

Medical Policy



An Independent Licensee of the
Blue Cross and Blue Shield Association.

Title: Cochlear Implant

Professional

Original Effective Date:
Revision Date(s): February 1, 2002;
August 1, 2002; January 1, 2003;
November 3, 2005; March 21, 2006;
October 31, 2006;
Current Effective Date: October 31, 2006

Institutional

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Revision Date(s): March 21, 2006;
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DESCRIPTION

A cochlear implant provides direct electrical stimulation to the auditory nerve, bypassing the usual transducer cells that are absent or nonfunctional in deaf cochlea. The basic components of a cochlear implant include both external and internal components. The external components include a microphone, an external sound processor, and an external transmitter. The internal components are implanted surgically and include an internal receiver implanted within the temporal bone and an electrode array that extends from the receiver into the cochlea through a surgically created opening in the round window of the middle ear.

Sounds that are picked up by the microphone are carried to the external sound processor, which transforms sound into coded signals that are then transmitted transcutaneously to the implanted internal receiver. The receiver converts the incoming signals to electrical impulses that are then conveyed to the electrode array, ultimately resulting in stimulation of the auditory nerve.

The labeled indications from the FDA for currently marketed electrode arrays are summarized below.

FDA Approval Status of Currently Marketed Cochlear Electrodes			
Clarion HiFocus*	Nucleus 24	Nucleus 24 Contour	Med El Combi 40
Children: 12 mo–18 yr; profound hearing loss	Children: 18–24 mo; profound hearing loss	Children: 12 mo–18 yr profound hearing loss	Children: 18 mo-18 yr; profound hearing loss
	Older children: 2–17 yr; severe to profound loss	Older children: severe to profound loss	
Adults: postlingual profound hearing loss	Adults: severe to profound loss pre- and postlingually	Adults: severe to profound loss pre- and postlingually	Adults: bilateral severe to profound hearing loss

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POLICY

Unilateral cochlear implantation is considered medically necessary in patients one year and older with bilateral severe to profound pre-or postlingual hearing loss, defined as a hearing threshold of 70 decibels (dB) or worse (adult) and 90dB (child), and have shown no response from hearing aids.

Bilateral cochlear implantation in children one through 18 years of age with bilateral severe to profound pre-or postlingual hearing loss, defined as a hearing threshold of 90dB (child), who have shown no response from hearing aids will be reviewed by a consultant for medical necessity.

Bilateral cochlear implantation is considered experimental/investigational in adults over 18 years of age.

CODING**CPT/HCPCS**

69930 Cochlear device implantation, with or without mastoidectomy
L8614 Cochlear device/system

DIAGNOSIS

These diagnoses are otherwise subject to medical policy as stated above

389.10 Sensorineural hearing loss, unspecified
389.11 Sensory hearing loss
389.12 Neural hearing loss
389.14 Central hearing loss
389.18 Sensorineural hearing loss of combined types

REVISIONS

March 21, 2006	In "Policy" section added, "Bilateral cochlear implantation is considered experimental/investigational" per Medical Director interim guide.
October 31, 2006 with an effective date of October 31, 2006; posted March 1, 2007	In "Policy" section deleted 'A FDA-approved cochlear implant and associated rehabilitation may be considered medically necessary in patients with bilateral deafness one year and older with severe to profound pre-or postlingual hearing loss, defined as a hearing threshold of 70 decibels (dB) or worse (adult) and 90dB (child), and have shown no response from hearing aids. Children 18 and under will be reviewed by a consultant' per Medical Director.

	In "Policy" section added, 'Unilateral cochlear implantation is considered medically necessary in patients one year and older with bilateral severe to profound pre-or postlingual hearing loss, defined as a hearing threshold of 70 decibels (dB) or worse (adult) and 90dB (child), and have shown no response from hearing aids' per Medical Director.
	In "Policy" section added, 'Bilateral cochlear implantation in children one through 18 years of age with bilateral severe to profound pre-or postlingual hearing loss, defined as a hearing threshold of 90dB (child), who have shown no response from hearing aids will be reviewed by a consultant for medical necessity' per Medical Director.
	In "Policy" section added, "in adults over 18 years of age" to Bilateral cochlear implantation is considered experimental/investigational, per Medical Director.
	In "References" Government Agency; Medical Society; and Other Authoritative Publications section, added #3 and #4 per Medical Director.

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4. Vermeire K, Brokx JP, Van de Heyning PH et al. Bilateral cochlear implantation in children. Int J Pediatr Otorhinolaryngol 2003; 67(1):67-70.
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9. Gantz BJ, Tyler RS, Rubinstein JT et al. Binaural cochlear implants placed during the same operation. Otol Neurotol 2002; 23(2):169-80.

10. Tyler RS, Gantz BJ, Rubinstein JT et al. Three-month results with bilateral cochlear implants. *Ear Hear* 2002; 23(1 suppl):80S-89S.
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12. Mawman DJ, Ramsden RT, O'Driscoll M et al. Bilateral cochlear implantation-- a case report. *Adv Otorhinolaryngol* 2000; 57:360-3.
13. Lawson DT, Wilson BS, Zerbi M et al. Bilateral cochlear implants controlled by a single speech processor. *Am J Otol* 1998; 19(6):758-61.

Government Agency; Medical Society; and Other Authoritative Publications

1. Blue Cross and Blue Shield of Kansas Otolaryngology Liaison Committee meeting, September 14, 2005 (see Blue Cross and Blue Shield of Kansas Newsletter, Blue Shield Report. MAC-03-05).
2. Blue Cross and Blue Shield of Kansas Medical Advisory Committee meeting, November 3, 2005 (see Blue Cross and Blue Shield of Kansas Newsletter, Blue Shield Report. MAC-03-05).
3. BCBSKS Medical Consultant, Practicing Board Certified ENT Surgeon (131), October 25, 2006.
4. BCBSKS Medical Consultant, MCMC, Department of Otolaryngology – Head and Neck Surgery, Harvard Medical School (Reviewer ID R-B065, MCOP ID 1072-1306), October 26, 2006.

Web Site

1. 1995 NIH Consensus Conference: Cochlear Implants in Adults and Children: www.odp.od.nih.gov/consensus/cons/068statement.htm.