

Evidence-based Hearing Screening for Infants and Young Children

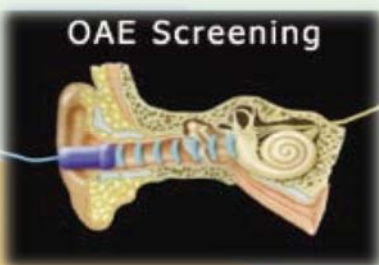


Otoacoustic Emissions (OAE) screening is the most appropriate method to identify young children at risk for permanent hearing loss because it is:

- ◆ **Accurate & feasible** -- does not require a behavioral response from the child, thus allowing us to screen children under three years of age or older children who cannot be screened with audiometry.
- ◆ **Quick & easy**—most children can be screened in just a minute or two.
- ◆ A **flexible tool** that can be used in a variety of environments and even while a child is asleep.
- ◆ **Effective** in identifying children who may have a mild hearing loss, as well as those who have a severe, bilateral loss.



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 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 are assessed by a health care provider for common ear problems. Children who still do not pass an OAE screening after medical clearance are referred to a pediatric audiologist for a complete evaluation.



The Early Childhood Hearing Outreach (ECHO) Initiative

Since 2001, NCHAM's ECHO Initiative has been assisting early childhood education and health care providers incorporate OAE hearing screening into a variety of service settings. Young children who are deaf or hard of hearing are now being identified and served during the critical, language-learning years.

Learn more at www.kidshearing.org and join with us to expand the outreach!



Early Childhood Hearing Outreach (ECHO) Initiative



The goal of the National Center for Hearing Assessment and Management at Utah State University is to ensure that all newborn infants and toddlers with hearing loss are identified as early as possible and provided with timely and appropriate audiological, educational, and medical intervention. The ECHO Initiative represents a focused effort to establish evidence-based, periodic hearing screening and follow-up for children birth to three years of age. Since 2001, the ECHO Initiative has received funding from the Office of Head Start to serve as a National Resource Center to update hearing screening practices in Early Head Start (EHS). By establishing model hearing screening and follow-up practices in selected EHS programs in every state and territory, the ECHO Initiative has increased the capacity of hundreds of providers to conduct state-of-the-art hearing screening and follow-up with over 100,000 young children. Children identified as deaf or hard of hearing are now receiving the services they need for language learning and school readiness.

The demonstrated success of these EHS programs serves as an example to hundreds of remaining programs that still need training and assistance in updating their hearing screening efforts. Additional support from the Maternal and Child Health Bureau has also allowed for exploratory expansion of ECHO Initiative practices into a variety of other early care and health settings.



Where the ECHO Initiative Can Help

The success of the ECHO Initiative in helping diverse, underserved families in Early Head Start receive the benefits of evidence-based hearing screening, audiological assessment and early intervention can serve as a model for:

- ◆ Other Head Start programs
- ◆ Home Visiting Programs
- ◆ Early Intervention Programs
- ◆ Health Care Clinics
- ◆ Early Care and Education Programs

Replication is the essence of an "echo" and is the key to extending the Initiative's activities into all of these early childhood settings.

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The Early Childhood Hearing Outreach (ECHO) Initiative is Here to Create Change

The ECHO Initiative helps education and health care providers who are committed to early childhood development and school readiness implement evidence-based hearing screening and follow-up practices through:

- ❖ Needs assessment & program planning
- ❖ Webinars & podcasts
- ❖ Web-based & on-site workshops
- ❖ Train-the-trainer workshops
- ❖ Online multi-media instructional modules
- ❖ Online screening program resources:
 - Planning tools
 - Access to audiologist mentors
 - Equipment selection information
 - Screening protocols & forms
 - Letters to parents & providers
 - Tracking & follow-up system
 - Resources for identified children

ECHO Initiative staff capacity to lead program improvement efforts includes:

- ✓ Needs assessment
- ✓ Program planning
- ✓ Instructional design
- ✓ Online learning
- ✓ Video production
- ✓ Website development
- ✓ Project management
- ✓ Screening program resource development
- ✓ Meeting facilitation
- ✓ Workshops
- ✓ Program evaluation



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The ECHO Initiative website www.kidshearing.org provides easy access to the tools that early childhood education and health care providers need to update their hearing screening practices.

Hearing Screening Program Development

1 Get Started & Implement *Screening Methods*

- ❖ *Otoacoustic Emissions*
- ❖ *Pure Tone*

2 Use Screening Results to Promote School Readiness

3 Spread the Word



[View a New Message from the ECHO Initiative!](#)



www.kidshearing.org

Get Started & Implement *Otoacoustic Emissions*

Implementing a Successful OAE Hearing Screening Program

	Video Tutorial Modules	Implementation Tools
Getting Started	Introduction to OAE Hearing Screening [6 min.]	<ul style="list-style-type: none"> ❑ Planning and Learning Tools ❑ Find an Audiologist ❑ Select OAE Equipment ❑ Audiologist's & Trainer's Tools
	How OAE Screening Works [3 min.]	
	OAE Protocol Overview/ Education Setting [2 min.] OAE Protocol Overview/ Health Care Setting [3 min.]	
	Plan Your OAE Screening Program [3 min.]	
Gain Skills	Get to Know Your OAE Equipment [3 min.]	<ul style="list-style-type: none"> ❑ Protocol Guides & Forms ❑ Prepare Children, Parents, Partner Health Care Providers and Adult Assistants ❑ Share Results: Letters & Scripts ❑ Track Child Progress & Monitor Program Quality ❑ Bonus Resources
	OAE Screening Step by Step [5 min.]	
	Develop Your OAE Screening Skills [4 Min.]	
Track Outcomes	<ul style="list-style-type: none"> ❑ Practice Exercise #1 ❑ Get Ready to Screen Children [5 Min.] ❑ Strategies for Successful Screening [6 Min.] ❑ OAE Protocol in Detail/ Education Setting [5 min.] ❑ OAE Protocol in Detail/ Health Care Setting [3 min.] ❑ Track Screening Outcomes [3 min.] 	