

Medical Policy

Bone Growth Stimulators

Policy Number: 09

	Commercial and Qualified Health Plans	Mass General Brigham ACO	Medicare Advantage	OneCare	Senior Care Options (SCO)
Authorization required	X	X	X	X	X
No notification or authorization					

Overview

The purpose of this document is to describe the guidelines Mass General Brigham Health Plan utilizes to determine medical appropriateness for bone growth stimulation. Coverage for the use of bone growth stimulation requires prior authorization. Mass General Brigham Health Plan does not cover invasive electrical bone growth stimulators.

Coverage Guidelines

Medical necessity for bone growth stimulators is determined through InterQual® criteria, which Mass General Brigham Health Plan has customized by adding CPT codes 20974 and 20979. To access the InterQual® Criteria Lookup Tool, log into Mass General Brigham Health Plan's Provider website at MassGeneralBrighamHealthPlan.org. Mass General Brigham Health Plan covers certain types of bone growth stimulation when recommended by the member's primary care provider or referring specialist and when the request meets medical necessity criteria.

Medicare Variation

Mass General Brigham Health Plan uses guidance from the Centers for Medicare and Medicaid Services (CMS) for medical necessity determinations for its Medicare Advantage plan members. National Coverage Determinations (NCDs), Local Coverage Determinations (LCDs), Local Coverage Articles (LCAs), and documentation included in the Medicare manuals are the basis for medical necessity determinations. When there is no guidance from CMS for the requested service, Mass General Brigham Health Plan's medical policies are used for medical necessity determinations. At the time of Mass General Brigham Health Plan's most recent policy review, Medicare includes coverage guidelines for the following:

- [NCD - Osteogenic Stimulators \(150.2\)](#)
- [LCD - Osteogenesis Stimulators \(L33796\)](#)
- [Article - Osteogenesis Stimulators - Policy Article \(A52513\)](#)

MassHealth Variation

Mass General Brigham Health Plan uses guidance from MassHealth for medical necessity determinations for its Mass General Brigham ACO members. When there is no guidance from MassHealth for the requested service, Mass General Brigham Health Plan's medical policies are used for medical necessity determinations. **At the time of Mass General Brigham Health Plan's most recent policy review, MassHealth had no medical necessity guidelines for bone growth stimulators.**

OneCare and SCO Variation

Mass General Brigham Health Plan uses guidance from CMS for medical necessity determinations for its OneCare and SCO plan members. NCDs, LCDs, LCAs, and documentation included in the Medicare manuals are the basis for medical necessity determinations. When there is no guidance from CMS for the requested service,

Mass General Brigham Health Plan uses medical necessity guidelines from MassHealth. When there is no guidance from CMS or from MassHealth, Mass General Brigham Health Plan's medical policies are used for medical necessity determinations.

Codes

The following codes are included below for informational purposes only; inclusion of a code does not constitute or imply coverage.

Authorized CPT/HCPCS Codes	Code Description
20974	Electrical stimulation to aid bone healing; noninvasive (nonoperative)
20979	Low intensity ultrasound stimulation to aid bone healing, noninvasive (nonoperative)
E0747	Osteogenesis stimulator, electrical, noninvasive , other than spinal applications
E0748	Osteogenesis stimulator, electrical, noninvasive , spinal applications
E0760	Osteogenesis stimulator, low intensity ultrasound, noninvasive

Effective

January 2026: Ad hoc update. Updated prior authorization table and added variation for OneCare and SCO members. Clarified MassHealth Variation.

August 2025: Annual update. Clarified MassHealth Variation. Fixed typos. Added links to CMS documents. Updated code disclaimer.

December 2024: Ad hoc update. Added customized InterQual criteria. Added MassHealth Variation.

August 2024: Annual update.

August 2023: Annual update. Medicare Advantage added to table. Medicare Variation language added. References updated.

August 2022: Annual update. References updated.

September 2021: Annual update. Revised coverage guidelines section. Removed the Exclusions and Definitions sections.

August 2020: Annual update.

June 2019: Annual update. References updated.

June 2018: Annual update.

April 2018: Ad hoc update. Added codes.

February 2017: Annual update. Adopted InterQual® criteria.

October 2016: Annual update.

October 2015: Annual update. No substantial change in the literature.

October 2014: Annual update. No substantial changes in medically necessary indicators.

August 2013: Annual update. Added invasive bone growth stimulators to exclusions after literature and independent practitioner review.

August 2012: Annual update. No changes.

August 2011: Effective date.

References

Behrens S, Deren M, Monchik KO. A review of bone growth stimulation for fracture treatment. *Current Orthopaedic Practice*. 2013; 24: 1.



Centers for Medicare and Medicaid Services. National Coverage Determination (NCD): Osteogenic Stimulators (150.2). Implementation Date 08/01/2005. Available: <https://www.cms.gov/medicare-coverage-database/search.aspx>

Noridian Healthcare Solutions, LLC. Local Coverage Determination (LCD): Osteogenesis Stimulators (L33796). Revision Effective Date: 07/02/2023. Available: <https://med.noridianmedicare.com/web/jddme/policies/lcd/active>

Noridian Healthcare Solutions, LLC. Local Coverage Article: Osteogenesis Stimulators– Policy Article (A52513). Revision Effective Date: 07/02/2023. Available: <https://med.noridianmedicare.com/web/jddme/policies/lcd/active>

Griffin XL, Smith N, Parsons N, Costa ML. Ultrasound and shockwave therapy for acute fractures in adults (review). The Cochrane Collaboration. (2012).

Han JJ, Yang HJ, Hwang SJ. Enhanced Bone Regeneration by Bone Morphogenetic Protein-2 after Pretreatment with Low-Intensity Pulsed Ultrasound in Distraction Osteogenesis. *Tissue Eng Regen Med*. 2022 Aug;19(4):871-886. doi: 10.1007/s13770-022-00457-1. Epub 2022 May 20. PMID: 35594008; PMCID: PMC9294106.

Hannemann PFW, Gottgens KWA, Van Wely BJ, et al. The clinical and radiological outcome of pulsed electromagnetic field treatment for acute scaphoid fractures. *The Journal of Bone & Joint Surgery*. 2012; 94 (10): 1403.

Hayes Inc. Evidence Analysis Research Brief. Ultrasound Bone Growth Stimulation for Foot and Ankle Nonunion or Delayed Union Fractures. Lansdale, PA: Hayes, Inc.; February 2022.

Hayes Inc. Directory Report. Noninvasive electrical bone growth stimulators for spinal fusion or foot and ankle indications. Lansdale, PA: Hayes Inc.; September 2016.

Kaiser MG, Eck JC, Groff MW, et al. Guideline update for the performance of fusion procedures for degenerative disease of the lumbar spine. Part 17: Bone growth stimulators as an adjunct for lumbar fusion. *J Neurosurg Spine*, 2014; 21: 133-139.

Leighton R, Phillips M, Bhandari M, Zura R. Low intensity pulsed ultrasound (LIPUS) use for the management of instrumented, infected, and fragility non-unions: a systematic review and meta-analysis of healing proportions. *BMC Musculoskelet Disord*. 2021 Jun 11;22(1):532. doi: 10.1186/s12891-021-04322-5. PMID: 34116673; PMCID: PMC8196464.

Lou S, Lv H, Li Z, Tang P, Wang Y. Effect of low-intensity pulsed ultrasound on distraction osteogenesis: a systematic review and meta-analysis of randomized controlled trials. *J Orthop Surg Res*. 2018 Aug 17;13(1):205. doi: 10.1186/s13018-018-0907-x. PMID: 30119631; PMCID: PMC6098620.

Peng L, Fu C, Xiong F, et al. Effectiveness of Pulsed Electromagnetic Fields on Bone Healing: A Systematic Review and Meta-Analysis of Randomized Controlled Trials. *Bioelectromagnetics*. 2020 Jul;41(5):323-337. doi: 10.1002/bem.22271. Epub 2020 Jun 3. PMID: 32495506.

Putz R, Vico R, Beilfuß N, et al. Pulsed ultrasound for bone regeneration - outcomes and hurdles in the clinical application: a systematic review. *Eur Cell Mater*. 2021 Oct 14;42:281-311. doi: 10.22203/eCM.v042a20. PMID: 34647316.

Walker, NA, Denegar CR, Preische J. Low-intensity pulsed ultrasound and pulsed electromagnetic field in the treatment of tibial fractures: a systematic review. *Journal of athletic training*. 2007; 42: 530.



