

# Medical Coverage Policy



## Nerve Velocity Conduction Studies, EMGs, Points of Care Nerve Conduction Tests

Device/Equipment  Drug  Medical  Surgery  Test  Other

Effective Date:	11/1/2006	Policy Last Updated:	4/3/2012
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**Prospective review is recommended/required. Please check the member agreement for preauthorization guidelines.**

**Prospective review is not required.**

### Description:

Nerve Conduction Studies (NCS) (including Nerve Conduction Velocity Studies [NCV]) and needle electromyography (EMG), typically performed together by a trained practitioner are considered the gold standard of electrodiagnostic testing. Both NCVs and EMGs are used for a clinical diagnosis of peripheral nervous system disorders.

Nerve conduction studies (NCS) are used to measure action potentials resulting from peripheral nerve stimulation recordable over the nerve or from an innervated muscle. One aspect of a nerve conduction study, nerve conduction velocity measurement, is measured between two sites of stimulation or between a stimulus and a recording site.

Portable nerve conduction test devices have been developed to provide point of care nerve conduction studies.

One proposed use of automated nerve conduction devices is to assist in the diagnosis of carpal tunnel syndrome (CTS). It has also been proposed for use in the diagnosis of peripheral neuropathy, and in particular, for detecting neuropathy in patients with diabetes. According to the US Food and Drug Administration's (FDA) specific clearance to market 510(k) process, received in 1998, the listed intended use for the device called the NC-stat (NeuroMetrix) is "as an adjunct to and not a replacement for conventional electrodiagnostic measurements". In its 510(k) FDA approval from 2006, the intended use is "to stimulate and measure neuromuscular signals that are useful in diagnosing and evaluating systemic and entrapment neuropathies".

There are two broad types of nerve conduction studies: sensory and motor. Either surface or needle electrodes can be used to stimulate the nerve or record the response.

Electromyography (EMG) is the study and recording of intrinsic electrical properties of skeletal muscles. EMG uses a needle electrode. This testing is invasive because it requires needle insertion and adjustment at multiple sites, and at anatomically critical

areas. EMG testing relies on both auditory and visual feedback to the electromyographer.

The intensity and extent of testing with EMG and NCS are based on clinical judgment developed after the initial pretest evaluation and later modified during the testing procedure. Decisions to continue, modify, or conclude a test rely on a knowledge base of anatomy, physiology, and neuromuscular diseases. There is a requirement for ongoing real-time clinical evaluation, especially during the EMG examination.

All personnel performing electrodiagnostics should be appropriately trained and qualified. When EMG-NCS are carried out by non-physicians, it should be done under the direct supervision of a physician. They must have detailed knowledge of neuromuscular diseases and an awareness of the influence of age, temperature, and body height on the results. The patient's medical records must clearly document the medical necessity for this test. Referral data containing pertinent clinical information must be available in instances where the need for a test may be questioned. The NCS-EMG performing provider, in addition to the referring provider, is responsible for a determination of the appropriateness of a study.

Nerve Conduction Studies (NCS) are useful:

- For localization of focal neuropathies or compressive lesions; or
- For diagnosis and prognosis of traumatic nerve lesions; or
- For diagnosis or confirmation of suspected generalized neuropathies (e.g., diabetic, uremic, metabolic, or immune); or
- For diagnosis of neuromuscular junction disorders (e.g., myasthenia gravis, myasthenic syndrome) using repetitive nerve stimulation; or
- For differential diagnosis of symptom-based complaints (e.g., pain in limb, weakness, disturbance in skin sensation, or paresthesia) provided the clinical assessment supports the need for a study.

Electromyography (EMG), together with properly conducted NCS, is useful:

- For diagnosis of nerve compression syndromes, including carpal tunnel syndrome and other focal compressions; or
- For diagnosis of radiculopathy - cervical, lumbosacral; or
- For diagnosis of mono/polyneuropathy - metabolic, degenerative, hereditary; or
- For diagnosis of myopathy - including poly- and dermatomyositis, myotonic and congenital myopathies; or
- For diagnosis of plexopathy-idiopathic, trauma, infiltration; or
- For diagnosis of neuromuscular junction disorders - myasthenia gravis. Single fiber EMG (95872) is of special value here; or
- At times, before Botulinum A toxin injection, for localization; or
- At times, prior to injection of phenol or other substances for nerve blocking or chemodenervation.
- There may be other instances, not detailed here, where EMG may be of use. See last item listed above under NCS uses.

While studies have shown the correlation of portable automated point of care nerve conduction test results with standard testing, the impact on outcome of point of care automated testing has not been determined.

**Medical Criteria:**

Not applicable.

**Policy:**

Nerve conduction studies (NCS) and electromyography (EMG) are **covered** services.

Automated point-of-care nerve conduction studies (portable hand-held devices like the NC Stat and Brevio) are considered **not medically necessary** as these devices are not used by clinicians capable of performing the spectrum of neurophysiologic assessments that would be required to be able to be performed by clinicians conducting any testing. All testing requires physician interpretation and report. Professional/technical coding is not allowed for these services. Typically, the use of the **automated point-of-care nerve conduction test** is considered **not medically necessary** due to the lack of information on diagnostic performance, and the lack of clinical evidence demonstrating improvement in health outcomes.

**Coverage:**

Benefits may vary between groups/contracts. Please refer to the appropriate evidence of coverage or subscriber agreement for applicable diagnostic imaging, lab, and machine tests benefits.

**Codes:**

The following codes are **covered** for all lines of business:

CPT codes:

**92265 95860 95861 95863 95864 95865 95866 95867 95868 95869 95870 95872  
95885 95886 95887 95900 95903 95904 95933 95934 95936 95937 95999**

The following code is covered for BlueCHiP for Medicare members only and is considered not medically necessary for all other members.

**95905**

***NOTE:** Medicare policy is developed separately from BCBSRI policy. Medicare policy incorporates consideration of governmental regulations from CMS (Centers for Medicare and Medicaid Services), such as national coverage determinations or local coverage determinations. In addition to benefit differences, CMS may reach different conclusions regarding the scientific evidence than does BCBSRI. Medicare and BCBSRI policies may differ. However, BlueCHiP for Medicare members must be offered, at least, the same services as Medicare offers.*

**Published:**

Policy Update, Sep 2006  
Policy Update, Sep 2007  
Provider Update, Jul 2008  
Provider Update, Oct 2008  
Provider Update, Sep 2009  
Provider Update, Jul 2011  
Provider Update, May 2012

**References:**

Blue Cross and Blue Shield Association Medical Policy Reference Manual, Policy No. 2.01.77. Automated Point-of-Care Nerve Conduction Tests. Retrieved 4/30/09:  
[http://bluweb.bcbs.com/global\\_assets/special\\_content/medical\\_policy/policymanual/policy.html?pnum=20177](http://bluweb.bcbs.com/global_assets/special_content/medical_policy/policymanual/policy.html?pnum=20177)

RI Medicare: Local Coverage Determination AC-02-009. Nerve Conduction Studies (NCS)/Electromyography(EMG). Retrieved 4/30/09:  
[http://www.cms.hhs.gov/mcd/viewlcd.asp?lcd\\_id=22662&lcd\\_version=12&show=all](http://www.cms.hhs.gov/mcd/viewlcd.asp?lcd_id=22662&lcd_version=12&show=all)

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