

I. RECOMMENDED GUIDELINES FOR PEDIATRIC AUDIOLOGY DIAGNOSIS

A. The New Mexico EHDI Audiology Committee has adopted the American Academy of Audiology: *Clinical Guidance Document- Assessment of Hearing in Infants and Young Children, January 2020*. The Committee also recommends following the Joint Committee on Infant Hearing (JCIH) Guidelines 2019. The following protocol should be used to facilitate the diagnosis of hearing loss by 3 months of age and entry into an early intervention for infants with hearing loss program by 6 months of age. Infants should be referred for a diagnostic evaluation, which should be completed by one month of age, after receiving “refer” results from one or both ears on a UNBHS (universal newborn hearing screening).

1) Professional Requirements

“A licensed audiologist with experience in the pediatric population is the professional qualified to perform diagnostic audiological assessments for infants. An audiologist who does not have the expertise and/or equipment necessary to evaluate infants and young children should refer to professionals and facilities that provide pediatric diagnostic services.”

2) Equipment

“Equipment must be calibrated to current ANSI standards annually.”

II. DIAGNOSTIC TESTING PROTOCOL

A. Hearing History

Obtain a detailed family, birth, and medical history. Address any parental concerns.

B. Otoscopy

Perform otoscopic evaluation.

C. Tympanometry

Infants less than 9 months of age (adjusted age) use high frequency probe tone-1000 Hz.

D. Acoustic Reflexes

Obtain ipsilateral and/or contralateral acoustic reflexes in cases of suspected ANSD, and if ABR markedly abnormal.

E. Otoacoustic Emissions

Obtain an evoked otoacoustic emission (TEOAE and/or DPOAE) to further evaluate cochlear function. Pass criteria is a minimum signal to noise ratio of 6 dB in 8 out of 12 frequencies, with a minimum frequency range of 1500 Hz to 8000 Hz for a diagnostic protocol, or a pass on a screening protocol.

F. Auditory Brainstem Response Testing

- 1) Perform click ABR at intensities of 80 to 90 dB nHL. Compare responses obtained to rarefaction and condensation clicks presented using a fast click rate (>30 second) to check for Auditory Neuropathy.
- 2) Obtain frequency-specific stimuli Wave V responses at 500 Hz, 1000 Hz, 2000 Hz, and 4000 Hz at 20 dB eHL or better (obtain 4000 Hz and 500 Hz at the minimum and then 1000 Hz and 2000 Hz, if time permits). *A click ABR is not sufficient to fit amplification. At a minimum, a high frequency tone burst, and a low frequency tone burst must be performed.*
- 3) For infants with indicators of hearing loss, obtain bone conduction ABR thresholds to click and tone burst stimuli, even if middle ear involvement is suspected or comorbidities are present (e.g. Cleft lip/palate, Down Syndrome, etc.).
- 4) ASSR Protocol using narrowband CE Chirps
 - a. Default is 4 frequencies per ear all running simultaneously (500 Hz, 1000 Hz, 2000 Hz & 4000 Hz).
 - b. Bone conduction using ASSR is not recommended at this time.

G. Additional Testing

Behavioral testing to confirm/monitor hearing loss should be completed as soon as the patient is developmentally able to participate in VRA testing.

H. Discuss Results

Discuss results and follow-up recommendations with parents and materials to families.

I. Referrals

- 1) If hearing loss is present
 - a. *Primary Care Physician
 - b. *ENT
 - c. *Pediatric dispensing audiologist
 - d. *Early intervention
 - e. Genetics
 - f. Ophthalmology
 - g. Child Development
 - h. Counseling
 - i. Speech Pathology
 - j. Parent support groups

*Referrals marked with an asterisk are mandatory referrals.

2) Referral Process to Early Intervention

- a. Audiologists are required to refer to the state Part C system (local FIT agency and/or NMSD) for Family Service Coordination and direct services within 7 days of diagnosis as per IDEA Part C §303.303(a)(2)(i). Referrals to additional programs and services may also be made as appropriate for the child and family.

J. Write Report

Prepare a written report interpreting test results and describing the diagnostic profile and send to required referrals, as listed in the referral section.

K. Resource List--attached

III. REPORT SCREENING AND DIAGNOSTIC RESULTS TO NMDOH EARLY HEARING DETECTION & INTERVENTION (EHDI) PROGRAM

- A. Report of Audiological/Screening/Diagnostic Results (ROAR) required for:
 - 1) All screening and/or diagnostic results for children with a DOB in the current or previous calendars years, including fluctuating, conductive hearing loss, and
 - 2) All diagnoses of permanent hearing loss (not fluctuating, conductive hearing loss) for all children age 4 or younger including:
 - Atresia/microtia
 - Sensorineural hearing loss
 - Mixed hearing loss
 - Auditory neuropathy/dyssynchrony
 - Syndrome known to include sensorineural hearing loss

B. ROAR should not be sent for:

- children with fluctuating, conductive hearing loss unless the child's DOB is in the current or previous calendar year, and
- missed or rescheduled appointments.

C. **Fax or securely email the completed ROAR to the EHDI Program:**

Fax: 505-827-5995. Email: Newborn.Hearing@doh.nm.gov.

ROAR form is attached and available at:

EHDI Program: <https://www.nmhealth.org/about/phd/fhb/cms/nbhs/>

ROAR Form: <https://www.nmhealth.org/publication/view/form/1058/>

IV. **RESOURCES**

American Academy of Audiology--Clinical Guidance Document-Assessment of Hearing in Infants and Young Children:

https://mk0audiologyotvgk5ps.kinstacdn.com/wp-content/uploads/2021/05/Clin-Guid-Doc_Assess_Hear_Infants_Children_1.23.20-1.pdf

Joint Committee on Infant Hearing Principles and Guidelines 2019:

https://mk0audiologyotvgk5ps.kinstacdn.com/wp-content/uploads/legacy/publications/resources/2019_JointCommiteeInfantHearing_Principles_Guidelines4EarlyHearingDetectionInterventionProgrs.pdf

V. **REFERENCES**

Arizona Department of Health EHDI Home Page:

<https://azdhs.gov/preparedness/state-laboratory/newborn-screening/index.php#az-ehdi-home>

Colorado Department of Human Services, Colorado Early Hearing Detection & Intervention (COEHDI):

<https://www.coehdi.org/>

EHDI/AZEIP/ASDB: Collaborating with Early Intervention Service Coordinators to Support the EHDI 1-3-6 (Arizona, 2018):

<https://azdhs.gov/documents/preparedness/state-laboratory/newborn-screening/azehdi/2018/full-material-packet.pdf>

Ohio Department of Health, *COACH Protocol, Diagnostic Protocols for pediatric audiologists evaluation infants birth to 6 months of age.*

<https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/infant-hearing-program/resources1>

Ohio Department of Health, *Limited and full diagnostic COACH, Two diagnostic protocols utilizing diagnostic testing – ABR and OAE.*

<https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/infant-hearing-program/resources1>

Oklahoma State Department of Health, *Oklahoma Protocol For Infant Audiologic Diagnostic Assessment, Revised: October 2009.*

<https://www.ok.gov/health2/documents/Oklahoma%20Protocol%20for%20Infant%20Audiologic%20Diagnostic%20Assessment.pdf>

Utah Department of Health, Children with Special Needs, Early Hearing Detection and Intervention:

<https://health.utah.gov/cshcn/programs/ehdi.html>

Utah Newborn Hearing Screening Standards:

<https://health.utah.gov/cshcn/pdf/EHDI/EHDI%20Minumum%20Standards.pdf>

VI. ATTACHMENTS

- A. Resource List
- B. ROAR Form
- C. NMSD Referral Form
- D. FIT Referral Form