditioning. The sham-control condition consisted of 10 acupuncture needles in identical locations, depth, and duration (30 minutes) as the PENS needles, with brief (5-minute) stimulation from 2 additional needles. Primary and secondary outcome measures were collected at baseline, 1 week, and 6 months after treatment by a research associate unaware of the treatment. There were no significant adverse events and no differences between the PENS and sham PENS groups in any outcome measure at 1-week or 6-month follow-up. All 4 groups reported reduced pain of a similar level (improvement ranging from 2.3 to 4.1 on the McGill Pain Questionnaire), reduced disability (range, 2.1-3.0, on the Roland-Morris Disability Questionnaire), and improved gait velocity (0.04-0.07 m/s) that was maintained for 6 months. Although trialists concluded that minimal electrical stimulation (5 minutes with 2 needles) was as effective as usual PENS (30 minutes of stimulation with 10 needles), the lack of benefit of this treatment over the sham-control did not support the use of PENS in patients with chronic low back pain.

An earlier study by Weiner et al (2003) focused on chronic low back pain in 34 community-dwelling older adults. Patients were randomized to twice weekly PENS or sham PENS for 6 weeks. At 3-month follow-up, the treatment group reported a significant reduction in pain intensity and disability, while the control group did not. Yokoyama et al (2004) used an active control of transcutaneous electrical nerve stimulation (TENS) in a study with 53 patients. They reported that patients randomized to PENS twice weekly for 8 weeks (n=18) had significantly decreased pain levels, physical impairment, and nonsteroidal anti-inflammatory drug use, which continued 1 month after treatment completion compared with a second group that received PENS for 4 weeks, followed by TENS for 4 weeks (n=17), and a third group that received only TENS for 8 weeks (n=18). While PENS for 8 weeks seemed to demonstrate greater effectiveness in controlling pain for up to 1 month after treatment compared with the other treatment groups, the beneficial effects were not found at the 2-month follow-up.

Several studies were reported by a single academic research. One of the reports, by Ghoname et al (1999), compared sham PENS, active PENS, and TENS in 64 patients. Active PENS achieved better outcomes than sham PENS on VAS pain scores and daily oral analgesic requirements and was better than sham PENS and TENS on physical activity, quality of sleep, and preference. Another report by Ghoname et al (1999) compared sham PENS, active PENS, TENS, and exercise therapy in 60 patients. Active PENS resulted in better outcomes than all other modalities regarding VAS pain, reduction in analgesic requirements, physical activity, quality of sleep, and preference. Hamza et al (1999) varied the duration
of active electrical stimulation at 3 levels (15, 30, 45 minutes) and compared them with sham stimulation in 75 patients. These investigators confirmed that sham PENS had the least effect, and results were best when the stimulation lasted 30 or 45 minutes. Ghoname et al (1999) varied the frequency of the active electrical stimulus, also comparing it with sham stimulation, in 68 patients. One level involved active stimulation with alternating 15-Hz and 30-Hz frequencies, while the other active levels had frequencies of 4 Hz and 100 Hz. The alternating frequency technique had the best results, superior to sham PENS.

**Subsection Summary: Chronic Low Back Pain**
The largest double-blinded, sham-controlled trial on PENS for chronic low back pain found no difference between the active (30 minutes with 10 needles) and sham PENS (5 minutes with 2 needles) at 1 week or 6 months after treatment. While other smaller studies have suggested that active PENS has effects that exceed placebo PENS in the short term, the trialists did not address long-term improvements in pain and functional outcomes, the objective of treating chronic low back pain. No studies on PENS for low back pain have been identified in the last decade.

**Chronic Neck Pain**
One study by White et al (2000) compared 2 locations of active stimulation with sham stimulation in 68 patients. Local stimulation involved needle insertion at the neck, while remote stimulation entailed needles placed in the lower back. The sham condition received needles with no electrical stimulation at the neck. Outcomes were assessed immediately after completion of a 3-week treatment period. The local placement of active needles resulted in better pain relief, physical activity, quality of sleep, and analgesic use than the local sham treatment or remote active treatment. The study was described as investigator-blinded. Withdrawals were not noted, and no long-term outcome data were presented.

**Subsection Summary: Chronic Neck Pain**
This single study with short-term follow-up does not permit conclusions on the effectiveness of PENS for treating chronic neck pain.

**Diabetic Neuropathy**
In a crossover study by Hamza et al (2000), 50 patients with diabetic neuropathic pain for at least 6 months were randomized to sham PENS or active PENS in a 7-week study. Outcomes were assessed 1 day after completion of a 3-week treatment period. Active PENS had better results on VAS pain, activity, sleep, and analgesic use than sham PENS. The authors described the study as investigator-blinded. No long-term outcome data were presented.

**Subsection Summary: Diabetic Neuropathy**
This single study does not permit conclusions on the effects of PENS for treating diabetic neuropathy.
**Headache**
Ahmed et al (2000) conducted a crossover study in 30 patients with longstanding headaches of 3 types: tension, migraine, and posttraumatic injury. Two-week courses of active and sham PENS were compared. Outcomes were assessed at the completion of each treatment. Active PENS achieved better outcomes than sham PENS regarding VAS pain, physical activity, and quality of sleep. Results did not vary by headache type. The investigators stated that the study was single-blinded but gave no details about blinding methods or whether withdrawals occurred. The report did not offer long-term outcomes data.

**Subsection Summary: Headache**
This single study does not establish the effectiveness of PENS for treatment of a chronic headache.

**Chronic Surface Hyperalgesia**
Raphael et al (2011) reported on a multicenter, double-blinded, randomized crossover trial of a single PENS treatment compared with a sham treatment in 30 patients with surface hyperalgesia due to a variety of chronic pain conditions. The pain diagnoses included surgical scar pain, occipital neuralgia, posttraumatic neuropathic pain, stump pain, inflammatory neuropathic pain, chronic low back pain, complex regional pain syndrome, pain following total knee arthroplasty, chronic cervical pain, and postherpetic neuralgia. The duration of pain ranged from 1 to 35 years (mean, 8.1 years). Subjective pain on an NRS and a pressure pain threshold were measured before and 1 week after the single treatment, with a washout period of 4 weeks between treatments. Median NRS scores improved from 7.5 to 0.5 after active PENS and did not change after sham treatment (7.5 pre, 7.5 post). The mean pain pressure threshold improved from 202 to 626 grams after active PENS and did not change significantly after sham treatment (202 grams pre, 206 grams post). Blinding was maintained after the first treatment, but not after the second due to the tingling sensation with active PENS. Analysis of the first treatment showed a significant difference in NRS score change (3.9 vs 0.1) and the pain pressure threshold (310 g vs 8 g) for the active compared with sham treatment.

**Subsection Summary: Chronic Surface Hyperalgesia**
A single study has reported positive effects on PENS for chronic surface hyperalgesia. Longer term follow-up in a larger sample is needed to evaluate the efficacy and confirm clinically meaningful durability of this treatment approach.

**Section Summary: Percutaneous Electrical Nerve Stimulation**
The highest quality trial on PENS for chronic pain found no difference between the active (30 minutes with 10 needles) and sham PENS (5 minutes with 2 needles) at 1 week or 6 months posttreatment. While other smaller studies have suggested that active PENS has effects that exceed sham in the short term, none addressed long-term reductions in pain and improvements in functional outcomes, the objective of treating chronic pain. Most of the studies on PENS were reported by a single academic research group (including Ghoname, Hamza, Ahmed, and White) over a decade ago. A more recent study has reported positive effects on PENS for
chronic surface hyperalgesia at 1 week after treatment. Longer term follow-up in a larger sample of patients is needed to evaluate the efficacy and confirm clinically meaningful durability of this treatment approach.

Percutaneous Neuromodulation Therapy

Knee Osteoarthritis
Kang et al (2007) reported on a single-blinded trial that included 70 patients with knee osteoarthritis randomized to stimulation (at the highest tolerable intensity) or placement of electrodes (without stimulation). Patients in the sham group were informed that they would not perceive the normal “pins and needles” with this new device. Patients received 1 treatment and were followed for 1 week. The neuromodulation group had 100% follow-up; 7 (20%) of 35 patients from the sham group dropped out. VAS pain scores improved immediately after active (from 5.4 to 3.2) but not sham (5.6 to 4.9) treatments. VAS scores did not differ significantly between the 2 groups at 48 hours posttreatment. Changes in the Western Ontario and McMaster Osteoarthritis Index scores were significantly better for stiffness (1-point change vs 0-point change) but not for pain or function at 48 hours.

Section Summary: Percutaneous Neuromodulation Therapy
One study was identified on PNT for osteoarthritis of the knee. Interpretation of this trial is limited by its lack of investigator blinding and 48-hour VAS pain scores and a differential loss to follow-up in the 2 groups. These results raise questions about the effectiveness of the blinding, the contribution of short-term pain relief and placebo effects, and the duration of PNT treatment effects.

Summary of Evidence
For individuals who have chronic pain conditions (eg, back, neck, neuropathy, headache, hyperalgesia) who receive PENS, the evidence includes primarily small controlled trials. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. In the highest quality trial of PENS conducted to date, no difference in outcomes was found between the active (30 minutes of stimulation with 10 needles) and the sham (5 minutes of stimulation with 2 needles) treatments. Smaller trials, which have reported positive results, are limited by unclear blinding and short-term follow-up. The evidence is insufficient to determine the effects of the technology on health outcomes.

For individuals who have chronic pain conditions (eg, knee osteoarthritis) who receive percutaneous neuromodulation therapy, the evidence consists of a randomized controlled trial. Relevant outcomes are symptoms, functional outcomes, quality of life, and medication use. The single trial is limited by lack of investigator blinding, unclear participant blinding, and short-term follow-up. The evidence is insufficient to determine the effects of the technology on health outcomes.
SUPPLEMENTAL INFORMATION

Clinical Input From Physician Specialty Societies and Academic Medical Centers
While the various physician specialty societies and academic medical centers may collaborate with and make recommendations during this process, through the provision of appropriate reviewers, input received does not represent an endorsement or position statement by the physician specialty societies or academic medical centers, unless otherwise noted.

In response to requests, input was received from 5 physician specialty societies and 2 academic medical centers while this policy was under review in 2011. Input was mixed on whether percutaneous electrical nerve stimulation and percutaneous neuromodulation therapy should be considered investigational or medically necessary.

Practice Guidelines and Position Statements

National Institute for Health and Care Excellence
The National Institute for Health and Care Excellence (2013) published guidance on percutaneous electrical nerve stimulation (PENS).\textsuperscript{14} It concluded that the “Current evidence on the safety of percutaneous electrical nerve stimulation (PENS) for refractory neuropathic pain raises no major safety concerns and there is evidence of efficacy in the short term.”

American Academy of Neurology et al
The American Academy of Neurology, American Association of Neuromuscular and Electrodiagnostic Medicine, and American Academy of Physical Medicine and Rehabilitation reaffirmed 2011 evidence-based guidelines on the treatment of painful diabetic neuropathy in 2016.\textsuperscript{15} The guidelines concluded that, based on a class I study, electrical stimulation is probably effective in lessening the pain of diabetic neuropathy and improving quality of life and recommended that PENS be considered for the treatment of painful diabetic neuropathy (level B).

American Society of Anesthesiologists et al
The 2010 practice guidelines for chronic pain management from the American Society of Anesthesiologists and the American Society of Regional Anesthesia and Pain Medicine indicated that subcutaneous peripheral nerve stimulation might be used in the multimodal treatment of patients with painful peripheral nerve injuries who have not responded to other therapies (category B2 evidence, observational studies).\textsuperscript{16}

American College of Physicians and American Pain Society
Joint practice guidelines on the diagnosis and treatment of low back pain from the American College of Physicians and the American Pain Society in 2007 indicated uncertainty over whether PENS should be considered a novel therapy or a form of electroacupuncture.\textsuperscript{17} The guidelines concluded that PENS is not widely available.
(The guidelines also concluded that transcutaneous electrical nerve stimulation has not been proven effective for chronic low back pain.)

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

**Medicare National Coverage**
The Centers for Medicare & Medicaid Services currently has the following national coverage policy on PENS:

“Electrical nerve stimulation is an accepted modality for assessing a patient's suitability for ongoing treatment with a transcutaneous or an implanted nerve stimulator.

Accordingly, program payment may be made for the following techniques when used to determine the potential therapeutic usefulness of an electrical nerve stimulator....

**B. Percutaneous Electrical Nerve Stimulation (PENS)**

This diagnostic procedure which involves stimulation of peripheral nerves by a needle electrode inserted through the skin is performed only in a physician's office, clinic, or hospital outpatient department. Therefore, it is covered only when performed by a physician or incident to physician's service. If pain is effectively controlled by percutaneous stimulation, implantation of electrodes is warranted.

[I]t is inappropriate for a patient to visit his/her physician, physical therapist, or an outpatient clinic on a continuing basis for treatment of pain with electrical nerve stimulation. Once it is determined that electrical nerve stimulation should be continued as therapy and the patient has been trained to use the stimulator, it is expected that a stimulator will be implanted or the patient will employ the TENS on a continual basis in his/her home. Electrical nerve stimulation treatments furnished by a physician in his/her office, by a physical therapist or outpatient clinic are excluded from coverage”.

**Ongoing and Unpublished Clinical Trials**
Some currently unpublished trials that might influence this review are listed in Table 1.

**Table 1. Summary of Key Trials**

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<tr>
<th>NCT No.</th>
<th>Trial Name</th>
<th>Planned Enrollment</th>
<th>Completion Date</th>
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<tr>
<td>Ongoing</td>
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<tr>
<td>NCT03331055</td>
<td>Percutaneous Electrical Nerve Stimulation or Transcutaneous Electrical Nerve Stimulation for Pain in Patients With Pancreatic Cancer</td>
<td>36</td>
<td>Oct 2019</td>
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<tr>
<td>NCT03338543</td>
<td>Percutaneous Electrical Nerve Stimulation or Transcutaneous Electrical Nerve Stimulation for Pain in Patients With Liver Cancer</td>
<td>36</td>
<td>Oct 2019</td>
</tr>
</tbody>
</table>
REFERENCES

1. Blue Cross and Blue Shield Association Technology Evaluation Center (TEC). Transcutaneous electric nerve stimulation (TENS) or percutaneous electric nerve stimulation (PENS) in the treatment of chronic and postoperative pain TEC Assessments. 1996;Volume 11:Tab 21.


18. Centers for Medicare & Medicaid. National Coverage Determination (NCD) for Assessing Patient’s Suitability for ELECTRICAL NERVE STIMULATION Therapy (160.7.1). 2006;
Billing Coding/Physician Documentation Information

64553  Percutaneous implantation of neurostimulator electrode array; cranial nerve
64555  Percutaneous implantation of neurostimulator electrode array; peripheral nerve (excludes sacral nerve)
64561  Percutaneous implantation of neurostimulator electrode array; sacral nerve (transforaminal placement)
64565  Percutaneous implantation of neurostimulator electrode array; neuromuscular
64568  Incision for implantation of cranial nerve (eg, vagus nerve) neurostimulator electrode array and pulse generator
64575  Incision for implantation of neurostimulator electrode array; peripheral nerve (excludes sacral nerve)
64580  Incision for implantation of neurostimulator electrode array; neuromuscular
64581  Incision for implantation of neurostimulator electrode array; sacral nerve (transforaminal placement)
64585  Revision or removal of peripheral neurostimulator electrode array
64590  Insertion or replacement of peripheral or gastric neurostimulator pulse generator or receiver, direct or inductive coupling
64595  Revision or removal of peripheral or gastric neurostimulator pulse generator or receiver
64999  Unlisted procedure, nervous system
0232T  Injection(s), platelet rich plasma, any site, including image guidance, harvesting and preparation when performed
0282T  Percutaneous or open implantation of neurostimulator electrode array(s), subcutaneous (peripheral subcutaneous field stimulation), including imaging guidance, when performed, cervical, thoracic or lumbar; for trial, including removal at the conclusion of trial period
0283T  Percutaneous or open implantation of neurostimulator electrode array(s), subcutaneous (peripheral subcutaneous field stimulation), including imaging guidance, when performed, cervical, thoracic or lumbar; permanent, with implantation of a pulse generator
L8679  Implantable neurostimulator, pulse generator, any type
L8680  Implantable neurostimulator electrode, each
L8685  Implantable neurostimulator pulse generator, single array, rechargeable, includes extension
L8686  Implantable neurostimulator pulse generator, single array, nonrechargeable, includes extension
L8687  Implantable neurostimulator pulse generator, dual array, rechargeable, includes extension
L8688  Implantable neurostimulator pulse generator, dual array, nonrechargeable, includes extension
C1787 Patient programmer, neurostimulator
C1820 Generator, neurostimulator (implantable), with rechargeable battery and charging system
C1897 Lead, neurostimulator test kit (implantable)

ICD10 Codes:

G56.40- G56.42 Causalgia of upper limb code range
G57.70- G57.72 Causalgia of lower limb code range
G89.21- G89.8 Chronic pain, not elsewhere classified, code range
G90.50- G90.59 Chronic pain syndrome
M25.50- M25.579 Pain in joint, code range
M54.10- M54.18 Radiculopathy, code range
M54.30- M54.32 Sciatica, code range
M54.40- M54.42 Lumbago with sciatica, code range
M54.5 Low back pain
M54.6 Pain in thoracic spine
M54.81, M54.89 Other dorsalgia codes
M54.9 Dorsalgia, unspecified
M79.1 Myalgia
M79.60- M79.676 Pain in limb, hand, foot, fingers and toes code range
R52 Pain, unspecified

The correct CPT code to use for PENS and PNT is the unlisted CPT code 64999. CPT codes for percutaneous implantation of neurostimulator electrodes (i.e., 64553–64565) are not appropriate since PENS and PNT use percutaneously inserted needles and wires rather than percutaneously implanted electrodes. The stimulation devices used in PENS and PNT are not implanted so CPT code 64590 is also not appropriate.

Additional Policy Key Words
N/A

Policy Implementation/Update Information
10/1/88 New policy titled Percutaneous (PENS) and Implanted Electrical Nerve Stimulation. Covered with specific criteria; not covered for multiple sclerosis or other motor function disorders.
4/1/00  No policy statement changes.
3/1/01  Policy statement revised to change “covered” to “medically necessary” and “benefit is not provided” to “investigational.”
3/1/02  No policy statement changes.
3/1/03  No policy statement changes.
6/1/04  Policy statement revised to consider PENS investigational for the management of chronic pain.
3/1/05  Policy statement revised to read, “Percutaneous electrical neurostimulation or neuromodulation is considered investigational.”
        Titled changed to Percutaneous Electrical Nerve Stimulation (PENS) and Percutaneous Neuromodulation Therapy (PNT).
3/1/06  No policy statement changes.
3/1/07  No policy statement changes.
3/1/08  No policy statement changes.
3/1/09  No policy statement changes.
3/1/10  No policy statement changes.
3/1/11  No policy statement changes.
3/1/12  No policy statement changes.
3/1/13  No policy statement changes.
3/1/14  No policy statement changes.
3/1/15  No policy statement changes.
3/1/16  No policy statement changes.
3/1/17  No policy statement changes.
3/1/18  Minor edits to the Policy section; policy statement otherwise unchanged.
3/1/19  No policy statement changes.

State and Federal mandates and health plan contract language, including specific provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage. The medical policies contained herein are for informational purposes. The medical policies do not constitute medical advice or medical care. Treating healthcare providers are independent contractors and are neither employees nor agents of Blue KC and are solely responsible for diagnosis, treatment and medical advice. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, photocopying, or otherwise, without permission from Blue KC.