Thalamotomy - MRI Guided Focus Ultrasound

LOB(s):	State(s):
☒ *Commercial* ☒ *Medicare*	☒ *Idaho* ☒ *Montana* ☒ *Oregon* ☒ *Washington* ☐ *Other:*
☒ *Medicaid*	☒ *Oregon*

Enterprise Policy

PacificSource is committed to assessing and applying current regulatory standards, widely-used treatment guidelines, and evidenced-based clinical literature when developing clinical criteria for coverage determination. Each policy contains a list of sources (references) that serves as the summary of evidence used in the development and adoption of the criteria. The evidence was considered to ensure the criteria provide clinical benefits that promote patient safety and/or access to appropriate care. Each clinical policy is reviewed, updated as needed, and readopted, at least annually, to reflect changes in regulation, new evidence, and advancements in healthcare.

Clinical Guidelines are written when necessary to provide guidance to providers and members in order to outline and clarify coverage criteria in accordance with the terms of the Member's policy. This Clinical Guideline only applies to PacificSource Health Plans, PacificSource Community Health Plans, and PacificSource Community Solutions in Idaho, Montana, Oregon, and Washington. Because of the changing nature of medicine, this list is subject to revision and update without notice. This document is designed for informational purposes only and is not an authorization or contract. Coverage determinations are made on a case-by-case basis and subject to the terms, conditions, limitations, and exclusions of the Member's policy. Member policies differ in benefits and to the extent a conflict exists between the Clinical Guideline and the Member's policy, the Member's policy language shall control. Clinical Guidelines do not constitute medical advice nor guarantee coverage.

Background

Movement disorders are a group of nervous system conditions that affect movement. They can cause either increased movements or reduced or slow movements. These movements may be under the person's control, known as voluntary or the movements may not be under the person's control, known as involuntary.

Thalamotomy is a surgical procedure that created lesions in the thalamus, a part of the brain that controls movement and relays sensory and motor signals, for the treatment of various forms of movement disorders such as Parkinson's disease, tremors, and dystonia.

MRI-guided focused ultrasound (MRgFUS) uses magnetic resonance (MRI) to locate the affected area of the brain, then uses focused sound waves to destroy the tissue.

Criteria

Commercial

Prior authorization is required

A. MRI-guided focused ultrasound (MRgFUS) Thalamotomy

PacificSource considers thalamotomy using MRI-guided focused ultrasound (MRgFUS) to be medically necessary when the **ALL** of the following criteria is met:

1. Unilateral thalamotomy
2. Diagnosis of essential tremors or tremor-dominant Parkinson's disease
3. Tremor is moderate to severe
4. Tremor refractory to 3 months or more of standard medication

Note: MRgFUS is not medically necessary for bilateral thalamotomy or staged bilateral thalamotomy

Medicaid

PacificSource Community Solutions follows the criteria hierarchy described in the Clinical Criteria Used in UM Decisions policy for coverage of Thalamotomy and considers services medically necessary when:

- The condition and service(s) pair on a funded line of the HERC Prioritized List of Health Services, and
- Any relevant Guideline criteria is met, and
- Service(s) are medically necessary and appropriate for the specific member.
- None of the limitations or exclusions outlined in OARs 410-141-3825 and 410-120-1200 apply.

Additional coverage options for unfunded conditions and services are provided as described in Covered Services OAR 410-141-3820.

PacificSource Community Solutions (PCS) follows the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) coverage requirements in OAR 410-151-0002 through 410-151-0003 for EPSDT beneficiaries. Relevant coverage guidance, including but not limited to Guideline Note 184, may be used to assist in informing a determination of medical necessity and medical appropriateness during the individual case review. A case-by-case review for EPSDT Medical Necessity and EPSDT Medical Appropriateness as defined in OAR 410-151-0001 is required prior to denying. Refer to the Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) policy for details.

Medicare

PacificSource Medicare uses Local Coverage Determination L37738 for Magnetic resonance image guided high intensity focused ultrasound (MRgFUS).

Experimental/Investigational/Unproven

PacificSource considers unilateral thalamotomy using MRI-guided focused ultrasound (MRgFUS) to be experimental, investigational, or unproven for any other indication.

Note: PacificSource Community Solutions and PacificSource Medicare require items listed on this policy's E/I/U list, to be reviewed by medical necessity review guidelines. Please see related policy, "*Clinical Criteria Used in UM Decisions*" to review criteria hierarchy and *"Medical Necessity Reviews*" for determination of coverage and medical necessity guidelines.

Coding Information

The following list of codes are for informational purposes only and may not be all-inclusive. Deleted codes and codes which are not effective at the time the service is rendered may not be eligible for reimbursement.

61715 Magnetic resonance image guided high intensity focused ultrasound (MRgFUS), stereotactic ablation of target, intracranial, including stereotactic navigation and frame placement, when performed

Definitions

Ataxia affects the part of the brain that controls coordinated movement.

Chorea causes brief, irregular, somewhat rapid, involuntary movements that happen over and over.

Dystonia is a condition that involves involuntary muscle contractions that cause twisting, irregular postures, or movements that occur again and again.

Essential Tremor is a neurological disorder that causes involuntary shaking or trembling in the body.

High-intensity focused ultrasound (**HIFU**) is a non-invasive therapeutic technique that uses non-ionizing ultrasonic waves to ablate cancer tissue in a focused area. Treatment of recurrent prostate cancer depends on factors such as the primary treatment method, extent of the cancer, and site of recurrence

Myoclonus are very quick jerks of a muscle.

Parkinson's disease causes tremors, muscle stiffness, slow or decreased movement, or loss of balance. It also can cause symptoms that are not related to movement.

Related Policies

Brain, Spinal Cord, and Peripheral Nerve Stimulators

Clinical Criteria Used in UM Decisions

Clinical Resources Used for Medical Necessity Determinations When No Other UM Clinical Criteria or Guideline Exists

Early and Periodic Screening, Diagnostic, and Treatment (EPSDT)

Epilepsy Treatment

References

American Academy of Neurology. Treatments for essential tremor. https://www.aan.com/globals/axon/assets/2585.pdf

Bond, A. E., Shah, B. B., Huss, D. S., Dallapiazza, R. F., Warren, A., Harrison, M. B., Sperling, S. A., Wang, X. Q., Gwinn, R., Witt, J., Ro, S., & Elias, W. J. (2017). Safety and Efficacy of Focused Ultrasound Thalamotomy for Patients With Medication-Refractory, Tremor-Dominant Parkinson

Disease: A Randomized Clinical Trial. JAMA neurology, 74(12), 1412–1418. https://doi.org/10.1001/jamaneurol.2017.3098

Boutet, A., Ranjan, M., Zhong, J., Germann, J., Xu, D., Schwartz, M. L., Lipsman, N., Hynynen, K., Devenyi, G. A., Chakravarty, M., Hlasny, E., Llinas, M., Lozano, C. S., Elias, G. J. B., Chan, J., Coblentz, A., Fasano, A., Kucharczyk, W., Hodaie, M., & Lozano, A. M. (2018). Focused ultrasound thalamotomy location determines clinical benefits in patients with essential tremor. Brain : a journal of neurology, 141(12), 3405–3414. https://doi.org/10.1093/brain/awy278

Ferreira, J. J., Mestre, T. A., Lyons, K. E., Benito-León, J., Tan, E. K., Abbruzzese, G., Hallett, M., Haubenberger, D., Elble, R., Deuschl, G., & MDS Task Force on Tremor and the MDS Evidence Based Medicine Committee (2019). MDS evidence-based review of treatments for essential tremor. Movement disorders : official journal of the Movement Disorder Society, 34(7), 950–958. https://doi.org/10.1002/mds.27700

Fishman P. S. (2017). Thalamotomy for essential tremor: FDA approval brings brain treatment with FUS to the clinic. Journal of therapeutic ultrasound, 5, 19. https://doi.org/10.1186/s40349-017-0096-9

Hayes Knowledge Center. (Jan 19, 2024). Health Technology Assessment: Magnetic Resonance-Guided Focused Ultrasound Unilateral Thalamotomy for Essential Tremor https://evidence.hayesinc.com/report/htb.mrgfusesstremor4408

MCG- GRG: SG-NS (ISC GRG), Neurosurgery or Procedure GRG, MCG Health, LLC https://careweb.careguidelines.com/ed28/

Minsoo, K., Na Young, J., Chang, P., Won, C., Hyun, J., & Jin, C. (August 16, 2017). Comparative evaluation of Magnetic Resonance-guided focused ultrasound surgery for essential tremor | stereotactic and Functional Neurosurgery | Karger publishers. Stereotactic and Functional Neurosurgery. https://karger.com/sfn/article-abstract/95/4/279/293599/Comparative-Evaluation-of-Magnetic-Resonance?redirectedFrom=fulltext

Oregon Health Authority. The Health Evidence Review Commission (HERC) Prioritized List of Health Services https://www.oregon.gov/oha/HSD/OHP/Pages/Prioritized-List.aspx

Oregon Health Authority. Oregon Administrative Rules (OARs). Health Systems: Medical Assistance Programs – Chapter 410 https://secure.sos.state.or.us/oard/displayChapterRules.action?selectedChapter=87

Paff, M., Boutet, A., Germann, J., Elias, G. J. B., Chow, C. T., Loh, A., Kucharczyk, W., Fasano, A., Schwartz, M. L., & Lozano, A. M. (2021). Focused Ultrasound Thalamotomy Sensory Side Effects Follow the Thalamic Structural Homunculus. Neurology. Clinical practice, 11(4), e497–e503. https://doi.org/10.1212/CPJ.0000000000001013

Appendix

Policy Number:

Effective: 11/21/2024 **Next review:** 1/1/2027

Policy type: Enterprise

Author(s):

Depts: Health Services

Applicable regulation(s): OARs 410-120-1200, 410-141-3820, 410-141-3825, 410-151-0001, 410-151-0002, 410-151-0003
Guideline Note 173

OPs approval: 12/2025