



6 CIGNA MEDICAL COVERAGE POLICY

The following Coverage Policy applies to all plans administered by CIGNA Companies including plans administered by Great-West Healthcare, which is now a part of CIGNA.

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Subject Neonatal Auditory Screening

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Hyperlink to Related Coverage Policies

- Aural Rehabilitation
- Cochlear and Auditory Brainstem Implants
- Genetic Testing for Congenital, Profound Deafness
- Hearing Aids
- Otoplasty/External Ear Reconstruction
- Speech/Language Therapy

INSTRUCTIONS FOR USE

Coverage Policies are intended to provide guidance in interpreting certain **standard** CIGNA HealthCare benefit plans as well as benefit plans formerly administered by Great-West Healthcare. Please note, the terms of a participant's particular benefit plan document [Group Service Agreement (GSA), Evidence of Coverage, Certificate of Coverage, Summary Plan Description (SPD) or similar plan document] may differ significantly from the standard benefit plans upon which these Coverage Policies are based. For example, a participant's benefit plan document may contain a specific exclusion related to a topic addressed in a Coverage Policy. In the event of a conflict, a participant's benefit plan document **always supercedes** the information in the Coverage Policies. In the absence of a controlling federal or state coverage mandate, benefits are ultimately determined by the terms of the applicable benefit plan document. Coverage determinations in each specific instance require consideration of 1) the terms of the applicable group benefit plan document in effect on the date of service; 2) any applicable laws/regulations; 3) any relevant collateral source materials including Coverage Policies and; 4) the specific facts of the particular situation. Coverage Policies relate exclusively to the administration of health benefit plans. Coverage Policies are not recommendations for treatment and should never be used as treatment guidelines. Proprietary information of CIGNA. Copyright ©2009 CIGNA

Coverage Policy

CIGNA covers neonatal auditory screening as medically necessary as a universal screening method for the early identification of hearing disorders in infants.

General Background

It is estimated that two to three out of every 1000 children in the United States are born with some degree of hearing impairment (National Institute on Deafness and Other Communication Disorders [NIDCD], 2007). Any degree of hearing loss very early in life affects the development of speech and language, social and emotional development, behavior and academic achievement. Early hearing detection and intervention (e.g., amplification, sign language or total communication programs) improves the development of language and speech, compared to interventions started after the first year of life (American Academy of Pediatrics [AAP], 2000).

The two basic types of hearing loss are conductive and sensorineural. Conductive hearing loss involves the outer and middle ear and can result from a blockage of wax, a punctured eardrum, birth defects, ear infections or heredity. Usually, conductive hearing loss can be corrected medically or surgically. Sensorineural hearing loss (SNHL) involves damage to the inner ear. It can be caused by a number of factors including aging, prenatal and birth-related problems, viral and bacterial infections, and trauma. Approximately 50% of hearing-impaired

infants exhibit high-risk indicators for sensorineural and/or conductive hearing impairment. Risk factors associated with a higher incidence of permanent bilateral congenital hearing loss include neonatal intensive care unit (NICU) admission for >2 days, several congenital syndromes, family history of hereditary childhood sensorineural hearing loss, craniofacial abnormalities, and certain congenital infections (U.S. Preventive Services Task Force [USPSTF], 2008).

Screening Tests

While multiple methods of audiological testing are potentially suitable for evaluating possible hearing deficits, audiometric testing is the gold standard for diagnosis and treatment monitoring in adults and older children. Evaluation of neonates and children below the age of 2–3 years with this method is difficult because it depends on developmental ability. In neonates, the preferred method is the evaluation of the electrical signals. Testing methods include behavioral audiometry, tympanometry, auditory brainstem response (ABR) and evoked otoacoustic emission (EOE).

Behavioral Audiometry: Behavioral auditory screening tests assess the child's reflexive response to sound. This screening depends largely on the subjective assessment of an infant's response to noise stimuli and can be used effectively for infants of six months of age or more (National Institutes of Health [NIH], 1993; American Speech-Language-Hearing Association [ASHA], 1994). The Joint Commission on Infant Hearing (JCIH) notes that for children under the age of six months, behavioral measures do not validly and reliably identify hearing losses of 30 decibels (dB). Both the NIH and JCIH report that behavioral testing may be used effectively to detect hearing impairment in infants six months of age or older (NIH, 1993; ASHA, 1994).

Tympanometry: Tympanometry is used to detect conductive hearing loss in infants, children and adults. Tympanometry tests middle ear function by measuring compliance at the tympanic membrane. An abnormal tympanogram usually indicates a conductive hearing loss; however, a sensorineural loss may also be present. Due to the increased elasticity in the auditory canal walls of infants, tympanometry does not accurately identify hearing loss in children less than seven months of age and is therefore not an appropriate tool for neonatal hearing screening (Buttross, et al., 1995).

Auditory Brainstem Response (ABR): ABR assesses physiological responses to sound stimuli. During ABR testing, a scalp-derived electroencephalogram (EEG) records brain waves elicited in response to sound stimuli. The response data are compared with stored data for a normal, nonhearing-impaired ABR response. The test results indicate "pass" or "refer." Infants who register in the "refer" category undergo further evaluation and follow-up.

Evoked Otoacoustic Emissions (EOE): EOE screening is a physiologic hearing test that detects both sensorineural and conductive hearing loss; however, EOE testing does not evaluate neural pathways in the brain. EOE measures sound waves generated in the inner ear in response to clicks or tone bursts emitted and recorded via miniature microphones placed in the external ear canals of the infant. The presence of otoacoustic emissions indicates that the preneural cochlear receptor mechanisms and conducting system of the ear are functioning. A lack of otoacoustic emissions indicates either a sensorineural or conductive hearing impairment (Huynh, et al., 1996).

Auditory screening protocols vary among hospitals. To gain the cooperation of some infants and young children during physiologic assessments of auditory function, sedation may be required (ASHA, 2004). Currently accepted methods for screening include ABR and EOE, either alone or in combination for neonatal testing up to nine months of age (AAP, 1999). Generally, infants who pass initial ABR and/or EOE testing are discharged from the hospital. Neonates who fail initial screening are re-screened. Infants who pass re-screening are discharged from the hospital and monitored for normal speech and language development at regular intervals. Infants who fail re-screening are referred for diagnostic evaluation. Diagnostic evaluation may consist of repeat EOE screenings, diagnostic ABR testing, behavioral testing at an appropriate age and otoscopy (NIH] 1993).

Professional Societies/Organizations

The U.S. Preventive Services Task Force (USPSTF) recommends screening for hearing loss in all newborn infants. The USPSTF recommendation states that screening programs should be conducted by using a one- or two-step validated protocol. A frequently used protocol requires a two-step screening process, which includes otoacoustic emissions (OAEs) followed by auditory brainstem response (ABR) in those who failed the first test. Programs should develop protocols to ensure that infants with positive screening-test results receive appropriate

audiologic evaluation and follow-up after discharge. Newborns delivered at home, birthing centers, or hospitals without hearing screening facilities should have some mechanism for referral for newborn hearing screening, including tracking of follow-up (USPSTF, 2008).

The Joint Committee on Infant Hearing (JCIH) which includes organizations such as the American Academy of Pediatrics (AAP), the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS), the American Academy of Audiology (AAA), and ASHA, has a published position statement on principles and guidelines for early hearing detection and intervention programs (AAP, 2007). This document is an update to the JCIH position 2000 which endorsed the goal of universal neonatal auditory screening. According to the JCIH, "to maximize the outcome for infants who are deaf or hard of hearing, the hearing of all infants should be screened at no later than one month of age. Those who do not pass screening should have a comprehensive audiological evaluation at no later than three months of age. Infants with confirmed hearing loss should receive appropriate intervention at no later than six months of age from health care and education professionals with expertise in hearing loss and deafness in infants and young children" (AAP, 2007). In addition, the 2007 JCIH position statement includes the following updates for screening and re-screening protocols:

- Separate protocols are recommended for NICU and well-infant nurseries. NICU infants admitted for more than five days are to have auditory brainstem response (ABR) included as part of their screening so that neural hearing loss will not be missed.
- For infants who do not pass automated ABR testing in the NICU, referral should be made directly to an audiologist for re-screening and, when indicated, comprehensive evaluation including ABR.
- For re-screening, a complete screening on both ears is recommended, even if only one ear failed the initial screening.
- For readmissions in the first month of life for all infants (NICU or well infant), when there are conditions associated with potential hearing loss (e.g., hyperbilirubinemia that requires exchange transfusion or culture-positive sepsis), a repeat hearing screening is recommended before discharge.

The AAP supports the statement of the JCIH, which endorses the goal of universal detection of hearing loss in infants before three months of age, with appropriate intervention no later than six months of age. Universal detection of infant hearing loss requires universal screening of all infants. Screening by high risk alone (e.g., family history of deafness) can only identify 50% of newborns with significant congenital hearing loss. Reliance on physician observation and/or parental recognition has not been successful in the past in detecting significant hearing loss in the first year of life. Until a specific screening method is proven to be superior, the AAP defers recommendation as to a preferred method of screening (AAP, 2003).

Summary

The overall body of evidence indicates that hearing loss of any severity or type has negative consequences for childhood development. The ultimate goal of early audiological diagnosis of hearing loss is to initiate treatment as soon as possible in order to minimize delays in speech, language and academic development. Although the effect of early screening on long-term functional and quality-of-life outcomes has not been adequately evaluated in well-designed clinical studies, it is generally believed that the early identification of hearing loss has a positive effect on net health outcome.

Coding/Billing Information

Note: This list of codes may not be all-inclusive.

Covered when medically necessary:

CPT®*	Description
92567	Tympanometry (impedance testing)
92568	Acoustic reflex testing; threshold
92569	Acoustic reflex testing; decay
92584	Electrocochleography
92585	Auditory evoked potentials for evoked response audiometry and/or testing of the

	central nervous system; comprehensive
92586	Auditory evoked potentials for evoked response audiometry and/or testing of the central nervous system; limited
92587	Evoked otoacoustic emissions; limited (single stimulus level, either transient or distortion products)
92588	Evoked otoacoustic emissions; comprehensive or diagnostic evaluation (comparison of transient and/or distortion product otoacoustic emissions at multiple levels and frequencies)

HCPCS Codes	Description
V5008	Hearing screening

ICD-9-CM Diagnosis Codes	Description
	All codes

*Current Procedural Terminology (CPT®) © 2008 American Medical Association: Chicago, IL.

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Policy History

<u>Pre-Merger Organizations</u>	<u>Last Review Date</u>	<u>Policy Number</u>	<u>Title</u>
CIGNA HealthCare	09/15/2007	0179	Neonatal Auditory Screening

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Connecticut General Life Insurance Company has acquired the business of Great-West Healthcare from Great-West Life & Annuity Insurance Company (GWLA). Certain products continue to be provided by GWLA (Life, Accident and Disability, and Excess Loss). GWLA is not licensed to do business in New York. In New York, these products are sold by GWLA's subsidiary, First Great-West Life & Annuity Insurance Company, White Plains, N.Y.