

Geisinger Health Plan Policies and Procedure Manual

Policy: MP234

Section: Medical Benefit Policy

Subject: Occipital Nerve Stimulation

Applicable Lines of Business

Commercial	Х	CHIP	Х
Medicare	Х	ACA	X
Medicaid	Х		

I. Policy: Occipital Nerve Stimulation

II. Purpose/Objective:

To provide a policy of coverage regarding Occipital Nerve Stimulation

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:

Occipital nerve stimulation has been proposed for the treatment of patients with intractable headache that cannot be managed by alternative treatments. It involves the use of a neurostimulator to deliver low-voltage electrical impulses via insulated lead wires that run under the skin and up to the occipital nerve.

MEDICARE BUSINESS SEGMENT:

REQUIRES PRIOR AUTHORIZATION BY A PLAN MEDICAL DIRECTOR

Per CMS NCD 160.7, payment may be made under the prosthetic device benefit for implanted peripheral nerve stimulators.

EXCLUSIONS:

The Plan does **NOT** provide coverage for occipital nerve stimulation as a treatment for any indication including but not limited to intractable headache because it is considered **experimental**, **investigational or unproven**. 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.

<u>Note:</u> 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: Occipital Nerve Stimulation

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

- 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 2 or more electrode arrays
- 64553 Percutaneous implantation of neurostimulator electrodes; cranial nerve
- 64555 Percutaneous implantation of neurostimulator electrodes; peripheral nerve
- 64575 Incision for implantation of neurostimulator electrodes; peripheral nerve
- 64590 Insertion or replacement of peripheral or gastric neurostimulator, pulse generator or receiver, direct or inductive coupling
- 95970 Electronic analysis in 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 compliance measurements); simple or complex brain, spinal cord, or peripheral (ie, cranial nerve, peripheral nerve, autonomic nerve, neuromuscular) Neurostimulator pulse generator/transmitter, without reprogramming
- 95975 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 compliance measurements); complex cranial nerve neurostimulator pulse generator/transmitter, with intraoperative or subsequent programming, each additional 30 minutes after first hour
- 95978 Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude and duration, battery status, electrode selectability and polarity, impedance and patient compliance measurements), complex deep brain neurostimulator pulse generator/transmitter, with initial or subsequent programming; first hour
- 95979 Electronic analysis of implanted neurostimulator pulse generator system (eg, rate, pulse amplitude and duration, battery status, electrode selectability and polarity, impedance and patient compliance measurements), complex

deep brain neurostimulator pulse generator/transmitter, with initial or subsequent programming; each additional 30 minutes after first hour

- L8679 Implantable neurostimulator, pulse generator, any type
- L8680 Implantable neurostimulator electrode, each
- L8681 patient programmer (external) for use with implantable programmable neurostimulator pulse generator, replacement only
- L8682 implantable neurostimulator radiofrequency receiver
- L8683 radiofrequency transmitter (external) for use with 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, nonrechargeable, includes extension
- L8689 external recharging system for battery (internal) for use with implantable neurostimulator, replacement only
- C1767 generator neurostimualtor (implantable) non-rechargable
- C1778 lead, neurostimulator
- C1787 patient programmer, neurostimulator
- C1816 receiver and/or transmitter neurostimulator (implantable)
- C1820 generator, neurostimulato (implantable), non high-frequency with rechargeable battery and charging system
- C1822 generator, neurostimulator (implantable), high frequency, with rechargeable battery and charging system
- C1897 lead neurostimulator test kit (implantable)
- Current Procedural Terminology (CPT®) © American Medical Association: Chicago, IL

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 Technology Assessment Triage Committee. Occipital Nerve Stimulation. August 19, 2009.

Kapural L, Mekhail N, Hayek SM, et al. Occipital nerve electrical stimulation via the midline approach and subcutaneous surgical leads for treatment of severe occipital neuralgia: A pilot study. Anesth Analg. 2005;101(1):171-174.

Slavin KV, Nersesyan H, Wess C. Peripheral neurostimulation for treatment of intractable occipital neuralgia. Neurosurgery. 2006;58(1):112-119.

Burns B, Watkins L, Goadsby PJ. Treatment of medically intractable cluster headache by occipital nerve stimulation: Long-term follow-up of eight patients. Lancet. 2007;369(9567):1099-1106.

Magis D, Allena M, Bolla M, et al. Occipital nerve stimulation for drug-resistant chronic cluster headache: A prospective pilot study. Lancet Neurol. 2007;6(4):314-321.

Schwedt TJ, Dodick DW, Hentz J, et al. Occipital nerve stimulation for chronic headache--long-term safety and efficacy. Cephalalgia. 2007;27(2):153-157.

Jasper JF, Hayek SM. Implanted occipital nerve stimulators. Pain Physician. 2008;11(2):187-200.

Goadsby PJ, Bartsch T, Dodick DW. Occipital nerve stimulation for headache: Mechanisms and efficacy. Headache. 2008;48(2):313-318.

Trentman TL, Zimmerman RS. Occipital nerve stimulation: Technical and surgical aspects of implantation. Headache. 2008;48(2):319-327.

Trentman TL, Rosenfeld DM, Vargas BB, Schwedt TJ, Zimmerman RS, Dodick DW. Greater occipital nerve stimulation via the Bion microstimulator: implantation technique and stimulation parameters. Clinical trial: NCT00205894. Pain Physician. 2009 May-Jun;12(3):621-8.

American Academy of Neurological Surgeons (AANS). Occipital Neuralgia. November 2006. Accessed July 23, 2009. Available at URL address: http://www.neurosurgerytoday.org/what/patient_e/occipital_neuralgia_06.asp

Weiner RL, Reed KL. Peripheral Neurostimulation for Control of Intractable Occipital Neuralgia. Neuromodulation 1999;2(3):, 217-221(5)

International Headache Society. Headache Classification Subcommittee. The international classification of headache disorders. Cephalgia. 2004; 24:115-6, 126-9.

Martelletti P, van Suijlekom H. Cervicogenic headache. Practical approaches to therapy. CNS drugs. 2004;18(12):793-805.

National Institute for Health and Clinical Evidence. Interventional procedure overview of occipital nerve stimulation for intractable headache. April 2008. Accessed July 10, 2009. Available at URL address: http://www.nice.org.uk/nicemedia/pdf/699 ONS overview for web 280708.pdf

Brewer, AC., Trentman, TL., Ivancic, MG., et al. Long-term outcome in occipital nerve stimulation patients with medically intractable primary headache disorders. Neuromodulation. 2012 Aug 6

Silberstein SD, Dodick DW, Saper J, et al. Safety and efficacy of peripheral nerve stimulation of the occipital nerves for the management of chronic migraine: Results from a randomized, multicenter, double-blinded, controlled study. Cephalalgia. 2012 Dec;32(16):1165-79

Dodick DW, Silberstein SD, Reed KL, et al. Safety and efficacy of peripheral nerve stimulation of the occipital nerves for the management of chronic migraine: Long-term results from a randomized, multicenter, double-blinded, controlled study. Cephalalgia. 2015; 35(4):344-358.

Rodrigo, D., Acin, P., & Bermejo, P. Occipital nerve stimulation for refractory chronic migraine: results of a long-term prospective study. Pain Physician, 2017;20 (1), E151-E159.

Miller S, Watkins L, Matharu M. Long-term outcomes of occipital nerve stimulation for chronic migraine: a cohort of 53 patients. J Headache Pain. 2016; 17(1):68.

Fontaine D, Blond S, Lucas C, et. al. Occipital nerve stimulation improves the quality of life in medically intractable chronic cluster headache: Results of a observational prospective study. Cephalalgia Oct 03 2016.

Centers for Medicare & Medicaid Services. National Coverage Determination (NCD) for Electrical Nerve Stimulators (160.7)

Miller S, Watkins L, Matharu M. Treatment of intractable chronic cluster headache by occipital nerve stimulation: a cohort of 51 patients. Eur J Neurol. Feb 2017;24(2):381-390

Miller S, Watkins L, Matharu M. Long-term follow up of intractable chronic short lasting unilateral neuralgiform headache disorders treated with occipital nerve stimulation. Cephalalgia. 2018 Apr;38(5):933-942.

Özer D, Bölük C, Türk Börü Ü, et al. Greater occipital and supraorbital nerve blockade for the preventive treatment of migraine: a single-blind, randomized, placebo-controlled study. Curr Med Res Opin. 2019 May;35(5):909-915

Cadalso RT Jr, Daugherty J, Holmes C, et. al. Efficacy of electrical stimulation of the occipital nerve in intractable primary headache disorders: a systematic review with meta-analyses. J Oral Facial Pain Headache Winter 2018:32(1):40-52.

Garcia-Ortega R, Edwards T, Moir L, et. al. Burst occipital nerve stimulation for chronic migraine and chronic cluster headache. Neuromodulation July 16, 2019

Leplus A, Fontaine D, Donnet A, et al. Long-Term Efficacy of Occipital Nerve Stimulation for Medically Intractable Cluster Headache. Neurosurgery. Jan 13 2021; 88(2): 375-383

Robinson IS, Salibian AA, Alfonso AR, et al. Surgical management of occipital neuralgia: a systematic review of the literature. Ann Plast Surg. 2021 Mar 1;86(3S Suppl 2):S322-S331.

ECRI. Nerivio Migra (Theranica Bioelectronics, Ltd.) Remote electrical neuromodulator for treating migraine headache. Plymouth Meeting (PA): ECRI; 2020 Oct 15.

Aibar-Durán JÁ, Álvarez Holzapfel MJ, Rodríguez R, et al. Occipital nerve stimulation and deep brain stimulation for refractory cluster headache: a prospective analysis of efficacy over time. J Neurosurg. 2020 Jan 17:1-8

Wilbrink LA, de Coo IF, Doesborg PGG, et al. ICON study group. Safety and efficacy of occipital nerve stimulation for attack prevention in medically intractable chronic cluster headache (ICON): a randomised, double-blind, multicentre, phase 3, electrical dose-controlled trial. Lancet Neurol. 2021; 20(7):515-525.

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

Devised: 08/2009

Revised: 7/17 (clarified Medicare/Medicaid coverage)

Reviewed: 9/10, 8/11, 8/12, 8/13, 8/14; 8/15; 7/16, 6/18, 7/19, 7/20, 7/21, 7/22, 7/23

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

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