Overview of Otoacoustic Emissions (OAE) Hearing Screening for Early Head Start

Need for Periodic Hearing Screening

Permanent hearing loss is the most common birth defect in the United States. Approximately 1 out of every 300 children in the U.S. is born with a significant hearing loss. Most newborns in the U.S. now receive an initial hearing screening before leaving the hospital. Not all hearing loss can be identified at birth, however. Hearing loss can occur at any time in a child's life. By six years of age, the incidence of permanent hearing loss doubles from 1 in every 300 to 2 in every 300.

Head Start Performance Standards require hearing screening of all children within 45 days of entry into the program (45 CFR 1304.2) and formal evaluation of any child identified through screening as possibly having a disability (45 CFR 1308.6). Policy Clarifications further suggest that a sensory screening tool must be used rather than a paper tool (OHS-PC-B-025). Because hearing screening is rarely conducted by health care providers, it may be the most efficient and effective for programs to provide uniform screening using objective screening instruments (OHS-PC-B-038).

Advantages of OAE Screening

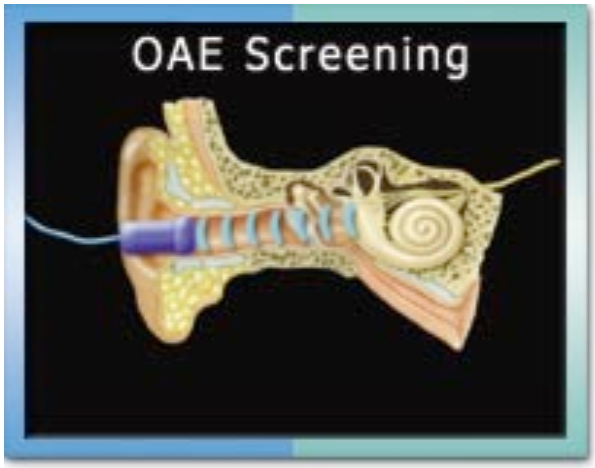
Subjective methods, such as sound makers or sole reliance on parent perceptions of hearing ability, have not proven reliable for screening children birth to three years of age for hearing loss. OAE Screening is the most appropriate method because it:

- Is quick, painless and does not require a behavioral response.
- Can help to detect permanent sensorineural hearing loss and call attention to a wide range of hearing-health concerns.
- Can be conducted in a variety of health and education settings by anyone who is trained to use the equipment and is skilled in working with young children.

The OAE Screening Procedure

The procedure is performed with a portable hand-held screening unit. A small probe, fitted with a sensitive microphone, is placed in the child's ear canal. This probe delivers a low-volume sound stimulus into the ear.

The cochlea responds by producing an otoacoustic emission, sometimes described as an echo, which travels back through the middle ear to the ear canal. The cochlear response is picked up and analyzed by the screening unit.



In approximately 30 seconds, the result is displayed on the screening unit as a "pass" or "refer." Children not passing the OAE screening are assessed by a health care provider for common outer or middle ear problems. Children who still do not pass an OAE screening after medical clearance are referred to a pediatric audiologist for a complete evaluation.

Getting Started

The ECHO Initiative and its website, www.kidshearing.org provides training and technical assistance resources to help Early Head Start, Migrant and Seasonal Head Start and American Indian/Alaska Native Head Start programs implement quality OAE hearing screening practices with children 0-3 years of age. To get started:

- Watch a 5 minute video demonstrating OAE screening in Early Head Start at www.kidshearing.org/videos/EHS.
- Consider how to share information on OAE hearing screening with your Health Services Advisory Committee

Then review the planning and training tools (www.kidshearing.org/resources/planning-tools) to help you:

- Identify a local audiologist partner who can assist with planning and training
- Budget for purchase of appropriate equipment and supplies (approximately $4,000)
- Develop a plan for screener training using video instructional modules and accompanying implementation tools