Clinical Coverage Guidelines: Cochlear Implants and Bone Anchored Hearing Aids (BAHA) for Hearing Impairment

Current Effective Date: 08/01/12
Original Effective Date: 04/07/06*
Policy Number: OCA: 3.30
Product Applicability:
☑ MassHealth ☑ Commonwealth Care ☐ Commercial

Summary: The Plan considers cochlear implants and bone anchored hearing aids (BAHA) for hearing impairment medically necessary based upon clinical criteria.

Description of Item or Service:
Bone Conduction Hearing Aid (BAHA): A device that transmits sound waves through the bone directly to the inner ear, bypassing the external and middle ear systems. The BAHA® System (a bone anchored hearing aid developed by the Cochlear Corporation) combines a sound processor with a small titanium fixture implanted behind the ear. The system allows sound to be conducted through the bone rather than via the middle ear known as direct bone conduction.

Cochlear Implant: An electronic medical device that stimulates cells of the auditory spiral ganglion to provide a sense of sound to persons with a hearing impairment. The device consists of a surgically implanted instrument to stimulate nerve fibers and a device that is worn externally to capture, analyze and code sound. Cochlear implants detour damaged structures in the inner ear and directly stimulate the auditory nerve. The implant is capable of electronically arranging useful sounds, transforming them into electrical impulses and delivering these signals to the nerves leading to the brain where they are interpreted as sound.

Clinical Guideline Statement:
The Plan requires prior authorization for implantable bone conduction hearing aids (BAHA) and cochlear implants and considers these devices medically necessary when all of the following criteria are met:
1. Bone conduction hearing aids are considered medically necessary as an alternative to an air conduction hearing aid for the treatment of conductive or

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mixed hearing loss with pure tone air equal to or greater than 45 dB HL in members who are 5 years of age or older and are unable to use a conventional air conduction hearing aid or undergo surgical repair because of any of the following conditions:

- Tumors of the external canal and/or tympanic cavity
- Congenital or surgically induced malformations (e.g., atresia) of the external ear canal or middle ear
- Severe chronic external otitis or otitis media
- Severe dermatitis of the external canal
- Other conditions that contraindicate the use of an air conduction hearing aid such as other acquired malfunction of the external or middle ear canal that includes hypersensitivity to ear molds used in air conduction hearing aids

2. Unilateral or bilateral cochlear implants are considered medically necessary for the treatment of bilateral pre or post-linguistic, sensorineural, severe (71 dB HL or greater) to profound (91+ dB HL) hearing loss in members who are age 12 months or older who demonstrate limited benefit from amplification. Cochlear implants are considered medically necessary when ALL of the following criteria are met:

- Diagnosis of bilateral severe-to-profound sensorineural hearing impairment with limited benefit from appropriate hearing (or vibrotactile) aids and some specific cases of bilateral auditory dys-synchrony with limited ability to recognize words or sentences; and
- Cognitive ability to use auditory clues and a willingness to undergo an extended program of rehabilitation; and
- Freedom from middle ear infection, an accessible cochlear lumen that is structurally suited to implantation, and freedom from lesions in the auditory nerve and acoustic areas of the central nervous system; and
- No contraindications to surgery; and
- The device must be used in accordance with Food and Drug Administration (FDA)-approved labeling; and
- The member has received pneumococcal vaccination under the same schedules that apply to other individuals at high risk for invasive pneumococcal disease

Definitions:

**Hearing Loss:** Normal speech and conversation occurs at 40-60 decibel (dB) HL within a frequency range of 500-6000 Hz (Hertz). Hearing loss is defined as decreased hearing, deafness or loss of hearing. Hearing loss can be classified as mild: 26-40 dB HL, moderate: 41-70 dB HL, severe: 71-90 dB HL and profound: > 91 dB HL. There are
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### Three Types of Hearing Loss

- **Conductive hearing loss**: Results from obstruction of the external auditory canal that can be caused by cerumen, debris and foreign bodies; swelling of the lining of the canal, atresia of the ear canal, neoplasms of the canal, breakdown of the ossicular chain, perforations of the eardrum, trauma, infections, fluid, scarring and neoplasms of the middle ear. Conductive hearing loss is usually corrected either medically or surgically.

- **Sensorineural hearing loss**: Results from damage to the inner ear or cochlea or the 8th cranial nerve that can be caused by heredity, prenatal or birth related complications, intense noise, viral infections, ototoxic drugs, fractures of the temporal bone, meningitis, Meniere’s disease, otosclerosis and aging.

- **Mixed hearing loss**: A combination of both conductive and sensorineural hearing loss that can result from pathology affecting the middle and inner ear together.

### Applicable Coding

Applicable coding is listed below, subject to codes being active on the date of service. Because the American Medical Association (AMA), Centers for Medicare & Medicaid Services (CMS), and the U.S. Department of Health and Human Services may update codes more frequently or at different intervals than Plan policy updates, the list of applicable codes may not be all inclusive. These codes are not intended to be used for coverage determinations.

<table>
<thead>
<tr>
<th>CPT Codes</th>
<th>Description</th>
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<tbody>
<tr>
<td>69710</td>
<td>Implantation or replacement of electromagnetic bone conduction hearing device in temporal bone</td>
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<tr>
<td>69711</td>
<td>Removal or repair of electromagnetic bone conduction hearing device in temporal bone (includes removal of old device)</td>
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<tr>
<td>69714</td>
<td>Implantation, osseointegrated implant, temporal bone, with percutaneous attachment to external speech processor/cochlear stimulator; without mastoidectomy</td>
</tr>
<tr>
<td>69715</td>
<td>Implantation, osseointegrated implant, temporal bone, with percutaneous attachment to external speech processor/cochlear stimulator; with mastoidectomy</td>
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<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tr>
<td>69717</td>
<td>Replacement (including removal of existing device), osseointegrated implant, temporal bone, with percutaneous attachment of external speech processor/cochlear stimulator; without mastoidectomy</td>
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<tr>
<td>69718</td>
<td>Replacement (including removal of existing device), osseointegrated implant, temporal bone, with percutaneous attachment of external speech processor/cochlear stimulator; with mastoidectomy</td>
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<tr>
<td>69930</td>
<td>Cochlear device implantation, with or without mastoidectomy</td>
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<td><strong>HCPCS Codes</strong></td>
<td><strong>Description</strong></td>
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<tr>
<td>L8614</td>
<td>Cochlear device, includes all internal and external components</td>
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<tr>
<td>L8615</td>
<td>Headset/headpiece for use with cochlear implant device, replacement</td>
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<tr>
<td>L8616</td>
<td>Microphone for use with cochlear implant device, replacement</td>
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<tr>
<td>L8617</td>
<td>Transmitting coil for use with cochlear implant device, replacement</td>
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<tr>
<td>L8618</td>
<td>Transmitter cable for use with cochlear implant device, replacement</td>
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<tr>
<td>L8619</td>
<td>Cochlear implant, external speech processor and controller, integrated system, replacement</td>
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<tr>
<td>L8627</td>
<td>Cochlear implant, external speech processor, component, replacement</td>
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<tr>
<td>L8628</td>
<td>Cochlear implant, external controller component, replacement</td>
</tr>
<tr>
<td>L8629</td>
<td>Transmitting coil and cable, integrated, for use with cochlear implant device, replacement</td>
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<tr>
<td>L8690</td>
<td>Auditory osseointegrated device, includes all internal and external components</td>
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<tr>
<td>L8691</td>
<td>Auditory osseointegrated device, external sound processor, replacement</td>
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<tr>
<td>L8692</td>
<td>Auditory osseointegrated device, external sound processor, used without osseointegration, body worn, includes headband or other means of external attachment</td>
</tr>
<tr>
<td>L8693</td>
<td>Auditory osseointegrated device abutment, any length, replacement only</td>
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<tr>
<td>V5273</td>
<td>Assistive listening device, for use with cochlear implant</td>
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**Limitations:**
- Air conduction hearing aids are excluded from coverage for Commonwealth Care and Commercial members.
- The Plan considers one (1) sound processor per cochlear implant medically necessary. Replacement of an existing, functioning cochlear implant component requires prior authorization if the component is listed above in the Applicable Coding section; the component is considered medically necessary only when a physician certifies that:
  1. The existing component is ineffective to the point of interfering with the activities of daily living, or
2. When there is a change in the patient’s medical condition necessitating a different type of component, or
3. The existing component has reached its reasonable useful life. The reasonable useful life of a sound processor is not less than five (5) years.

**Clinical Background Information:**
Conventional hearing aids can be divided into air conduction hearing aids, bone conduction hearing aids and middle ear implants. Air conduction aids are indicated for persons with sensorineural hearing loss, mixed hearing loss or conductive hearing loss that is not amenable to medical or surgical intervention. Bone conduction hearing aids are indicated for persons with conductive and mixed hearing loss who are not able to use air conduction hearing aids or have a medical condition that precludes the wearing of an air conduction hearing aid.

Cochlear implants are indicated for adults and children with moderate to profound sensorineural hearing loss and associated poor speech discrimination. Cochlear implant surgery is performed under general anesthesia; the surgery typically takes about 1 to 3 hours and can be done either in the inpatient or outpatient setting. Contraindications to surgery include poor anesthetic risk, severe mental retardation, severe psychiatric disorders, and organic brain syndromes. The standard radiologic evaluation includes computed tomography (CT) scanning to detect mixed fibrous and bony occlusions and anatomical abnormalities. MRI provides better resolution of soft tissue structures and should supplement the CT scan when indicated.

Children age 12 months or older with severe to profound sensorineural hearing loss bilaterally and minimal speech perception may be considered for cochlear implantation. In the young child, auditory brainstem response, auditory steady state response testing, stapedial reflex testing, and otoacoustic emission testing may be useful when combined with auditory behavioral responses to determine hearing status. Prior to implantation, a trial period with appropriate amplification combined with intensive auditory training should be attempted to ensure that maximal benefit is achieved. Children should also undergo a complete medical evaluation to rule out the presence of active systemic disease that would contraindicate implantation. The child must be otologically stable and free of active middle ear disease prior to cochlear implantation. Preoperative assessment should involve evaluation of the child by an experienced cochlear implant team in home, social, and educational settings to ensure that implantation is the proper intervention. Parental expectations must be addressed, and compliance to habilitation is essential. Because the rate for pneumococcal meningitis is higher in children with cochlear implants and *Streptococcus pneumoniae* is the most common pathogen causing bacterial meningitis in cochlear implant recipients of all ages with meningitis of known etiology, the Advisory Committee on Immunization Practices (ACIP) recommends the age-appropriate
pneumococcal vaccine for all individuals who have or are scheduled to receive a cochlear implant.

**References:**


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Policy History
Original Effective Date: 04/07/06
*Effective Date for Commercial is 01/01/12

Date of Review/Revision:
02/06/07: Removed preauthorization requirement for most hearing aids.
11/13/07: Updated clinical criteria.
11/11/08: Annual review, updated clinical criteria, references and coding.
11/24/09: Annual review, removed all language and coding pertaining to hearing aids, updated references.
10/01/10: Annual review, added to the limitations section that cochlear implants are excluded from coverage for CWC members and not a covered benefit, updated coding and references.
06/01/11: Revised the criteria for cochlear implants from moderate to profound TO severe to profound hearing impairment (71 and greater dB HL). Added criteria for the bone anchored hearing aids (BAHA), added limitations for the cochlear implant speech processors, updated coding and references.
06/01/12: Annual review, updated references, and revised the introductory paragraph in Applicable Coding section.

Last Review Date:
06/01/12
Next Review Date:
06/01/13

Approval Dates:
Regulatory Approval: N/A
Internal Approval:
02/07/06: Initial approval by Q&CMC
02/06/07: Q&CMC
11/13/07: MPCTAC
11/27/07: UMC
12/06/07: QIC
11/25/08: MPCTAC
11/25/08: UMC
12/16/08: QIC
11/24/09: MPCTAC
12/23/09: QIC
11/23/10: MPCTAC
12/22/10: QIC
06/29/11: MPCTAC
07/27/11: QIC
06/20/12: MPCTAC
07/25/12: QIC

Authorizing Entity:
QIC

IMPORTANT NOTE: Not all services are covered for all products or employer groups. This medical policy expresses the Plan’s determination of whether certain services or supplies are medically necessary, experimental or investigational or cosmetic. The Plan has reached these conclusions based upon the regulatory status of the technology and a review of clinical studies published in peer-reviewed medical literature. Even though this policy may indicate that a particular service or supply is considered covered or not covered, this conclusion is not based upon the terms of a member’s particular benefit plan. Each benefit plan contains its own specific provisions for coverage and exclusions. Not all services that are determined to be medically necessary will necessarily be covered services under the terms of a member’s benefit plan. Members and their providers need to consult the applicable benefit plan document (e.g., Evidence of Coverage) to determine if there are any exclusions or other benefit limitations applicable to this service or supply. If there is a discrepancy between this medical policy and the benefit plan document, the provisions of the benefit plan document will govern. In addition, this policy and the benefit plan document are subject to applicable state and federal laws that may mandate coverage for certain services and supplies.

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