Priority Health

MEDICAL POLICY
No. 91468-R28

STIMULATION THERAPY AND DEVICES

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Date Of Origin: June 25, 2003

Status: Current

Summary of Changes

Additions:

- I. P. ELECTRIC TUMOR TREATMENT FIELDS (ETTF) DEVICES: Added the following text (italics): ETTF devices for all other indications are considered experimental and not covered*, including, but not limited to, the following: Intrabuccal devices that deliver systemic amplitude-modulated radiofrequency electromagnetic field stimulation (AM RF EMF) for treatment of cancer (e.g., TheraBionic P1 device (TheraBionic, Inc.))*.
- I. J. INCONTINENCE STIMULATOR: added section *e. Transcutaneous Tibial Nerve Stimulation (TTNS)*. Transcutaneous tibial nerve stimulation for treatment of overactive bladder and its associated symptoms is considered not medically necessary.

RELATED MEDICAL POLICIES:

For spinal cord/dorsal column and dorsal root ganglion stimulation, see ***Priority Health Medical Policy No. 91635 – Spinal Cord/Dorsal Column and Dorsal Root Ganglion Stimulation.***

For the peripheral nerve stimulation (including transcutaneous electrical nerve stimulators (TENS), percutaneous electrical nerve stimulators (PENS), and implanted peripheral nerve stimulators (PNS)), see ***Priority Health Medical Policy No. 91634 – Peripheral Nerve Stimulation.***

For hypoglossal nerve stimulation for the treatment of obstructive sleep apnea, see ***Priority Health Medical Policy No. 91333 – Obstructive Sleep Apnea.***

For gastric pacing (gastric pacemaker) and gastric electrical stimulation for treatment of gastroparesis, see ***Priority Health Medical Policy No. 91572 – Gastroparesis Testing and Treatment.***

For transcranial magnetic stimulation for treatment of depression, see ***Priority Health Medical Policy No. 91563 – Transcranial Magnetic Stimulation for Depression.***

For transcutaneous electrical acupoint stimulation for treatment of hyperemesis gravidarum, see ***Priority Health Medical Policy No. 91576 – Transcutaneous Electrical Acustimulation (TEAS) for Hyperemesis Gravidarum.***

Contents

I. POLICY/CRITERIA

All stimulation devices require prior authorization by Priority Health.

Note: Electro-acupuncture not covered by this policy may be covered with a rider for some commercial plans.

A. BONE GROWTH STIMULATORS

Priority Health may consider either invasive or non-invasive bone graft/growth stimulators for the nonunion of fractures of the long bones medically necessary when applicable InterQual® criteria are met.

B. CHRONIC SKIN ULCERS

Electrical or electromagnetic stimulation of wounds and skin ulcers in a home setting is **not a covered benefit.**

C. DEEP BRAIN STIMULATION/STEREOTACTIC INTRODUCTION, CORTICAL OR SUBCORTICAL ELECTRODES

Priority Health may consider stereotactic introduction of either cortical or subcortical electrodes (including deep brain stimulation) medically necessary when applicable InterQual® criteria are met.

D. DIAPHRAGMATIC/PHRENIC PACING

Diaphragmatic/phrenic pacing is covered as DME to improve ventilatory function in stable, non-acute patients with spinal cord injury (SCI) when ALL of the following criteria are met:

- Patient has high quadriplegia at or above C-3, and
- There are viable phrenic nerves, and
- Patient's diaphragm and lung function are adequate.

E. VAGAL NERVE STIMULATION

Priority Health may consider vagus/vagal nerve stimulation (VNS) medically necessary when applicable InterQual® criteria are met.

Priority Health considers non-invasive vagal nerve stimulation (e.g. GammaCore) not medically necessary for treatment of all headache types**.**

F. NEUROSTIMULATION WITH NEUROPACE® RNS® (RESPONSIVE NEUROSTIMULATION) DEVICE

Neurostimulation with the FDA approved NeuroPace® RNS® device is a covered benefit for the treatment of seizures in adults with partial-onset seizures refractory to at least 2 antiepileptic medications.

G. FUNCTIONAL ELECTRICAL STIMULATION (FES)

FES (or NMES) may be a covered benefit for acute or post-acute upper extremity rehabilitation following a stroke when criteria are met. Refer to NMES (Section XIII) for criteria.

Functional Electrical Stimulation (FES) for all other diagnoses has not been proven efficacious and therefore is not a covered benefit.

H. GALVANIC STIMULATORS

Galvanic stimulators have not been scientifically shown to be medically effective or necessary and are not a covered benefit.

I. HIGH-VOLTAGE PULSED ELECTROGALVANIC STIMULATORS

High-voltage pulsed electrogalvanic stimulators are covered as DME for patients with levator syndrome (proctalgia fugax, chronic anal pain syndrome) who meet ALL of the following criteria:

- No underlying disease has been revealed by anorectal exam or by manometry, radiology, or endoscopy, and a neurological cause for the pain cannot be detected, and
- Patient has failed prior conservative treatments, namely, high fiber diet, withdrawal of drugs that cause constipation (e.g., narcotics, calcium channel blockers) or diarrhea (e.g., quinidine, theophylline, antibiotics), perineal strengthening exercises, rectal massage, warm baths, and drug therapy (e.g., sedatives, muscle relaxants, and non-narcotic analgesics).
- More than three 60-minute sessions, administered over a 10-day period, are not considered medically necessary and are not covered. Electrogalvanic stimulators for home use are not covered because they have not been proven to be safe and effective for home use.

J. INCONTINENCE STIMULATOR

1. Urinary incontinence stimulators

a. *External electrical muscle stimulators* / pelvic floor stimulators (e.g., Innova) are covered as DME for management of urinary incontinence when ALL of the following criteria are met:

i Patient is diagnosed with stress, urge, or mixed incontinence, and
ii There is an average of 3 or more episodes of gross urinary incontinence per week, and
iii There is no glycosuria or pyuria, and
iv Patient has tried and failed pelvic floor exercises (Kegel exercises).
v Patient has failed maximal pharmacologic management.

b. *InterStim Continence Control Therapy/Sacral Nerve Stimulation*:

Sacral nerve stimulation involves both a temporary test stimulation to determine if an implantable stimulator would be effective and a permanent implantation in appropriate candidates. Both the test and the permanent implantation are covered.

Implantation of the InterStim (Medtronic Inc., Minneapolis, MN), a device for stimulation of the sacral nerve, is covered for the treatment of any of the following:

1. urinary urge incontinence,
2. urgency-frequency syndrome
3. nonobstructive urinary retention.

The following criteria apply:

- Patient must be refractory to conventional therapy (documented behavioral, pharmacologic and/or surgical corrective therapy) and be an appropriate surgical candidate such that implantation with anesthesia can occur.
- Patient must have had a successful test stimulation (a trial period of up to 7 days with a temporary lead or up to 14 days with a permanent lead) in order to support subsequent implantation. Before a patient is eligible for permanent implantation, he/she must demonstrate a 50% or greater improvement through test stimulation. Improvement is measured through voiding diaries. Adequate bladder capacity and normal urinary tract
- The device must be FDA approved and used according to FDA labeling
- Age16 years or older

Non-Covered: SNS is not a covered benefit in patients with, but not limited to, the following conditions:

- Patients with stress incontinence, urinary obstruction, and specific neurologic diseases (e.g., diabetes with peripheral nerve involvement)

which are associated with secondary manifestations of the above three indications
- Neurogenic urinary retention
- Pregnancy
- Diabetes
- Fowler's syndrome
- Multiple sclerosis
- Patients with mechanical obstructions/strictures or cancer

c. Percutaneous Tibial Nerve Stimulation (PTNS)

Percutaneous tibial nerve stimulators are intended for use by patients with urinary urgency, urinary frequency, and urge incontinence. The stimulation delivers retrograde access to the sacral nerves that control the bladder through percutaneous stimulation of the tibial nerve, blocking the abnormal signals that contribute to overactive bladder

Percutaneous tibial nerve stimulators are classified in the Food and Drug Administration (FDA) 510(k) database under the general Product Code NAM, which identifies them as nonimplanted, peripheral nerve stimulators for pelvic floor dysfunction, or nonimplanted, peripheral electrical continence devices. The FDA defines these devices as consisting of an electrode that is connected by an electrical cable to a battery-powered pulse source. The electrode is placed onto or inserted into the body at a peripheral location and is used to stimulate the nerves associated with pelvic floor function to maintain urinary continence. When necessary, the electrode may be removed by the user.

Treatments are commonly 30 minutes in length and are given for 12 consecutive weeks. Reportedly, the benefits of these treatments continue for long periods of time; however, maintenance treatments are usually needed and tailored to each specific patient.

Policy:

PTNS may be a covered benefit for the diagnosis of urinary incontinence or overactive bladder when **both** of the following are met:
1. Failure of medication , AND
2. Failure of pelvic floor exercises (e.g. Kegels, biofeedback)

Coverage is limited to 24 treatments in a year.

d. Implanted Tibial Nerve Stimulation

Implanted tibial nerve stimulation devices are intended to treat patients with symptoms of urinary frequency, urinary urgency, and urinary incontinence often associated with overactive bladder. Stimulation of the tibial nerve interferes in a retrograde fashion with the sacral nerves that innervate

and send dysfunctional signals to the bladder. These devices can be implanted subcutaneously, such as **eCoin (Valencia Technologies Corp.)**, or subfascial, near the medial malleolus of the ankle.

Implanted tibial nerve stimulators are classified by the Food and Drug Administration (FDA) PMA database under the general **Product Code QPT**, which defines them as implanted electrical stimulators, including an implanted power source, for treatment of overactive bladder or symptoms of overactive bladder through electrical stimulation of the tibial nerve.

Implantable tibial nerve stimulators are considered not medically necessary. There is a relatively small, low-quality body of evidence available on these devices.

American Urological Association/Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction Guidelines for Diagnosis and Treatment of Non-Neurogenic Overactive Bladder (OAB) in Adults (2019) do not specifically recommend *implanted* tibial nerve stimulation as a treatment for OAB: "In the patient who has failed behavioral and pharmacologic therapies or who is not a candidate for these therapies, onabotulinumtoxinA therapy, PTNS, or neuromodulation may be offered." (AUA/SUFU 2019)

e. Transcutaneous Tibial Nerve Stimulation (TTNS)

Transcutaneous tibial nerve stimulation for treatment of overactive bladder and its associated symptoms is considered **not medically necessary**. Available clinical practice guidelines and positions statements confer weak support for TTNS.

TTNS is intended to treat overactive bladder (OAB) and its associated symptoms. The tibial nerve is connected to the sacral plexus, which contains the nerves for bladder function. TTNS stimulators send mild electrical pulses to the tibial nerve, which then travel to the sacral nerve plexus. By stimulating these nerves, overactive and abnormal bladder nerve signals can be disrupted, thereby reducing OAB symptoms (Yamashiro et al., 2019). Transcutaneous TNS uses electrodes on the surface of the skin to deliver stimulation to the tibial nerve. It was developed as a noninvasive option for home use by the patient (Al-Danakh et al., 2022).

The Vivally System (Avation Medical) is a transcutaneous TNS device controlled by a phone app. The Vivally System received 510(k) clearance (K220454) on April 3, 2023, under product code NAM (stimulator, peripheral nerve, non-implanted, for urinary incontinence).

2. Fecal Incontinence Stimulators

Sacral nerve stimulation is a covered benefit for fecal incontinence when *all* of the following are met:

1. Chronic fecal incontinence: 2 or more episodes per week on average and duration of greater than 6 months.
2. Failure of conservative therapy (e.g. dietary management, pharmacotherapy, strengthening exercises).
3. A successful percutaneous test stimulation (1-2 week trial) in order to support subsequent permanent implantation. Before a patient is eligible for permanent implantation, he/she must demonstrate a 50% or greater improvement through test stimulation.

Device is FDA approved (e.g. Medtronic's InterStim) and used as labeled.

K. GASTRIC STIMULATION

Gastric stimulation (gastric pacemaker) for the treatment of gastroparesis is covered as defined in the *Gastroparesis Testing and Treatment medical policy #91572*.

L. INTERFERENTIAL STIMULATORS

Interferential stimulators, including those combined with muscle stimulation (e.g. RS-4i), have not been scientifically shown to be medically effective or necessary and are not a covered benefit.

M. NEUROMUSCULAR ELECTRICAL STIMULATION (NMES)

Neuromuscular electrical stimulators (NMES) are covered as DME for either of the following (A or B):

A. Disuse atrophy where the nerve supply to the muscle is intact and the patient has ANY of the following non-neurological reasons for disuse atrophy:

- Previous casting or splinting of a limb, or
- Contractures due to burn scarring, or
- Recent hip replacement surgery (NMES is covered until physical therapy begins), or
- Previous major knee surgery (when there is failure to respond to physical therapy).

B. Acute or post-acute upper extremity rehabilitation following a stroke, with all of the following:

- NMES or FES (Functional Electrical Stimulation) is done in conjunction with conventional physical or occupational rehabilitation
- Therapy is restorative in nature
- Reasonable expectation for meaningful functional improvement within 90 days in ability to perform functional day-to-day activities

More than 2 hours of NMES per day is not considered medically necessary and is not covered.

Prior authorization by Priority Health is required. Compliance logs, if available, may be reviewed for continued authorization.

A form fitting conductive garment is **not a covered** benefit.
NMES is **not a covered benefit** for ANY of the following:

- Spinal cord injury
- Stroke (CVA), except for upper extremity rehabilitation following stroke as above
- Cerebral palsy
- Other upper motor neuron disorders
- For general muscle strengthening in healthy individuals
- For cardiac conditioning
- For the treatment of denervated muscles

N. PULSED ELECTRICAL STIMULATION FOR THE TREATMENT OF OSTEOARTHRITIS OF THE KNEE (E.G. BIONICARE 1000®)

Coverage Decision:

Based on the available evidence in the peer-reviewed medical literature, Priority Health considers pulsed electrical stimulation for the treatment of osteoarthritis of the knee to be experimental and investigational because the short-term and long-term effectiveness of the treatment have not been established.

Evidence:

1. Zizic, et al. (1995) evaluated the safety and effectiveness of pulsed electrical stimulation for the treatment of osteoarthritis (OA) of the knee (n = 78). Patients were treated 6 hours per day for four weeks. The investigators reported that patients treated with the active devices showed significantly greater improvement than the placebo group for all primary efficacy variables in comparisons of mean change from baseline to the end of treatment. Improvement of greater or equal to 50% from baseline was shown in at least one primary efficacy variable in 50% of the active device group, in 2 variables in 32 %, and in all 3 variables in 24%. In the placebo group improvement of greater or equal to 50% occurred in 36% for one, 6% for 2, and 6% for 3 variables. Mean morning stiffness decreased 20

minutes in the active device group and increased 2 minutes in the placebo group ($p < 0.05$). No statistically significant differences were observed for tenderness, swelling, or walking time. The authors concluded that improvements in clinical measures for pain and function found in this study suggest that pulsed electrical stimulation is effective for treating OA of the knee. The investigators noted, however, that studies of the durability of results are warranted.

2. In 2002, the Cochrane Collaboration evaluated the published evidence on the effectiveness of pulsed electric stimulation for the treatment of osteoarthritis (OA). The study also assessed the most effective and efficient method of applying an electromagnetic field, through pulsed electromagnetic fields (PEMF) or electric stimulation, as well as the consideration of length of treatment, dosage, and the frequency of the applications.

   Only three studies with a total of 259 OA patients were eligible for inclusion in the review. Electrical stimulation therapy had a small to moderate effect on outcomes for knee OA, all statistically significant with clinical benefit ranging from 13-23% greater with active treatment than with placebo. Only 2 outcomes for cervical OA were significantly different with PEMF treatment and no clinical benefit can be reported with changes of 12% or less. The reviewers concluded that the current evidence suggests that electrical stimulation therapy may provide significant improvements for knee OA, but further studies are required to confirm whether the statistically significant results shown in these trials confer important and durable benefits.

3. Results of a four year study of the BioniCare device in 157 patients were presented as a poster presentation at the 2004 meeting of the American Academy of Orthopaedic Surgeons. Patients in this study had moderate to severe knee osteoarthritis and were considered candidates for total knee arthroplasty. The poster presenters reported that patients using the BioniCare system avoided total knee arthroplasty over 50% of the time ($p=0.0004$) at one, two, three and four year follow-up when compared to a matching group of 101 patients. Study patients who avoided surgery also reported "significant improvements in pain scores (mean improvement 40%), function (mean improvement 38%), and physician global evaluation (mean 38%)." The manufacturer is seeking publication of the full results of this study. This study does not have a randomly assigned control group.

References:

A. Zizic TM, Hoffman KC, Holt PA, et al. The treatment of osteoarthritis of the knee with pulsed electrical stimulation. J Rheumatol. 1995;22(9):1757-1761.
B. Hulme J, Robinson V, DeBie R, et al. Electromagnetic fields for the treatment of osteoarthritis. Cochrane Database Syst Rev. 2002;(1):CD003523.
C. Mont MA, He DY, Jones LC et al. Abstract: The use of pulsed electrical stimulation (PES) to defer total knee arthroplasty (TKA) in patients with osteoarthritis (OA) of the knee. Presented at American Academy of Orthopaedic Surgeons annual meeting, March 2004

This policy is based on the review and recommendation of Priority Health's Technology Assessment Committee on March 4, 2005.

O. SURFACE ELECTRICAL MUSCLE STIMULATION

Surface electrical muscle stimulation (direct or alternating current, not high voltage galvanic current) is covered as DME for the management of juvenile or adolescent idiopathic scoliosis when ALL of the following criteria are met:

- Patient has juvenile or adolescent idiopathic scoliosis that has not been surgically treated and the scoliosis is not currently being treated with bracing, and
- Spinal curvature is between 20 and 45 degrees (Cobb measurement based on radiographic studies), and
- Spinal curvature is highly progressive, with documented progression of curvature of 5 degrees or more within the past 12 months for curves between 20 and 30 degrees. (With these immature patients, curves of 30 degrees or more are presumed to be highly progressive.), and
- There is a minimum of 50% correction on forced lateral bending, and
- Patient has a minimum of 1 year of bone growth remaining, as judged by the physician.

Note: Since treatment may last from 6 to 18 months, purchase of the equipment may be covered if it is more economical than rental.

P. ELECTRIC TUMOR TREATMENT FIELDS (ETTF) DEVICES

Electric tumor treatment fields (ETTF) devices (e.g. NovoTTF, Optune) are covered for the following FDA approved indications:

1. for the treatment of *recurrent* glioblastoma when used as monotherapy for persons with histologically confirmed glioblastoma, after histologically or radiologically confirmed recurrence in the supratentorial region of the brain after receiving chemotherapy.
2. for use in combination with temozolomide to treat adults with *newly diagnosed* glioblastoma multiforme (GBM), following standard treatments that include surgery, chemotherapy, and radiation therapy.

ETTF devices for all other indications are considered experimental and not covered, including, but not limited to, the following:

- intrabuccal devices that deliver systemic amplitude-modulated radiofrequency electromagnetic field stimulation (AM RF EMF) for treatment of cancer (e.g., TheraBionic P1 device (TheraBionic, Inc.).

Q. HYPOGLOSSAL NERVE STIMULATION FOR THE TREATMENT OF OBSTRUCTIVE SLEEP APNEA (E.G., INSPIRE UPPER AIRWAY HYPOGLOSSAL NERVE STIMULATOR)

See Policy 91333 Obstructive Sleep Apnea

R. NON-COVERED ELECTRICAL STIMULATION THERAPIES

The following electrical stimulation therapies are **not covered** because their effectiveness has not been established:

1. Cranial electrical stimulation (also known as electrosleep, electrotherapeutic sleep, cerebral electrotherapy, transcranial electrotherapy, transcerebral electrotherapy, craniofacial electrostimulation, and electric cerebral stimulation) for use in patients with headaches (e.g. Cefaly device), depression, chemical dependency, or alcoholism (e.g., using the Liss Body Stimulator to treat this indication)
2. Electric reflex salivary stimulation (Salitron System) to treat xerostomia (dry mouth) secondary to Sjogren's syndrome
3. Neuromuscular electrical stimulation for ANY of the following conditions:
    a. Spinal cord injury
    b. Stroke (CVA), except for upper extremity rehabilitation post stroke as noted in Section XII
    c. Cerebral palsy
    d. Other upper motor neuron disorders
    e. For general muscle strengthening in healthy individuals
    f. For cardiac conditioning
    g. For the treatment of denervated muscles
4. Transurethral electrical stimulation for the management of neurogenic bladder dysfunction
5. High frequency pulsed electromagnetic fields (i.e., Diapulse and sofPulse device) for the treatment of wounds in the home setting or acute postoperative pain and edema
6. Interferential current therapy
7. Electrical stimulation for the treatment of Bell's palsy
8. Stellate ganglion blockade using TENS
9. Dorsal column stimulation for the management of chronic malignant pain
10. H-WAVE ® type stimulators for ANY of the following indications:
    a. To reduce pain
    b. To reduce edema
    c. To accelerate healing
    d. For treatment of chronic pain due to ischemia
11. Functional electrical stimulation for electrical stimulation of muscles in patients with spinal cord injuries and other neuromuscular conditions

12. Intramuscular stimulation (IMS) for the management of soft-tissue or neuropathic pain
13. Galvanic stimulation therapy
14. Electrical stimulation for wound healing or skin ulcers in the home setting
15. Percutaneous Electrical Stimulation (PENS)
16. Percutaneous Neuromodulation Therapy (PNT)
17. Transcend® Implantable Gastric Stimulator for treatment of obesity
18. Synergy® Neurostimulator (Medtronic) for intractable migraine pain
19. Vagal nerve stimulators, both invasive and non-invasive, for all indications other than seizures as defined in Section VI. Non-covered indications include, but are not limited to depression, Alzheimer's disease, obesity, headache, obsessive-compulsive disorder, autism and ADHD.
20. Microcurrent, Electrical Nerve Stimulation (MENS), including Frequency-Specific Microcurrent (FSM). Also known as Bio-Electric Stimulation Therapy (BEST), By Kingfisher Healthcare.
21. Motor cortex stimulation for neuropathic facial pain.
22. Devices (e.g. NovoTTF-100A System, Novocure, Portsmouth, NH) to generate electric tumor treatment fields (ETTF) for the treatment of malignant tumors and all other indications, unless criteria in Section P are met.
23. Transcranial magnetic stimulation (e.g. Cerena) for treatment of migraine headaches. (For use in depression see *Transcranial Magnetic Stimulation for Depression medical policy #91563).*
24. Carotid sinus/baroreceptor stimulators (e.g., the Barostim neo™ System, and the Rheos Baroreflex Hypertension Therapy System) for the treatment *of hypertension and for all other indications (e.g., heart failure).*
25. Vagal Blocking for Obesity Control (VBLOC, Maestro Rechargable System)
26. Calmare Pain Therapy (Calmare Therapeutics Inc.)
27. ARP (Accelerated Recovery Performance) wave therapy/ARPwave
28. All auricular electroacupuncture devices (e.g. P-STIM™ device,) and all other electrical acupuncture, for any indication, including but not limited to, pain and substance use or addiction.
29. remedē System (Respicardia Inc.) phrenic nerve stimulator for central sleep apnea
30. VisONE® Synchronized Diaphragmatic Stimulation™ (SDS®) System
31. IB-Stim (NeurAxis) non-implanted nerve stimulator for functional abdominal pain relief

II. MEDICAL NECESSITY REVIEW

Prior authorization for certain drug, services, and procedures may or may not be required. In cases where prior authorization is required, providers will submit a request demonstrating that a drug, service, or procedure is medically necessary. For more information, please refer to the Priority Health Provider Manual.

To access InterQual guidelines policies: Log into Priority Health Prism → Authorizations → Authorization Criteria Lookup.

III. BACKGROUND

The following are brief descriptions of various types of electrical stimulation:

Neuromuscular Stimulation (NMS), Electrical Muscle Stimulation (EMS) is characterized by low voltage stimulation targeted to stimulate motor nerves to cause a muscle contraction. Contraction/relaxation of muscles has been used to treat a variety of musculoskeletal and vascular conditions. NMS/EMS differs from TENS in that it, through multiple channels, attempts to stimulate motor nerves and alternately causes contraction and relaxation of muscles, while TENS is designed to stimulate sensory nerve endings to help decrease pain.

Russian Muscle Stimulation, Burst-Modulated Alternating Current is similar to NMS/EMS in that it is designed to stimulate motor nerves. However, it is set at a frequency of 2,500 Hz, which, according to its proponents, allows for deeper muscle penetration and a more complete/stronger contraction of the muscle fibers.

Functional Electrical Stimulation (FES), also known as functional neuromuscular stimulation and EMG-triggered neuromuscular stimulation, attempts to replace stimuli from destroyed nerve pathways with computer-controlled sequential electrical stimulation of muscles to enable patients with spinal cord injury or stroke to function independently, or at least maintain healthy muscle tone and strength.

High Voltage Pulsed Galvanic Stimulation (HVPGS) is characterized by high voltage (300 to 500 V), short pulse duration (2 to 60 mS) stimulation and exhibit a monophasic twin peak waveform. Most HVPGS produce a high peak current intensity 2,000 to 2,500 mA. Because the interval between paired pulses generated by HVPGS make up as much as 99% of each second that the current flows, the total current (average) delivered to the tissue per second does not exceed 1.2 to 1.5 mA; thus HVPGS has been reported to be tolerated by most patients.

Microcurrent Electrical Nerve Stimulation (MENS) is a "TENS-like" unit for home use that uses small amounts of electrical current for pain and tissue healing. According to its proponents, MENS acts on the body's naturally occurring electrical impulses to decrease pain and facilitate the healing process. MENS employs microamperage instead of milliamperage to drive its current into the injured site. What appears to be a small driving force is compensated by the pulse width of the waveform (500,000 mS). MENS uses current between 1 and 1000 mA at a voltage of 10 to 60 V, and a frequency of 0.5 to 100 Hz. MENS differs from TENS in that it uses a significantly reduced electrical stimulation. TENS blocks pain, while MENS (in theory) acts on the naturally occurring electrical impulses to decrease pain by

stimulating the healing process. There is no evidence in the peer-reviewed medical literature to support the efficacy of MENS.

Interferential Stimulation (IF) is characterized by two alternating-current sine waves of differing frequencies that "work" together to produce an interferential current that is also known as a beat pulse or alternating modulation frequency. One of the two currents is usually held at 4,000 Hz, and the other can be held constant or varied over a range of 4,001 to 4,100 Hz. Interferential currents reportedly can stimulate sensory, motor, and pain fibers. Because of the frequency, the interferential wave meets low impedance when crossing the skin to enter the underlying tissue. This deep tissue penetration can be adjusted to stimulate parasympathetic nerve fibers for increased blood flow. According to proponents, interferential stimulation differs from TENS because it allows a deeper penetration of the tissue with more comfort (compliance) and increased circulation.

H-Wave Stimulation delivers electrical stimulation in the form of milliamperage. H-wave stimulation is intended to emulate the H waveform found in nerve signals (Hoffman Reflex) and therefore enables greater and deeper penetration of a low frequency current, while using significantly less power than other machines. This allegedly makes H-Wave stimulation much safer, less painful and more effective than other forms of electrotherapy to date. The H-wave signal is a bipolar, exponential decaying waveform that overcomes the disadvantages of other electrotherapy machines. It allows the therapist to apply two treatments at the same time: (i) low frequency muscle stimulation and (ii) high frequency deep analgesic pain control (a "TENS" effect). Note: H-wave stimulation must be distinguished from the H-waves that are a component of EMG.

Galvanic stimulation is characterized by high voltage, pulsed stimulation and is used primarily for local edema reduction through muscle pumping and polarity effect. Edema is comprised of negatively charged plasma proteins, which leak into the interstitial space. The theory of galvanic stimulation is that by placing a negative electrode over the edematous site and a positive electrode at a distant site, the monophasic high voltage stimulus applies an electrical potential which disperses the negatively charged proteins away from the edematous site, thereby helping to reduce edema.

Gastric pacing was cleared by the FDA as a humanitarian use device. Thus, the manufacturer was not required to submit the level of evidence that would be required to support a premarket approval application (PMA). The data presented to the FDA documenting the "probable benefit" of gastric pacing (Gastric Electrical Stimulation (GES) System) was based on a multicenter double-blind cross-over study (FDA, 2000) which included 33 patients with intractable idiopathic or diabetic gastroparesis. In the initial phase of the study, all patients underwent implantation of the stimulator and were randomly assigned to stimulation ON or stimulation OFF for the first month, with cross-over to OFF and ON during the second month. The baseline vomiting frequency was 47 episodes per month, which significantly declined in both

ON and OFF groups to 23 to 29 episodes, respectively. However, there were no significant differences in the number of vomiting episodes between the two groups, suggesting a placebo effect.

Electric tumor treatment fields (ETTF). Alternating electric fields, generated by insulated electrodes, have been reported to exhibit inhibitory effect on the growth rate of a variety of human and rodent tumor cell lines as well as malignant tumors in animals. Electric tumor treating fields (ETTF) are low-intensity (1 to 2 V/cm), intermediate-frequency (100 to 200 kHz), alternating electric fields employed for the treatment of malignant tumors. This novel treatment modality has shown promise in pilot clinical trials in patients with advanced stage solid tumors including glioblastoma (GBM).

Intrabuccal devices that deliver systemic amplitude-modulated radiofrequency electromagnetic field stimulation (AM RF EMF) for treatment of cancer. AM RF EMF therapy exposes the patient to tumor-specific electromagnetic field (EMF) frequencies. Research has suggested that EMF therapy can inhibit growth of cancer cells. Through measurement of radial pulse pressure during EMF therapy, clinical trials in patients and healthy volunteers identified tumor-specific EMF frequencies for different cancer types (Zimmerman et al., 2013). Results of animal studies suggest that the mechanism of action of AM RF EMF is related to increased intracellular calcium concentrations within hepatocellular cells due to calcium influx through certain calcium channels (Jimenez et al., 2019). One such device is the TheraBionic P1 device (TheraBionic Inc.), a handheld AM RF EMF generator wired to a spoon-shaped antenna that is placed on the tongue (i.e., intrabuccal).

Non-implanted nerve stimulators for functional abdominal pain relief are a class of devices that stimulate nerves remotely from the source of pain by sending gentle electrical impulses into cranial nerve bundles located in the ear with the intent to relieve functional abdominal pain. This stimulation targets brain areas involved in processing pain and aids in the reduction of functional abdominal pain associated with Irritable Bowel Syndrome. An example of this device is IB-Stim (NeurAxis), which is intended to be used for 120 hours per week up to 3 consecutive weeks, through application to branches of Cranial Nerves V, VII, IX and X, and the occipital nerves identified by transillumination, as an aid in the reduction of pain when combined with other therapies for IBS.

Kovacic et al (2017) conducted a randomized, sham-controlled trial enrolling adolescents (aged 11–18 years) who met Rome III criteria for abdominal pain-related functional gastrointestinal disorders from a single US outpatient gastroenterology clinic. Patients were randomly assigned (1:1) to active treatment or sham (no electrical charge) for 4 weeks. The primary efficacy endpoint was change in abdominal pain scores. Other outcomes measured were improvement in worst abdominal pain and composite pain score using the Pain Frequency-Severity-Duration (PFSD) scale. 115 children with abdominal pain-related functional

gastrointestinal disorders were enrolled and assigned to either PENFS (n=60) with an active device or sham (n=55). Patients in the PENFS group were found to have greater reduction in worst pain compared with sham after 3 weeks of treatment (PENFS: median score 5·0 [IQR 4·0–7·0]; sham: 7·0 [5·0–9·0]; least square means estimate of change in worse pain 2·15 [95% CI 1·37–2·93], p<0·0001). Median follow up was 9.2 weeks [IQR 6·4–13·4]), with reduction in pain scores sustained over the follow-up period in the PENFS group - median 8·0 (IQR 7·0–9·0) at baseline to 6·0 (5·0–8·0) at follow-up versus sham: 7·5 (6·0–9·0) at baseline to 7·0 (5·0–8·0) at follow-up (p<0·0001). Median PFSD composite scores also decreased significantly in the PENFS group (from 24·5 [IQR 16·8–33.3] to 8·4 [3·2–16·2]) compared with sham (from 22·8 [IQR 8·4–38·2] to 15·2 [4·4–36·8]) with a mean decrease of 11·48 (95% CI 6·63–16·32; p<0·0001) after 3 weeks. These effects were sustained at extended follow-up in the PENFS group: median 24·5 (IQR 16·8–33·3) at baseline to 12 (3·6–22·5) at follow-up, compared with sham: 22·8 (8·4–38·2) at baseline to 16·8 (4·8–33·6) at follow-up (p=0·018). Ten patients reported side-effects (three of whom discontinued the study): ear discomfort (n=6; three in the PENFS group, three in the sham group), adhesive allergy (n=3; one in the PENFS group, two in the sham group), and syncope due to needle phobia (n=1; in the sham group). There were no serious adverse events. Limitations of this study include small sample size, lack of long-term follow-up, and lack of high-quality, subjective outcome data.

Santucci and colleagues (2023) performed a retrospective study comparing percutaneous electrical nerve field stimulation (PENFS) to the current standard medical treatment for IBS. The records of functional abdominal pain (FAPD) patients ages 11-21 years, treated with 4 weeks of PENFS, cyproheptadine or amitriptyline were reviewed. Outcomes were evaluated using validated questionnaires [Abdominal Pain Index (API), Nausea Severity Scale (NSS), and the Functional Disability Inventory (FDI)] at baseline and follow-up within 3 months. Of 101 patients, 48% received PENFS, 31% cyproheptadine and 21% received amitriptyline. Median ages were 17 (15-19), 16 (15-18) and 15 (11-16) years respectively and the majority were females (75%, 90% and 52% respectively). In the PENFS group, API (p = 0.001), NSS (p = 0.059) and FDI (p = 0.048) were significantly lower at FU. API (p = 0.034) but not NSS and FDI (p > 0.05) decreased significantly at FU in the amitriptyline group. API, NSS and FDI did not change significantly with cyproheptadine at FU (p > 0.05). FU API scores were lower in PENFS vs. cyproheptadine (p = 0.04) but not vs. amitriptyline (p = 0.64). The FDI scores were significantly lower in the amitriptyline vs. cyproheptadine group (p = 0.03). This study was limited by retrospective/uncontrolled design, lack of controlled doses in the standard medical treatments, and short-term follow up.

Bora et al (2022) performed a small-scale pilot study investigating the effects of PENFS on the adolescent with IBS gut microbiome. This was a prospective study involving females with IBS aged 11-18 years receiving PENFS therapy for 4 weeks with pre- and post-intervention stool sampling. Outcome surveys completed pre-therapy, weekly, and post-therapy included IBS-Severity Scoring System (IBS-SSS), Visceral Sensitivity Index (VSI), Functional Disability Inventory (FDI), and the

global symptom response scale (SRS). Bacterial DNA was extracted from stool samples followed by 16S rRNA amplification and sequencing. QIIME 2 (version 2022.2) was used for analyses of α and β diversity and differential abundance by group. Twenty females aged 15.6 ± 1.62 years were included. IBS-SSS, VSI, and FDI scores decreased significantly after PENFS therapy ($P < 0.0001$, $P = 0.0003$, $P = 0.0004$, respectively). No intra- or interindividual microbiome changes were noted pre- versus post-therapy or between responders and non-responders. When response was defined by 50-point IBS-SSS score reduction, α diversity was higher in responders compared with non-responders at week 4 ($P = 0.033$). There was higher abundance of Blautia in excellent responders versus non-responders. Limitations of this study include small sample size and lack of control group.

InterQual® Procedures criteria are derived from the systematic, continuous review and critical appraisal of the most current evidence-based literature and include input from our independent panel of clinical experts. To generate the most appropriate recommendations, a comprehensive literature review of the clinical evidence was conducted. Sources searched included PubMed, Agency for Healthcare Research and Quality (AHRQ) Comparative Effectiveness Reviews, the Cochrane Library, Choosing Wisely, Centers for Medicare & Medicaid Services (CMS) National Coverage Determinations, and the National Institute of Health and Care Excellence (NICE). Other medical literature databases, medical content providers, data sources, regulatory body websites, and specialty society resources may also have been used. Relevant studies were assessed for risk of bias following principles described in the Cochrane Handbook. The resulting evidence was assessed for consistency, directness, precision, effect size, and publication bias. Observational trials were also evaluated for the presence of a dose-response gradient and the likely effect of plausible confounders. (Source: Change Healthcare LLC)

IV. APPLICATION TO PRODUCTS:

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

- **HMO/EPO:** ***This policy applies to insured HMO/EPO plans.***
- **POS:** ***This policy applies to insured POS plans.***
- **PPO:** ***This policy applies to insured PPO plans. Consult individual plan documents as state mandated benefits may apply. If there is a conflict between this policy and a plan document, the provisions of the plan document will govern.***
- **PPO***: This policy applies to insured PPO plans.*
- **ASO:** ***For self-funded plans, consult individual plan documents. If there is a conflict between this policy and a self-funded plan document, the provisions of the plan document will govern.***
- **INDIVIDUAL:** ***For individual policies, consult the individual insurance policy. If there is a conflict between this medical policy and the individual insurance policy document, the provisions of the individual insurance policy will govern.***
- **MEDICARE:** ***Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, this policy applies.***
- **MEDICAID/HEALTHY MICHIGAN PLAN:** ***For Medicaid/Healthy Michigan Plan members, this policy will apply. Coverage is based on medical necessity criteria being met and the appropriate***

code(s) from the coding section of this policy being included on the Michigan Medicaid Fee Schedule located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_42542_42543_42546_42551-159815--,00.html. If there is a discrepancy between this policy and the Michigan Medicaid Provider Manual located at: http://www.michigan.gov/mdch/0,1607,7-132-2945_5100-87572--,00.html, the Michigan Medicaid Provider Manual will govern. If there is a discrepancy or lack of guidance in the Michigan Medicaid Provider Manual, the Priority Health contract with Michigan Medicaid will govern. For Medical Supplies/DME/Prosthetics and Orthotics, please refer to the Michigan Medicaid Fee Schedule to verify coverage.

V. CODING INFORMATION:

Diagnosis information may be truncated – verify codes using appropriate references.
Prior auth required for all services and devices unless indicated.
(No Auth) = no prior authorization required

A. **Bone Growth Stimulator**
ICD-10 Codes:
(See InterQual® criteria)

CPT/HCPCS Codes:

E0747	Osteogenesis stimulator, electrical, noninvasive, other than spinal applications
E0748	Osteogenesis stimulator, electrical, noninvasive, spinal applications
E0749	Osteogenesis stimulator, electrical, surgically implanted
E0760	Osteogenesis stimulator, low intensity ultrasound, noninvasive
20974	Electrical stimulation to aid bone healing; noninvasive (nonoperative) ***(No Auth)*** *(Not covered for Priority Medicaid)*
20975	Electrical stimulation to aid bone healing; invasive (operative)
20979	Low intensity ultrasound stimulation to aid bone healing, noninvasive (nonoperative) ***(No Auth)*** *(Not covered for Priority Medicaid)*

II. **Chronic Skin Ulcers** - not covered for home
ICD-10 Codes that may apply:

I70.231 – I70.25	Atherosclerosis with ulcer, leg
L89.000 - L89.95	Pressure ulcer
L97.101 - L97.929	Nonpressure chronic ulcer
L98.411 – L98.499	Other Nonpressure ulcer

CPT/HCPCS Codes:

97014	Application of a modality to one or more areas; electrical stimulation (unattended) ***(No Auth)*** *(Code not covered for Priority Medicare)*

Medicare only --

G0281	Electrical stimulation, (unattended), to one or more areas, for chronic Stage III and Stage IV pressure ulcers, arterial ulcers, diabetic ulcers, and venous stasis ulcers not demonstrating measurable signs of healing after 30 days of conventional care, as part of a therapy plan of care ***(No Auth)***
G0283	Electrical stimulation (unattended), to one or more areas for indication(s) other than wound care, as part of a therapy plan of care ***(No Auth)***
G0329	Electromagnetic therapy, to one or more areas for chronic Stage III and Stage IV pressure ulcers, arterial ulcers, diabetic ulcers and venous stasis ulcers not

demonstrating measurable signs of healing after 30 days of conventional care as part of a therapy plan of care ***(No Auth)***

Not Covered

E0769 Electrical stimulation or electromagnetic wound treatment device, not otherwise classified

G0282 Electrical stimulation, (unattended), to one or more areas, for wound care other than described in G0281

G0295 Electromagnetic therapy, to one or more areas, for wound care other than described In G0329 or for other uses

III. Deep Brain Stimulation

ICD-10 Codes that may support medical necessity:

G20	Parkinson's disease
G23.0 – G23.9	Other degenerative diseases of basal ganglia
G25.0	Essential tremor

CPT/HCPCS Codes:

61850 Twist drill or burr hole(s) for implantation of neurostimulator electrodes, cortical

61860 Craniectomy or craniotomy for implantation of neurostimulator electrodes, cerebral, cortical

61863 Twist drill, burr hole, craniotomy, or craniectomy with stereotactic implantation of neurostimulator electrode array in subcortical site (eg, thalamus, globus pallidus, subthalamic nucleus, periventricular, periaqueductal gray), without use of intraoperative microelectrode recording; first array

61864 Twist drill, burr hole, craniotomy, or craniectomy with stereotactic implantation of neurostimulator electrode array in subcortical site (eg, thalamus, globus pallidus, subthalamic nucleus, periventricular, periaqueductal gray), without use of intraoperative microelectrode recording; each additional array (List separately in addition to primary procedure)

61867 Twist drill, burr hole, craniotomy, or craniectomy with stereotactic implantation of neurostimulator electrode array in subcortical site (eg, thalamus, globus pallidus, subthalamic nucleus, periventricular, periaqueductal gray), with use of intraoperative microelectrode recording; first array

61868 Twist drill, burr hole, craniotomy, or craniectomy with stereotactic implantation of neurostimulator electrode array in subcortical site (eg, thalamus, globus pallidus, subthalamic nucleus, periventricular, periaqueductal gray), with use of intraoperative microelectrode recording; each additional array (List separately in addition to primary procedure)

61880 Revision or removal of intracranial neurostimulator electrodes ***(No Auth)***

61885 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to a single electrode array

61886 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to two or more electrode arrays

61888 Revision or removal of cranial neurostimulator pulse generator or receiver ***(No Auth)***

61889 Insertion of skull-mounted cranial neurostimulator pulse generator or receiver, including craniectomy or craniotomy, when performed, with direct or inductive coupling, with connection to depth and/or cortical strip electrode array(s)

61891	Revision or replacement of skull-mounted cranial neurostimulator pulse generator or receiver with connection to depth and/or cortical strip electrode array(s)
61892	Removal of skull-mounted cranial neurostimulator pulse generator or receiver with cranioplasty, when performed
95961	Functional cortical and subcortical mapping by stimulation and/or recording of electrodes on brain surface, or of depth electrodes, to provoke seizures or identify vital brain structures; initial hour of physician attendance ***(No Auth)***
95962	Functional cortical and subcortical mapping by stimulation and/or recording of electrodes on brain surface, or of depth electrodes, to provoke seizures or identify vital brain structures; each additional hour of physician attendance (List separately in addition to code for primary procedure) ***(No Auth)***
95970	Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain, cranial nerve, spinal cord, peripheral nerve, or sacral nerve, neurostimulator pulse generator/transmitter, without programming ***(No Auth)***
95983	Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain neurostimulator pulse generator/transmitter programming, first 15 minutes face-to-face time with physician or other qualified health care professional ***(No Auth)***
95984	Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain neurostimulator pulse generator/transmitter programming, each additional 15 minutes face-to-face time with physician or other qualified health care professional (List separately in addition to code for primary procedure) ***(No Auth)***
A4596	Cranial electrotherapy stimulation (ces) system supplies and accessories, per month (not covered)
C1767	Generator, neurostimulator (implantable), nonrechargeable
C1787	Patient programmer, neurostimulator
C1820	Generator, neurostimulator (implantable), with rechargeable battery and charging system
C1826	Generator, neurostimulator (implantable), includes closed feedback loop leads and all implantable components, with rechargeable battery and charging system
C1827	Generator, neurostimulator (implantable), non-rechargeable, with implantable stimulation lead and external paired stimulation controller
C1883	Adapter/ extension, pacing lead or neurostimulator lead

L8679 Implantable neurostimulator, pulse generator, any type
L8686 Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension
L8687 Implantable neurostimulator pulse generator, dual array, rechargeable, includes extension
L8688 Implantable neurostimulator pulse generator, dual array, non-rechargeable, includes extension
L8689 External recharging system for battery (internal) for use with implantable neurostimulator

(L codes not separately paid under APC payment arrangements)

IV. Diaphragmatic/Phrenic Pacing

ICD-10 Codes that may apply:

G82.51 Quadriplegia, C1-C4 complete
G82.52 Quadriplegia, C1-C4 incomplete
Z99.11 Dependence on respirator [ventilator] status

CPT/HCPCS Codes:

64575 Incision for implantation of neurostimulator electrodes; peripheral nerve (excludes sacral nerve)
64585 Revision or removal of peripheral neurostimulator electrodes ***(No Auth)***
64590 Insertion or replacement of peripheral, sacral, or gastric neurostimulator pulse generator or receiver, requiring pocket creation and connection between electrode array and pulse generator or receiver
64595 Revision or removal of peripheral, sacral, or gastric neurostimulator pulse generator or receiver, with detachable connection to electrode array***(No Auth)***

95970 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain, cranial nerve, spinal cord, peripheral nerve, or sacral nerve, neurostimulator pulse generator/transmitter, without programming ***(No Auth)***
95971 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with simple spinal cord or peripheral nerve (eg, sacral nerve) neurostimulator pulse generator/transmitter programming by physician or other qualified health care professional
95972 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with complex spinal cord or peripheral nerve (eg, sacral nerve)

neurostimulator pulse generator/transmitter programming by physician or other qualified health care professional ***(No Auth)***

C1767 Generator, neurostimulator (implantable), nonrechargeable
C1778 Lead, neurostimulator (implantable)
C1820 Generator, neurostimulator (implantable), with rechargeable battery and charging system

L8679 Implantable neurostimulator, pulse generator, any type
L8680 Implantable neurostimulator electrode, each
L8681 Patient programmer (external) for use with implantable programmable neurostimulator pulse generator
L8682 Implantable neurostimulator radiofrequency receiver
L8683 Radiofrequency transmitter (external) for use with implantable neurostimulator radiofrequency receiver
L8686 Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension
L8688 Implantable neurostimulator pulse generator, dual array, non-rechargeable, includes extension
L8689 External recharging system for battery (internal) for use with implantable neurostimulator
L8696 Antenna (external) for use with implantable diaphragmatic/phrenic nerve stimulation device, replacement, each
(L codes not separately paid under APC payment arrangements)

V. Electrical Stimulation of Seizures/Vagal Nerve Stimulation

ICD-10 Codes that <u>may</u> support medical necessity:

G40.011 – G40.019 Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset,
G40.111 – G40.119 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, intractable
G40.211 – G40.219 Generalized idiopathic epilepsy and epileptic syndromes, not intractable

CPT/HCPCS Codes:

61885 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to a single electrode array
61886 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to two or more electrode arrays
61888 Revision or removal of cranial neurostimulator pulse generator or receiver
64553 Percutaneous implantation of neurostimulator electrodes; cranial nerve
64568 Incision for implantation of cranial nerve (eg, vagus nerve) neurostimulator electrode array and pulse generator
64569 Revision or replacement of cranial nerve (eg, vagus nerve) neurostimulator electrode array, including connection to existing pulse generator
64570 Removal of cranial nerve (eg, vagus nerve) neurostimulator electrode array and pulse generator
64585 Revision or removal of peripheral neurostimulator electrodes (***No Auth)***

95970 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain, cranial nerve, spinal cord, peripheral nerve, or sacral nerve, neurostimulator pulse generator/transmitter, without programming

95976 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with simple cranial nerve neurostimulator pulse generator/transmitter programming by physician or other qualified health care professional ***(No Auth)***

95977 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with complex cranial nerve neurostimulator pulse generator/transmitter programming by physician or other qualified health care professional ***(No Auth)***

C1767 Generator, neurostimulator (implantable), nonrechargeable
C1778 Lead, neurostimulator (implantable)
C1816 Receiver and/or transmitter, neurostimulator (implantable)
C1883 Adapter/ extension, pacing lead or neurostimulator lead
L8679 Implantable neurostimulator, pulse generator, any type
L8680 Implantable neurostimulator electrode, each
L8681 Patient programmer (external) for use with implantable programmable neurostimulator pulse generator
L8685 Implantable neurostimulator pulse generator, single array, rechargeable, includes extension
L8686 Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension
L8687 Implantable neurostimulator pulse generator, dual array, rechargeable, includes extension
L8688 Implantable neurostimulator pulse generator, dual array, non-rechargeable, includes extension
L8689 External recharging system for implanted neurostimulator, replacement only

(L codes not separately paid under APC payment arrangements)

Not Covered:

E0735 Non-invasive vagus nerve stimulator ***(not covered)***

VI. Neurostimulation With NeuroPace® Rns® (Responsive Neurostimulation) Device

ICD-10 Codes that <u>may</u> support medical necessity:

G40.011 – G40.019 Localization-related (focal) (partial) idiopathic epilepsy and epileptic syndromes with seizures of localized onset,

G40.111 – G40.119 Localization-related (focal) (partial) symptomatic epilepsy and epileptic syndromes with simple partial seizures, intractable

G40.211 – G40.219 Generalized idiopathic epilepsy and epileptic syndromes, not intractable

CPT/HCPCS Codes:

61850 Twist drill or burr hole(s) for implantation of neurostimulator electrodes, cortical

61860 Craniectomy or craniotomy for implantation of neurostimulator electrodes, cerebral, cortical

61863 Twist drill, burr hole, craniotomy, or craniectomy with stereotactic implantation of neurostimulator electrode array ….without use of intraoperative microelectrode recording; first array

61864 Twist drill, burr hole, craniotomy, or craniectomy with stereotactic implantation of neurostimulator electrode array..... without use of intraoperative microelectrode recording; each additional array (List separately...)

61880 Revision or removal of intracranial neurostimulator electrodes ***(No Auth)***

61885 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to a single electrode array

61886 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to two or more electrode arrays

61888 Revision or removal of cranial neurostimulator pulse generator or receiver

95836 Electrocardiogram from an implanted brain neurostimulator pulse generator/transmitter, including recording, with interpretation and written report, up to 30 days

95961 Functional cortical and subcortical mapping by stimulation and/or recording of electrodes on brain surface, or of depth electrodes, to provoke seizures or identify vital brain structures; initial hour of physician attendance

95962 Functional cortical and subcortical mapping by stimulation and/or recording of electrodes on brain surface, or of depth electrodes, to provoke seizures or identify vital brain structures; each additional hour of physician attendance (List separately in addition to code for primary procedure)

95970 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain, cranial nerve, spinal cord, peripheral nerve, or sacral nerve, neurostimulator pulse generator/transmitter, without programming ***(No Auth)***

95983 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain neurostimulator pulse generator/transmitter programming, first 15 minutes face-to-face time with physician or other qualified health care professional ***(No Auth)***

95984 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz],

on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain neurostimulator pulse generator/transmitter programming, each additional 15 minutes face-to-face time with physician or other qualified health care professional (List separately in addition to code for primary procedure) ***(No Auth)***

C1767 Generator, neurostimulator (implantable), nonrechargeable
L8686 Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension
L8688 Implantable neurostimulator pulse generator, dual array, non-rechargeable, includes extension
(L codes not separately paid under APC payment arrangements)

VII. Functional Electrical Stimulation (FES)

ICD-10 Codes that may apply:

I69.031 - I69.039 Monoplegia of upper limb
I69.131 - I69.139 Monoplegia of upper limb following nontraumatic intracerebral hemorrhage
I69.231 - I69.239 Monoplegia of upper limb following other nontraumatic intracranial hemorrhage
I69.331 - I69.339 Monoplegia of upper limb following cerebral infarction
I69.831 - I69.839 Monoplegia of upper limb following other cerebrovascular disease
I69.931 - I69.939 Monoplegia of upper limb following unspecified cerebrovascular disease

CPT/HCPCS Codes:

97014 Application of a modality to one or more areas; electrical stimulation (unattended) (N*ot covered for Medicare*)
97032 Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes
A4593 Neuromodulation stimulator system, adjunct to rehabilitation therapy regime (not covered)

A4594 Neuromodulation stimulator system, adjunct to rehabilitation therapy regime, mouthpiece each (not covered)

A4560 Neuromuscular electrical stimulator (nmes), disposable, replacement only *(Not parately payable)*
A4558 Conductive gel or paste, for use with electrical device (e.g., TENS, NMES), per oz ***(No Auth)***
A4595 Electrical stimulator supplies, 2 lead, per month, (e.g. TENS, NMES) ***(No Auth)***

E0731 Form-fitting conductive garment for delivery of TENS or NMES (with conductive fibers separated from the patient's skin by layers of fabric) *(Covered for Medicare, Medicaid ONLY)*

E0764 Functional neuromuscular stimulator, transcutaneous stimulation of muscles of ambulation with computer control, used for walking by spinal cord injured, entire system, after completion of training program *(Not covered for Priority Medicaid)*

E0770 Functional electrical stimulator, transcutaneous stimulation of nerve and/or muscle groups, any type, complete system, not otherwise specified *(Not covered for Priority Medicaid)*

VIII. Galvanic Stimulators

Not Covered:

E0745 Neuromuscular stimulator, electronic shock unit

E0769 Electrical stimulation or electromagnetic wound treatment device, not otherwise classified *(Not covered for Priority Medicaid)*

IX. High Voltage Pulsed Electrogalvanic stimulators (HVPC)

ICD-10 Codes that may apply:

K59.4 Anal spasm

K62.89 Other specified diseases of anus and rectum

CPT/HCPCS Codes:

97014 Application of a modality to one or more areas; electrical stimulation (unattended) ***(No Auth)*** (*Not covered for Medicare)*

97032 Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes ***(No Auth)***

E0745 Neuromuscular stimulator, electronic shock unit *(Not covered for Priority Medicaid)*

E0769 Electrical stimulation or electromagnetic wound treatment device, not otherwise classified *(Not covered for Priority Medicaid)*

X. Incontinence Stimulators

1. Urinary Incontinence

A. Electrical Muscle Stimulators (*Pelvic floor stimulator, e.g. Innova ™)*

ICD-10 Codes that may apply:

N39.3 Stress incontinence (female) (male)

R32 Unspecified urinary incontinence

N39.41 Urge incontinence

N39.46 Mixed incontinence

CPT/HCPCS Codes:

97014 Application of a modality to one or more areas; electrical stimulation (unattended) (***No Auth)*** (*Not covered for Medicare)*

97032 Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes ***(No Auth)***

E0736 Transcutaneous tibial nerve stimulator (N*ot Covered*)

E0740 Incontinence treatment system, pelvic floor stimulator, monitor, sensor and/or trainer *(Not covered for Priority Medicaid)*

B. Sacral Nerve Stimulator

ICD-10 Codes that may apply:

N39.3	Stress incontinence (female) (male)
N39.41	Urge incontinence
N39.46	Mixed incontinence
R33.8	Other retention of urine
R33.9	Retention of urine, unspecified
R39.14	Feeling of incomplete bladder emptying

CPT/HCPCS Codes:

64561	Percutaneous implantation of neurostimulator electrodes; sacral nerve. (transforaminal placement).
64581	Incision for implantation of neurostimulator electrodes; sacral nerve; (transforaminal placement).
64585	Revision or removal of peripheral neurostimulator electrodes ***(No Auth)***
64590	Incision and subcutaneous placement of peripheral neurostimulator pulse generator or receiver, direct or inductive coupling
64595	Revision or removal of peripheral neurostimulator pulse generator or receiver ***(No Auth)***
95970	Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain, cranial nerve, spinal cord, peripheral nerve, or sacral nerve, neurostimulator pulse generator/transmitter, without programming ***(No Auth)***
95971	Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with simple spinal cord or peripheral nerve (eg, sacral nerve) neurostimulator pulse generator/transmitter programming by physician or other qualified health care professional ***(No Auth)***
95972	Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with complex spinal cord or peripheral nerve (eg, sacral nerve) neurostimulator pulse generator/transmitter programming by physician or other qualified health care professional ***(No Auth)***
A4290	Sacral nerve stimulation test lead, each ***(No Auth)*** *(Not covered for Priority Medicaid)*

C1767 Generator, neurostimulator (implantable), nonrechargeable
C1778 Lead, neurostimulator (implantable)
C1897 Lead, neurostimulator test kit (implantable)
L8678 Electrical stimulator supplies (external) for use with implantable neurostimulator, per month
L8679 Implantable neurostimulator, pulse generator, any type
L8680 Implantable neurostimulator electrode, each
L8681 Patient programmer (external) for use with implantable programmable neurostimulator pulse generator
L8686 Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension

(L codes not separately paid for Priority Medicaid)

C. Percutaneous Tibial Nerve Stimulation (PTNS)

This procedure covered only for these diagnoses when criteria above are met.

ICD-10 Codes that support medical necessity:

N32.81 Overactive bladder
N39.3 Stress incontinence (female) (male)
N39.41 Urge incontinence
N39.46 Mixed incontinence
N39.498 Other specified urinary incontinence
R32 Unspecified urinary incontinence
R35.0 Frequency of micturition
R39.15 Urgency of urination

CPT/HCPCS Codes:

64566 Posterior tibial neurostimulation, percutaneous needle electrode, single treatment, includes programming ***(No Auth)***
0587T Percutaneous implantation or replacement of integrated single device neurostimulation system for bladder dysfunction including electrode array and receiver or pulse generator, including analysis, programming, and imaging guidance when performed, posterior tibial nerve ***(not covered)***
0588T Revision or removal of percutaneously placed integrated single device neurostimulation system for bladder dysfunction including electrode array and receiver or pulse generator, including analysis, programming, and imaging guidance when performed, posterior tibial nerve ***(not covered)***
0589T Electronic analysis with simple programming of implanted integrated neurostimulation system for bladder dysfunction (eg, electrode array and receiver), including contact group(s), amplitude, pulse width, frequency (Hz), on/off cycling, burst, dose lockout, patient-selectable parameters, responsive neurostimulation, detection algorithms, closed-loop parameters, and passive parameters, when performed by physician or other qualified health care professional, posterior tibial nerve, 1-3 parameters ***(not covered)***

0590T Electronic analysis with complex programming of implanted integrated neurostimulation system for bladder dysfunction (eg, electrode array and receiver), including contact group(s), amplitude, pulse width, frequency (Hz), on/off cycling, burst, dose lockout, patient-selectable parameters, responsive neurostimulation, detection algorithms, closed-loop parameters, and passive parameters, when performed by physician or other qualified health care professional, posterior tibial nerve, 4 or more parameters ***(not covered)***

0816T Open insertion or replacement of integrated neurostimulation system for bladder dysfunction including electrode(s) (eg, array or leadless), and pulse generator or receiver, including analysis, programming, and imaging guidance, when performed, posterior tibial nerve; subcutaneous ***(not covered)***

0817T Open insertion or replacement of integrated neurostimulation system for bladder dysfunction including electrode(s) (eg, array or leadless), and pulse generator or receiver, including analysis, programming, and imaging guidance, when performed, posterior tibial nerve; subfascial ***(not covered)***

0818T Revision or removal of integrated neurostimulation system for bladder dysfunction, including analysis, programming, and imaging, when performed, posterior tibial nerve; subcutaneous ***(not covered)***

0819T Revision or removal of integrated neurostimulation system for bladder dysfunction, including analysis, programming, and imaging, when performed, posterior tibial nerve; subfascial ***(not covered)***

2. Fecal Incontinence Stimulators

ICD-10 Codes that may apply:

R15.9 Full incontinence of feces

CPT/HCPCS Codes:

64561 Percutaneous implantation of neurostimulator electrodes; sacral nerve (transforaminal placement)

64581 Incision for implantation of neurostimulator electrodes; sacral nerve; (transforaminal placement).

64585 Revision or removal of peripheral neurostimulator electrodes ***(No Auth)***

64590 Incision and subcutaneous placement of peripheral neurostimulator pulse generator or receiver, direct or inductive coupling

64595 Revision or removal of peripheral neurostimulator pulse generator or receiver ***(No Auth)***

95970 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with brain, cranial nerve, spinal cord, peripheral nerve, or sacral nerve, neurostimulator pulse generator/transmitter, without programming ***(No Auth)***

95971 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with simple spinal cord or peripheral nerve (eg, sacral nerve) neurostimulator pulse generator/transmitter programming by physician or other qualified health care professional ***(No Auth)***

95972 Electronic analysis of implanted neurostimulator pulse generator/transmitter (eg, contact group[s], interleaving, amplitude, pulse width, frequency [Hz], on/off cycling, burst, magnet mode, dose lockout, patient selectable parameters, responsive neurostimulation, detection algorithms, closed loop parameters, and passive parameters) by physician or other qualified health care professional; with complex spinal cord or peripheral nerve (eg, sacral nerve) neurostimulator pulse generator/transmitter programming by physician or other qualified health care professional ***(No Auth)***

A4290 Sacral nerve stimulation test lead, each (***No Auth)***

C1767 Generator, neurostimulator (implantable), nonrechargeable
C1778 Lead, neurostimulator (implantable)
C1883 Adapter/ extension, pacing lead or neurostimulator lead
C1897 Lead, neurostimulator test kit (implantable)

L8679 Implantable neurostimulator, pulse generator, any type
L8680 Implantable neurostimulator electrode, each
L8681 Patient programmer (external) for use with implantable programmable neurostimulator pulse generator
L8686 Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension

(L codes not separately paid under APC payment arrangements)

XI. Gastric Stimulators

ICD-10 Codes that may apply:

E08.43	Diabetes mellitus due to underlying condition with diabetic autonomic (poly)neuropathy
E09.43	Drug or chemical induced diabetes mellitus with neurological complications with diabetic autonomic (poly)neuropathy
E10.43	Type 1 diabetes mellitus with diabetic autonomic (poly)neuropathy
E11.43	Type 2 diabetes mellitus with diabetic autonomic (poly)neuropathy
E13.43	Other specified diabetes mellitus with diabetic autonomic (poly)neuropathy
K31.84	Gastroparesis

CPT/HCPCS Codes:

43647 Laparoscopy, surgical; implantation or replacement of gastric neurostimulator electrodes, antrum
43648 Laparoscopy, surgical; revision or removal of gastric neurostimulator electrodes, antrum ***(No Auth)***
43881 Implantation or replacement of gastric neurostimulator electrodes, antrum, open
43882 Revision or removal of gastric neurostimulator electrodes, antrum, open ***(No Auth)***
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 ***(No Auth)***

95980 Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance, and patient measurements) gastric ***(No Auth)***
95981 Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance, and patient measurements) gastric ***(No Auth)***
95982 Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance, and patient measurements) gastric ***(No Auth)***

L8679 Implantable neurostimulator, pulse generator, any type
L8680 Implantable neurostimulator electrode, each
L8688 Implantable neurostimulator pulse generator, dual array, non-rechargeable, includes extension
(L codes not separately paid for Priority Medicaid)

XII. Interferential Stimulators

Not Covered:

E0769 Electrical stimulation or electromagnetic wound treatment device, not otherwise classified
S8130 Interferential current stimulator, 2 channel
S8131 Interferential current stimulator, 4 channel

XIII. Neuromuscular Electrical Stimulation

ICD-10 Codes that may apply:
M62.50 – M62.59 Muscular wasting and disuse atrophy, not elsewhere classified

CPT/HCPCS Codes:

64580 Incision for implantation of neurostimulator electrodes; neuromuscular

97014 Application of a modality to one or more areas; electrical stimulation (unattended)
97032 Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes

E0745 Neuromuscular stimulator, electronic shock unit E0764 Functional neuromuscular stimulator, transcutaneous stimulation of muscles of ambulation with computer control, used for walking by spinal cord injured, entire system, after completion of training program (*Not covered for Priority Medicaid)*

XIV. Pulsed Electrical Stimulation (BioniCare®)

Not Covered:

E0762 Transcutaneous electrical joint stimulation device system, includes all accessories

XV. Surface Electrical Muscle Stimulation

ICD-10 Codes that may apply:

M41.00 – M41.9 Scoliosis

CPT/HCPCS Codes:

E0744 Neuromuscular stimulator for scoliosis *(Not covered for Priority Medicaid)*

XVI. Electric Tumor Treatment Fields (ETTF) Devices

ICD-10 Codes that may apply:

C71.0-C71.9 Malignant neoplasm of brain

CPT/HCPCS Codes:

E0766 Electrical stimulation device used for cancer treatment, includes all accessories, any type

A4555 Electrode/transducer for use with electrical stimulation device used for cancer treatment, replacement only *(Not covered for Priority Medicaid or Medicare)*

77299 Unlisted procedure, therapeutic radiology clinical treatment planning (*Explanatory notes must accompany claim)*
Not separately payable when billed for use of NovoTAL™ System for treatment planning

XVII. Hypoglossal Nerve Stimulation for the Treatment of Obstructive Sleep Apnea
See Policy 91333 Obstructive Sleep Apnea

XVIII. Non-Covered Electrical Stimulation Therapies

1. Cranial electrical stimulation
   CPT/HCPCS Codes:
   E0720 Transcutaneous electrical nerve stimulation (TENS) device, two lead, localized stimulation
   E0732 Cranial electrotherapy stimulation (ces) system, any type ***(not covered)***
   E1399 Durable medical equipment, miscellaneous *(Explanatory notes must accompany claims billed with unlisted codes.)*

2. Electric reflex salivary stimulation
   CPT/HCPCS Codes:
   E0755 Electronic salivary reflex stimulator (intraoral/noninvasive)

3. Neuromuscular electrical stimulation for ANY of the following conditions:
   a. Spinal cord injury
   b. Stroke (CVA)
   c. Cerebral palsy
   d. Other upper motor neuron disorders
   e. For general muscle strengthening in healthy individuals
   f. For cardiac conditioning
   g. For the treatment of denervated muscles

   For codes see section XIV

4. Transurethral electrical stimulation for the management of neurogenic bladder dysfunction
   The following codes billed for transurethral electrical stimulation are not covered
   CPT/HCPCS Codes:
   53899 Unlisted procedure, urinary system

   C1778 Lead, neurostimulator (implantable)
   C1816 Receiver and/or transmitter, neurostimulator (implantable)

   L8679 Implantable neurostimulator, pulse generator, any type
   L8680 Implantable neurostimulator electrode, each (*Not covered by Medicare*)

5. High frequency pulsed electromagnetic fields (i.e., Diapulse and sofPulse device) for the treatment of wounds in the home setting or acute postoperative pain and edema
   The following codes billed for this treatment are not covered
   CPT/HCPCS Codes:
   97014 Application of a modality to one or more areas; electrical stimulation (unattended)
   G0329 Electromagnetic therapy, to one or more areas for chronic Stage III and Stage IV pressure ulcers, arterial ulcers, diabetic ulcers and venous stasis ulcers not demonstrating measurable signs of healing after 30 days of conventional care as part of a therapy plan of care (*Covered by Medicare*)
   E0761 Nonthermal pulsed high frequency radio waves, high peak power electromagnetic energy treatment device

6. Interferential current therapy
   For codes see section XIII.

7. Electrical stimulation for the treatment of Bell's palsy
   ICD-10 Codes – <u>not covered:</u>
   G51.0 Bell's palsy

   CPT/HCPCS Codes:
   97032 Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes

8. Stellate ganglion blockade using TENS
   For codes see section XIX

9. Dorsal column stimulation for the management of chronic malignant pain
   For codes see section V.

10. H-WAVE ® type stimulators for ANY of the following indications:
    a. To reduce pain
    b. To reduce edema
    c. To accelerate healing
    d. For treatment of chronic pain due to ischemia

    CPT/HCPCS Codes:
    The following codes billed for H-Wave® treatment are not covered
    97014 Application of a modality to one or more areas; electrical stimulation (unattended)

    E0745 Neuromuscular stimulator, electronic shock unit

11. Functional electrical stimulation for electrical stimulation of muscles in patients with spinal cord injuries and other neuromuscular conditions

    CPT/HCPCS Codes:
    For codes see section VIII

12. Intramuscular stimulation (IMS) for the management of soft-tissue or neuropathic pain.
    CPT/HCPCS Codes:

    97813 Acupuncture, 1 or more needles; with electrical stimulation, initial 15 minutes of personal one-on-one contact with the patient
    97814 Acupuncture, 1 or more needles; with electrical stimulation, each additional 15 minutes of personal one-on-one contact with the patient, with re-insertion of needle(s) (List separately in addition to code for primary procedure)

13. Galvanic stimulation therapy
    For codes, see section VIII

14. Electrical stimulation for wound healing or skin ulcers in the home setting
    For codes, see section II.

15. Percutaneous Electrical Stimulation (PENS)
    For codes, see policy: Peripheral Nerve Stimulation # 91634

16. Percutaneous Neuromodulation Therapy (PNT)
    For codes, see policy: Peripheral Nerve Stimulation # 91634

17. Transcend® Implantable Gastric Stimulator for treatment of obesity
    The following codes billed for gastric stimulation for obesity treatment are not covered.

    CPT/HCPCS Codes:

43647 Laparoscopy, surgical; implantation or replacement of gastric neurostimulator electrodes, antrum
43648 Laparoscopy, surgical; revision or removal of gastric neurostimulator electrodes, antrum
43881 Implantation or replacement of gastric neurostimulator electrodes, antrum, open
43882 Revision or removal of gastric neurostimulator electrodes, antrum, open
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
95980 Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient measurements) gastric neurostimulator pulse generator/transmitter; intraoperative, with programming
95981 Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient measurements) gastric neurostimulator pulse generator/transmitter; subsequent, without reprogramming
95982 Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude and duration, configuration of wave form, battery status, electrode selectability, output modulation, cycling, impedance and patient measurements) gastric neurostimulator pulse generator/transmitter; subsequent, with reprogramming
L8679 Implantable neurostimulator, pulse generator, any type
L8680 Implantable neurostimulator electrode, each
L8688 Implantable neurostimulator pulse generator, dual array, non-rechargeable, includes extension

18. Synergy® Neurostimulator (Medtronic) for intractable migraine pain (Occipital nerve stimulation)
The following codes billed for Synergy® are not covered.

CPT/HCPCS Codes:

61885 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to a single electrode array
61886 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to two or more electrode arrays
64553 Percutaneous implantation of neurostimulator electrodes; cranial nerve
64555 Percutaneous implantation of neurostimulator electrodes; peripheral nerve (excludes sacral nerve)
64568 Incision for implantation of cranial nerve (eg, vagus nerve) neurostimulator electrode array and pulse generator
64569 Revision or replacement of cranial nerve (eg, vagus nerve) neurostimulator electrode array, including connection to existing pulse generator
64575 Incision for implantation of neurostimulator electrodes; peripheral nerve (excludes sacral nerve)

64590 Insertion or replacement of peripheral or gastric neurostimulator pulse generator or receiver, direct or inductive coupling

L8679 Implantable neurostimulator, pulse generator, any type
L8680 Implantable neurostimulator electrode, each
L8681 Patient programmer (external) for use with implantable programmable neurostimulator pulse generator
L8682 Implantable neurostimulator radiofrequency receiver
L8683 Radiofrequency transmitter (external) for use with implantable neurostimulator radiofrequency receiver
L8684 Radiofrequency transmitter (external) for use with implantable sacral root neurostimulator receiver for bowel and bladder management, replacement
L8685 Implantable neurostimulator pulse generator, single array, rechargeable, includes extension
L8686 Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension
L8687 Implantable neurostimulator pulse generator, dual array, rechargeable, includes extension
L8688 Implantable neurostimulator pulse generator, dual array, non-rechargeable, includes extension
L8689 External recharging system for battery (internal) for use with implantable neurostimulator

19. Vagal nerve stimulators for other indications. See Section VI.

20. Microcurrent electrical nerve stimulation (MENS), including frequency-specific microcurrent (FSM).
The following codes billed for Microcurrent stimulation are not covered.

CPT/HCPCS Codes:
97014 Application of a modality to one or more areas; electrical stimulation (unattended)
97032 Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes

E0720 Transcutaneous electrical nerve stimulation (TENS) device, two lead, localized stimulation
E0730 Transcutaneous electrical nerve stimulation (TENS) device, four or more leads, for multiple nerve stimulation
E0731 Form-fitting conductive garment for delivery of TENS or NMES (with conductive fibers separated from the patient's skin by layers of fabric)

21. Motor cortex stimulation for neuropathic facial pain –
T*he following codes billed for motor cortex stimulation are not covered.*

CPT/HCPCS Codes:
61850 Twist drill or burr hole(s) for implantation of neurostimulator electrodes, cortical
61860 Craniectomy or craniotomy for implantation of neurostimulator electrodes, cerebral, cortical

61885 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to a single electrode array
61886 Insertion or replacement of cranial neurostimulator pulse generator or receiver, direct or inductive coupling; with connection to two or more electrode arrays

C1767 Generator, neurostimulator (implantable), nonrechargeable
C1778 Lead, neurostimulator (implantable)
C1816 Receiver and/or transmitter, neurostimulator (implantable)
C1820 Generator, neurostimulator (implantable), with rechargeable battery and charging system

L8680 Implantable neurostimulator electrode, each
L8682 Implantable neurostimulator radiofrequency receiver
L8685 Implantable neurostimulator pulse generator, single array, rechargeable, includes extension
L8686 Implantable neurostimulator pulse generator, single array, non-rechargeable, includes extension
L8687 Implantable neurostimulator pulse generator, dual array, rechargeable, includes extension
L8688 Implantable neurostimulator pulse generator, dual array, non-rechargeable, includes extension
L8689 External recharging system for battery (internal) for use with implantable neurostimulator

22. Devices (e.g. NovoTTF-100A System, Novocure, Portsmouth, NH) to generate electric tumor treatment fields (ETTF) for the treatment of malignant tumors and all other indications, unless criteria in Section P are met.

23. Transcranial magnetic stimulation (e.g. Cerena) for treatment of migraine headaches – not covered indication.
90867 Therapeutic repetitive transcranial magnetic stimulation treatment; planning
90868 Therapeutic repetitive transcranial magnetic stimulation treatment; delivery and management, per session
90869 Therapeutic repetitive transcranial magnetic stimulation (TMS) treatment; subsequent motor threshold re-determination with delivery and management

24. Carotid sinus/baroreceptor stimulators (e.g., the Barostim neo™ System, and the Rheos Baroreflex Hypertension Therapy System) for the treatment *of hypertension and for all other indications (e.g., heart failure).*
The following codes are not covered
0266T Implantation or replacement of carotid sinus baroreflex activation device; total system (includes generator placement, unilateral or bilateral lead placement, intra-operative interrogation, programming, and repositioning, when performed)
0267T Implantation or replacement of carotid sinus baroreflex activation device; lead only, unilateral (includes intra-operative interrogation, programming, and repositioning, when performed)

0268T Implantation or replacement of carotid sinus baroreflex activation device; pulse generator only (includes intra-operative interrogation, programming, and repositioning, when performed)
0269T Revision or removal of carotid sinus baroreflex activation device; total system (includes generator placement, unilateral or bilateral lead placement, intra-operative interrogation, programming, and repositioning, when performed)
0270T Revision or removal of carotid sinus baroreflex activation device; lead only, unilateral (includes intra-operative interrogation, programming, and repositioning, when performed)
0271T Revision or removal of carotid sinus baroreflex activation device; pulse generator only (includes intra-operative interrogation, programming, and repositioning, when performed)
0272T Interrogation device evaluation (in person), carotid sinus baroreflex activation system, including telemetric iterative communication with the implantable device to monitor device diagnostics and programmed therapy values, with interpretation and report (eg, battery status, lead impedance, pulse amplitude, pulse width, therapy frequency, pathway mode, burst mode, therapy start/stop times each day);
0273T Interrogation device evaluation (in person), carotid sinus baroreflex activation system, including telemetric iterative communication with the implantable device to monitor device diagnostics and programmed therapy values, with interpretation and report (eg, battery status, lead impedance, pulse amplitude, pulse width, therapy frequency, pathway mode, burst mode, therapy start/stop times each day); with programming
C1825 Generator, neurostimulator (implantable), non-rechargeable with carotid sinus baroreceptor stimulation lead(s)

25. Calmare Pain Therapy (Calmare Therapeutics Inc.)
    0278T Transcutaneous electrical modulation pain reprocessing (eg, scrambler therapy), each treatment session (includes placement of electrodes)
26. ARP (Accelerated Recovery Performance) wave therapy/ARPwave – *the following codes billed for ARP treatment are not covered*
    CPT/HCPCS Codes:
    97032 Application of a modality to one or more areas; electrical stimulation (manual), each 15 minutes
    97110 Therapeutic procedure, 1 or more areas, each 15 minutes; therapeutic exercises to develop strength and endurance, range of motion and flexibility
    97112 Therapeutic procedure, 1 or more areas, each 15 minutes; neuromuscular reeducation of movement, balance, coordination, kinesthetic sense, posture, and/or proprioception for sitting and/or standing activities
    97530 Therapeutic activities, direct (one-on-one) patient contact (use of dynamic activities to improve functional performance), each 15 minutes
27. All auricular electroacupuncture devices (e.g. P-STIM™ device,) the *following codes for P-STIM are* ***not covered***
    CPT/HCPCS Codes:
    97813 Acupuncture, 1 or more needles; with electrical stimulation, initial 15 minutes of personal one-on-one contact with the patient
    97814 Acupuncture, 1 or more needles; with electrical stimulation, each additional 15 minutes of personal one-on-one contact with the patient, with re-insertion of needle(s) (List separately in addition to code for primary procedure)
    64999 Unlisted procedure, nervous system

E1399 Durable medical equipment, miscellaneous

28. remedē® System (Respicardia Inc.) phrenic nerve stimulator for central sleep apnea – the following codes for this system are **not covered**

CPT/HCPCS Codes:

C1823 Generator, neurostimulator (implantable), nonrechargeable, with transvenous sensing and stimulation leads

29. VisONE® Synchronized Diaphragmatic Stimulation™ (SDS®) System

CPT/HCPCS Codes: Not Covered

0674T Laparoscopic insertion of new or replacement of permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function, including an implantable pulse generator and diaphragmatic lead(s)

0675T Laparoscopic insertion of new or replacement of diaphragmatic lead(s), permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function, including connection to an existing pulse generator; first lead

0676T Laparoscopic insertion of new or replacement of diaphragmatic lead(s), permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function, including connection to an existing pulse generator; each additional lead (List separately in addition to code for primary procedure)

0677T Laparoscopic repositioning of diaphragmatic lead(s), permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function, including connection to an existing pulse generator; first repositioned lead

0678T Laparoscopic repositioning of diaphragmatic lead(s), permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function, including connection to an existing pulse generator; each additional repositioned lead (List separately in addition to code for primary procedure)

0679T Laparoscopic removal of diaphragmatic lead(s), permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function

0680T Insertion or replacement of pulse generator only, permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function, with connection to existing lead(s)

0681T Relocation of pulse generator only, permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function, with connection to existing dual leads

0682T Removal of pulse generator only, permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function

0683T Programming device evaluation (in-person) with iterative adjustment of the implantable device to test the function of the device and select optimal permanent programmed values with analysis, review and report by a physician or other qualified health care professional, permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function

0684T Peri-procedural device evaluation (in-person) and programming of device system parameters before or after a surgery, procedure, or test with analysis, review, and report by a physician or other qualified health care professional, permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function

0685T Interrogation device evaluation (in-person) with analysis, review and report by a physician or other qualified health care professional, including connection, recording and disconnection per patient encounter, permanent implantable synchronized diaphragmatic stimulation system for augmentation of cardiac function

30. Vestibular Implant- **Not Covered**
    0725T Vestibular device implantation, unilateral
    0726T Removal of implanted vestibular device, unilateral
    0727T Removal and replacement of implanted vestibular device, unilateral
    0728T Diagnostic analysis of vestibular implant, unilateral; with initial programming
    0729T Diagnostic analysis of vestibular implant, unilateral; with subsequent programming
31. Transcutaneous magnetic stimulation by focused low-frequency electromagnetic pulse
    0766T Transcutaneous magnetic stimulation by focused low-frequency electromagnetic pulse, peripheral nerve, with identification and marking of the treatment location, including noninvasive electroneurographic localization (nerve conduction localization), when performed; first nerve
    0767T Transcutaneous magnetic stimulation by focused low-frequency electromagnetic pulse, peripheral nerve, with identification and marking of the treatment location, including noninvasive electroneurographic localization (nerve conduction localization), when performed; each additional nerve (List separately in addition to code for primary procedure)
32. IB Stim – **Not Covered**
    0720T Percutaneous electrical nerve field stimulation, cranial nerves, without implantation
33. TheraBionic P1 device (TheraBionic Inc.)- **Not Covered**
    E0767 Intrabuccal, systemic delivery of amplitude-modulated, radiofrequency electromagnetic field device, for cancer treatment, includes all accessories.

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Centers for Medicare & Medicaid Services. Deep Brain Stimulation for Essential Tremor and Parkinson's Disease. National Coverage Determination (NCD) 160.24
Centers for Medicare & Medicaid Services. Phrenic Nerve Stimulator. National Coverage Determination (NCD) 160.19
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