BOSTON MEDICAL CENTER HEALTHNet PLAN

bmchp.org | 888-566-0008

WELL SENSE HEALTH PLAN

wellsense.org | 877-957-1300

Medical Policy and InterQual® Criteria

Cochlear Implants

Policy Number: OCA 3.301
Version Number: 24
Version Effective Date: 12/01/21

Product Applicability	☒ **All Plan+ Products**
WellSense Health Plan ☒ NH Medicaid ☒ NH Medicare Advantage	**Boston Medical Center HealthNet Plan** ☒ MassHealth ACO ☒ MassHealth MCO ☒ Qualified Health Plans/ConnectorCare/Employer Choice Direct ☒ Senior Care Options

+ Note: Disclaimer and audit information is located at the end of this document.

Policy Summary

Cochlear implants are considered **medically necessary** for pediatric members age 17 or younger on the date of service when **InterQual® Cochlear Implantation (Pediatric) criteria** are met. For members age 18 or older on the date of service, cochlear implants are considered medically necessary when the **clinical review criteria included in this medical policy** are met. Replacement of external components for cochlear implants is considered medically necessary when applicable criteria included in this medical policy are met. Prior authorization is required. It will be determined during the Plan's prior authorization process if the service is considered medically necessary for the requested indication. The Plan complies with coverage guidelines for all applicable state-mandated benefits and federally-mandated benefits that are medically necessary for the member's condition.

Prior authorization is NOT required for external hearing devices, including non-implantable bone-conduction hearing aids such as the BAHA® Softband™ (unless the external processor is related to an implantable bone-conduction/bone-anchored hearing aid). The hearing aid limits specified in the member's benefit documents apply to external hearing aids and do NOT apply to the components of implantable hearing aids or cochlear implants. Review the Plan's *Implantable Bone-Conduction (Bone-*

+ *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

Anchored) Hearing Aids medical policy, policy number OCA 3.30, rather than this policy for medical necessity criteria related to the use of fully-implantable and semi-implantable hearing amplification devices (transmitting sound waves through the bone) to treat conductive hearing loss, mixed hearing loss, and/or single-sided sensorineural hearing loss.

A conventional cochlear implant is an electronic medical device that converts received sounds from its external components into electrical impulses, resulting in the direct electrical stimulation of auditory spiral ganglion cells that form the auditory nerve. A hybrid cochlear implant combines electrical stimulation (used with a conventional cochlear implant) with acoustic amplification technology (used in hearing aids) integrated into the external sound processor of the cochlear implant for the same ear (e.g., Cochlear™ Nucleus® Hybrid L24 Implant System by Cochlear and MED-EL SYNCHONY EAS/Electric Acoustic Stimulation) Cochlear Implant System.

Clinical Criteria

Pediatric Members Age 17 or Younger on the Date of Service: Cochlear implants are considered medically necessary for pediatric members age 17 or younger on the date of service when criteria are met for EPSDT services or applicable **InterQual®** Cochlear Implantation (Pediatric) criteria are met and documented in the member's medical record. The clinical criteria in item B of this policy shall apply if InterQual® criteria are not available to determine the medical necessity for replacement of external components for cochlear implants for pediatric members.

Adult Members Age 18 or Older on the Date of Service: Cochlear implants are considered medically necessary for members 18 to 20 years of age on the date of service when criteria are met for EPSDT services or applicable criteria are met in this Medical Policy Statement section. For members age 21 and older on the date of service, applicable Plan medical necessity criteria must be met in item A. Replacement of external components for cochlear implants is considered medically necessary when Plan medical criteria are met in item B.

A. **Medical Criteria for Cochlear Implants for Members Age 18 or Older:**

Unilateral and bilateral cochlear implant(s) are considered medically necessary for the treatment of a **bilateral sensorineural hearing impairment** when ANY of the criteria in items 1 through 3 is met:

1. **Unilateral Conventional Cochlear Implantation for Bilateral Hearing Impairment:**

ALL of the following criteria must be met for unilateral conventional cochlear implantation for an adult member age 18 or older on the date of service, as specified below in items a through k:

a. Member is diagnosed with pre or post linguistic bilateral severe-to-profound sensorineural hearing impairment; AND

b. Hearing threshold of pure-tone average of $\geq$ 70 decibels hearing level (dB HL) at 500 hertz (Hz), 1000 Hz, and 2000 Hz in intended ear(s); AND

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

c. The treating provider has determined that the member has limited or no benefit from appropriate amplification with hearing aids (or vibrotactile aids). Limited benefit from amplification is defined by test scores of less than or equal to 40% correct in the best-aided listening condition on tape-recorded tests of open-set sentence cognition; AND

d. Bilateral auditory dys-synchrony with failed sentence or word recognition testing by speech audiometry (with limitations in speech, language, and listening skills typically considered appropriate to the member's age, developmental stage, and cognitive ability); AND

e. Member possesses the cognitive ability to use auditory clues and a willingness to undergo an extended program of age-appropriate, postoperative cochlear implant/aural rehabilitation and training on the device; AND

f. Member is free from active infection of the external or middle ear or mastoid cavity; AND

g. No lesion of the acoustic nerve or central auditory pathway by CT or MRI; AND

h. Member has an accessible cochlear lumen that is structurally suited to implantation; AND

i. Member has no contraindication to surgery; AND

j. Device will be used in accordance with U. S. Food and Drug Administration (FDA)-approved labeling for that device; AND

k. Member has received ALL age-appropriate vaccines and has also been vaccinated with both conjugate and polysaccharide pneumococcal vaccines under the same schedules that apply to other individuals at high risk for invasive pneumococcal disease; OR

2. **Bilateral Conventional Cochlear Implantation for Bilateral Hearing Impairment:**

BOTH criteria in items a and b must be met for bilateral conventional cochlear implantation for an adult member age 18 or older on the date of service:

a. All of the criteria are met for unilateral cochlear implant for the treatment of bilateral severe-to-profound sensorineural hearing loss, as specified above in items 1a through 1k of this section; AND

b. The treating provider has determined that a unilateral cochlear implant plus hearing aid in the contralateral ear will NOT result in a binaural benefit for the member (i.e., hearing aid will not produce the required amplification); OR

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

3. **Unilateral Hybrid Cochlear Implantation for Bilateral Hearing Impairment**:

ALL of the criteria in items a through n must be met for the medically necessary use of unilateral hybrid cochlear implantation (e.g., Nucleus® Hybrid™ L24 Cochlear Implant System by Cochlear) for an adult member age 18 or older on the date of service:

a. Member is diagnosed with bilateral severe-to-profound sensorineural hearing impairment with residual low-frequency hearing sensitivity; AND

b. Member obtained limited benefit from appropriately fitted bilateral hearing aids; AND

c. Intended ear for unilateral hybrid cochlear implant has normal to moderately severe low-frequency hearing loss of $\leq$ 60 dB HL at $\leq$ 500 Hz; AND

d. Member has severe to profound mid- to high-frequency hearing loss (threshold average of 2000, 3000, and 4000 Hz ≥75 dB HL) in the ear to be implanted; AND

e. Member has moderately severe to profound mid- to high-frequency hearing loss (threshold average of 2000, 3000, and 4000 Hz ≥ 60 dB hearing level) in the contralateral ear; AND

f. Member's aided consonant-nucleus-consonant word recognition score is from 10% to 60% in the ear to be implanted; AND

g. Member's aided consonant-nucleus-consonant word recognition score in the contralateral ear is equal to or better than the ear to be implanted but not more than 80% correct.

h. Member possesses the cognitive ability to use auditory clues and a willingness to undergo an extended program of age-appropriate, postoperative cochlear implant rehabilitation and training on the device; AND

i. Member is free from active infection of the external or middle ear or mastoid cavity; AND

j. No lesion of the acoustic nerve or central auditory pathway by CT or MRI; AND

k. Member has an accessible cochlear lumen that is structurally suited to implantation; AND

l. Member has no contraindication to surgery; AND

m. Device will be used in accordance with all U. S. Food and Drug Administration (FDA)-approved labeling for that device, including the member's condition, age, and guidelines on the use of uniaural (monoaural) hybrid cochlear implantation, (e.g., Cochlear™ Nucleus® Hybrid L24 Implant System by Cochlear is FDA approved for unilateral use for patients 18 years of age and older); AND

n. Member has received ALL age-appropriate vaccines and has also been vaccinated with both conjugate and polysaccharide pneumococcal vaccines under the same schedules that apply to other individuals at high risk for invasive pneumococcal disease; OR

B. **Medical Criteria for Replacement of External Components for Cochlear Implants for Adult and Pediatric Members:**

Replacement of external components for cochlear implants (e.g., sound processor, transmitting coil, microphone, or connecting cords) is considered medically necessary for an adult member age 18 or older on the date of service when it is a covered service and applicable criteria are met in either item 1 or item 2. If InterQual® criteria are not available to evaluate requests for replacement components for pediatric members age 17 or younger on the date of service, the following medical necessity criteria shall apply.

1. **Criteria for Replacement of All External Components for Cochlear Implants**:

A treating provider (e.g., audiologist or physician) certifies that the member meets ANY of the criteria in items a through f:

a. The existing component is ineffective to the point of interfering with the activities of daily living; OR

b. There is a change in the patient's medical condition that necessitates a different type of component, OR

c. The existing component has reached the end of its reasonable useful life; the reasonable useful life of a sound processor is not less than 5 years; OR

c. The manufacturer of the component no longer supports the repairs of the device; OR

e. The external component is lost and will be replaced by the same make and model unless it is obsolete (with additional criteria in item 2 met for the replacement of a lost processor when it is the requested component); OR

f. The external component is unable to be repaired, with additional criteria in item 2 met for the replacement of an existing processor when it is the requested component; OR

2. **Additional Criteria for Replacement/Upgrade of Processor for Cochlear Implant**:

BOTH of the following criteria are met, as specified below in item a and item b:

a. Criteria are met for replacement of external components specifically related to the processor as stated above in item 1 (Criteria for Replacement of All External Components for Cochlear Implants); AND

b. When the request is for a replacement of a cochlear implant processor, ANY of the following ADDITIONAL documentation listed in items (1) and (2) must be submitted to the Plan with the prior authorization:

(1) **Replace Existing Processor**:

A comprehensive report within the last 6 calendar months with justification of the medical necessity is required for each prior authorization request for a new processor; the report must include ALL of the documentation specified in items (a) through (d):

(a) A description of the status of the member's current equipment; AND

(b) Documentation of the current equipment's obsolescence if it is the reason for the equipment replacement; AND

(c) Member's current sound field results and speech testing results utilizing the member's current cochlear implant equipment; AND

(d) Invoice stating cost of equipment requested; OR

(2) **Replace Lost Processor:**

In the case of loss of a processor, ALL of the following information must be submitted to the Plan, as specified below in items (a) through (c):

(a) A description of the circumstances regarding the loss; AND

(b) An invoice stating the cost of equipment requested; AND

(c) A list of the member's current equipment.

Limitations and Exclusions

ANY of the following limitations listed in items 1 through 6 apply to cochlear implants:

1. Contraindications for conventional cochlear implants and/or hybrid cochlear implantation for members age 18 or older include ANY of the following conditions, as specified below in items a through f. Plan Medical Director review is required with supporting medical record documentation submitted by the treating provider.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

a. Absence of cochlear development as demonstrated on CT scan; OR

b. Active or chronic infection of the external or middle ear and mastoid cavity; OR

c. Tympanic membrane perforation; OR

d. Cochlear ossification that prevents electrode insertion; OR

e. Deafness due to lesion(s) of the 8th cranial nerve (acoustic nerve), central auditory pathway, or brain stem; OR

f. Lack of motivation preoperatively by the adult member to participate in the rehabilitation process. (Participation in the rehabilitation process is essential for optimal benefit from the cochlear implant; rehabilitation may include telephone use, communication strategies, speech reading and auditory training after cochlear implantation.)

2. Upgrade of an existing and functional external component of a cochlear implant system to achieve aesthetic improvement (such as smaller profile components) is NOT considered medically necessary for an adult or pediatric member.

3. A switch from a body-worn, functioning, external sound processor to a behind the ear model to achieve aesthetic improvement is NOT considered medically necessary for an adult or pediatric member.

4. The use of bilateral hybrid cochlear implantations is considered experimental and investigational or NOT medically necessary for an adult member age 18 or older due to limited evidence demonstrating the clinical utility and clinical validity of the treatment.

5. The Plan considers cochlear implants with Bluetooth technology integrated within the device itself or the use of accessories that allow for Bluetooth technology's wireless streaming of sound to the device to be experimental and investigational or NOT medically necessary for an adult or pediatric member because the effectiveness has not been established.

6. Plan Medical Director review is required for any of the following requests listed in items a through c. Requests for cochlear implantation will be evaluated based on current clinical guidelines that include position statements from the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS).

   a. The Plan considers the use of conventional cochlear implantation for the treatment of unilateral hearing loss to NOT be medically necessary for an adult member age 18 or older

due to an insufficient quantity of published, peer-reviewed clinical evidence to assess the safety and/or impact on health outcomes or patient management for this indication. This includes the use of FDA-approved devices for unilateral hearing loss (e.g., MED-EL Cochlear Implant System with Synchrony/Synchrony 2 is FDA approved for individuals 5 years of age and older with single-sided deafness who have profound sensorineural hearing loss in one ear and normal hearing or mild sensorineural hearing loss in the other ear or asymmetric hearing loss). Plan Medical Director review is required for individual consideration.

b. A request for cochlear implantation for a member with severe to profound hearing loss for a duration of 30 years or longer requires Plan Medical Director review for individual consideration.

c. Plan Medical Director review is required for the use of cochlear implantation for an adult member age 18 or older when the Plan's applicable medical necessity criteria are NOT met.

Variations

The Plan uses guidance from the Centers for Medicare & Medicaid Services (CMS) for medical necessity and coverage determinations for Senior Care Options (SCO) members and WellSense Medicare Advantage HMO members, including but not limited to national coverage determinations (NCDs), local coverage determinations (LCDs), local coverage articles (LCAs), and documentation included in Medicare manuals. At the time of the Plan's most recent policy review, CMS NCD 50.3 includes nationally covered indications for cochlear implantation. Verify CMS guidelines in effect on the date of the prior authorization request. When there is no guidance from CMS for the requested service, Plan-adopted clinical review criteria will be used to determine the medical necessity of the service.

Applicable Coding

The Plan uses and adopts up-to-date Current Procedural Terminology (CPT) codes from the American Medical Association (AMA), International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10) diagnosis codes developed by the World Health Organization and adapted in the United Stated by the National Center for Health Statistics (NCHS) of the Centers for Disease Control under the U.S. Department of Health and Human Services, and the Health Care Common Procedure Coding System (HCPCS) established and maintained by the Centers for Medicare & Medicaid Services (CMS). Since the AMA, NCHS, and CMS may update codes more frequently or at different intervals than Plan policy updates, the list of applicable codes included in this Plan policy is for informational purposes only, may not be all inclusive, and is subject to change without prior notification. Whether a code is listed in the Applicable Coding section of this Plan policy does not constitute or imply member coverage or provider reimbursement. Providers are responsible for reporting all services using the most up-to-date industry-standard procedure and diagnosis codes as published by the AMA, NCHS, and CMS at the time of the service.

Providers are responsible for obtaining prior authorization for the services specified in the Clinical Criteria and Limitation and Exclusions sections of this Plan policy, even if an applicable code

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

appropriately describing the service that is the subject of this Plan policy is not included in this Applicable Coding section. Review the Plan's reimbursement policies for Plan billing guidelines. Coverage for services is subject to benefit eligibility under the member's benefit plan in effect at the time of the service. Member benefit documents are available at the following websites: www.bmchp.org for BMC HealthNet Plan members, www.SeniorsGetMore.org for Senior Care Options members, www.wellsense.org for WellSense New Hampshire Medicaid members, and www.WellSense.org/Medicare for WellSense Medicare Advantage HMO members.

CPT Codes	Description: Codes Covered When Medically Necessary
69930	Cochlear device implantation, with or without mastoidectomy Plan note: Code used for conventional cochlear implant or hybrid cochlear implant.
HCPCS Codes	**Description: Codes Covered When Medically Necessary**
L8614	Cochlear device, includes all internal and external components
L8615	Headset/headpiece for use with cochlear implant device, replacement
L8616	Microphone for use with cochlear implant device, replacement
L8617	Transmitting coil for use with cochlear implant device, replacement
L8618	Transmitter cable for use with cochlear implant device or auditory osseointegrated device, replacement
L8619	Cochlear implant, external speech processor and controller, integrated system, replacement
L8627	Cochlear implant, external speech processor, component, replacement
L8628	Cochlear implant, external controller component, replacement
L8629	Transmitting coil and cable, integrated, for use with cochlear implant device, replacement
V5273	Assistive listening device, for use with cochlear implant Plan note: Code is NOT payable for the WellSense Medicare Advantage HMO product.

References

American Academy of Audiology (AAA). Clinical Practice Guideline: Cochlear Implants. 2019 Jul.

American Academy of Audiology (AAA). Clinical Practice Guideline: Pediatric Amplification. 2013 Jun.

American Academy of Audiology (AAA). Cochlear Implants in Children.

American Academy of Audiology (AAA). Guidelines and Standards. Cochlear Implants.

American Academy of Audiology (AAA). Guidelines and Standards. Pediatric Rehabilitation & Hearing Aids. Cochlear Implants in Children. 1995

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

American Academy of Audiology (AAA). Guidelines and Standards. Pediatric Rehabilitation & Hearing Aids. Pediatric Amplification Practice Guidelines. 2013 Jun.

American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS). Clinical Practice Guidelines.

American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS). Position Statement: Cochlear Implants. Revised 2020 Nov 10.

American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS). Position Statement: Pediatric Cochlear Implantation Candidacy. 2021 Apr 5

American Academy of Pediatrics (AAP). Joint Committee on Infant Hearing (JCIH) of the AAP, Muse C, Harrison J, Yoshinaga-Itano C, Grimes A, Brookhouser PE, Epstein S, Buchman C, Mehl A, Vohr B, Moeller MP, Martin P, Benedict BS, Scoggins B, Crace J, King M, Sette A, Martin B. Supplement to the JCIH 2007 position statement: principles and guidelines for early intervention after confirmation that a child is deaf or hard of hearing. Pediatrics 2013 Apr;131(4):e1324-49. doi: 10.1542/peds.2013-0008. Epub 2013 Mar 25. PMID: 23530178.

American Academy of Pediatrics (AAP). Program to Enhance the Health & Development of Infants and Children (PEHDIC). Early Hearing Detection & Intervention Guidelines.

American Cochlear Implant Alliance. Park LR, Eskridge H, Dillon MT, Brown KD. A White Paper In Support of Insurance Coverage for Cochlear Implantation in Cases of Pediatric Unilateral Hearing Loss. The University of North Carolina at Chapel Hill Department of Otolaryngology/Head and Neck Surgery. 2019.

American Neurotology Society (ANS). Carlson ML, O'Connell BP, Lohse CM, Driscoll CL, Sweeney AD. Survey of the American Neurotology Society on Cochlear Implantation: Part 2, Surgical and Device-Related Practice Patterns. Otol Neurotol. 2018 Jan;39(1):e20-e27. doi: 10.1097/MAO.0000000000001631. PMID: 29210943.

American Neurotology Society (ANS). Carlson ML, Sladen DP, Gurgel RK, Tombers NM, Lohse CM, Driscoll CL. Survey of the ANS on Cochlear Implantation: Part 1, Candidacy Assessment and Expanding Indications. Otol Neurotol. 2018 Jan;39(1):e12-e19. doi: 10.1097/MAO.0000000000001632. PMID: 29210952.

American Neurotology Society (ANS). Resources & Announcement.

American Speech-Language-Hearing Association (ASHA). Cochlear Implants.

American Speech-Language-Hearing Association (ASHA). Degree of Hearing Loss

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

American Speech-Language-Hearing Association (ASHA), the Department of Veterans Affairs (VA), and the American Academy of Audiology (AAA). Joint Audiology Committee Clinical Practice Statements and Algorithms.

American Speech-Language-Hearing Association (ASHA). Evans M, Dillon M. The Assessment and Aural Rehabilitation Tool for Cochlear Implant Recipients With Unilateral Hearing Loss. 2019 Oct:4(5):962-70. doi: 10.1044/2019_PERS-SIG9-2019-0003.

American Speech-Language-Hearing Association (ASHA). FDA Approves MED-EL USA's Cochlear Implants for Single-Sided Deafness and Asymmetric Hearing Loss. 2019 Jul 23.

American Speech-Language-Hearing Association (ASHA). Hearing Loss.

American Speech-Language-Hearing Association (ASHA). Hearing Loss - Beyond Early Childhood.

Arnoldner C, Lin VY. Expanded selection criteria in adult cochlear implantation. Cochlear Implants Int. 2013 Nov;14 Suppl 4:S10-3. doi: 10.1179/1467010013Z.000000000123. PMID: 24533755.

Au A, Dowel RC. Evidence-Based Recommendations for Bilateral Cochlear Implantation in Adults. Am J. Audiol. 2019 Oct 16;28(3S):775-82. doi: 10.1044/2019_AJA-HEAL18-18-0183. Epub 2019 Oct 16. PMID: 32271119.

Bento RF, Danieli F, Magalhães AT, Gnansia D, Hoen M. Residual Hearing Preservation with the Evo® Cochlear Implant Electrode Array: Preliminary Results. Int Arch Otorhinolaryngol. 2016 Oct;20(4):353-358. Epub 2016 Feb 16. PMID: 27746839.

Bergeson TR, Houston DM, Miyamoto RT. Effects of congenital hearing loss and cochlear implantation on audiovisual speech perception in infants and children. Restor Neurol Neurosci. 2010;28(2):157-65. doi: 10.3233/RNN-2010-0522. PMID: 20404405.

Berrettini S, Baggiani A, Bruschini L, Cassandro E, Cuda D, Filipo R, Palla I, Quaranta N, Forli F. Systematic review of the literature on the clinical effectiveness of the cochlear implant procedure in adult patients. Acta Otorhinolaryngol Ital. 2011 Oct;31(5):299-310. PMID: 22287821.

Biever A, Amurao C, Mears M. Considerations for a Revised Adult Cochlear Implant Candidacy Evaluation Protocol. Otol Neurotol. 2021 Jan;42(1):159-164. doi: 10.1097/MAO.0000000000002966. PMID: 33885262.

Bierer JA, Spindler E, Bierer SM, Wright R. An Examination of Sources of Variability Across the Consonant-Nucleus-Consonant Test in Cochlear Implant Listeners. Trends Hear. 2016 May 17;20. pii: 2331216516646556. doi: 10.1177/2331216516646556. PMID: 27194155.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

Bond M, Mealing S, Anderson R, Elston J, Weiner G, Taylor RS, Hoyle M, Liu Z, Price A, Stein K. The effectiveness and cost-effectiveness of cochlear implants for severe to profound deafness in children and adults: a systematic review and economic model. Health Technol Assess. 2009 Sep;13(44):1-330. doi: 10.3310/hta13440. PMID: 19799825.

Brant JA, Ruckenstein MJ. Electrode selection for hearing preservation in cochlear implantation: A review of the evidence. World J Otorhinolaryngol Head Neck Surg. 2016 Nov 24;2(3):157-160. doi: 10.1016/j.wjorl.2016.08.002. eCollection 2016 Sep. PMID: 29204561.

Brodie A, Smith B, Ray J. The Impact of Rehabilitation on Quality of Life After Hearing Loss: a Systemic Review. Eur Arch Otorhinolaryngol. 2018 Oct;275(10):2435-40. Doi: 10.1007/s00405-018-5100-7. Epub 2018 Aug 23.

Broomfield, SJ, Murphy, J, Wild, DC, Emmett, SR, O'Donoghue, GM. Writing for the UK National Pediatric CI Surgical Audit Group. Results of a prospective surgical audit of bilateral pediatric cochlear implantation in the UK. Cochlear Implants Int. 2014 Sep;15(5):246-53. doi: 10.1179/1754762813Y.0000000041. Epub 2014 Jan 3. PMID: 24621149.

Büchner A, Schüssler M, Battmer RD, Stöver T, Lesinski-Schiedat A, Lenarz T. Impact of low-frequency hearing. Audiol Neurootol. 2009;14(Suppl 1):8-13. doi: 10.1159/000206490. Epub 2009 Apr 22. PMID: 19390170.

Cabral Junior F, Pinna MH, Alves RD, Malerbi AF, Bento RF. Cochlear Implantation and Single-sided Deafness: A Systematic Review of the Literature. Int Arch Otorhinolaryngol. 2016 Jan;20(1):69-75. doi: 10.1055/s-0035-1559586. Epub 2015 Jul 29. PMID: 26722349.

Causon A, Verschuur C, Newman TA. A retrospective analysis of the contribution of reported factors in cochlear implantation on hearing preservation outcomes. Otol Neurotol. Aug 2015;36(7):1137-45. doi: 10.1097/MAO.0000000000000753. PMID 25853614.

Centers of Disease Control and Prevention (CDC). Data and Statistics About Hearing Loss in Children.

Centers for Disease Control and Prevention (CDC). Hearing Loss Screening: Recommendations and Guidelines.

Centers for Disease Control and Prevention (CDC). Morbidity & Mortality Weekly Report. Pneumococcal Vaccination for Cochlear Implant Candidates and Recipients: Updated Recommendations of the Advisory Committee on Immunization Practices. MMWR. 2003;52(31):739-74.

Centers of Disease Control and Prevention (CDC). Vaccines and Preventable Diseases. Use of Vaccines to Prevent Meningitis in Persons with Cochlear Implants.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

Centers for Medicare & Medicaid Services (CMS). Coverage with Evidence Development. Cochlear Implants.

Centers for Medicare & Medicaid Services (CMS). EPSDT - A Guide for States: Coverage in the Medicaid Benefit for Children and Adolescents. 2014 Jun.

Centers for Medicare & Medicaid Services (CMS). Medicaid. Early and Periodic Screening, Diagnosis, and Treatment. Medicaid.gov.

Centers for Medicare & Medicaid Services (CMS). Medicaid. Vision and Hearing Screening Services for Children and Adolescents. Medicaid.gov

Centers for Medicare & Medicaid Services (CMS). Medicare Benefit Policy Manual. Publication Number 100-02. Chapter 15 - Covered Medical and Other Health Services. 80.3 – Audiology Services

Centers for Medicare & Medicaid Services (CMS). Medicare Benefit Policy Manual. Publication Number 100-02. Chapter 16 - General Exclusions from Coverage. 100 - Hearing Aids and Auditory Implants.

Centers for Medicare & Medicaid Services (CMS). Medicare Coverage Database (MCD).

Centers for Medicare & Medicaid Services (CMS). National Coverage Determination (NCD) for Cochlear Implants (50.3). Version 2. 2005 Apr 4.

Centers for Medicare & Medicaid Services (CMS). Transmittals

Chung J, Chueng K, Shipp D, Friesen L, Chen JM, Nedzelski JM, Lin VY. Unilateral multi-channel cochlear implantation results in significant improvement in quality of life. Otol Neurotol. 2012 Jun;33(4):566-71. doi: 10.1097/MAO.0b013e3182536dc2. PMID: 22569148.

Cochlear. Cochlear Nucleus Hybrid L24 cochlear implant C124REH. Professional Package Insert.

Commonwealth of Massachusetts. Division of Insurance (DOI) Bulletins.

Commonwealth of Massachusetts. Early Intervention Policies.

Commonwealth of Massachusetts. MassHealth Provider Bulletins

Commonwealth of Massachusetts. MassHealth Provider Manuals.

Commonwealth of Massachusetts. MassHealth Transmittal Letters.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

Craddock L, Cooper H, Riley A, Wright T. Cochlear implants for pre-lingually profoundly deaf adults. Cochlear Implants Int. 2016 Apr;17 Suppl 1:26-30. doi: 10.1080/14670100.2016.1161122. PMID: 27099107.

Crathorne L, Bond M, Cooper C, Elston J, Weiner G, Taylor R, Stein K. A systematic review of the effectiveness and cost-effectiveness of bilateral multichannel cochlear implants in adults with severe-to-profound hearing loss. Clin Otolaryngol. 2012 Oct;37(5):342-54. doi: 10.1111/coa.12011. PMID: 22928754.

Crowson MG, Semenov YR, Tucci DL, Niparko JK. Quality of Life and Cost-Effectiveness of Cochlear Implants: A Narrative Review. Audiol Neurootol. 2017;22(4-5):236-58. doi: 10.1159/000481767. Epub 2017 Dec 21. PMID: 29262414.

Deep NL, Gordon SA, Shapiro WH, Waltzman SB, Roland JT Jr, Friedmann DR. Cochlear Implantation in Children with Single-Sided Deafness. Laryngoscope. 2020 Feb 17. doi: 10.1002/lary.28561. PMID: 32065422.

Dillon MT, Buss E, Rooth MA, King ER, Deres EJ, Buchman CA, Pillsbury HC, Brown KD. Effect of Cochlear Implantation on Quality of Life in Adults with Unilateral Hearing Loss. Audiol Neurootol. 2017;22(4-5):259-71. doi: 10.1159/000484079. Epub 2018 Jan 4. PMID: 29298446.

Friedmann DR, Peng R, Fang Y, McMenomey SO, Roland JT, Waltzman SB. Effects of loss of residual hearing on speech performance with the CI422 and the Hybrid-L electrode. Cochlear Implants Int. 2015 Sep;16(5):277-84. doi: 10.1179/1754762815Y.0000000008. Epub 2015 Apr 26. PMID 25912363.

Galvin JJ 3rd, Fu QJ, Wilkinson EP, Mills D, Hagan SC, Lupo JE, Padilla M, Shannon RV. Benefits of Cochlear Implantation for Single-Sided Deafness: Data From the House Clinic-University of Southern California-University of California, Los Angeles Clinical Trial. Ear Hear. 2019 Jul/Aug;40(4):766-81. doi: 10.1097/AUD.0000000000000671. PMID: 30358655.

Härkönen K, Kivekäs I, Kotti V, Sivonen V, Vasama JP. Hybrid cochlear implantation: quality of life, quality of hearing, and working performance compared to patients with conventional unilateral or bilateral cochlear implantation. Eur Arch Otorhinolaryngol. 2017 Oct;274(10):3599-604. doi: 10.1007/s00405-017-4690-9. Epub 2017 Jul 31. PMID: 28762045.

Hayes. Evidence Analysis Research Brief. Cochlear Implantation for Adults with Single-Sided Deafness and Tinnitus. Dallas, TX: Hayes; 2021 Nov 15.

Hayes. Evidence Analysis Research Brief. Cochlear Implantation for Adults with Single-Sided Deafness without Tinnitus. Dallas, TX: Hayes; 2020 Oct 22.

Hayes. Evidence Analysis Research Brief. Cochlear Implantation for Children with Single-Sided Deafness and Tinnitus. Dallas, TX: Hayes; 2020 Oct 29.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

Hayes. Evidence Analysis Research Brief. Cochlear Implantation for Children with Single-Sided Deafness without Tinnitus. Dallas, TX: Hayes; 2020 Nov 6.

Hayes. Evidence Analysis Research Brief. Synchrony/Synchrony 2 Cochlear Implant (MED-EL Corp.) for Children with Unilateral Sensorineural Hearing Loss. Dallas, TX: Hayes; 2021 June 10.

Health Quality Ontario. Bilateral Cochlear Implantation: A Health Technology Assessment. Ont Health Technol Assess Ser. 2018:18(6):1-139. PMID: 30443278

Health Quality Ontario. Implantable Devices for Single-Sided Deafness and Conductive or Mixed Hearing Loss: Recommendation. Ont Health Technol Assess Ser [Internet]. 2020 Mar;20(1):1–165.

HEARnet Online. Hearing Technologies.

HEARnet Online. Hybrid Cochlear Implants. Cochlear Hybrid System

Hunter JB, Tolisano AM. When to Refer a Hearing-impaired Patient for a Cochlear Implant Evaluation. Otol Neurotol. 2021 Jun 1;42(5):e530-5. doi: 10.1097/MAO.0000000000003023. PMID: 33394941.

Hwang CF, Chen Y, Lin HC, Narayanan P, Oh SH, Truy E. Cochlear Implant and Its Related Science. Biomed Res Int. 2015;2015:683967. doi: 10.1155/2015/683967. Epub 2015 Jul 9. PMID: 26240825.

Isaiah A, Hartley DE. Can training extend current guidelines for cochlear implant candidacy? Neural Regen Res. 2015 May;10(5):718-20. doi: 10.4103/1673-5374.156964. PMID: 26109944.

Jurawitz MC, Büchner A, Harpel T, Schüssler M, Majdani O, Lesinski-Schiedat A, Lenarz T. Hearing preservation outcomes with different cochlear implant electrodes: Nucleus® Hybrid-L24 and Nucleus Freedom™ CI422. Audiol Neurotol. 2014;19(5):293-309. doi: 10.1159/000360601. Epub 2014 Oct 1. PMID: 25277083.

Kelsall DC, Arnold RJG, Lionnet L. Patient-Reported Outcomes from the United States Clinical Trial for a Hybrid Cochlear Implant. Otol Neurotol. 2017 Oct;38(9):1251-61. doi: 10.1097/ MAO.0000000000001517. PMID: 28777227.

Kitterick PT, O'Donoghue GM, Edmondson-Jones M, Marshall A, Jeffs E, Craddock L, Riley A, Green K, O'Driscoll M, Jiang D, Nunn T, Saeed S, Aleksy W, Seeber BU. Comparison of the benefits of cochlear implantation versus contra-lateral routing of signal hearing aids in adult patients with single-sided deafness: study protocol for a prospective within-subject longitudinal trial. BMC Ear Nose Throat Disord. 2014 Aug 11;14:7. doi: 10.1186/1472-6815-14-7. eCollection 2014. PMID: 25152694.

Kumar RS, Mawman D, Sankaran D, Melling C, O'Driscoll M, Freeman SM, Lloyd SK. Cochlear implantation in early deafened, late implanted adults: Do they benefit? Cochlear Implants Int. 2016 Apr;17 Suppl 1:22-5. doi: 10.1080/14670100.2016.1161142. PMID: 27099106.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

Leigh J, Dettman S, Dowell R, Sarant J. Evidence-based approach for making cochlear implant recommendations for infants with residual hearing. Ear Hear. 2011 May-Jun;32(3):313-22. doi: 10.1097/AUD.0b013e3182008b1c. PMID: 21522067.

Lenarz T, James C, Cuda D, Fitzgerald O'Connor A, Frachet B, Frijns JH, Klenzner T, Laszig R, Manrique M, Marx M, Merkus P, Mylanus EA, Offeciers E, Pesch J, Ramos-Macias A, Robier A, Sterkers O, Uziel A. European multi-centre study of the Nucleus Hybrid L24 cochlear implant. Int J Audiol. 2013 Dec;52(12):838-48. doi: 10.3109/14992027.2013.802032. Epub 2013 Sep 2. PMID: 23992489.

Lenarz T, Verhaert N, Desloovere C, Desmet J, D'hondt C, González JC, Kludt E, Macías AR, Skarzynski H, Van de Heyning P, Vyncke C, Wasowski A. A comparative study on speech in noise understanding with a direct acoustic cochlear implant in subjects with severe to profound mixed hearing loss. Audiol Neurotol. 2014;19(3):164-74. doi: 10.1159/000358004. Epub 2014 Feb 18. PMID: 24556905.

Massachusetts Health Quality Partners (MHQP). 2021 Adult Preventive Care Guidelines.

Massachusetts Health Quality Partners (MHQP). 2021 Pediatric Preventive Care Guidelines
McKinnon BJ. Cost effectiveness of cochlear implants. Curr Opin Otolaryngol Head Neck Surg. 2014 Oct;22(5):344-8. doi: 10.1097/MOO.0000000000000091. PMID: 25089664.

McRackan TR, Bauschard M, Hatch JL, Franko-Tobin E, Droghini HR, Velozo CA, Nguyen SA, Dubno JR. Meta-Analysis of Cochlear Implantation Outcomes Evaluated with General Health-Related Patient-Reported Outcome Measures. Otol Neurotol. 2018 Jan;39(1):29-36. doi: 10.1097/MAO.0000000000001620. PMID: 29227446.

McRackan TR, Bauschard M, Hatch JL, Franko-Tobin E, Droghini HR, Nguyen SA, Dubno JR. Meta-analysis of quality-of-life improvement after cochlear implantation and associations with speech recognition abilities. Laryngoscope. 2018 Apr;128(4):982-990. doi: 10.1002/lary.26738. Epub 2017 Jul 21. PMID: 28731538.

MED-EL Medical Electronics. Cochlear Implants.

MED-EL Medical Electronics. Electric Acoustic Stimulation (EAS). MED-EL SYNCHRONY EAS Cochlear Implant System

MED-EL Medical Electronics. SYNCHRONY Cochlear Implant System, Synchrony EAS Hearing Implant System, BONEBRIDGE Bone Conduction Implant System, and ADHEAR Bone Conduction System.

Miller G, Miller C, Marrone N, Howe C, Fain M, Jacob A. The impact of cochlear implantation on cognition in older adults: a systematic review of clinical evidence. BMC Geriatr. 2015 Feb 25;15:16. doi: 10.1186/s12877-015-0014-3. PMID: 25879461.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

National Institute on Deafness and Other Communication Disorders (NIDCD). Cochlear Implants. 2017 Mar 6.

National Institute on Deafness and Other Communication Disorders (NIDCD). Statistics and Epidemiology. Hearing, Ear Infections, and Deafness.

National Institute for Health and Clinical Excellence (NICE). Cochlear implants for children and adults with severe to profound deafness. Technology appraisal guidance (TA566). 2019 Mar 7.

National Institute for Health and Clinical Excellence (NICE). Hearing impairment - cochlear implants. Technology appraisal guidance (TA166). Guidance Cochlear implants for children and adults with severe to profound deafness. 2009 Jan. Reviewed 2011 Jun.

National Institute for Health and Care Excellence (NICE). Hearing loss in adults: assessment and management. NICE guidelines NG98. 2018 Jun 21.

New Hampshire Department of Health and Human Services. Billing Manuals.

New Hampshire Department of Health and Human Services. Provider Notices

Nguyen Y, Mosnier I, Borel S, Ambert-Dahan E, Bouccara D, Bozorg-Grayeli A, Ferrary E, Sterkers O. Evolution of electrode arrage diameter for hearing preservation in cochlear implantation. Acta Otolaryngol. 2013;133(2):116-22. doi: 10.3109/0016489.2012.723824. Epub 2012 Dec 7. PMID: 23216055.

Ontario Health (Quality). Implantable devices for single-sided deafness and conductive or mixed hearing loss: a health technology assessment. Ont Health Technol Assess Ser [Internet]. 2020 Mar;20(1):1–165.

Peters BR, Wyss J, Manrique M. Worldwide Trends in Bilateral Cochlear Implantation Laryngoscope. 2010 May;120 Suppl 2:S17-44. doi: 10.1002/lary.20859. PMID: 20422715.

Pillsbury HC 3rd, Dillon MT, Buchman CA, Staecker H, Prentiss SM, Ruckenstein MJ, Bigelow DC, Telischi FF, Martinez DM, Runge CL, Friedland DR, Blevins NH, Larky JB, Alexiades G, Kaylie DM, Roland PS, Miyamoto RT, Backous DD, Warren FM, El-Kashlan HK, Slager HK, Reyes C, Racey AI, Adunka OF. Multicenter US Clinical Trial With an Electric-Acoustic Stimulation (EAS) System in Adults: Final Outcomes. Otol Neurotol. 2018 Mar;39(3):299-305. doi: 10.1097/MAO.0000000000001691. PMID: 29342054.

Poncet-Wallet C, Mamelle E, Godey B, Truy E, Guevara N, Ardoint M, Gnansia D, Hoen M, Saaï S, Mosnier I, Lescanne E, Bakhos D, Vincent C. Prospective Multicentric Follow-up Study of Cochlear Implantation in Adults With Single-Sided Deafness: Tinnitus and Audiological Outcomes. Otol Neurotol. 2019 Dec 20. doi: 10.1097/MAO.0000000000002564. PMID: 31868784.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

Prentiss S, Snapp H, Zwolan T. Audiology Practices in the Preoperative Evaluation and Management of Adult Cochlear Implant Candidates. JAMA Otolaryngol Head Neck Surg. 2020 Feb 1;146(2):136-42. doi: 10.1001/jamaoto.2019.3760. PMID: 31830215.

Roland JT Jr, Gantz BJ, Waltzman SB, Parkinson AJ. Long-term outcomes of cochlear implantation in patients with high-frequency hearing loss. Laryngoscope. 2018 Aug;128(8):1939-45. doi: 10.1002/lary.27073. Epub 2018 Jan 13. PMID: 29330858.

Roland JT Jr, Gantz BJ, Waltzman SB, Parkinson AJ; Multicenter Clinical Trial Group. United States multicenter clinical trial of the cochlear nucleus hybrid implant system. Laryngoscope. 2016 Jan;126(1):175-81. doi: 10.1002/lary.25451. Epub 2015 Jul 7. PMID: 26152811.

Telmesani LM, Said NM. Electrically evoked compound action potential (ECAP) in cochlear implant children: Changes in auditory nerve response in first year of cochlear implant use. Int J Pediatr Otorhinolaryngol. 2016 Mar;82:28-33. doi: 10.1016/j.ijporl.2015.12.027. Epub 2016 Jan 8. PMID: 26857311.

U. S. Food and Drug Administration (FDA). Medical Devices. Cochlear Implants.

U. S. Food and Drug Administration (FDA). Medical Devices. MED-EL Cochlear Implant System – P000025/S104. 2019 Aug 21

U. S. Food and Drug Administration (FDA). Medical Devices. Nucleus 24 Cochlear Implant System - P970051/S172. 2020 Apr 7.

U. S. Food and Drug Administration (FDA). Medical Devices. Other Products and Devices to Improve Hearing

U. S. Food and Drug Administration (FDA). Premarket Approval (PMA). MED-EL Cochlear Implant System. Cochlear Implant with Combined Electrical Stimulation and Acoustic Amplification. MED-EL Corporation. PMA Number P000025. Decision Date 2016 Sep 15.

U. S. Food and Drug Administration (FDA). Premarket Approval (PMA). Nucleus® Hybrid™ L24 Implant System. Cochlear Implant with Combined Electrical Stimulation and Acoustic Amplification. Cochlear Americas. PMA Number 130016. 2014 Mar 20.

U. S. Food and Drug Administration (FDA). Summary of Safety and Effectiveness Data (SSED). MED-EL Cochlear Implant System. MED-EL Corporation. 2016 Sep 15.

U. S. Food and Drug Administration (FDA). Summary of Safety and Effectiveness Data (SSED). Nucleus® Hybrid™ L24 Implant System. Cochlear Americas. 2014 Mar 20.

Van de Heyning P, Távora-Vieira D, Mertens G, Van Rompaey V, Rajan GP, Müller J, Hempel JM, Leander D, Polterauer D, Marx M, Usami SI, Kitoh R, Miyagawa M, Moteki H, Smilsky K, Baumgartner

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

WD, Keintzel TG, Sprinzl GM, Wolf-Magele A, Arndt S, Wesarg T, Zirn S, Baumann U, Weissgerber T, Rader T, Hagen R, Kurz A, Rak K, Stokroos R, George E, Polo R, Medina MDM, Henkin Y, Hilly O, Ulanovski D, Rajeswaran R, Kameswaran M, Di Gregorio MF, Zernotti ME. Towards a Unified Testing Framework for Single-Sided Deafness Studies: A Consensus Paper. Audiol Neurootol. 2016;21(6):391-398. doi: 10.1159/000455058. Epub 2017 Mar 21. PMID: 28319951.

van Wieringen A, Boudewyns A, Sangen A, Wouters J, Desloovere C. Unilateral congenital hearing loss in children: Challenges and potentials. Hear Res. 2018 Jan 30. pii: S0378-5955(17)30433-1. doi: 10.1016/j.heares.2018.01.010. [Epub ahead of print] PMID: 29395617.

Vermeire K, Landsberger DM, Van de Heyning PH, Voormolen M, Punte AK, Schatzer R, Zierhofer C. Frequency-place map for electrical stimulation in cochlear implants: Change over time. Hear Res. 2015 Aug;326:8-14. doi: 10.1016/j.heares.2015.03.011. Epub 2015 Apr 1. PMID: 25840373.

Vesseur A, Free R, Langereis M, Snels C, Snik A, Ravenswaaij-Arts Cv, Mylanus E. Suggestions for a Guideline for Cochlear Implantation in CHARGE Syndrome. Otol Neurotol. 2016 Oct;37(9):1275-83. doi: 10.1097/MAO.0000000000001177. PMID: 27636388.

Vincenti, V., Bacciu, A., Guida, M., Marra, F., Bertoldi, B., Bacciu, S., Pasanisi, E. Pediatric cochlear implantation: an update. Ital J Pediatr. 2014 Sep 2;40:72. doi: 10.1186/s13052-014-0072-8. PMID: 25179127.

Yawn R, Hunter JB, Sweeney AD, Bennett ML. Cochlear implantation: a biomechanical prosthesis for hearing loss. F1000Prime Rep. 2015 Apr 2;7:45. doi: 10.12703/P7-45. eCollection 2015. PMID: 26097718.

Yoon YS, Shin YR, Fu QJ. Clinical selection criteria for a second cochlear implant for bimodal listeners. Otol Neurotol. 2012 Sep;33(7):1161-8. doi: 10.1097/MAO.0b013e318259b8c0. PMID: 22772002.

Policy History

Original Approval Date	Original Effective Date* and Version Number	Policy Owner	Original Policy Approved by
Regulatory Approval: N/A Internal Approval: 02/07/06 Quality and Clinical Management Committee (Q&CMC)	04/07/06 Version 1	Medical Policy Manager as Chair of Medical Policy, Criteria, and Technology Assessment Committee (MPCTAC)	Q&CMC

*Effective Date for the BMC HealthNet Plan Commercial Product: 01/01/12
*Effective Date for the WellSense New Hampshire Medicaid Product: 01/01/13
*Effective Date for the Senior Care Options Product: 01/01/16

*Effective Date for the WellSense Medicare Advantage HMO Product: 01/01/22

Note: Policy formerly titled *Cochlear Implants and Bone Anchored Hearing Aids* (policy number OCA 3.30). Policy renamed *Cochlear Implants* (and renumbered policy number OCA 3.301), and the revised policy is effective 10/01/14. Medical criteria for implantable bone-conduction hearing aids are included in a separate medical policy, *Implantable Bone-Conduction (Bone-Anchored) Hearing Aids* (policy number OCA 3.30), and this revised policy is effective on 10/01/14.

Policy Revisions History			
Review Date	**Summary of Revisions**	**Revision Effective Date and Version Number**	**Approved by**
02/06/07	Removed preauthorization requirement for most hearing aids.	Version 2	02/06/07: Q&CMC
11/13/07	Updated clinical criteria.	Version 3	11/13/07: MPCTAC 11/27/07: Utilization Management Committee (UMC) 12/06/07: Quality Improvement Committee (QIC)
11/11/08	Updated clinical criteria, references and coding.	Version 4	11/25/08: MPCTAC 11/25/08: UMC 12/16/08: QIC
11/24/09	Removed all language and coding pertaining to hearing aids, updated references.	Version 5	11/24/09: MPCTAC 12/23/09: QIC
10/01/10:	Added to the limitations section that cochlear implants are excluded from coverage for CWC members and not a covered benefit, updated coding and references.	Version 6	11/23/10: MPCTAC 12/22/10: QIC
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.	Version 7	06/29/11: MPCTAC 07/27/11: QIC
06/01/12	Updated references and revised the introductory paragraph in Applicable Coding section.	Version 8	06/20/12: MPCTAC 07/25/12: QIC

Policy Revisions History			
07/30/12	Off cycle review for WellSense New Hampshire Medicaid product, reformatted Medical Policy Statement. Air conduction hearing aid exclusion does not apply to the WellSense New Hampshire Medicaid product.	Version 9	08/03/12: MPCTAC 09/15/12: QIC
06/01/13	Review for effective date 10/01/13. Revised title, Summary section, and Limitations section. Referenced Northwood, Inc. in the Summary section. Reformatted Medical Policy Statement and Definitions sections. Referenced Plan policy, *Reimbursement Guidelines - Hearing Aid Dispensing and Repairs.* Updated and added references.	10/01/13 Version 10	06/19/13: MPCTAC 07/18/13: QIC
06/01/14	Review for effective date 10/01/14. Revised Summary, Description of Item or Service, Definitions, Clinical Background Information, and References sections. Revised medical criteria in the Medical Policy Statement section and Limitations section. Revised policy title and policy number. Revised language in Applicable Coding section and only included applicable codes for cochlear implants. Moved policy language and coding related to implantable bone-conduction (bone-anchored) hearing aids to a new medical policy effective 10/01/14, *Implantable Bone-Conduction (Bone-Anchored) Hearing Aids*, policy number OCA 3.30.	10/01/14 Version 11	06/18/14: MPCTAC 07/09/14: QIC
04/01/15	Review for effective date 08/01/15. Updated Limitations section. Updated criteria for the replacement of external components and moved to the Medical Policy Statement section. Removed Commonwealth Care, Commonwealth Choice, and Employer Choice from the list of applicable products because the products are no longer available. Updated References and Definitions	08/01/15 Version 12	04/15/15: MPCTAC 05/13/15: QIC

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.

Policy Revisions History			
	sections.		
11/25/15	Review for effective date 01/01/16. Updated template with list of applicable products and notes. Administrative changes made to the Medical Policy Statement section without changing criteria. Revised language in the Applicable Coding section.	01/01/16 Version 13	11/18/15: MPCTAC 11/25/15: MPCTAC (electronic vote) 12/09/15: QIC
05/01/16	Review for effective date 09/01/16. Revised criteria in the Medical Policy Statement and Limitations sections. Updated the Clinical Background Information and References sections.	09/01/16 Version 14	05/18/16: MPCTAC 06/08/16: QIC
06/01/17	Review for effective date 07/01/17. Administrative changes made to the Summary, Description of Item or Service, Definitions, References, Other Applicable Policies, and Reference to Applicable Laws and Regulations sections.	07/01/17 Version 15	06/21/17: MPCTAC
12/01/17	Review for effective 01/01/18. Industry-wide updates to codes included in the Applicable Coding section. Administrative changes made to the Policy Summary and Limitations sections.	01/01/18 Version 16	Not applicable because industry-wide code changes.
05/01/18	Review for effective date 06/01/18. Administrative changes made to the Limitations, References, and Other Applicable Policies sections.	06/01/18 Version 17	05/16/18: MPCTAC
05/01/19	Review for effective date 06/01/19. Administrative changes made to the Summary, Description of Item or Service, Definitions, Applicable Coding, References, Other Applicable Policies, and Reference to Applicable Laws and Regulations sections. Revised criteria in the Medical Policy Statement and Limitations sections.	06/01/19 Version 18	05/15/19: MPCTAC
11/01/19	Review for effective date 02/01/20. Criteria revised in the Limitations section. Administrative changes made to the References section.	02/01/20 Version 19	11/20/19: MPCTAC

Policy Revisions History			
02/01/20	Review for effective date 03/01/20. Updated the References section.	03/01/20 Version 20	02/19/20: MPCTAC
05/01/20	Review for effective date 06/01/20. Updated References section.	06/01/20 Version 21	05/20/20: MPCTAC
09/01/20	Review for effective date 10/01/20. Updated the Description of Item or Service, References, and Other Applicable Policies sections. Administrative changes made to the Medical Policy Statement and Limitations sections to clarify existing clinical review criteria.	10/01/20 Version 22	09/16/20: MPCTAC
08/01/21	Review for effective date 11/01/21. Administrative changes made to the Policy Summary, Description of Item or Service, Definitions, References, Other Applicable Policies, and Reference to Applicable Laws and Regulations sections. Criteria revised in the Medical Policy Statement and Limitations sections.	11/01/21 Version 23	08/27/21: MPCTAC (electronic vote)
11/01/21	Review for effective date 12/01/21. Adopted new medical policy template; removed administrative sections, the Medical Policy Statement section renamed the Clinical Criteria section, and the Limitations section renamed the Limitations and Exclusions section. Added WellSense Medicare Advantage HMO as an applicable product effective 01/01/22. Administrative changes made to the Policy Summary, Clinical Criteria, Limitations and Exclusions, Applicable Coding, and References sections.	12/01/21 Version 24	11/17/21: MPCTAC

Next Review Date

05/01/22

Authorizing Entity

MPCTAC

Disclaimer Information: +

Medical Policies are the Plan's guidelines for determining the medical necessity of certain services or supplies for purposes of determining coverage. These Policies may also describe when a service or supply is considered experimental or investigational, or cosmetic. In making coverage decisions, the Plan uses these guidelines and other Plan Policies, as well as the Member's benefit document, and when appropriate, coordinates with the Member's health care Providers to consider the individual Member's health care needs.

Plan Policies are developed in accordance with applicable state and federal laws and regulations, and accrediting organization standards (including NCQA). Medical Policies are also developed, as appropriate, with consideration of the medical necessity definitions in various Plan products, review of current literature, consultation with practicing Providers in the Plan's service area who are medical experts in the particular field, and adherence to FDA and other government agency policies. Applicable state or federal mandates, as well as the Member's benefit document, take precedence over these guidelines. Policies are reviewed and updated on an annual basis, or more frequently as needed. Treating providers are solely responsible for the medical advice and treatment of Members.

The use of this Policy is neither a guarantee of payment nor a final prediction of how a specific claim(s) will be adjudicated. Reimbursement is based on many factors, including member eligibility and benefits on the date of service; medical necessity; utilization management guidelines (when applicable); coordination of benefits; adherence with applicable Plan policies and procedures; clinical coding criteria; claim editing logic; and the applicable Plan – Provider agreement.

[+] *Plan* refers to Boston Medical Center Health Plan, Inc. and its affiliates and subsidiaries offering health coverage plans to enrolled members. The Plan operates in Massachusetts under the trade name Boston Medical Center HealthNet Plan and in other states under the trade name WellSense Health Plan.