Mass General Brigham
Health Plan

Medical Policy
Hearing Devices

Policy Number: 025

	Commercial and Qualified Health Plans*	MassHealth	Medicare Advantage*
Authorization Required Air conduction and non-implantable bone conduction hearing aids Bone anchored hearing devices/aids	X	X	X
No notification or authorization Cochlear implants	X	X	X

*Not all plans cover this service; please check plan's Schedule of Benefits, Summary of Benefits and Coverage, Benefit Handbook, and/or amendments package to verify coverage.

Overview
The purpose of this document is to describe the guidelines Mass General Brigham Health Plan utilizes to determine medical appropriateness for assistive hearing devices.

Coverage Guidelines
Mass General Brigham Health Plan covers assistive hearing devices when medically necessary and in accordance with Massachusetts law. The specialist and/or the primary care provider are responsible for providing all necessary clinical information for the determination of benefit coverage including presenting condition(s), history of hearing loss, and medical necessity rationale. Mass General Brigham Health Plan does not cover hearing/listening devices or device features that are to be principally used for convenience and are not medically necessary, or devices or device features that are considered experimental and investigational (e.g., semi-implantable and fully implantable middle ear hearing aids).

Air Conduction Hearing Aids and Non-Implantable Bone Conduction Hearing Aids
Medical necessity for Air Conduction Hearing Aids and Non-Implantable Bone Conduction Hearing Aids is determined through InterQual® criteria which Mass General Brigham Health Plan has customized to remove the tympanometry requirement and add exclusions to introductory section of subset. To access the Mass General Brigham Health Plan Hearing Aids Custom criteria, log into Mass General Brigham Health Plan's provider website at MassGeneralBrighamHealthPlan.org and click the InterQual® Criteria Lookup link under the Resources Menu.

Cochlear Implants
Medical necessity for Cochlear implantation for adults 18 years of age and older is determined through InterQual® criteria. To access the criteria, log into Mass General Brigham Health Plan's provider website at MassGeneralBrighamHealthPlan.org and click the InterQual® Criteria Lookup link under the Resources Menu.

Medical necessity for Cochlear implantation for children under the age of 18 is determined through InterQual® criteria which Mass General Brigham Health Plan has customized by lowering the age of eligibility and updating the MRI requirements. To access the criteria, log into Mass General Brigham Health Plan's provider website at MassGeneralBrighamHealthPlan.org and click the InterQual® Criteria Lookup link under the Resources Menu.

Bone Anchored Hearing Devices (BAHD) or Bone Anchored Hearing Aid (BAHA)

Mass General Brigham Health Plan medical necessity criteria for BAHD for members who are at least 5 years old is determined through a custom subset accessible through InterQual®. To access the criteria, log into Mass General Brigham Health Plan's provider website at MassGeneralBrighamHealthPlan.org and click the InterQual® Criteria Lookup link under the Resources Menu, or see below:

1. Conductive or mixed hearing loss in members who are unable to use conventional air conduction hearing aids and when a-e of the following criteria are met:
    a. Has one of the following conditions:
        i. Congenital, surgical, or acquired malformations of the external ear canal or middle ear canal; or
        ii. Tumors of the external canal and/or tympanic cavity; or
        iii. Severe, chronic otitis externa or otitis media, hypersensitivity to ear molds used in air conduction hearing aids or recalcitrant dermatitis of the external ear; and
    b. Has one of the following audiologic findings:
        i. The processor requested is appropriate to meet the needs of the member based on their pure tone average bone conduction threshold, measured at 500 Hz, 1000 Hz, 2000 Hz & 3000 Hz; or
        ii. For bilateral implantation, patients meet above audiologic criteria and have a symmetrically conductive or mixed-hearing loss as defined by a difference of less than 10 dB on average between left- and right-side bone condition thresholds measured at 500 Hz, 1000 Hz, 2000 Hz & 3000 Hz; or less than 15 dB at individual frequencies; and
    c. A non-permanent, BAHD test band/soft band has been tried and has improved the member's word recognition and speech comprehension - particularly in noisy environments; and
    d. Member has been counseled regarding reasonable expectations of the BAHD performance; and
    e. Member is motivated to use the device.
2. Single-sided deafness, and normal (at least a 25 dB threshold) or only mildly reduced bone conduction hearing in the good ear (26-40 dB) measured at 500 Hz, 1000 Hz, 2000 Hz, and 3000 Hz, and when a-d of the following criteria are met:
    a. A conventional CROS or (bi)CROS aid (whichever is most appropriate) has been considered and is felt not to be a viable option;
    b. A non-permanent, BAHD test band/soft band has been tried and has improved the member's word recognition and speech comprehension particularly in noisy environments;
    c. Member has been counseled regarding reasonable expectations of the BAHD performance; and
    d. Member is motivated to use the device.

Exclusions for BAHD and BAHA

1. Bone-anchored hearing devices for any reason other than those listed.
2. For all conditions/diagnosis not covered under this coverage criteria.
3. For pure bilateral sensorineural hearing loss.
4. Replacement or repair of a processor when:

a. It is still under manufacturer warranty;

b. It is lost, stolen, or damaged due to improper care, misuse, or neglect (Mass General Brigham Health Plan may require proof of the stolen or damaged item. Proof consists of a police report, pictures, or corroborating statement); or

c. The member has a functioning model, and a newer or upgraded model is not medically necessary.

5. Devices or device features that are to be principally used for convenience and are not medically necessary, or devices or device features that are considered experimental and investigational.

6. Non-medically necessary accessories such as but not limited to: Bluetooth accessories, accessories for recreational use, accessories for water use, duplicate accessories.

Brainstem Implant
Mass General Brigham Health Plan medical necessity criteria for unilateral auditory brain stem implant (using surface electrodes on the cochlear nuclei) is determined through a custom subset accessible through InterQual®. To access the criteria, log into Mass General Brigham Health Plan's provider website at MassGeneralBrighamHealthPlan.org and click the InterQual® Criteria Lookup link under the Resources Menu, or see below:

1. Member has neurofibromatosis type II; and

2. Member is 12 years of age or older; and

3. Member has been rendered deaf due to bilateral resection of the cochlear nerve.

Exclusions

1. Brainstem implants for any reason other than those listed above.

2. For all conditions/diagnosis not covered under this coverage criteria.

MassHealth Variation
Mass General Brigham Health Plan uses guidance from MassHealth for coverage determinations for its MassHealth ACO members. **At the time of Mass General Brigham Health Plan's most recent policy review, MassHealth does not have guidelines for air conduction hearing aids, non-implantable bone conduction hearing aids, semi- and fully-implantable middle ear hearing aids, bone-anchored hearing devices or hearing aids, or auditory brainstem implants. MassHealth has Guidelines for Medical Necessity Determination for Cochlear Implantation.**

Medicare Variation
Mass General Brigham Health Plan uses guidance from the Centers for Medicare and Medicaid Services (CMS) for coverage 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 coverage determinations. When there is no guidance from CMS for the requested service, Mass General Brigham Health Plan's medical policies are used for coverage determinations. **At the time of Mass General Brigham Health Plan's most recent policy review, Medicare does not have NCDs/LCDs for air conduction hearing aids, non-implantable bone conduction hearing aids, semi- and fully-implantable middle ear hearing aids, bone-anchored hearing devices or hearing aids, or auditory brainstem implants. Medicare does have an NCD for Cochlear Implantation (50.3).**

The NCD above establishes that cochlear implantation is covered for certain individuals with severe bilateral hearing loss, who can complete tests of open-set sentence recognition, but does not fully establish coverage

criteria for this service. Therefore, Mass General Brigham Health Plan uses InterQual criteria, modified as described above, in addition to the NCD, to determine medical necessity for this service.

Mass General Brigham Health Plan provides additional clarification and specificity beyond existing NCDs and LCDs to ensure consistent medical review and coverage decisions. This aligns with the latest clinical evidence and accepted standards of practice, without contradicting existing determinations, and enhances the clarity of medical necessity criteria, documentation requirements, and clinical indications.

Hearing aids are only covered as a supplementary benefit through TruHearing or by using a Flexible Benefit card. More information can be found in the Schedule of Benefits, Summary of Benefits and Coverage, Benefit Handbooks, and/or amendments.

Definitions

Air Conduction Hearing Aid: A wearable aid or device, not including surgical implants, which is inserted directly into the ear or worn with an ear mold and air conduction receiver or bone oscillator attachment and any part, attachment, or accessory, but excluding batteries, cords, and accessories thereto, designed for or offered for the purpose of aiding or compensating for hearing loss.

Non-implantable Bone Conduction Hearing Aid (e.g., CROS, biCROS): A non-surgically implanted, wearable aid or device with the bone vibrator tightly held in place on the mastoid process via a headband. It delivers sound from that ear, routing it transcranially via bone conduction to the cochlea of the normal ear. For a patient with an unaidable ear and normal hearing in the opposite ear, the bone conduction aid can provide improved awareness and recognition of speech arriving on the side of the poor ear.

Semi-Implantable & Fully Implantable Hearing Aid: Hearing device which consists of an audio processor, a receiver, and an implanted electromagnetic transducer to provide contact with the ossicles or is close to a magnet implanted on the ossicles. The audio processor detects and converts sounds into electric currents, which are transmitted to the receiver and conveyed to the electromagnetic transducer, where they are converted into a magnetic field that vibrates the ossicles, either by direct contact with the ossicles or by acting on (attracting and repelling) the magnet implanted on the ossicles. Some examples are:

1. Vibrant Soundbridge
2. Sound tec
3. Direct System
4. Esteem implantable hearing system

Codes

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

This list of codes applies to Commercial and ACO lines of business

Authorized Code	Code Description
V5014	Repair/modification of a hearing aid
V5030	Hear Aid Monaural Bdy Wrn Air Condct
V5040	Hear Aid Monaural Bdy Worn BN Condct
V5050	Hearing Aid Monaural in the Ear
V5060	Hearing Aid Monaural Behind the Ear
V5070	Glasses Air Conduction

V5080	Glasses Bone Conduction
V5100	Hearing Aid Bilateral Body Worn
V5120	Binaural Body
V5130	Binaural in the Ear
V5140	Binaural Behind the Ear
V5150	Binaural Glasses
V5171	Hearing aid, contralateral routing device, monaural, in the ear (ite)
V5172	Hearing aid, contralateral routing device, monaural, in the canal (itc)
V5181	Hearing aid, contralateral routing device, monaural, behind the ear (bte)
V5190	Hearing Aid CROS Glasses
V5211	Hearing aid, contralateral routing system, binaural, ite/ite
V5212	Hearing aid, contralateral routing system, binaural, ite/itc
V5213	Hearing aid, contralateral routing system, binaural, ite/bte
V5214	Hearing aid, contralateral routing system, binaural, itc/itc
V5215	Hearing aid, contralateral routing system, binaural, itc/bte
V5221	Hearing aid, contralateral routing system, binaural, bte/bte
V5230	Hearing Aid BICROS Glasses
V5242	Hearing Aid Analog Monaural CIC
V5243	Hearing Aid Analog Monaural ITC
V5244	Hearing Aid Prog Analog Monaural CIC
V5245	Hearing Aid Prog Analog Monaural ITC
V5246	Hearing Aid Prog Analog Monaural ITE
V5247	Hearing Aid Prog Analog Monaural BTE
V5248	Hearing Aid Analog Binaural CIC
V5249	Hearing Aid Analog Binaural ITC
V5250	Hearing Aid Prog Analog Binaural CIC
V5251	Hearing Aid Prog Analog Binaural ITC
V5252	Hearing Aid Prog Binaural ITE
V5253	Hearing Aid Prog Binaural BTE
V5254	Hearing Aid Digital Monaural CIC
V5255	Hearing Aid Digital Monaural ITC
V5256	Hearing Aid Digital Monaural ITE
V5257	Hearing Aid Digital Monaural BTE
V5258	Hearing Aid Digital Binaural CIC
V5259	Hearing Aid Digital Binaural ITC
V5260	Hearing Aid Digital Binaural ITE
V5261	Hearing Aid Digital Binaural BTE
V5262	Hearing Aid Dispbl Type Monaural
V5263	Hearing Aid Dispbl Type Binaural
V5264	Ear mold/insert, not disposable, any type
V5265	Ear mold/insert, disposable, any type
L8614	Cochlear device, includes all internal and external components
L8619	Cochlear implant, external speech processor and controller, integrated system, replacement
L8621	Zinc air battery for use with cochlear implant device and auditory osseointegrated sound processors, replacement, each

L8622	Alkaline battery for use with cochlear implant device, any size, replacement, each
L8623	Lithium ion battery for use with cochlear implant device speech processor, other than ear level, replacement, each
L8624	Lithium ion battery for use with cochlear implant or auditory osseointegrated device speech processor, ear level, replacement, each
L8627	Cochlear implant, external speech processor, component, replacement
L8628	Cochlear implant, external controller component, replacement
L8690 (BAHA)	Auditory osseointegrated device, includes all internal and external components
L8691 (BAHA)	Auditory osseointegrated device, external sound processor, excludes transducer/actuator, replacement only, each
L8693 (BAHA)	Auditory osseointegrated device abutment, any length, replacement only
L8694 (BAHA)	Auditory osseointegrated device, transducer/actuator, replacement only, each
69714	Implantation, osseointegrated implant, skull; with percutaneous attachment to external speech processor
69729	Implantation, osseointegrated implant, skull; with magnetic transcutaneous attachment to external speech processor, outside of the mastoid and resulting in removal of greater than or equal to 100 sq mm surface area of bone deep to the outer cranial cortex
69730	Replacement (including removal of existing device), osseointegrated implant, skull; with magnetic transcutaneous attachment to external speech processor, outside the mastoid and involving a bony defect greater than or equal to 100 sq mm surface area of bone deep to the outer cranial cortex
69930	Cochlear device implantation, with or without mastoidectomy
S2235	Implantation of auditory brain stem implant

Summary of Evidence

Advances in hearing restoration technology have transformed treatment options for various types of hearing loss, with robust evidence supporting the efficacy of cochlear implants, bone-anchored hearing systems, and brainstem implants. Multiple studies demonstrate significant improvements in auditory function and quality of life across diverse patient populations, with particular emphasis on the benefits of early intervention and bilateral implantation. This evidence review will focus on BAHA, cochlear implantation and auditory brainstem implantation.

BAHD and BAHA are bone anchored devices with sound processors attached or implanted into skull bone that rely on bone conduction. BAHA has proven effective in a range of clinical conditions, particularly those involving conductive or mixed hearing loss, single-sided deafness, congenital ear malformations, and otosclerosis. Multiple studies have demonstrated improvements in speech recognition, hearing performance, and quality of life for recipients. As a result, BAHA is an option for those not suitable candidates for conventional hearing aids or cochlear implants. BAHA studies for conductive and mixed hearing loss, single sided deafness, congenital ear malformations (microtia and atresia) and otosclerosis show improved hearing performance, compared to air conduction hearing aids, particularly in noisy environments.

Bone-anchored hearing systems offer early and sustained benefit, as demonstrated by den Besten et al. (2018), who conducted a prospective multicenter study of 54 adult patients using the Baha Attract System. The study documented significant improvements in both conductive/mixed hearing loss and SSD patients, with mean PTA4 improvements of 20.8 dB HL (SD 9.8) and 21.6 dB HL (SD 12.2), respectively. These findings complement findings from Bravo-Torres et al.'s 2018 retrospective analysis of 15 pediatric Bonebridge implant recipients, showing improved thresholds averaging 25.2 dB (95% CI 23.5-26.9) one-month post-activation.

Cochlear implants are electronic devices designed to provide a sense of sound to individuals with severe to profound sensorineural hearing loss. Unlike hearing aids, which amplify sound, cochlear implants directly stimulate the auditory nerve by converting sound into electrical signals. This bypasses the damaged hair cells in the cochlea, offering hearing restoration for those with profound hearing loss who do not benefit from conventional hearing aids.

The AAO-HNS recommends cochlear implantation for patients with bilateral severe to profound sensorineural hearing loss who demonstrate limited benefit from hearing aids. Children as young as 6-12 months may benefit from implantation, with the best outcomes observed when implantation occurs before 18 months for pre-lingual deafness. For adults, candidates should show limited speech recognition performance, typically under 50% in a quiet environment with hearing aids (American Academy of Otolaryngology-Head and Neck Surgery 2021).

Diverse studies showcase the benefits of hearing devices across age groups. Lyu et al. (2019) report that early cochlear implantation provides long-term auditory and speech perception improvements in children with pre-lingual deafness. Similarly, Falcón Benítez et al. (2021) compare outcomes in children and adults with single-sided deafness, noting positive results in both populations.

Current clinical guidelines, as outlined in Warner-Czyz et al.'s 2022 American Cochlear Implant Alliance publication, emphasize the importance of evidence-based decision-making in determining implant candidacy. These guidelines stress early intervention and individualized assessment, noting that residual hearing should inform surgical approach rather than preclude implantation.

A large-scale clinical trial published by Archbold in *The Lancet* (2017) assessed the outcomes of cochlear implantation in 186 children with profound hearing loss. The study demonstrated that early implantation (before 18 months of age) significantly improved speech perception, language development, and educational outcomes, compared to children who received implants after the critical period.

A 2021 systematic review and meta-analysis by Benchetrit and colleagues provided compelling evidence for the effectiveness of cochlear implantation in treating children with single-sided deafness (SSD). Their analysis of 12 observational studies, encompassing 119 children with a mean age of 6.6 years, revealed that patients with acquired SSD achieved superior outcomes in speech and spatial hearing compared to those with congenital SSD. This research was further substantiated by Baron et al.'s 2019 single-center retrospective study of 109 children and adolescents receiving sequential bilateral implants, which documented significant progressive improvements: 51.9% showed enhanced auditory performance at 24 months post-second implant, while speech intelligibility and word recognition improved in 52.6% and 55% of patients, respectively.

The importance of early intervention was highlighted in Arras et al.'s 2023 longitudinal study of 18 children who received cochlear implants before age 2.5 years. Following strict inclusion criteria, including normal hearing in one ear (≤35 dB nHL) and severe-to-profound loss in the other (≥80 dB nHL), these early-implanted children achieved narrative and verbal skills comparable to normal-hearing peers, significantly outperforming non-implanted SSD children (group difference -0.67, $p = 0.02$).

A study by Gifford in *JAMA Otolaryngology–Head and Neck Surgery* (2014) examined cochlear implantation in 150 adults with severe hearing loss and found significant improvements in speech understanding, particularly in challenging environments like noisy settings. This study reinforced the guideline that cochlear implantation benefits adults who fail to achieve satisfactory outcomes with hearing aids.

A study published by Zeng in *Otology & Neurotology* (2017) assessed the effectiveness of cochlear implants for individuals with single-sided deafness (SSD). The results indicated that cochlear implants in SSD patients significantly improved speech perception in noise and localization of sound, offering a new treatment option for this condition.

Skarżyński, H., et al. (2016) performed a randomized controlled trial of elderly with severe bilaterial severe sensorineural hearing loss who received cochlear implant or conventional hearing aids. Among those implanted, this study documented meaningful improvement in speech perception and quality of life.

Auditory brainstem implants (ABIs) are used to provide sound perception to individuals with profound hearing loss due to damage to the cochlea or auditory nerve, especially when cochlear implants are not an option. This typically includes patients with neurofibromatosis type II (NF2) or those who have congenital absence or severe damage to the cochlear nerve. ABIs bypass the damaged parts of the auditory pathway, directly stimulating the brainstem. ABI restores auditory perception and improves quality of life, social interaction and emotional well-being. (Papsin et al., 2021).

Mass General Brigham Health Plan medical necessity criteria for BAHA, cochlear implantation, and auditory brainstem implants are derived primarily from AAO-HNS position statements. InterQual criteria have been modified to make them less restrictive and more consistent with AAO-HNS recommendations as well as inclusion criteria in the studies described above.

Related Policies

- Hearing Aids Provider Payment Policy Guidelines

Effective Dates

July 2025: Annual review. Simplified language in sections referencing customized InterQual® subsets. Removed Cochlear implants from prior authorization. Clarified Medicare variation.
April 2025: Ad hoc review. Clarified Medicare variation. Summary of evidence added. References updated.
November 2024: Ad hoc review. Clarified MassHealth variation language. Updated criteria for Cochlear implantation for children. Added criteria from custom InterQual® subsets for air conduction and non-implantable bone conduction hearing aids, BAHA/D and auditory brainstem implant. Codes updated.
October 2024: Ad hoc review. Customized InterQual® criteria for Cochlear implantation for children. References updated. Clarified Medicare Advantage language. Added MassHealth variation language.
July 2024: Annual review.
July 2023: Annual review. Medicare Advantage added to table one page 1. Medicare variation language added. References updated.
January 2023: Codes updated.
August 2022: Annual review. Under Bone Anchored Hearing Devices (BAHD) or Bone Anchored Hearing Aid (BAHA), item B i. – removed reference to specific models. References updated.
July 2021: Annual review. References updated.
July 2020: Annual review. Codes updated. References updated.
July 2019: Annual review. References updated. Code update.
September 2018: Annual review.
August 2017: Annual review.
February 2017: Changes reflect the addition of InterQual® criteria for Air Conduction Hearing Aids and Non-Implantable Bone Conduction Hearing Aids and Cochlear Implants.
August 2016: Annual review.
August 2015: Clarification of replacement or repair of hearing devices or components under exclusions
August 2014: Edited exclusion language, Modified BAHD criteria to allow for new devices as technology progresses and added Bluetooth BAHD and Cochlear implants and accessories to exclusions.
May 2013: Effective date.

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