Clinical Policy: Neuromuscular and Peroneal Nerve Electrical Stimulation (NMES)

Reference Number: LA.CP.MP.48
Date of Last Revision: ~~09/22~~08/23

Coding Implications
Revision Log

See Important Reminder at the end of this policy for important regulatory and legal information.

Description
This policy describes the medical necessity requirements for the use of neuromuscular electrical stimulation (NMES) and functional electrical stimulation (FES).

Policy/Criteria

I. It is the policy of Louisiana HealthCare Connections that neuromuscular electrical stimulation (NMES) is **medically necessary** when used as one component of a comprehensive rehab program for the treatment of disuse atrophy when the nerve supply to the atrophied muscle is intact and has any of the following atrophy indications:
   A. Contractures due to burn scarring;
   B. Previous casting or splinting of a limb;
   C. Major knee surgery with failure to respond to physical therapy;
   D. Recent hip replacement and NMES will be used until physical therapy begins.

II. It is the policy of Louisiana HealthCare Connections that functional ~~neuromuscular~~electrical stimulation (FES) is **medically necessary** for spinal cord injury (SCI) when all of the following criteria are met:
   A. The member/enrollee has brisk muscle contraction to stimulation and sensory perception of electrical stimulation sufficient for muscle contraction;
   B. At least six months have passed since recovery from spinal cord injury and restorative surgery;
   C. Member/enrollee is highly motivated, committed, and has the cognitive ability to use FES devices for walking;
   D. Successful completion of a training program consisting of at least 32 physical therapy sessions with the device over a three-month period;
   E. Member/enrollee demonstrates a willingness to use the device long-term;
   F. None of the following contraindications are present:
      1. Cardiac pacemaker;
      2. Uncontrolled cardiac arrhythmias
      3. Unstable angina
      4. Severe scoliosis or severe osteoporosis;
      5. Joint replacement in a location targeted by FES;
      6. Skin disease or cancer at area of stimulation;
      7. Irreversible contracture;
      8. Autonomic dysreflexia;
      9. Seizure disorder;
   G. If lower extremity FES is requested, all of the following:

~~A.~~1. Intact lower motor units (L1 and below, including both muscle and peripheral nerve);

~~B.~~2. Muscle and joint stability adequate for weight bearing at upper and lower extremities and can demonstrate balance and control to maintain an upright support posture independently;

~~C. Brisk muscle contraction to stimulation and sensory perception of electrical stimulation sufficient for muscle contraction;~~

~~D.~~3. Transfers independently and demonstrates independent standing tolerance for at least three minutes;

~~E.~~4. Demonstrates hand and finger function to manipulate controls;

~~F. At least six months post recovery from spinal cord injury and restorative surgery;~~

~~G.~~5. No hip and knee degenerative disease and no history of long bone fracture secondary to osteoporosis~~;~~.

~~H.~~ It is the policy of Louisiana HealthCare Connections that peroneal nerve stimulators (e.g., ~~Highly motivated, committed, and the cognitive ability to use such devices for walking;~~

~~I. Successfully completed a training program consisting of at least 32 physical therapy sessions with the device over a 3-month period;~~

~~J. Demonstrates a willingness to use the device long-term;~~

~~K. None of the following contraindications:~~

~~1. Cardiac pacemaker;~~

~~2.~~1.~~Severe scoliosis or severe osteoporosis;~~

~~3.~~1.~~Skin disease or cancer at area of stimulation;~~

~~4.~~1.~~Irreversible contracture;~~

~~5. Autonomic dysflexia.~~

III. ~~It is the policy of Louisiana HealthCare Connections that peroneal nerve stimulators (e.g.,~~ NESS L300, NESS L300 Plus, L300 Go System, WalkAide, Odstock [ODFS®] Dropped Foot Stimulator) are **medically necessary** for incomplete spinal cord injury.

It is the policy of Louisiana HealthCare Connections that peroneal nerve stimulators (e.g.,

IV. ~~It is the policy of Louisiana HealthCare Connections that peroneal nerve stimulators (e.g.,~~ NESS L300, NESS L300 Plus, L300 Go System, WalkAide, Odstock [ODFS®] Dropped Foot Stimulator) have not been proven safe and effective for any indication other than incomplete spinal cord injury, including, but not limited to: foot drop in cerebral palsy, multiple sclerosis, traumatic brain injury, or stroke.

V. It is the policy of Louisiana HealthCare Connections that neuromuscular electrical stimulation for any other indication (e.g., idiopathic scoliosis, heart failure) is not proven safe and effective.

Background

Neuromuscular electrical stimulation (NMES) involves the use of a device which transmits an electrical impulse to the skin over selected muscle groups by way of electrodes.[1,5] There are two broad categories of NMES. ~~One~~The first type of device stimulates the muscle when the patient is in a resting state to treat muscle atrophy.[1] The second type, known as functional electrical stimulation (FES), is used to enhance functional activity of neurologically impaired patients.[1]

NMES can be performed at low, medium, or high intensity to elicit mild, moderate, or strong muscle contractions. NMES can be performed on upper or lower limbs. When used at very low intensity to stimulate barely perceptible contractions, this technique is referred to as threshold NMES or threshold electrical stimulation (TES).[1,4] Regardless of the intensity of NMES, patients are encouraged to exercise the affected muscles voluntarily to maintain and improve ~~their~~ strength and function. For chronic disorders, this exercise may be in the form of regular participation in sports activities. For acute conditions, such as rehabilitation shortly after surgery or a stroke, patients must often undergo intensive physical and occupational therapy.[1,4]

FES is the application of electrical stimulation that can be used to activate muscles of the upper or lower limbs to produce functional movement patterns, such as standing and walking~~,~~ in patients with paraplegia.[1,4] Although FES is used to treat the effects of upper motor neurone lesions, it is not normally suitable for patients with lower motor neurone lesions.[11]
FES can also be used therapeutically for cycling of the upper and/or lower limbs, with the goal of strengthing to produce functional movement patterns.[10]

FES has been shown to strengthen muscles, improve circulation, heal tissue, slow muscle atrophy, and reduce pain and spasticity.[4]

There is evidence from preliminary studies that FES can improve gait in some patients; however, additional larger randomized trials are needed.[3,5,7]

The only settings where skilled therapists can provide both types of NMES services are inpatient hospitals, outpatient hospitals, comprehensive outpatient rehabilitation facilities, and outpatient rehabilitation facilities. The physical therapy needed to perform these services requires that the patient be in a one-on-one training program.[1]

Coding Implications
This clinical policy references Current Procedural Terminology (CPT®). CPT® is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted ~~2020~~2022, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. –Codes referenced in this clinical policy are for informational purposes only and may not support medical necessity. . Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

NOTE: Coverage is subject to each requested code's inclusion on the corresponding LDH fee schedule. Non-covered codes are denoted (*) and are reviewed for Medical Necessity for members under 21 years of age on a per case basis.

HCPCS ®* Codes	Description
E0745*	Neuromuscular stimulator, electronic shock unit
E0764*	Functional neuromuscular stimulation, transcutaneous stimulation of sequential muscle groups of ambulation with computer control, used for walking by spinal cord injured, entire system, after completion of training program
E0770	Functional electrical stimulator, transcutaneous stimulation of nerve and/or muscle groups, any type, complete system, not otherwise specified

HCPCS codes that do not support coverage criteria

HCPCS Codes	Description
E0744*	Neuromuscular stimulator for scoliosis

~~**ICD-10-CM Diagnosis Codes that Support Coverage Criteria**~~
~~+ Indicates a code(s) requiring an additional character~~

~~ICD-10-CM Code~~	~~Description~~
~~M62.50 through M62.59~~	~~Muscle wasting and atrophy, not elsewhere classified~~
~~S14.0xxA through S14.0xxS~~	~~Concussion and edema of cervical spinal, cord~~
~~S14.101A through S14.109S~~	~~Unspecified injury of cervical spinal cord~~
~~S24.101A through S24.109S~~	~~Unspecified injury at unspecified level of thoracic spinal cord~~
~~S34.101A through S34.109S~~	~~Unspecified injury to unspecified level to lumbar spinal cord~~
~~S34.131A through S34.139S~~	~~Unspecified injury to sacral spinal cord~~

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Rebranded from corporate policy Annual review completed. References reviewed and updated. Changed "review date" in the header to "date of last revision" and "date" in the revision log header to "revision date." Integrated NMES, FES, and peroneal stimulator criteria from CP.MP.107 DME and Legacy WellCare Neuromuscular Electrical Stimulation (NMES) CP.MP.48 policy. Renamed to "Neuromuscular and Peroneal Nerve Electrical Stimulation." Added section III and IV criteria. Added code E0744 to "HCPCS codes that do not support coverage criteria." Specialist reviewed.	01/2022	

Reviews, Revisions, and Approvals	Revision Date	Approval Date
Annual review. Criteria IV. verbiage updated for clarity. Background updated with no impact on criteria. References reviewed and updated. Specialist reviewed.	9/22	11/28/22
Annual review completed. Combined criteria applicable to LE units into section II.G. Additional contraindications added to Section F. Minor rewording with no clinical significance. Background updated with no impact to criteria. ICD-10-CM Diagnosis Code table removed. References reviewed and updated. Internal specialist reviewed.	08/23	

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Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. LHCC makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved.

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This clinical policy does not constitute medical advice, medical treatment or medical care. It is not intended to dictate to providers how to practice medicine. Providers are expected to exercise professional medical judgment in providing the most appropriate care, and are solely responsible for the medical advice and treatment of members/enrollees. This clinical policy is not intended to recommend treatment for members/enrollees. Members/enrollees should consult with their treating physician in connection with diagnosis and treatment decisions.

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