Geisinger

Geisinger Health Plan Policies and Procedure Manual

Policy: MP118

Section: Medical Benefit Policy

Subject: Quantitative Sensory Testing

Applicable Lines of Business

Commercial	**X**	**CHIP**	**X**
Medicare	**X**	**ACA**	**X**
Medicaid	**X**		

I. Policy: Quantitative Sensory Testing (aka: Current Perception Threshold (CPT); Sensory Nerve Conduction Testing (sNCT)

II. Purpose/Objective:

To provide a policy of coverage regarding Quantitative Sensory Testing

III. Responsibility:

A. Medical Directors

B. Medical Management Department

IV. Required Definitions

1. Attachment – a supporting document that is developed and maintained by the policy writer or department requiring/authoring the policy.
2. Exhibit – a supporting document developed and maintained in a department other than the department requiring/authoring the policy.
3. Devised – the date the policy was implemented.
4. Revised – the date of every revision to the policy, including typographical and grammatical changes.
5. Reviewed – the date documenting the annual review if the policy has no revisions necessary.

V. Additional Definitions

Medical Necessity or Medically Necessary means Covered Services rendered by a Health Care Provider that the Plan determines are:

a. appropriate for the symptoms and diagnosis or treatment of the Member's condition, illness, disease or injury;
b. provided for the diagnosis, and the direct care and treatment of the Member's condition, illness disease or injury;
c. in accordance with current standards of good medical treatment practiced by the general medical community;
d. not primarily for the convenience of the Member, or the Member's Health Care Provider; and the most appropriate source or level of service that can safely be provided to the Member. When applied to hospitalization, this further means that the Member requires acute care as an inpatient due to the nature of the services rendered or the Member's condition, and the Member cannot receive safe or adequate care as an outpatient.

Medicaid Business Segment

Medically Necessary — A service, item, procedure, or level of care that is necessary for the proper treatment or management of an illness, injury, or disability is one that:

- Will, or is reasonably expected to, prevent the onset of an illness, condition, injury or disability.
- Will, or is reasonably expected to, reduce or ameliorate the physical, mental or developmental effects of an illness, condition, injury or disability.

- Will assist the Member to achieve or maintain maximum functional capacity in performing daily activities, taking into account both the functional capacity of the Member and those functional capacities that are appropriate for Members of the same age.

DESCRIPTION:
Quantitative sensory testing (QST), also known as Current Perception Testing (CPT) or Sensory Nerve Conduction Testing (sNCT) is a non-invasive functional test reported to provide a measurement of peripheral sensory nerve integrity. Using transcutaneous electrical stimulation (Neurontron), thermal stimulation, or vibratory stimulation (Vibrometer), measurements are recorded as a means of quantifying the sensory threshold.

EXCLUSIONS: The Plan does **NOT** provide coverage for the use of devices, including but not limited to current perception testing, voltage-actuated sensory threshold testing, and pressure-specified device testing because it is considered **unproven** and therefore **NOT COVERED.** The Geisinger Technology Assessment Committee evaluated this technology and concluded that there is insufficient evidence in the peer-reviewed published medical literature to establish the effectiveness of this test on health outcomes when compared to established tests or technologies.

Note: A complete description of the process by which a given technology or service is evaluated and determined to be experimental, investigational or unproven is outlined in **MP 15 - Experimental Investigational or Unproven Services or Treatment.**

Medicaid Business Segment:
Any requests for services that do not meet criteria set in the PARP may be evaluated on a case by case basis

CODING ASSOCIATED WITH: Quantitative Sensory Testing
The following codes are included below for informational purposes and may not be all inclusive. Inclusion of a procedure or device code(s) does not constitute or imply coverage nor does it imply or guarantee provider reimbursement. Coverage is determined by the member specific benefit plan document and any applicable laws regarding coverage of specific services. Please note that per Medicare coverage rules, only specific CPT/HCPCS Codes may be covered for the Medicare Business Segment. Please consult the CMS website at www.cms.gov ***or the local Medicare Administrative Carrier (MAC) for more information on Medicare coverage and coding requirements.***

G0255	(sNCT), per limb, any nerve
0106T	Quantitative sensory testing (QST), testing and interpretation per extremity; using touch pressure stimuli to assess large diameter sensation
0107T	Quantitative sensory testing (QST), testing and interpretation per extremity; using vibration stimuli to assess large diameter fiber sensation
0108T	Quantitative sensory testing (QST), testing and interpretation per extremity; using cooling stimuli to assess small nerve fiber sensation and hyperalgesia.
0109T	Quantitative sensory testing (QST), testing and interpretation per extremity; using heat-pain stimuli to assess small nerve fiber sensation and hyperalgesia.
0110T	Quantitative sensory testing (QST), testing and interpretation per extremity; using other stimuli to assess sensation.
95905	Motor and/or sensory nerve conduction, using preconfigured electrode array(s), amplitude and latency/velocity stud, each limb, includes F-wave study when performed, with interpretation and report.
G0255	Current perception threshold/sensory nerve conduction test (sNCT), per limb, any nerve

LINE OF BUSINESS:
Eligibility and contract specific benefits, limitations and/or exclusions will apply. Coverage statements found in the line of business specific benefit document will supersede this policy. For Medicare, applicable LCD's and NCD's will supercede this policy. For PA Medicaid Business segment, this policy applies as written.

REFERENCES:
Geisinger Clinic Technology Assessment Triage Group, "Quantitative Sensory Testing", Sept. 2003.

Freeman R, Chase KP, Risk MR, " Quantitative sensory testing cannot differentiate simulated sensory loss from sensory neuropathy", Neurology. 60:465-470. Feb. 2003.

Dyck PJ, Dyck PJB, Kennedy WR, et. al. ,"Limitations of quantitative sensory testing when patients are biased toward a bad outcome", Neurology. 50(5):1213. May 1998.

American Association of Electrodiagnostic Medicine Technology Review: The Neurometer Current Perception Threshold http://www.aaem.net/aaem/practiceissues/TechnologyReviews/Neurometerpage1.cfm

Pitei DL, Watkins PJ, Stevens MJ, Edmonds ME, “The value of the Neurometer in assessing diabetic neuropathy by measurement of the current perception threshold.” Diabet Med. 1994 Nov;11(9):872-6.

Tack CJ, Netten PM, Scheepers MH, Meijer JW, Smits P, Lutterman J.,” Comparison of clinical examination, current and vibratory perception threshold in diabetic polyneuropathy. Neth J Med. 1994 Feb;44(2):41-9

Nasseri K, Strijers RL, Dekhuijzen LS, Buster M, Bertelsmann FW,” Reproducibility of different methods for diagnosing and monitoring diabetic neuropathy”. Electromyogr Clin Neurophysiol. 1998 Jul-Aug;38(5):295-9.

Menkes DL, Swenson MR, Sander HW,” Current perception threshold: an adjunctive test for detection of acquired demyelinating polyneuropathies”, Electromyogr Clin Neurophysiol. 2000 Jun;40(4):205-10.

Yamashita T. Kanaya K. Sekine M. Takebayashi T. Kawaguchi S. Katahira G.,” A quantitative analysis of sensory function in lumbar radiculopathy using current perception threshold testing.” Spine. 27(14):1567-70, 2002 Jul 15.

Siao P, Cros DP.” Quantitative sensory testing.” Phys Med Rehabil Clin N Am. 2003 May;14(2):261-86.

Alberto Martinez-Arizala, MD, “Methods to measure sensory function in humans versus animals.”, Journal of Rehabilitation Research and Development. Vol. 40 No. 4, July/August 2003, Supplement Pages 35 — 40

CMS National Coverage Determination (CAG#-00106N), Electrodiagnostic Sensory Nerve Conduction Threshold. Feb. 14, 2002.

CMS National Coverage Database, National Coverage Determination for Sensory Nerve Conduction Threshold Test (sNCT). April 1, 2004

ECRI Hotline. Current perception Threshold (CPT)/ Sensory Nerve Conduction Threshold (sNCT) Tests. ECRI Online. May 5, 2005.

Shy ME, Frohman EM, So YT, Arezzo JC, Cornblath DR, Giuliani MJ, Kincaid JC, Ochoa JL, Parry GJ, Weimer LH. “Quantitative Sensory Testing: Report of Therapeutics and Technology Assessment Subcomittee of the American Academy of Neurology.” Neurology 2003; 60:898-904

Yilmaz U, Ciol MA, Berger RE, Yang CC. Sensory perception thresholds in men with chronic pelvic pain syndrome. Urology. 2010;75(1):34-37.

Liao MF, Lee M, Hsieh MJ, et al. Evaluation of the pathophysiology of classical trigeminal neuralgia by blink reflex study and current perception threshold testing. J Headache Pain. 2010;11(3):241-246.

Katz NP, Paillard FC, Edwards RR. Review of the performance of quantitative sensory testing methods to detect hyperalgesia in chronic pain patients on long-term opioids. Anesthesiology. 2015;122(3):677-685

Vuilleumier PH, Biurrun Manresa JA, Ghamri Y, et al. Reliability of quantitative sensory tests in a low back pain population. Reg Anesth Pain Med. Nov-Dec 2015;40(6):665-673

Ahmad S, De Oliveira GS, Jr., Bialek JM, et al. Thermal quantitative sensory testing to predict postoperative pain outcomes following gynecologic surgery. Pain Med. May 2014;15(5):857-864.

Marcuzzi A, Dean CM, Wrigley PJ, et al. Prognostic value of quantitative sensory testing in low back pain: A systematic review of the literature. J Pain Res. 2016;9:599-607.

Cho YW, Kang MS, Kim KT, et al. Quantitative sensory test for primary restless legs syndrome/Willis-Ekbom disease using the current perception threshold test. Sleep Med. 2017;30:19-23

Azzopardi K, Gatt A, Chockalingam N, et al. Hidden dangers revealed by misdiagnosed diabetic neuropathy: A comparison of simple clinical tests for the screening of vibration perception threshold at primary care level. Prim Care Diabetes. Apr 2018;12(2):111-115.

Goel A, Shivaprasad C, Kolly A, et al. Comparison of electrochemical skin conductance and vibration perception threshold measurement in the detection of early diabetic neuropathy. PLoS One. Sep 2017;12(9):e0183973.

Roldan CJ, Johnson C, Lee SO, et al. Subclinical peripheral neuropathy in patients with head and neck cancer: A quantitative sensory testing (QST) study. Pain Physician. 2018;21(4):E419-E427

Delmotte JB, Beaussier H, Auzeil N, et al. Is quantitative sensory testing helpful in the management of oxaliplatin neuropathy? A two-year clinical study. Cancer Treat Res Commun. 2018;17:31-36

Martland ME, Rashidi AS, Bennett MI, et al. The use of quantitative sensory testing in cancer pain assessment: A systematic review. Eur J Pain. 2019 Dec 10

Billig SCI, Schauermann JC, Rolke R, et al. Quantitative sensory testing predicts histological small fiber neuropathy in postural tachycardia syndrome. Neurol Clin Pract. 2020;10(5):428-434.

van Helmond N, Aarts HM, Timmerman H, et al. Is preoperative quantitative sensory testing related to persistent postsurgical pain? A systematic literature review. Anesth Analg. 2020;131(4):1146-1155.

Vaughan S, McGlone F, Poole H, Moore DJ. A quantitative sensory testing approach to pain in autism spectrum disorders. J Autism Dev Disord. 2020;50(5):1607-1620.

Braun M, Bello C, Riva T, et al. Quantitative sensory testing to predict postoperative pain. Curr Pain Headache Rep. 2021;25(1):3.

Petersen KK, Vaegter HB, Stubhaug A, et al. The predictive value of quantitative sensory testing: A systematic review on chronic postoperative pain and the analgesic effect of pharmacological therapies in patients with chronic pain. Pain. 2021;162(1):31-44.

Paredes AC , Pinto JM, Almeida A, Pinto PR. Predictive value of quantitative sensory testing for acute and chronic postsurgical pain after total joint arthroplasty: A systematic review. Pain. 2022;163(3):e385-e400.

Arant KR, Katz JN, Neogi T. Quantitative sensory testing: Identifying pain characteristics in patients with osteoarthritis. Osteoarthritis Cartilage. 2022;30(1):17-31

Dams L, Haenen V, Van der Gucht E, et al. Absolute and relative reliability of a comprehensive quantitative sensory testing protocol in women treated for breast cancer. Pain Med. 2022;23(6):1162-1175.

Trouvin A-P, Attal N, Perrot S. Assessing central sensitization with quantitative sensory testing in inflammatory rheumatic diseases: A systematic review. Joint Bone Spine. 2022;89(5):105399.

Bilika P, Paliouras A, Savvoulidou K, et al. Psychometric properties of quantitative sensory testing in healthy and patients with shoulder pain: A systematic review. J Musculoskelet Neuronal Interact. 2023;23(1):145-164

Kmiecik MJ, Tu FF, Clauw DJ, Hellman KM. Multimodal hypersensitivity derived from quantitative sensory testing predicts pelvic pain outcome: An observational cohort study. Pain. 2023;164(9):2070-2083.

Coxon L, Vollert J, Perro D, et al. Comprehensive quantitative sensory testing shows altered sensory function in women with chronic pelvic pain: Results from the Translational Research in Pelvic Pain (TRiPP) Study. Pain. 2023;164(11):2528-2539.

Li R, Holley AL, Palermo TM, et al. Feasibility and reliability of a quantitative sensory testing protocol in youth with acute musculoskeletal pain postsurgery or postinjury. Pain. 2023;164(7):1627-1638.

This policy will be revised as necessary and reviewed no less than annually.

Devised: 10/03

Revised: 10/04(added reference), 09/05 (add reference, expanded exclusions);9/06; 9/10(coding/refs)

Reviewed: 10/07, 10/08, 10/09, 9/11, 9/12, 9/13, 9/14, 9/15, 9/16, 8/17, 8/18, 8/19, 8/20, 8/21, 8/22, 8/23, 8/24

CMS UM Oversight Committee Approval: 12/23; 11/8/24

Geisinger Health Plan may refer collectively to health care coverage sponsors Geisinger Health Plan, Geisinger Quality Options, Inc., and Geisinger Indemnity Insurance Company, unless otherwise noted. Geisinger Health Plan is part of Geisinger, an integrated health care delivery and coverage organization.

Coverage for experimental or investigational treatments, services and procedures is specifically excluded under the member's certificate with Geisinger Health Plan. Unproven services outside of an approved clinical trial are also specifically excluded under the member's certificate with Geisinger Health Plan. This policy does not expand coverage to services or items specifically excluded from coverage in the member's certificate with Geisinger Health Plan. Additional information can be found in MP015 Experimental, Investigational or Unproven Services.

Prior authorization and/or pre-certification requirements for services or items may apply. Pre-certification lists may be found in the member's contract specific benefit document. Prior authorization requirements can be found at https://www.geisinger.org/health-plan/providers/ghp-clinical-policies