



Bone-Anchored Hearing Aids (Osseointegrated Auditory Implants)

Clinical Coverage Criteria

Overview

A bone conduction hearing aid works by transmitting sound through the mastoid bone to the inner ear (cochlea), bypassing the outer and middle ear. Hearing through bone conduction is helpful for people with conductive or mixed hearing loss that cannot be corrected surgically, and for people with chronic, severe middle ear infection. A traditional bone-conduction hearing aid requires the use of a bone-conductor or vibrating pad. The vibrating pad is held in place on the mastoid bone by a removable headband. Because of advances in the treatment of outer and middle ear disorders, bone conduction hearing aids are rarely used today.

A bone-anchored hearing aid (BAHA) is an alternative to a traditional bone conduction hearing aid that eliminates the need for the headband. A BAHA consists of a small titanium fixture, a percutaneous abutment (a screw), and a sound processor (a hearing aid). The titanium fixture is implanted in the mastoid bone during a minor outpatient surgical procedure. Over a period of several months, the titanium fixture bonds with the surrounding tissue; a process known as osseointegration. The osseointegrated titanium fixture and abutment provide secure retention for the sound processor and transmit sound through the bone to the cochlea.

Policy

Bone-anchored Hearing Aids require Prior Authorization by Fallon Health. The below criteria must be met and supported by the treating provider(s) medical records:

1. Patient is 5 years of age or older and is unable to use conventional air conduction hearing aid(s) or undergo surgical repair because of one of the following conditions:
 - Congenital or surgical malformation of the external ear canal or middle ear canal
 - Tumors of the external ear canal and/or tympanic cavity
 - Severe, chronic otitis externa or otitis media
 - Other acquired malfunction of the external ear canal or middle ear canal which precludes the use of a conventional air-conduction hearing aid, such as hypersensitivity to ear molds used in air conduction hearing aids

Currently there are several FDA-approved bone-anchored hearing aids marketed in the U.S. Despite many similarities in these devices, there are important features that distinguish them from one another. Coverage for bone-anchored hearing aids is premised upon the use of an FDA-approved device in accordance with its FDA-approved indications.

Exclusions

- Any use of Bone-Anchored Hearing Aids other than outlined above.
- Semi-implantable hearing aids (also known as middle-ear implants) in which the hearing aid is surgically implanted into the middle ear.
- A BAHA® "sleeper fixture" or other accessories which are not medically necessary.

Codes

Code type	Code	Description
CPT	69714	Implantation, osseointegrated implant, temporal bone, with percutaneous attachment to external speech processor/cochlear stimulator; without mastoidectomy.
	69715	Implantation, osseointegrated implant, temporal bone, with percutaneous attachment to external speech processor/cochlear stimulator; with mastoidectomy.
	69717	Replacement (including removal of existing device), osseointegrated implant, temporal bone, with percutaneous attachment to external speech processor/cochlear stimulator; without mastoidectomy
	69718	Replacement (including removal of existing device), osseointegrated implant, temporal bone, with percutaneous attachment to external speech processor/cochlear stimulator; with mastoidectomy.
HCPCS	L8690	Auditory osseointegrated device, includes all internal and external components.
	L8691	Auditory osseointegrated device, external sound processor, replacement.

References

1. Centers for Medicare & Medicaid Services (CMS), Medicare Benefit Policy Manual Chapter 16 General Exclusions from Coverage, Section 100; Hearing Aids and Auditory Implants, effective 11-10-2005.
2. Hol MK, Snik AF, Mylanus EA, Cremers CW. Long-term results of bone-anchored hearing aid recipients who had previously used air-conduction hearing aids. Arch Otolaryngol Head Neck Surg. 2005 Apr;131(4):321-5.
3. Ramakrishnan Y, Marley S, Leese D, et al. Bone-anchored hearing aids in children and young adults: the Freeman Hospital experience. J Laryngol Otol. Feb 2011;125(2):153-157. PMID 20849670
4. Kompis M, Kurz A, Pfiffner F, et al. Is complex signal processing for bone conduction hearing aids useful? Cochlear Implants Int. May 2014;15 Suppl 1:S47-50. PMID 24869443
5. Calvo Bodnia N, Foghsgaard S, Nue Moller M, et al. Long-term Results of 185 Consecutive Osseointegrated Hearing Device Implantations: A Comparison Among Children, Adults, and Elderly. Otol Neurotol. Dec 2014;35(10):e301-306.
6. Desmet J, Wouters K, De Bodt M, et al. Long-term subjective benefit with a bone conduction implant sound processor in 44 patients with single-sided deafness. Otol Neurotol. Jul 2014;35(6):1017-1025.

7. Amonoo-Kuofi K, Kelly A, Neeff M, Brown CR. Experience of bone-anchored hearing aid implantation in children younger than 5 years of age *Int J Pediatr Otorhinolaryngol*. 2015 Apr;79(4):474-80. doi: 10.1016/j.ijporl.2014.12.033. Epub 2015 Jan 3.
8. Asma A, Ubaiah, M, Et al. Surgical outcome of bone anchored hearing aid (baha) implant surgery: a 10 years experience. *Indian J Otolaryngol Head Neck Surg*. 2013 Jul;65(3):251-4. doi: 10.1007/s12070-013-0621-2. Epub 2013 Feb 2.
9. Edmiston RC, Aggarwal R, Green KM. Bone conduction implants - a rapidly developing field. *J Laryngol Otol*. 2015 Oct;129(10):936-40. doi: 10.1017/S0022215115002042. Epub 2015 Sep 7.
10. Reddy-Kolanu R, Gan R, Marshall AH. A case series of a magnetic bone conduction hearing implant. *Ann R Coll Surg Engl*. Nov 2016;98(8):552-553. PMID 27490984
11. Snapp HA, Holt FD, Liu X, et al. Comparison of speech-in-noise and localization benefits in unilateral hearing loss subjects using contralateral routing of signal hearing aids or bone-anchored implants. *Otol Neurotol*. Jan 2017;38(1):11-18. PMID 27846038

Policy History

Origination date: 05/22/2007
 Approval(s): Technology Assessment Subcommittee: 03/27/2007, 05/22/2007, 05/07/2009
 Technology Assessment Committee: 10/09/2007, 09/30/2009, 03/26/2013, 05/28/2014 (Removed hearing aid benefit as part of criteria, updated template, references updated) 06/03/2015 (BAHA product names removed, updated references) 05/26/2016 (updated references), 05/24/2017 (updated references)

Not all services mentioned in this policy are covered for all products or employer groups. Coverage is based upon the terms of a member's particular benefit plan which may contain its own specific provisions for coverage and exclusions regardless of medical necessity. Please consult the product's Evidence of Coverage for exclusions or other benefit limitations applicable to this service or supply. If there is any discrepancy between this policy and a member's benefit plan, the provisions of the benefit plan will govern. However, applicable state mandates take precedence with respect to fully-insured plans and self-funded non-ERISA (e.g., government, school boards, church) plans. Unless otherwise specifically excluded, federal mandates will apply to all plans. For Medicare and Medicaid members, this policy will apply unless Medicare and Medicaid policies extend coverage beyond this policy.