Local Coverage Determination (LCD): Autonomic Function Tests (L33609)

Contractor Information

<table>
<thead>
<tr>
<th>Contractor Name</th>
<th>Contract Type</th>
<th>Contract Number</th>
<th>Jurisdiction</th>
<th>State(s)</th>
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<td>First Coast Service Options, Inc.</td>
<td>A and B MAC</td>
<td>09101 - MAC A</td>
<td>J - N</td>
<td>Florida</td>
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<td>First Coast Service Options, Inc.</td>
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<td>09302 - MAC B</td>
<td>J - N</td>
<td>Virgin Islands</td>
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LCD Information

Document Information

LCD ID
L33609

Original ICD-9 LCD ID
L31465

 LCD Title
Autonomic Function Tests

Proposed LCD in Comment Period
N/A

Source Proposed LCD
N/A

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Language quoted from CMS National Coverage Determination (NCDs) and coverage provisions in interpretive manuals are italicized throughout the Local Coverage Determination (LCD). NCDs and coverage provisions in interpretive manuals are not subject to the LCD Review Process (42 CFR 405.860[b] and 42 CFR 426 [Subpart D]). In addition, an administrative law judge may not review an NCD. See §1869(f)(1)(A)(i) of the Social Security Act.

Unless otherwise specified, italicized text represents quotation from one or more of the following CMS sources:

CMS Manual System, Pub. 100-02, Medicare Benefit Policy, Chapter 15, Section 80.

Coverage Guidance

Coverage Indications, Limitations, and/or Medical Necessity

The autonomic nervous system (ANS) is a regulatory branch of both the central and peripheral nervous system, which controls and regulates the autonomic functions within the body through sympathetic and parasympathetic nerves. These functions include regulation of blood pressure, heart rate, airway size and airflow to the lungs, digestive tract functions, sweat production, bladder control, and sexual function. The ANS acts through a balance of its own two components, the sympathetic and parasympathetic nervous systems. Autonomic failure consists of impaired or absent function of autonomic responses, which may be sympathetic or parasympathetic or both and can involve specific organ systems or can be generalized. There are other autonomic disorders that consist of excessive function of autonomic responses. The concept of an imbalance between opposing autonomic systems is applicable to some disorders, such as some cardiac arrhythmias, but not in all autonomic disorders. Autonomic disorders may be congenital or acquired – primary or secondary. If it becomes unbalanced, a person may experience a variety of symptoms that are sometimes vague and can affect many bodily functions. To the specialist, the presentation of autonomic dysfunction can be specific and diagnosed with simple clinical tests. Autonomic testing, properly performed and interpreted, is helpful toward achieving diagnostic specificity. Autonomic failure is associated with increased morbidity and mortality. Orthostatic hypotension is associated with an increased risk of falls and impairment in activities of daily living.

ANS testing can be grouped into the following general categories:

1. Cardiovagal innervation (CPT code 95921) - a test that provides a standardized quantitative evaluation of vagal innervation to parasympathetic function of the heart. Responses are based on the interpretation of changes in continuous heart recordings in response to standardized maneuvers and include heart rate response to deep breathing, Valsalva ratio, and 30:15 ratio heart rate responses to standing.

2. Vasomotor adrenergic innervation (CPT code 95922) – evaluates adrenergic innervation of the circulation and of the heart in autonomic failure. The following tests are included: beat-to-beat blood pressure and R-R interval response to Valsalva maneuver, sustained hand grip, and blood pressure and heart rate responses to tilt-up or active standing.

3. Sudomotor (CPT code 95923) – function testing is used to evaluate and document neuropathic disturbances that may be associated with pain. The quantitative sudomotor axon reflex test (QSART), thermoregulatory sweat test (TST), sympathetic skin responses, and silastic sweat imprints are tests of sympathetic cholinergic sudomotor function.

   The QSART measures axon reflex-mediated sudomotor responses quantitatively and evaluates post-ganglionic sudomotor function. Recording is usually carried out from the forearm and three lower extremity skin sites to assess the distribution of post-ganglionic deficits.

   The TST evaluates the distribution of sweating by a change in color of an indicator powder. This test has a high sensitivity, and its specificity for delineating the site of lesion is greatly enhanced when used in conjunction with QSART.

   Sweat imprints are formed by the secretion of active sweat glands into a plastic (silastic) imprint. The test can determine sweat gland density, a histogram of sweat droplet size and sweat volume per area.

4. Combined cardio vagal and vasomotor adrenergic innervation testing (CPT code 95924) of the autonomic nervous system is specifically of parasympathetic function and vasomotor adrenergic function using at least a 5-minute tilt with a passive tilttable.
Indications:

Appropriate application and interpretation of ANS testing requires a detailed knowledge of the testing criterion and a match between the tests of suspected clinical/functional impairment with the autonomic activity being tested. Most autonomic disorders are diagnosed clinically, with laboratory and formal diagnostic testing when ordered and performed appropriately playing both a primary diagnostic and an adjunctive or confirmatory role. Testing may also be appropriate to monitor disease progression when there is a change in clinical status or to evaluate a patient’s response to specific treatment for an autonomic disorder.

Autonomic function testing is covered as reasonable and necessary when used as a diagnostic tool to evaluate symptoms indicative of vasomotor instability, such as hypotension, orthostatic tachycardia, and hyperhidrosis after more common causes have been excluded by other testing, and the ANS testing is directed at establishing a more accurate or definitive diagnosis or contributing to clinically useful and relevant medical decision making for one of the following indications:

1. To diagnose the presence of autonomic neuropathy in a patient with signs or symptoms suggesting a progressive autonomic neuropathy.
2. To evaluate the severity and distribution of a diagnosed progressive autonomic neuropathy.
3. To differentiate the diagnosis between certain complicated variants of syncope from other causes of loss of consciousness.
4. To evaluate inadequate response to beta blockade in vasodepressor syncope.
5. To evaluate distressing symptoms in a patient with a clinical picture suspicious for distal small fiber neuropathy in order to diagnose the condition.
6. To differentiate the cause of postural tachycardiasyndrome.
7. To evaluate change in type, distribution, or severity of autonomic deficits in patients with autonomic failure.
8. To evaluate the response to treatment in patients with autonomic failure who demonstrate a change in clinical exam.
9. To diagnose axonal neuropathy or suspected autonomic neuropathy in the symptomatic patient.
10. To evaluate and treat patients with recurrent unexplained syncope to demonstrate autonomic failure, after more common causes have been excluded by other standard testing.

Equipment for Autonomic Nervous System Studies

General professional standards apply for all equipment. Unknown algorithms untested on the Medicare population in systematic trials do not constitute the professional component of diagnostic testing. Equipment with FDA clearance for heart rate variability measurements in response to paced respirations and exercises that tests only heart rate variability does not meet the full range of testing parameters required for the performance of 95921 and 95922 and does not ensure full test requirements, such as blood pressure monitoring, nor do they incorporate proper testing conditions, such as the use of a tilt table. Providers may be asked to supply information on the equipment used to perform autonomic nervous system studies to ensure that all studies performed meet the requirements of the procedure.

Limitations:

 Syndromes of autonomic dysfunction for which ANS testing might add valuable clinical information are relatively rare. Generally, only after excluding more common causes of autonomic signs or symptoms (e.g., hypotension, hyperhidrosis, and orthostatic tachycardia) may formal autonomic testing be indicated to exclude or confirm autonomic disorders. The following indications are not considered medically reasonable and necessary and will not be covered:

- To screen patients without signs or symptoms of autonomic dysfunction, including patients with diabetes, hepatic or renal disease;
- Testing for the sole purpose of monitoring disease intensity or treatment efficacy in diabetes, hepatic or renal disease;
- Testing where the results are not used in clinical decision-making and patient management;
- Testing performed by physicians who do not have evidence of training, and expertise to perform and interpret these tests. Testing must be done for an accepted clinical indication by a properly trained
examiner and interpreted by qualified individuals within their scope of practice (weekend courses may not
demonstrate expertise). Physicians must have knowledge, training, and expertise to perform and interpret
these tests, and to assess and train personnel working with them. This training and expertise must have
been acquired within the framework of an accredited residency and/or fellowship program or must reflect
extensive continued medical education activities. If these skills have been acquired by way of continued
medical education, the courses must be comprehensive, and designated for the American Medical
Association (AMA) category I credit by an ACCME (Accreditation Council for Continuing Medical Education)
or SMS (State Medical Society) accredited CME provider.

CPT code 95943, for example Ansar (ANX 3.0), is not medically reasonable and necessary since it is not proven
that this type of testing is at least as beneficial as existing and available medically appropriate testing
alternatives. The clinical validity and clinical utility of these technologies have not been established. The
qualifications of the personnel performing the testing are not standardized. If a physician finds that this non-
standardized component information of autonomic function testing is useful in a patient assessment and clinical
decision making given certain patient risks/signs/symptoms, this would be included in the physician’s basic
evaluation and management service and not separately covered. When patients have significant symptoms, the
primary physician should consider referring to the appropriate specialist or subspecialist for testing.

Summary of Evidence

N/A

Analysis of Evidence (Rationale for Determination)

N/A

Coding Information

Bill Type Codes:

Contractors may specify Bill Types to help providers identify those Bill Types typically used to report this service.
Absence of a Bill Type does not guarantee that the policy does not apply to that Bill Type. Complete absence of all
Bill Types indicates that coverage is not influenced by Bill Type and the policy should be assumed to apply equally
to all claims.

012x Hospital Inpatient (Medicare Part B only)
013x Hospital Outpatient
071x Clinic - Rural Health
085x Critical Access Hospital

Revenue Codes:

Contractors may specify Revenue Codes to help providers identify those Revenue Codes typically used to report
this service. In most instances Revenue Codes are purely advisory. Unless specified in the policy, services
reported under other Revenue Codes are equally subject to this coverage determination. Complete absence of all
Revenue Codes indicates that coverage is not influenced by Revenue Code and the policy should be assumed to
apply equally to all Revenue Codes.

092X Other Diagnostic Services - General Classification

CPT/HCPCS Codes

Group 1 Paragraph: N/A

Group 1 Codes:
TESTING OF AUTONOMIC NERVOUS SYSTEM FUNCTION; CARDIOVAGAL INNERVATION (PARASYMPATHETIC FUNCTION), INCLUDING 2 OR MORE OF THE FOLLOWING: HEART RATE RESPONSE TO DEEP BREATHING WITH RECORDED R-R INTERVAL, VALSALVA RATIO, AND 30:15 RATIO

TESTING OF AUTONOMIC NERVOUS SYSTEM FUNCTION; VASOMOTOR ADRENERGIC INNERVATION (SYMPATHETIC ADRENERGIC FUNCTION), INCLUDING BEAT-TO-BEAT BLOOD PRESSURE AND R-R INTERVAL CHANGES DURING VALSALVA MANEUVER AND AT LEAST 5 MINUTES OF PASSIVE TILT

TESTING OF AUTONOMIC NERVOUS SYSTEM FUNCTION; SUDOMOTOR, INCLUDING 1 OR MORE OF THE FOLLOWING: QUANTITATIVE SUDOMOTOR AXON REFLEX TEST (QSART), SILASTIC SWEAT IMPRINT, THERMOREGULATORY SWEAT TEST, AND CHANGES IN SYMPATHETIC SKIN POTENTIAL

TESTING OF AUTONOMIC NERVOUS SYSTEM FUNCTION; COMBINED PARASYMPATHETIC AND SYMPATHETIC ADRENERGIC FUNCTION TESTING WITH AT LEAST 5 MINUTES OF PASSIVE TILT

ICD-10 Codes that Support Medical Necessity

**Group 1 Paragraph:** N/A

**Group 1 Codes:**

<table>
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<th>ICD-10 Code</th>
<th>Description</th>
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<td>E10.40 - E10.49</td>
<td>Type 1 diabetes mellitus with diabetic neuropathy, unspecified - Type 1 diabetes mellitus with other diabetic neurological complication</td>
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<tr>
<td>E10.610</td>
<td>Type 1 diabetes mellitus with diabetic neuropathic arthropathy</td>
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<tr>
<td>E11.40 - E11.49</td>
<td>Type 2 diabetes mellitus with diabetic neuropathy, unspecified - Type 2 diabetes mellitus with other diabetic neurological complication</td>
</tr>
<tr>
<td>E11.610</td>
<td>Type 2 diabetes mellitus with diabetic neuropathic arthropathy</td>
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<tr>
<td>E11.65</td>
<td>Type 2 diabetes mellitus with hyperglycemia</td>
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<td>E85.0</td>
<td>Non-neuropathic heredofamilial amyloidosis</td>
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<td>E85.1</td>
<td>Neuropathic heredofamilial amyloidosis</td>
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<td>E85.3</td>
<td>Secondary systemic amyloidosis</td>
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<td>E85.81 - E85.89</td>
<td>Light chain (AL) amyloidosis - Other amyloidosis</td>
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<tr>
<td>G23.0</td>
<td>Hallervorden-Spatz disease</td>
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<td>G23.1</td>
<td>Progressive supranuclear ophthalmoplegia [Steele-Richardson-Olszewski]</td>
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<td>G23.2</td>
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<td>G60.8</td>
<td>Other hereditary and idiopathic neuropathies</td>
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<td>G60.9</td>
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<td>G90.09</td>
<td>Other idiopathic peripheral autonomic neuropathy</td>
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<td>Complex regional pain syndrome I, unspecified - Complex regional pain syndrome I of other specified site</td>
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<td>I95.1</td>
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<td>R55</td>
<td>Syncope and collapse</td>
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<td>Generalized hyperhidrosis</td>
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ICD-10 Codes that DO NOT Support Medical Necessity

**Additional ICD-10 Information**

N/A
General Information

Associated Information

Documentation Requirements

General professional standards with FDA clearance apply for all equipment used in ANS testing. Providers may be asked to supply information on the equipment used to perform ANS studies to ensure all studies performed meet the requirements of the procedure.

Medical record documentation maintained by the performing provider must clearly support the medical necessity for ANS testing as well as the test reports and interpretation. Supportive documentation showing medically reasonable and necessary indications as outlined in this LCD are expected to be documented in the medical record and be available upon request. This documentation includes, but is not limited to, relevant medical history, physical examination, results of pertinent diagnostic tests or procedures, and after more common causes of autonomic signs or symptoms have been excluded (see limitations section of LCD).

The CMS Manual System, Pub. 100-08, Program Integrity Manual, Chapter 13, Section 5.1 (http://www.cms.hhs.gov/manuals/downloads/pim83c13.pdf outlines that "reasonable and necessary" services are "ordered and/or furnished by qualified personnel."

A qualified physician for this service/procedure is defined as follows: A) Physician is properly enrolled in Medicare. B) Training and expertise must have been acquired within the framework of an accredited residency and/or fellowship program in the applicable specialty/subspecialty in the United States or must reflect equivalent education, training, and expertise endorsed by an academic institution in the United States and/or by the applicable specialty/subspecialty society in the United States.

If the provider of the ANS studies is other than the ordering/referring physician/nonphysician practitioner, the provider of the service must maintain a copy of the test results and interpretation, along with copies of the ordering/referring physician/nonphysician practitioner’s order for the studies.

Utilization Guidelines

Diagnostic testing may be allowed once to confirm or exclude specific autonomic disease. For patients with diagnosed autonomic disorders, repeat testing is governed by a change in clinical status or response to a therapeutic intervention. If a repeat test is needed, it is not expected to exceed once per year.

Providers who perform these tests on an unusually high proportion of their patients, or at frequencies exceeding once per year may be subject to medical review.

Sources of Information

First Coast Service Options, Inc. reference LCD number(s) – L31461


**Bibliography**

N/A

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**Revision History Information**

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<th>Revision History Number</th>
<th>Revision History Explanation</th>
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<tr>
<td>10/01/2017</td>
<td>R1</td>
<td><strong>Revision Number: 1</strong></td>
<td>Revisions Due To ICD-10-CM Code Changes</td>
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<td></td>
<td>Publication: September 2017 Connection LCRA/B2017-038</td>
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<td><strong>Explanation of Revision:</strong> Based on CR 10153 (Annual 2018 ICD-10-CM Update) the LCD was revised. Added ICD-10-CM diagnosis codes E85.81 – E85.89. Deleted ICD-10-CM diagnosis code E85.8. The effective date of this revision is based on date of service.</td>
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<td>10/01/2017</td>
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<td>10/01/2017: At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination and therefore not all the fields included on the LCD are applicable as noted in this policy.</td>
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Associated Documents

Attachments
Coding guidelines (PDF - 136 KB)

Related Local Coverage Documents
N/A

Related National Coverage Documents
N/A

Public Version(s)
Updated on 09/22/2017 with effective dates 10/01/2017 - N/A
Updated on 07/01/2014 with effective dates 10/01/2015 - N/A
Updated on 03/21/2014 with effective dates 10/01/2015 - N/A

Keywords
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