Volume 2: Journal #8

Date: March 23, 2011

Topic: Hearing Screening for Infants and Toddlers in Early Intervention Programs

Facilitator: Cathy Riley – UNM CDD, Training and Development Consultant

Guest Facilitators: Joanne Corwin, Step*Hi Coordinator and Dr. Gayle Mohorcich, Pediatric Audiologist/NM School for the Deaf.

# of Participants: 30 +

Introduction to the discussion: Before the days of early detection and intervention, most children who had a hearing loss, experienced some degree of difficulty in learning language. Now with early detection and intervention services, language delays that often accompany hearing loss can be prevented or minimized. New Mexico was the 19th state to initiate universal newborn hearing screening. Ninety five percent of babies born in a hospital are now being screened. However, each screen is good for only 6 months. It is important as early intervention providers that we follow up with each child.

Types of Hearing Screening:

- **ABR** (Auditory Brainstem Response) - measures the entire auditory system from the outer ear through the middle and inner ears and up the auditory neural pathways to the brain. Almost all hospitals utilize the ABR screening.
- **OAE** (Oto=ear, Acoustic=sound, Emission=something that is emitted, or produces/discharged) - measures the outer hair cells in the inner ear - requires a clear, healthy outer and middle ear space. Almost all Early Intervention agencies have OAE screeners.
- **Tympanogram**—tests the outer and middle ear (checks for fluid, otitis media, ear infections, wax, PE tubes)

Why we do hearing screening:

- It is the law! IDEA requires vision & hearing screening PRIOR to initial evaluations
- Outcomes are typically much better when hearing loss is identified early
- If using only a checklist, even trained clinicians still miss 50% of hearing loss; thus, checklists are neither valid nor reliable
- Hearing loss can be progressive; just because a child passes their newborn screen does not mean their hearing remains normal
Follow up screening:
- A child who has had an ABR screening cannot be followed up with an OAE screening
  - Most EI agencies have OAE screeners. So in these cases, you will want to contact NMSD, Step*Hi for support and guidance
- If child does not pass OAE screening, follow up with tympanogram screening. If they do not pass the second screening, you will refer and send them to the child’s primary care physician

What is Auditory Neuropathy (ASND, or Auditory Neuropathy Spectrum Disorder)?
A relatively recent clinical diagnosis used to describe individuals with auditory disorders due to dysfunction of the synapse of the inner hair cells and auditory nerve, and/or the auditory nerve itself.
- A person can pass an OAE screening and still have Auditory Neuropathy
- If a child is diagnosed with Auditory Neuropathy, contact Step*Hi

What kinds of hearing screening are used with toddlers?
- Not too long ago, play audiometry
- Now most EI agencies use OAE and tympanometry screening. Both are good tools. If you are seeing an infant you want to make sure the screening tools used are in conjunction with their newborn screening
  - Separate OAE and tympanometry screeners
  - Combination of OAE and tympanometry screeners
  - Hand-held, may require screener judgment (PASS or REFER)

What creates problems with screening outcomes?
- Sounds have to get past the inner ear and when there is wax build up, inner ear infections, chronic otitis media it is difficult to get an accurate reading.
- Important to have a clean & healthy ear for a screening tool to work effectively.

What is Goldenhar Syndrome (also known as Oculoauricular Dysplasia or OAV)?
A congenital birth defect which involves deformities of the face. It usually affects one side of the face only. Characteristics include:
- A partially formed or totally absent ear (microtia)
- The chin may be closer to the affected ear
- One corner of the mouth may be higher than the other
- Benign growths of the eye
- A missing eye

Special Considerations:
- NM leads the nation in cranial-facial abnormalities, including microtia/arteria (if a child has abnormal appearing ears, do not screen; refer to your medical consultants
- NM leads the nation in Otitis Media (chronic ear infections)
- In observations of a child during a hearing screening look for: ear tags, fluid in the ear, strange ear odor, dry or crusty substance around the ear as these are all indicators of a problem.
- Follow universal precautions for infection control! All screeners are encouraged to wear gloves to protect against infections such as impetigo & scabies.
- When making referrals for children, please use the preferred terminology of Deaf or Hard of Hearing rather than Hearing Impaired.

Questions:
- Can you recommend hearing screening equipment? Yes, for recommendations contact Joanne Corwin at 505-275-5433. ARRA grants allow for purchasing scanning equipment & NMSD Step*Hi staff can help train on use of equipment. Dr. Gayle Mohorcich is available as an audiologist consult. She may be reached at 505-880-0345.
- Is Written Prior Notice required each time a screening is done for a child? The Written Prior Notice is NOT required but it is recommended and good practice to let families know about the screening and the process.
- Do families get a report after their child has a hearing screening in the hospital? It depends on which hospital conducts the screening. Most hospitals do not give a report to the parents. As early intervention providers we should encourage families to ask if their child was screened for hearing.
- Are the protocols that you’ve talked about today: the Hearing Screening Form, ASHA Guidelines 1997, Hearing Screening Results and the Hearing Screening Flow Chart for Early Intervention Programs available in Spanish? Currently the Hearing Screening Results form for parents is the only form available in Spanish and will be sent out as a resource with this audio call’s journal summary.
- Should there be concern about hearing loss when there is trauma to a child’s head/shaken baby syndrome? Whenever a child has had head trauma/shaken baby, it is important to follow up as there is a likelihood of hearing loss and the more chance there is of catching it early and preventing further loss or damage.

Resources:
http://www.nmsd.k12.nm.us/outreach/index.php: Step*Hi -home-based program for parents & their infants & young children. Services through this program are offered statewide & occur in the child’s most natural learning environment.

Gayle Mohorcich, Aud CCC-A, NMSD Pediatric Audiologist, 505-880-0345, gayle.mohorcich@nmsd.k12.nm.us