

Evidence Based Guideline

Auditory Brain Stem Implant

File Name: auditory_brain_stem_implant
Guideline Number: EBG.SUR6045
Origination: 09/2003
Last Review: 06/2004

Active guideline, no longer scheduled for routine literature review

Description of Procedure or Service

The auditory brain stem implant is a device designed to restore some hearing in people who become deaf when surgery to remove auditory nerve tumors damages the nerves. The auditory cranial nerves are responsible for hearing. The device includes both surgically implanted and externally worn components. The device is used in teenagers and adults who have a rare disease (neurofibromatosis type 2) in which tumors growing on cranial nerves need to be surgically removed. Removal of tumors on the auditory cranial nerves requires severing or cutting the nerves, which results in total loss of hearing. These patients cannot be helped by hearing aids or cochlear implants.

The device consists of a receiver/stimulator, a pocket sized speech processor worn on the body, and the microphone/headset. During surgery, the receiver/stimulator is implanted behind the ear. A wire leads from the receiver/stimulator to a series of electrodes that are implanted on the surface of the cochlear nerve in the brainstem, thus bypassing the inner ear and auditory nerve. The speech processor and microphone/headset pick up sound and change it into electrical impulses that are sent to the implanted receiver/stimulator. The impulses travel down the wire to the electrodes, which electrically stimulates multiple sites on the cochlear nucleus, (which is the first auditory center within the brainstem), which is then processed normally by the brain.

One device has received approval by the U.S. Food and Drug Administration (FDA) for auditory brainstem implantation, the Nucleus 24 Auditory Brainstem Implant System (Cochlear Corporation). The speech processor and receiver are similar to the devices used in cochlear implants; the electrode array placed on the brainstem is the novel component of the device.

Evidence Based Guideline for Auditory Brain Stem Implant

An Auditory Brain Stem Implant may be appropriate in patients with neurofibromatosis type 2, 12 years of age or older, who are rendered deaf due to bilateral resection of neurofibromas of the auditory nerve.

Medical Evidence regarding Auditory Brain Stem Implant indicates it is not recommended in the following situations:

An Auditory Brain Stem Implant is not recommended for indications other than those listed above.

Policy: Auditory Brain Stem Implant

Benefits Application

Please refer to certificate for availability of benefit. This guideline relates only to the services or supplies described herein. Benefits may vary according to benefit design; therefore certificate language should be reviewed before applying the terms of the policy.

Billing/Coding/Physician Documentation Information

This policy may apply to the following codes. Inclusion of a code in this section does not guarantee that it will be reimbursed. For further information on reimbursement guidelines, please see Administrative Policies on the Blue Cross Blue Shield of North Carolina web site at www.bcbsnc.com. They are listed in the Category Search on the Medical Policy search page.

Applicable codes: 92640

Medical Term Definitions

N/A

Scientific Background and Reference Sources

U.S. Food and Drug Administration, Center for Devices and Radiological Health, New Device Approvals; Nucleus 24 Auditory Brainstem Implant System-P000015. Retrieved from <http://www.fda.gov/cdrh/mda/docs/p000015.html>

BCBSA Medical Policy Reference Manual, 7.01.83; 7/12/02

BCBSA Medical Policy Reference Manual, 7.01.83; 7/17/03

Specialty Matched Consultant Advisory Panel - 6/2004

BCBSA Medical Policy Reference Manual [Electronic Version]. 7.01.83, 8/17/05

Policy Implementation/Update Information

09/03 Original policy issued.

8/26/04 Specialty Matched Consultant Advisory Panel review. No changes to criteria.

1/5/06 Policy status changed to "Active policy, no longer scheduled for routine literature review."

8/28/06 Medical Policy changed to Evidence Based Guideline.

1/3/07 CPT code 92640 effective January 1, 2007 added to Billing/Coding section. Removed deleted CPT code S2235.

Policy: Auditory Brain Stem Implant

Medical policy is not an authorization, certification, explanation of benefits or a contract. Benefits and eligibility are determined before medical guidelines and payment guidelines are applied. Benefits are determined by the group contract and subscriber certificate that is in effect at the time services are rendered. This document is solely provided for informational purposes only and is based on research of current medical literature and review of common medical practices in the treatment and diagnosis of disease. Medical practices and knowledge are constantly changing and BCBSNC reserves the right to review and revise its medical policies periodically.