

COLORADO

EARLY CHILDHOOD

HEARING SCREENING

GUIDELINES

COLORADO DEPARTMENT OF EDUCATION

**COLORADO DEPARTMENT OF PUBLIC HEALTH
AND ENVIRONMENT**

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2nd Edition

The following participants are acknowledged for their work



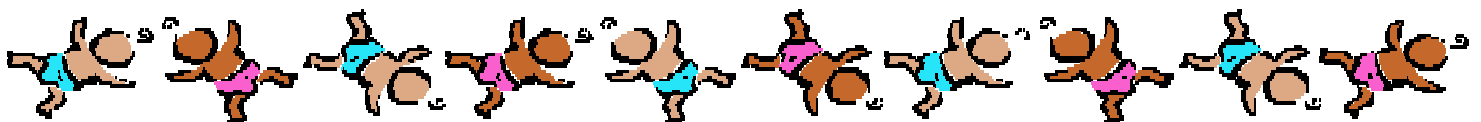
in developing the original version of this manual in 1996.

Jay Tinglum	Audiology Consultant	Colorado Dept. of Public Health & Environment
Cheryl D. Johnson	Audiology Consultant	Colorado Dept. of Education
Beverly Bridges	Nurse	Denver Public Schools Child Find
Jane Cotler	Nurse Consultant	Child Health Services Colorado Dept. of Public Health & Environment
Norma Edelman	Program Administrator	Child Health Services Colorado Dept. of Public Health & Environment
Lily Kasbaum	Nurse	Denver Head Start
Kim Miller	Audiologist	Weld County BOCES
Jean Schule	Nurse Consultant	Migrant Health Colorado Dept. of Public Health & Environment
Annette Schurich	Audiologist	Jefferson County CCB
Mary Lou Seeliger	Audiologist	Denver Public Schools

2001 Revisions by Cheryl D. Johnson, Senior Consultant, Colorado Department of Education, Vickie Thomson, Audiology Consultant, Colorado Department of Public Health & Environment, & Sally Specht, Regional Audiology Coordinator, Colorado Department of Public Health & Environment.

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I. INTRODUCTION

There are five important points that support the need for early childhood hearing screening.

- ◆ hearing loss is not uncommon; in fact some screening programs have shown as many as 20% of children do not pass hearing screenings
- ◆ hearing loss can have a major impact on a child's development, especially in his/her first years of life
- ◆ early identification and intervention minimize the effects of hearing loss on a child's development
- ◆ hearing screening is the quick and efficient first step in the process of identifying normal hearing or the need for further evaluation
- ◆ hearing screening may identify conditions requiring medical attention

Colorado receives federal tax dollars to carry out Public Law 102-119, the Individuals with Disabilities Education Act (IDEA). This law mandates states to identify children who have disabilities, or who have factors which may result in disabilities.

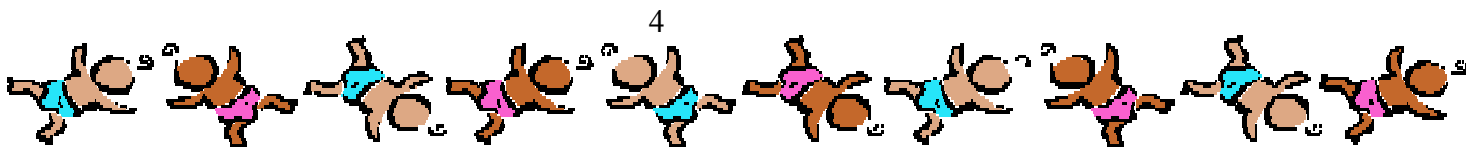
Healthy People 2000 is a set of National Health Promotion and Disease Prevention Objectives to be met by the year 2000. Objective 17.16 is to reduce the average age at which children with significant hearing impairment are identified to no more than 12 months of age.

Education 2000, a set of education-related goals, includes the objective that all children should enter school ready to learn. To meet this objective, hearing loss must be identified at an early age and an intervention and management plan must be available.

House Bill 1095-97 requires all Colorado hospitals to provide a newborn hearing screen prior to birth. Although Colorado State Law mandates the public schools have a system for routine hearing screening for children in grade levels K, 1, 2, 3, 5, 7 & 9, a gap exists in population-based hearing screening between birth and entry into school.

The purpose of these guidelines is to establish recommended early childhood hearing screening practices to be used statewide by all agencies providing services to young children. These guidelines are for screening only; they are designed to identify children who need further testing. Children with any known hearing loss must be managed by an audiologist and therefore should not be seen through a screening program.

All hearing screening programs must include regular consultation by an audiologist. Before setting up your screening program locate an audiologist who can assist in the training and coordination of the screening program as well as follow-up for children referred. Most often your school district's audiologist will be able to provide this service. Children who are difficult to screen due to age or development should be referred to the audiologist for screening.



II. RECOMMENDED EARLY CHILDHOOD HEARING SCREENING PROCEDURES

SCREENING COMPONENTS	RECOMMENDATIONS	REFERRAL CONSIDERATIONS
HISTORY	<p>Ask for information regarding the following:</p> <ul style="list-style-type: none"> • Family history of hearing loss • Number of episodes of ear infections; tubes or other ear surgeries • Problems during pregnancy or delivery • Concerns regarding speech/language, developmental delay • Previous hearing screening or testing 	<p>This information should be part of the referral and follow-up process. Concerns noted through history should increase the importance of obtaining audiometry and immittance results</p>
VISUAL INSPECTION OF THE EAR	<p>Look for:</p> <ul style="list-style-type: none"> • Structural defects • Drainage from the ear canal <p>If trained in otoscopy, also look for:</p> <ul style="list-style-type: none"> • Ear canal abnormalities • Foreign objects/tubes • Condition of the tympanic membrane 	<p>Any concerns should be noted, but not used to refer for medical attention and/or audiological attention if audiometry and immittance screenings are passed.</p>
AUDIOMETRIC SCREENING	<p>PROCEDURES FOR CHILDREN WHO CAN NOT RESPOND TO CONVENTIONAL PURE TONE SCREENING METHODS</p> <p>Conduct one or more of the following as appropriate:</p> <ul style="list-style-type: none"> • Sound Booth Visual Reinforcement audiometry (VRA) • Automated Otoacoustic Emissions <p>The following procedures are conducted only upon recommendation of the audiologist</p> <ul style="list-style-type: none"> • Auditory Brainstem Response (ABR/BSER) • Diagnostic Otoacoustic Emissions (OAE) 	<p>All frequencies must be heard in both ears in order to pass the pure tone screening.</p>
IMMITTANCE	<p>PROCEDURE FOR CHILDREN WHO RESPOND TO TRADITIONAL PURE TONE SCREENING METHODS</p> <p>Utilizing conditioned play audiometry, conduct a screening utilizing a pure tone audiometer at the following frequencies and decibel levels: 20dBHL @ 1000, 2000 & 4000Hz.</p>	

Important Notes:

1. Parent consent should be obtained prior to conducting hearing screening.
2. Children should be referred to an audiologist when hearing screening results cannot be obtained within two weeks of the initial Child Find screen.
3. All children, birth through 3rd grade, should have an annual hearing screening regardless of whether or not they passed newborn screening or family story of hearing loss.
4. All hearing screening programs should be developed and conducted in collaboration with an audiologist.

III. METHODS FOR AUDIOMETRY AND IMMITANCE SCREENING

These are screening methods to identify children who need further testing. Therefore it is not appropriate to screen children who have known hearing losses monitored by an audiologist, or children who wear hearing aids. All screeners must receive appropriate training prior to conducting any of the following procedures.

Calibration

1. Pure Tone Audiometers

Each time the hearing screening equipment is set up for use, the screener should listen to the equipment to make sure it is working. See Appendix A for a chart of listening check items. Place the headphones on yourself or someone else with normal hearing, and screen at 5dBHL below the level you are using for screening (20dBHL at 15dBHL at 1000, 2000, and 4000 Hz). Make sure each tone can be heard clearly and easily. Then make sure that as the volume is increased the sound becomes louder.

2. Otoacoustic Emissions (OAE) – follow the manufacturer’s instructions

3. Immittance - follow the manufacture’s instructions

Audiometric Screening Procedures

1. Conventional Audiometry

The Conventional pure tone screening procedure is recommended for children who are able to respond to earphone sound presentation utilizing a pure tone audiometer. For each sound presentation children should respond by raising their hand or playing a game (block in bucket, ring on stand, peg in board).

Protocol: 25 dB @ 20 dB @ 1000, 2000, & 4000 Hz.

All sounds must be heard in **both** ears in order for a child to pass the pure tone screening.

2. Sound Booth Visual Reinforcement Audiometry (VRA):

This technique is appropriate for children who have the ability to localize to the source of sound. The child responds to the sound source by turning his/her head toward the sound source. A visual reinforcer is then presented (lighted toy or moving toy) when the child localizes to the sound source. Sound-field speakers are available with toys attached at the top that are connected to a calibrated signal generator for a variety of frequencies and intensities.

3. Automated Otoacoustic Emissions (OAE: DPOAE or TEOAE):

OAEs are sounds created in the cochlea which can be measured by a sensitive microphone placed in the ear canal. These emissions may be evoked, or enhanced by presenting an external auditory signal. Emissions are not affected by neurological involvement and can be obtained up to 6000Hz. A computer is used to record and average the emissions in response to a large number of auditory signals presented to that ear. There is a high correlation between the presence of emissions and hearing levels better than 30-35 dB. Voluntary responses from the child are not required. This procedure is monitored by an audiologist.

4. Automated Auditory Brainstem Response (ABR, AER, ERA, BAER, BSER):

This procedure measures the electrical responses of the auditory nerves to a series of clicks presented to the child through headphones. A computer averages the nerve responses measured by electrodes placed in specific locations on the head. Click stimuli are used to assess high frequency hearing ability (+/-15dB

of threshold); tone pips may be added to evaluate low frequency hearing. Results may be affected by neurological involvement. Voluntary responses from the child are not required. This procedure is only conducted by an audiologist. Automated ABR (AABR) is used to screen newborns or young infants.

5. Immittance

Immittance is an objective means of assessing the function of the outer and middle ear, which includes the ear canal, eardrum, the bones of the middle ear (ossicles), and the eustachian tube. This procedure gives specific information about the size of the ear canal, mobility of the eardrum, and pressure on the eardrum. Although the test does not assess the ability to hear, certain conditions of the outer and middle ear are highly correlated to hearing loss. The results may indicate the need for a direct referral for medical evaluation. Tympanograms with an abnormally wide tympanometric width have configurations with shallow, rounded peaks or are flat (no peaks). The latter are often referred to as Type B tympanograms.

A **PASS** is when the gradient (tympanometric width) is **less than 200** (daPa or mm H₂O). The child does **NOT PASS** when the value is **equal to or greater than 200** (daPa or mm H₂O). If **NOT PASS**, also record the canal volume. See Appendix D for sample tympanograms and information on how to calculate the gradient if your tympanometer doesn't calculate it automatically.

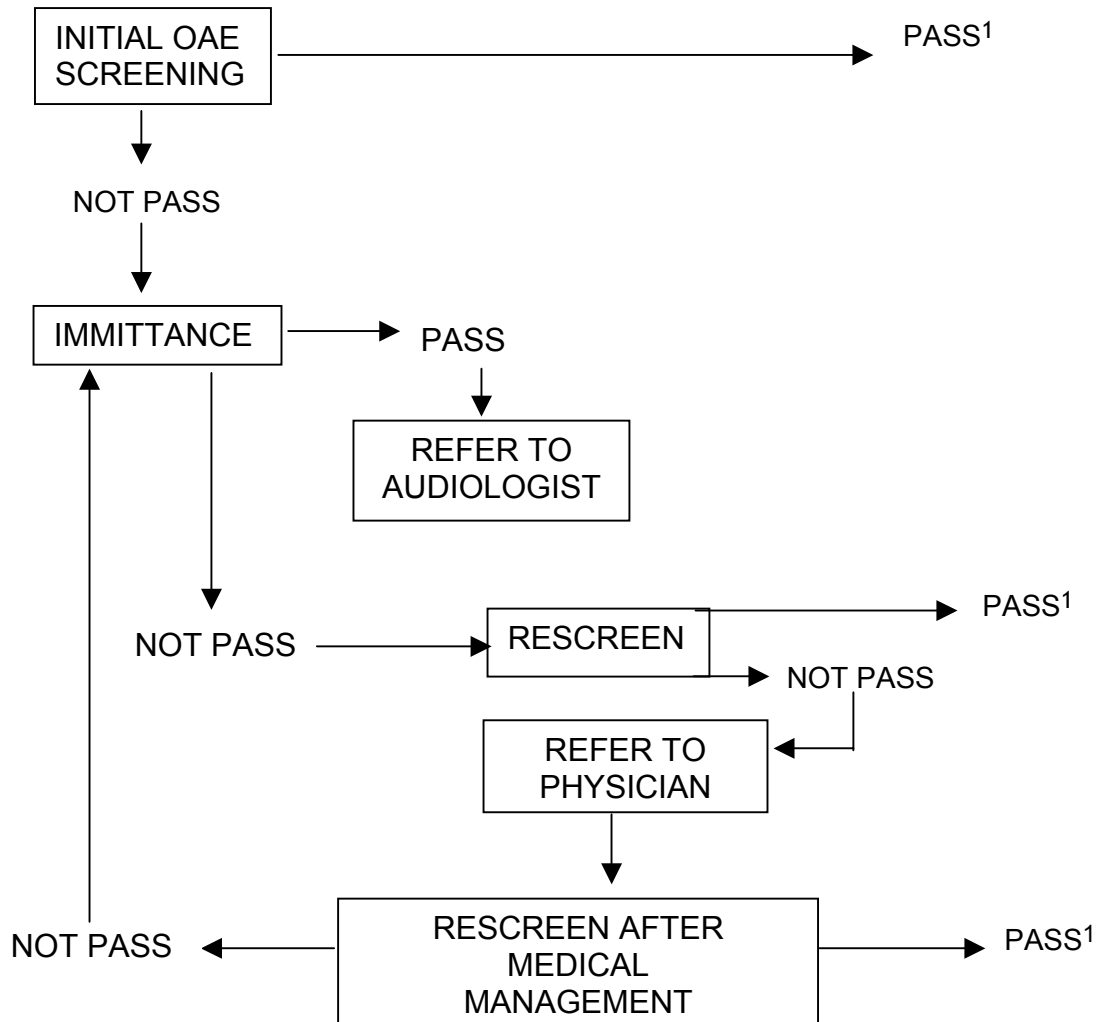
COMPARISON OF NON-TRADITIONAL SCREENING PROCEDURES

	Visual Reinforcement Audiometry	Otoacoustic Emissions	BrainStem Evoked Response
Equipment Cost	\$1,000	\$4,000	\$10,000 and higher
Portability	Good	Good	Most difficult
Training Needs	Moderate	Moderate	High
Sensitivity & Specificity	Gives an idea of approximate hearing levels down to soft levels at specific frequencies	Presence of emissions indicates hearing better than 30-35 dBHL in the mid-to high frequencies	Commonly provides high frequency (2k-4kHz) hearing information within 15dB of threshold
Limitations	Not ear specific; requires quiet room	Child must sit quietly and tolerate a probe in the ear canal	May require sedation for toddlers, results may be affected by neurological involvement

IV. SCREENING MANAGEMENT

OTOACOUSTIC EMISSIONS FOR EARLY CHILDHOOD HEARING SCREENING

FLOWCHART



NOTE: A child who has a previously identified hearing loss which is under the care of an audiologist, or who has hearing aids should not be screened.

¹A pass on an OAE screening does not rule out the possibility of a slight hearing loss. It is recommended that all children, birth through third grade, have at least an annual hearing screening. Any parental concern regarding hearing, speech or language development warrants further evaluation.

OTOACOUSTIC EMISSIONS FOR EARLY CHILDHOOD SCREENING

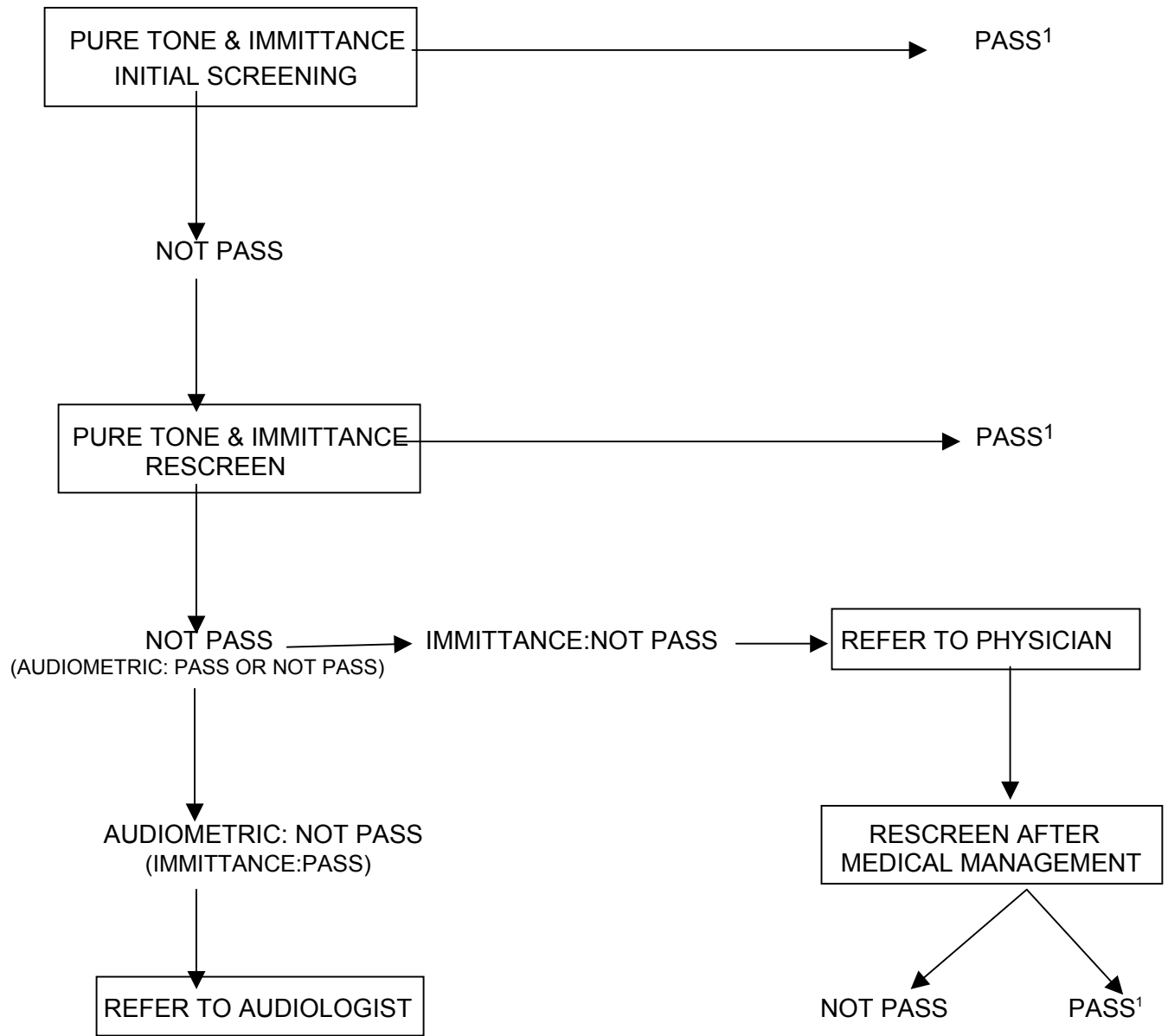
FOLLOW - UP

1. All children who do not pass OAE and immittance screening should be rescreened within two to four weeks unless referred for immediate medical or audiological evaluation.
2. Children who do not pass OAE screening but do pass immittance should be referred to an audiologist for a hearing evaluation.
3. Any concerns identified through history and/or visual inspection of the ear (structural defects, ear canal abnormalities, drainage, excessive wax) should be interpreted in conjunction with immittance and OAE screening results. If OAEs and immittance are passed, the history/visual inspection concerns may be noted but should not be considered a basis for referral. If OAEs and/or immittance are not passed, then the history/visual inspection concern should be noted with the referral. It is important that these children be seen for hearing screening annually.
4. Children with patent PE tubes should have a normal OAE response and should be monitored according to the physician's recommendations. Should abnormal results be obtained, refer the child to his/her physician.

RESCEENING RESULTS	OUTCOME	REFERRAL	FOLLOW-UP
OAE - PASS	Normal	None	Routine annual screening
OAE – NOT PASS Tympanometry – NOT PASS	Possible abnormal middle ear function	To audiologist	Monitor and refer to physician when necessary; if condition persists 3 months or more a medical referral is recommended
OAE - NOT PASS Tympanometry - PASS	Possible hearing loss	To audiologist	Management based upon audiologist's recommendations

PURE TONE AND IMMITTANCE SCREENING

FLOWCHART



NOTE: A child who has a previously identified hearing loss which is under the care of an audiologist, or who has hearing aids should not be screened.

¹Passing a hearing screening may not rule out the possibility of a slight hearing loss or a loss at frequencies not tested. It is recommended that all children, birth through third grade, have at least an annual hearing screening. Any parental concern regarding hearing, speech or language warrants immediate evaluation by an audiologist.

PURE TONE AND IMMITTANCE SCREENING

FOLLOW - UP

1. All children who do not pass audiometry and immittance screening should be rescreened within two to four weeks unless referred for immediate medical or audiological evaluation.
2. Children who do not pass the second screening should be managed according to the follow-up recommendations in the chart below.
3. Any concerns identified through history and/or visual inspection of the ear (structural defects, ear canal abnormalities, drainage, excessive wax) should be interpreted in conjunction with immittance and audiometric screening results. If pure tones and immittance are passed, the history/visual inspection concerns may be noted but should not be considered a basis for referral. If pure tones and/or immittance are not passed, then the history/visual inspection concern should be noted with the referral. It is important that these children be seen for hearing screening annually.

RESCEENING RESULTS	OUTCOME	REFERRAL	FOLLOW-UP
Audiometry - PASS Immittance - PASS	Normal	None	Routine annual screening
Audiometry – PASS Immittance – NOT PASS	Possible abnormal middle ear function	To audiologist	Monitor and refer to physician when necessary; if condition persists 3 months or more a medical referral is recommended
Audiometry - NOT PASS Immittance - NOT PASS	Possible abnormal middle ear function and hearing loss	To audiologist and/or physician depending upon significance of findings	Monitor and refer to physician when necessary; rescreen tympanometry and audiometry after medical treatment; refer back to physician if tympanometry is still abnormal
Audiometry - NOT PASS Immittance - PASS	Possible hearing loss	To audiologist	Management based upon audiologist's recommendations

AUDIOLOGICAL EVALUATION OUTCOME

Following evaluation by an audiologist all children should be categorized in one of the following outcomes:

Normal Hearing:

Child's hearing is within a normal range. Hearing, however, should be screened annually through the third grade.

Medically Significant Ear Problem:

Child's hearing is within a normal range, but middle ear function is abnormal, or fluctuates frequently, due to otitis media or otitis media-related ear problems, including middle ear tubes. Hearing, and tube status, if the child has tubes, should be monitored, through screening or evaluation, at least every 6 months

Note:

- three or more episodes of otitis media in a 6 month period, or
- 4 or more episodes in a 12 month period, or
- one episode of otitis media lasting three months or longer
- are risk factors for speech, language, and learning problems.

Non-educationally Significant Hearing Loss:

Child has a hearing loss that does not meet the criteria for educationally significant hearing loss (based upon Colorado Department of Education's Audiology Effectiveness Indicators for Audiology Services in the Schools). These losses are slight and typically in the high frequency range, affect only one or two frequencies, or only one ear. These losses are usually sensorineural in origin and therefore permanent. These types of losses should be monitored at least annually, through evaluation or screening, to insure their stability. Any change in hearing requires an audiological evaluation and referral to an ear specialist.

Educationally Significant Hearing Loss:

A hearing loss that meets one of the following criteria, as determined by an audiological evaluation:

1. An average pure-tone hearing loss in the speech range (500-2000Hz) of 20dBHL or greater in the better ear which is not reversible within a reasonable period of time.
2. An average high frequency, pure-tone hearing loss of 35 dBHL or greater in the better ear at two (2) or more of the following frequencies - 2000, 3000, 4000, 6000 Hz.
3. A permanent unilateral hearing loss of 35 dBHL or greater in the speech range (500-2000 Hz).
4. Chronic otitis media (any episode lasting 3 months or longer), whether educationally significant hearing loss is present or not, between the ages of birth and 5 years.

Children who meet the educationally significant hearing loss category must be referred to the community or school district Child Find program for appropriate assessment and determination of eligibility for services.

DATA MANAGEMENT

Data Management is an essential component of the screening program. There must be a method for recording and tracking results that is easy to use and maintain. The following areas should be included:

- A written process for notifying parents of screening results
- Proper procedures and forms that are easy to use for referrals to the audiologist and physicians
- Parents should be able to understand these forms and how to follow through on recommendations; translated material and/or interpreters may be required.
- All forms and procedures should be developed and implemented through the cooperative effort of the audiologist with whom you are working; the audiologist must have easy access to referral information in order to expedite follow up procedures
- Results for children who pass screening should be recorded as well as those who do not pass; a plan to screen children who were absent is also necessary
- Work with your audiologist to develop the methods and management procedures that will work best for both of you.

INCLUDED IN THE APPENDIX ARE SOME SAMPLE FORMS TO ASSIST IN THE DEVELOPMENT OF A HEARING SCREENING PROCESS THAT IS MOST EFFECTIVE FOR YOUR AREA.

GENERAL INFORMATION ABOUT HEARING SCREENING

WHAT DOES IT MEAN IF A CHILD PASSES THE HEARING SCREENING?

If a child has passed the screening he/she should hear at a level which is adequate for the pitches of sound which are most important for understanding what people say. Since this is a screening, it is possible for a child to occasionally pass who does have a hearing loss. The screening does not rule out a very slight hearing loss or a hearing loss in the high pitches. If a parent suspects his/her child may have a hearing problem even after the hearing screening, an evaluation by an audiologist should be recommended. Even if a child passes today, it does not mean he/she may not have a hearing problem later on. Children should have their hearing screened every year through third grade, and then at scheduled intervals as recommended through the State screening guidelines for the schools. Anytime a concern about hearing arises, another hearing screening should be done as soon as possible.

WHAT DOES IT MEAN IF A CHILD NEEDS A HEARING RECHECK?

This means that the child either refused the screening, did not understand, or did not respond as would be expected for his/her age. A referral does not mean the child has a hearing problem, but further testing is required to find out how well he/she hears. Since the only way to know for sure how a child hears is through hearing testing, it is recommended that follow up occur according to the procedures outlined in these guidelines.

WHAT IS A IMMITANCE (Tympanometry)

It is not a hearing test. Tympanometry is a method of using air pressure to move the eardrum and the bones behind the eardrum to test the function of the middle ear. The test can tell if there may be a problem such as a wax blockage in the ear canal, a hole in the eardrum, fluid behind the eardrum, or a eustachian tube problem. This test does not hurt and is not harmful. Some doctors do a similar test where they look in the ear with a light while puffing air into the ear to watch the eardrum move. If the test indicates borderline normal results, such as in a eustachian tube problem, a recheck of the tympanogram may be recommended to determine whether the ears are getting better or worse. Since the tympanogram is not a hearing test, the child could "pass" and still have a hearing problem that requires follow-up testing.

WHO IS AN AUDIOLOGIST?

Audiologists are hearing professionals who have at least a master's degree in audiology. Audiologists are trained to test people of all ages and abilities. There should be an audiologist working in each school district or BOCES. School audiologists are required by law to test any child (infants as well as school aged children), at no charge to families, to determine whether a hearing loss exists which might result in the child being eligible for

special education services. If a school district audiologist does not have the proper equipment to assess a child's hearing, as in the case of some children who are difficult to test, he/she can recommend to the family another audiologist to test the child. The audiologist may also help to find financial assistance for related hearing or medical needs.

What are Otoacoustic Emissions (OAE)?

OAE's are the inner ear's response to sound. These responses are typically present in normal hearing ears. If the child has an ear infection the OAE is usually not present. A small probe in the ear canal is used to measure the OAE.

What is the Colorado Hearing Resource (CO-Hear) Coordinator?

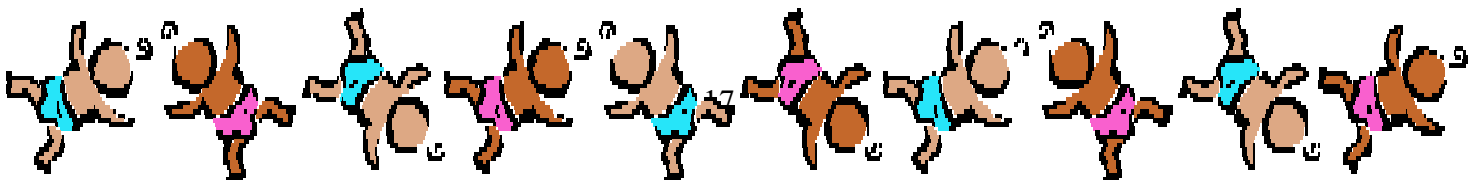
The Co-Hear Coordinator is a local professional trained to work with families who have children who are deaf or hard of hearing. The Co-Hear Coordinator assists the family in finding resources for funding, early intervention programs and parent support groups.

PERSONNEL AND TRAINING

1. All screening programs, including training of screeners, should be under the direction of an audiologist.
2. While screening programs need to be flexible and adaptable to unique situations, all programs should adhere to stated protocols.
3. Individuals who will be trained to screen this age group should have broad based knowledge and experience with early childhood development.
4. It is recommended that all screeners have initial training and annual refresher training to maintain screening skills. Supervision of screeners by an audiologist should occur routinely.

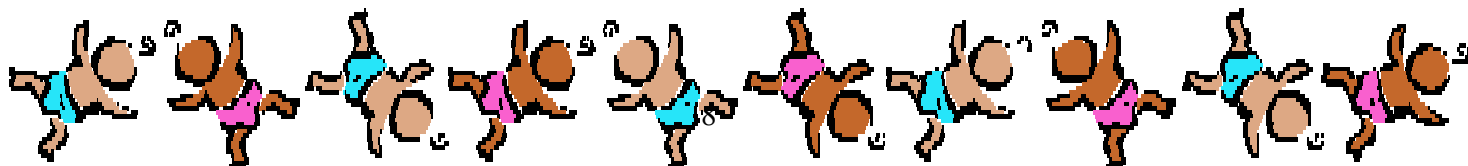
EQUIPMENT AND CALIBRATION

1. Behavioral calibration (testing yourself) should be done at the beginning of each screening day for audiometers, VRAs and tympanometers.
2. Manually operated pure tone audiometers must meet ANSI S3.6-1969 standards. The Owner's Manual for each piece of equipment will indicate which standards are met. Automated pure tone screening systems are typically not appropriate for use with young children. Annual professional electro-acoustic calibration is necessary.
3. Tympanometers must meet ANSI 83.39-1987, Type 4 standards. Reflectometers such as the "Acoustic Otoscope" are not recommended. Routine calibration should occur with the system's self-calibration equipment if available. Annual calibration is necessary for equipment that does not self-calibrate. Tympanometers should be specially calibrated for use in high altitudes.
4. OAE calibration and function is available in the manufacturer's manuals.



V. APPENDIXES

All forms, hand-outs, or other information in this packet may be reproduced, modified, or adapted for local use.



APPENDIX B

HEARING HEALTHCARE ASSOCIATIONS

National

Academy of Dispensing Audiologists	(803) 252-5646
Alexander Graham Bell Assoc. for the Deaf	(202) 337-5220
American Academy of Audiology	(800) 222-2336
American Auditory Society	(602) 942-4939
American Speech-Language-Hearing Assoc.	(301) 897-5700
Better Hearing Institute	(703) 642-0580
Deafness Research Foundation	(212) 684-6556
Educational Audiology Association	(800) 460-7322
League for the Hard of Hearing	(212) 741-7650
Miracle Ear Children's Foundation	(800) 234-5422
National Assoc. of the Deaf	(301) 587-1788
National Technical Institute for the Deaf	(716) 465-6400
Self Help for Hard of Hearing People (SHHH)	(301) 657-2248
SERTOMA International	(816) 333-8300

State

Colorado Academy of Audiology	(970) 351-1595
Colorado Speech-Language-Hearing Assoc.	(303) 753-1221
Center on Deafness	(303) 839-8022
Colorado Clearinghouse for the Hearing Impaired	(303) 788-7766
Colorado Dept. of Education	
-Audiology	(303) 866-6960
-Special Education	(303) 866-6694
Colorado Dept. of Public Health and Environment:	
-Health Care Program for Children with Special Needs (HCP)	(303) 692-2370
-Child Health Services	(303) 692-2375

Local

School district (ask for the school audiologist or Child Find program)	
Public health nurse, or local health department	
Look in the yellow pages under "audiology"	
CO-Hear Coordinator	(303) 692-2370
Part C Coordinator	

APPENDIX C

COLORADO AUDIOMETRIC EQUIPMENT RESOURCES

MSR West, Inc.
P.O. Box 18176
Boulder, CO 80308

Roger Ott

(303) 604-0044

Western Acoustics
700 Billings
Aurora, CO 80011

Bill Van Cleave

(303) 360-0575

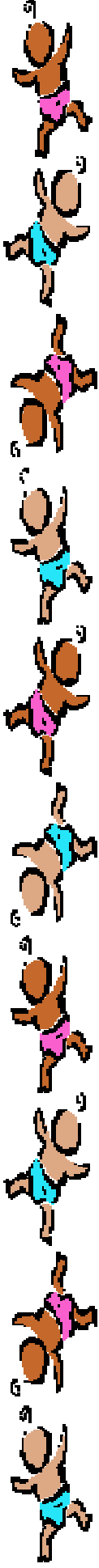
Aurora Education Foundation
1085 Peoria Street
Aurora, CO 80011
(videotape to prepare children for traditional screening)

(303) 344-8060 ext.365

APPENDIX D

Brochure: Your Child's Hearing

"Your Child's Hearing" is a brochure developed for parents and is provided in both English and Spanish.. It is suggested that this form be reproduced on colored paper and presented in a tri-fold format. This brochure should be given to parents at the time of screening. Additional uses include placement in physicians' offices, health departments, daycares and preschools, Child Find offices, and any other sites where children's health and development is addressed.



DEVELOPMENTAL MILESTONES FOR HEARING & SPEECH

By 1 Month Your Child Should:

- startle to loud, sudden noises
- cry
- coo and gurgle
- be comforted by soft sounds and familiar voices

By 3 Months Your Child Should:

- Make vowel sounds like "ooh" and "aah"

By 4 Months Your Child Should:

- occasionally stir or waken when quietly sleeping if a loud noise is made or if someone talks

By 6 Months Your Child Should:

- babble ("baba", "gaga", etc)
- try to imitate changes in voice pitch
- turn head toward sound source

By 7 Months Your child Should:

- turn head when called from behind
- begin using some consonant sounds such as "b", "d", "f", "m", & "p"

By 9 Months Your Child Should:

- turn head toward a sound made at side and locate it if at eye level or below
- occasionally jump or startle when there is a very loud sound
- stop when "no-no" or name is said
- change pitch of his/her voice
- act differently to friendly versus angry talking
- imitate speech sounds of other people

By 12 Months Your Child Should:

- respond to music and singing
- give a toy when asked for it from behind
- begin to repeat some of the sounds you make
- use one other word correctly besides "mama" and

"dada"

- turn head in any direction to locate interesting sound source

By 15 Months Your Child Should:

- use 3 to 5 words correctly
- identify familiar objects when named without watching your lips

By 18 Months Your Child Should:

- indicate wants by naming certain objects
- point to a familiar picture when named without watching your lips
- have a 6 to 10 word vocabulary

By 24 Months Your Child Should:

- occasionally express self in 2 word sentences
- point to certain body parts when asked without watching your lips
- have a 10 to 15 word vocabulary

By 3 Years Your Child Should:

- use 2 to 3 word sentences
- have a 200 to 300 word vocabulary

By 4 Years Your Child Should:

- say most sounds correctly except perhaps "r", "l", "th", and "s"

By 5 Years Your Child Should:

- use all sounds correctly except perhaps "s" and "th"
- use the same sentence structure as the family

CHILD'S

HEARING

HEARING IS IMPORTANT ...

FOR SPEAKING...

Children learn to speak by listening

FOR LEARNING-

Much of what children learn is by hearing

FOR SOCIAL GROWTH-

Children need to communicate to make friend

YOUR

WHY IS IT IMPORTANT TO HAVE YOUR CHILD'S HEARING CHECKED EVERY YEAR?

- Hearing can change
- Only a hearing test can tell you for sure how your child hears
- Hearing problems can be related to medical problems
- Hearing is important for speech, language development & learning

HOW IS HEARING SCREENED IN CHILDREN?

Part 1: Audiometry

- The child's ability to hear soft sounds at different pitches is screened.
- Hearing ability is determined by checking how the child responds to sounds through headphones or speakers
- For very young or difficult to test children other techniques may be used

Part 2: Tympanometry

- A measure of how well the ear canal, eardrum, Eustachian tube and middle ear bones are working
- A common way to check for fluid behind the eardrum frequently found with ear infections

Children with abnormal results on either of these tests are referred for further testing or for medical treatment. If your child passes the screening and you still have a concern about your child's hearing, consult an audiologist.

RISK FACTORS FOR HEARING

Permanent Hearing Loss

- A family member with permanent hearing loss since childhood

- Serious infection present at birth (such as German measles, CMV, herpes, or syphilis)
- Difficult birth or diversity which affected baby's breathing
- Baby's birth weight less than 3 lbs
- Unusual appearance of baby's head, face or ears (including cleft palate or malformed ears)
- Baby requires neonatal intensive care (NICU) for 2 days or more following birth
- Baby has a disorder or infection of the brain (such as meningitis)
- Baby requires exchange blood transfusion

Ear Infections & Otitis Media

- Infants who have their first ear infection at or before 6 months of age
- Children with facial abnormalities such as cleft lip/palate or Down Syndrome
- Infants & young children in day care settings
- Children exposed to cigarette smoke
- Bottle feeding when baby is lying down
- Upper respiratory infections
- Allergies
- Large adenoids

WHO CAN HELP TAKE CARE OF YOUR CHILD'S EARS & HEARING?

- The Audiologist - A specialist who tests hearing and helps people with hearing loss (hearing aids, lip/speech reading, auditory training & individual & family support).
- The Ear Specialist (ENT otologist) - A physician who specializes in the medical & surgical treatment of ear & hearing disorders.

ABOUT OTITIS MEDIA.....

Otitis media is an inflammation of the

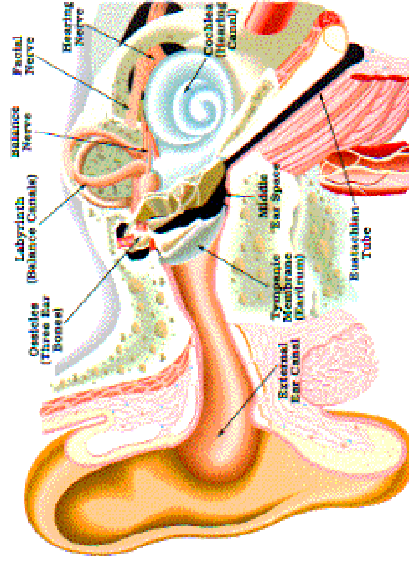
eardrum and the middle ear. The inflammation is caused by swelling and blockage of the eustachian tube that then creates a vacuum resulting in fluids pooling behind the eardrum. This problem creates a warm, wet place where germs can thrive and often lead to ear infections.

Medical treatment of ear infections usually includes "watching and waiting" or antibiotics. Tubes may be necessary if the ear infections do not clear with treatment or if they reoccur.

Fluid behind the eardrum often causes a hearing loss which lasts as long as there is fluid or the abnormal condition is present. Permanent damage can result without proper treatment.

EAR CARE TIPS:

- Never put anything in your child's ear
- For general cleaning use a wash cloth on the outer part of the ear
- For tubes, follow your physicians recommendations regarding water in the ears
- Consult your physician or audiologist regarding problems of wax in the ears





HITOS DEL DESARROLLO PARA AUDICIÓN Y HABLA

Para el Primer Mes Su Niño(a) Debe:

- hacer ruidos de repente altos o de sobresalto
- llorar
- arrullar o gorjear
- ser consolado por ruidos suaves o voces conocidas

Para los Tres Meses Su Niño(a) Debe:

- hacer ruidos vocales como “ooo” y “aaa”

Para los Cuatro Meses Su Niño(a) Debe:

- ocasionalmente moverse o despertar cuando se hace un ruido fuerte o alguien habla mientras esta durmiendo calladamente

Para los Seis Meses Su Niño(a) Debe:

- balbucear (“baba”, “gaga”, etc.)
- tartar de imitar cambios en el tono de la voz
- voltear su cabeza hacia la fuente

Para los Siete Meses Su Niño Debe:

- voltear su cabeza cuando se le habla de atras
- empezar a usar algunos sonidos de consonants tales como “b”, “d”, “f”, “m”, y “p”

Para los Nueve Meses Su Niño Debe:

- voltear su cabeza hacia un sonido hecho de lado y localizarlo si esta a o debajo de su nivel visual
- ocasionalmente brincar o asustarse cuando hay un sonido muy fuerte
- detenerse cuando se le dice que “no” o se le lama por su nombre

Para los Diez Meses Su Niño Debe:

- actuar diferente de cuando se le habla amigablemente a un tono enojado
- imitar los sonidos de habla de otra gente

Para los Doce Meses Su Niño(a) Debe:

- responder a la musica y al canto
- entregar un juguete cuando se le pide de atras

LA AUDICIÓN

DE SU

NIÑO(A)

LA AUDICIÓN ES IMPORTANTE...

PARA HABLAR

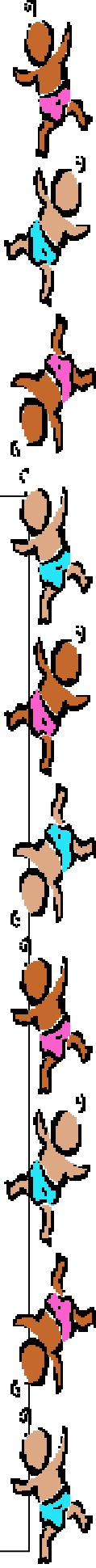
Los niños aprenden a hablar al escuchar

PARA APRENDER –

Mucho de lo que los niños aprenden es por audición

PARA DESARROLLO SOCIAL –

Los niños necesitan poder comunicar para hacer amigos



¿ POR QUÉ ES IMPORTANTE QUE SE REVISE LA AUDICIÓN DE SU NIÑO(A) CADA AÑO?

- Su audición puede cambiar
- Solamente un examen auditivo puede decirle cuánto escucha su niño(a)
- Problemas auditivos pudieran estar relacionados con problemas médicos
- La auditiva es muy importante para el desarrollo del habla y lenguaje y aprendizaje

¿CÓMO SE REVISA LA AUDICIÓN EN LOS NIÑOS?

Parte 1: Audiometría

- Se revisa la habilidad del niño de oír sonidos suaves en tonos diferentes
- La habilidad de audición es determinada por como responde por medio de audifonos o bocinas
- Para niños muy pequeños o muy difíciles de probar se pueden usar otras técnicas

Parte 2: Timpanometría

- Una medida de qué tan bien trabaja el canal del oído, oído medio, la trompa de Eustaquio y los huesos del oído median
- Una manera común para revisar por liquido detras del oído medio hallado frecuentemente con infecciones del oído

Niños con resultados anormales en cualquiera de esta pruebas se refieren para pruebas adicionales o para tratamiento médico. Si su niño pasa los revisos pero todavía le preocupa la audición de su niño, consulte un audiólogo.

FACTORES DE RIESGO PARA AUDICIÓN Pérdida Permanente Auditiva

- Un miembro de familia con pérdida permanente auditiva desde su niñez
- Infecciones presentes al nacimiento (como rubeola, CMV, herpes, o sifilis)
- Alumbramiento o nacimiento difícil que afecto la

respiración del bebé

- Peso al nacimiento de menos de 3 ½ libras
- Apariencia extraña de la cabeza, cara o oído del bebé (incluido hendidura del paladar o orejas malformadas)
- El bebé necesita cuidado intensivo neonatal (NICU) por dos días o mas después de nacer
- El bebé tiene un desorden o infección del cerebro (como meningitis)
- El bebé necesita una transfusión de sangre

Infecciones Del Oído Y Otitis Media

- Infantes que tienen su primera infección de oído en o antes de los 6 meses de edad
- Niños con anomalidades tales como hendidura del labio/paladar o síndrome de Down
- Infantes o niños pequeños en ambientes donde se cuidan niños
- Dándole biberón al bebé mientras acostado
- Infecciones respiratorias
- Alergias
- Adenoideos grandes

¿QUIÉN PUEDE AYUDARLE CON LOS OÍDOS Y AUDICIÓN DE SU NIÑO(A)?

- El Audiólogo- Un especialista que prueba audición y ayuda con pérdida auditiva (ayudas auditivas, leer los labios, entrenamiento auditorio y apoyo individual y de familia).
- Al Médico- trata condiciones medicas incluidas las relacionadas con otitis media
- El Especialista del Oído (ENT o otólogo) – Un médico quien especializa en el tratamiento médico o quirúrgico de desordenes auditivas

EN CUANTO AL OTITIS MEDIA...

Otitis media es una inflamación de la membrana del timpano y el oído medio. La inflamación es causada por lo hinchado y bloqueo de la trompa de Eustaquio que luego produce un vacío creando líquidos estancosos detras de la membrana detras de la membrana del timpano. Este problema produce un lugar calentito y humedo donde microbios crecen y lleva a

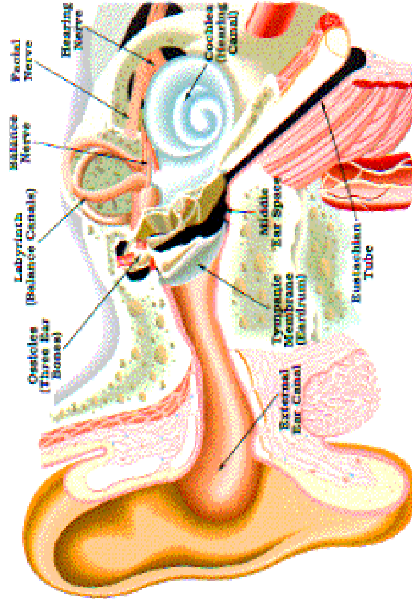
infecciones del oído.

El tratamiento médico de infecciones del oído normalmente incluye “esperar y ver” o antibióticos. Pudieran ser necesarios tubos si las infecciones no se quitan con tratamiento o si ocurren nuevo.

Fluido detras de la membrana de tímpano normalmente causa una perdida auditiva que puede durar mientras que el liquido o la condición anormal este presente. Daño permanente puede resultar sin el tratamiento apropiando.

SUGERENCIAS PARA EL CUIDADO DE OÍDOS

- Nunca ponga CUALQUIER COSA DENTRA del oído de su niño(a)
- Para limpieza en general usa una toalla en la parte de afuera del oído
- Para tubos, siga las recomendaciones de su médico con respecto al agua en los oídos
- Consulte con su médico o audiólogo con respecto o problemas de cera en los oídos



Appendix E

HANDOUT:

Suggestions for Parents of Children with Middle Ear Problems

This handout is provided in English and Spanish.
It may be reproduced for parents, daycare providers, teachers, and other pertinent parties.

SUGGESTIONS FOR PARENTS OF CHILDREN WITH MIDDLE EAR PROBLEMS

THE IMPORTANCE OF TALKING

Talking to your child is necessary for his/her language development. Since children usually imitate what they hear, how much you talk to your child, what you say, and how you say it will affect how much and how well your child talks.

LOOK

Look directly at your child's face and wait until you have his/her attention before you begin talking.

CONTROL DISTANCE

Be sure that you are close to your child when you talk (no farther than 5 feet). The younger the child, the more important it is to be close.

LOUDNESS

Talk slightly louder than you normally do. Turn off the radio, TV, dishwasher, etc. to remove background noise.

BE A GOOD SPEECH MODEL

- Describe to your child daily activities as they occur.
- Expand what your child says. For example, if your child points and says "car", you say "Oh, you want the car."
- Add new information. You might add, "That car is little."
- Build vocabulary. Make teaching new words and concepts a natural part of every day's activities. Use new words while shopping, taking a walk, washing dishes, etc.
- Repeat your child's words using adult pronunciation.

PLAY AND TALK

Set aside some times throughout each day for "play time" for just you and your child. Play can be looking at books, exploring toys, singing songs, coloring, etc. Talk to your child during these activities, keeping the conversation at his/her level.

READ

Begin reading to your child at a young age (under 12 months). Ask a librarian for books that are right for your child's age. Reading can be a calming-down activity that promotes closeness between you and your child. Reading provides another opportunity to teach and review words and ideas. Some children enjoy looking at pictures in magazines and catalogs.

DON'T WAIT

Your child should have the following skills by the ages listed below:

18 months: 3 word vocabulary.

2 years: 25-30 word vocabulary and several 2-word sentences.

2 ½ years: At least a 50 word vocabulary and 2-word sentences consistently.

IF YOUR CHILD DOESN'T HAVE THESE SKILLS, TELL YOUR DOCTOR. A referral to an audiologist and speech pathologist may be indicated. Hearing and language testing may lead to a better understanding of your child's language development.

Adapted from "Suggestions for Parents..." Noel Matkin, Ph.D., Professor of Audiology, University of Arizona, 1960.

Screening Children for Communication Disorders

A Project of the Robert Wood Johnson Foundation and University of Colorado Health Sciences Center

SUGERENCIA PARA LOS PADRES DE NIÑOS CON PROBLEMAS DEL OÍDO MEDIO

LA IMPORTANCIA DE HABLAR

Hablar con su Niño/a es necesario para el desarrollo del lenguaje. Porque los niños imitan lo que oyen, lo que usted le dice a su Niño/a le afectará como habla y cuanta habla.

MIRAR

Mire directamente a la cara de su niño/a y espere hasta que usted tenga la atención de él/ella antes de empezar a hablar.

CONTROL DE LA DISTANCIA

Asegúrese de estar cerca de su Niño/a cuando le habla (no más lejos de 5 pies). Mientras mas joven es su niño/a, mas importante es estar cerca de él/ella.

VOZ ALTA

Hable en una voz un poco más alta de lo que usa normalmente. Apague el radio, la televisión, el lavaplatos, etc. para quitar el ruido del ambiente.

SER MODELO DEL BUEN HABLA

- Describale a su niño/a las actividades diarias cuando ocurren.
- Extienda lo que dice su niño/a. Por ejemplo, si su niño/a apunta y dice “carro,” diga usted, “O, tu quieres el carro.”
- Aumente o expanda las frases de su niño/a con información nueva. Tal vez usted puede añadir, “Ese carro es chiquito.”
- Desarrolle más el vocabulario de su niño/a. Trate de enseñarle palabras y conceptos nuevos como parte natural de las actividades diarias. Use palabras nuevas al ir de compras, al tomar paseos, al lavar los trastes, etc.
- Repita las palabras que usa su niño/a usando pronunciación adulta.

JUGAR Y HABLAR

Trate de sacar tiempo durante el día solo para que usted juegue con su niño/a. Puede ser tiempo para ver libros, explorar juguetes, cantar canciones, colorear, etc. Hablele a su niño/a durante de estas actividades, manteniendo la conversación al nivel de él/ella.

LEER

Empiece a leerle a su niño/a cuando este chiquito (menos de 12 meses). Pídale a la bibliotecaria los libros que son apropiados para la edad de su niño/a. La lectura puede ser una actividad para calmar a su niño/a. La lectura puede ser una actividad para clamar a su niño/a y promueve una cercanía entre usted y su niño/a. La lectura provee otra oportunidad para enseñarle nuevas palabras e ideas. A algunos niño les gusta ver revistas y catalogos.

NO ESPERE

Su niño/a debe de tener las siguientes destrezas para las edades anotadas:

18 meses: vocabulario de 3 palabras

2 años: vocabulario de 25-30 palabras y varias frases de 2-palabras.

2 ½ años: vocabulario de 50 palabras y el uso consistente de frases de 2-palabras.

SI SU NIÑO/A NO TIENE ESTAS DESTREZAS, DIGALE A SU MÉDICO. Esto puede indicar que su niño/a necesita ser referido a un audiólogo o terapeuta del habla y lenguaje (fonoaudiólogo). Un examen para el niño/a de audición y de lenguaje le puede ayudar a entender mejor el desarrollo de lenguaje de su niño/a.

Adaptado de: “Suggestions for parents...” Noel Matkin, Ph.D., Professor of Audiology, University of Arizona, 1980

EXAMINANDO A LOS NIÑOS PARA PROBLEMAS DE LA COMUNICACIÓN
A Project of the Robert Wood Johnson Foundation and University of Colorado Health Sciences Center

APPENDIX F

SAMPLE FORMS

(It may be helpful to reproduce some of these forms on NCR paper.)

SCREENING PERMISSION

Annual hearing screening for all children from birth to age eight has been recommended by the Colorado Early Childhood Hearing Screening Task Force. Early identification of hearing loss and appropriate treatment greatly reduces the chances of problems later. The screening is quick, simple and harmless.

I hereby consent to the provision of hearing and/or tympanometry screening for:

_____	_____
(Full Name of Child)	(Date of Birth)
_____	_____
(Parent or Legal Guardian Signature)	(Date)

RELEASE OF INFORMATION

It is generally agreed that sharing information regarding the results of hearing and/or tympanometry screening with those individuals or agencies that are concerned with the child's primary health care provider, local school district, and local public health agency. Please mark the agencies that you wish to receive the screening results.

I hereby agree to have the results of hearing and/or tympanometry screening shared with the following individuals or agencies.

- copy to parent/legal guardian (this copy may be shared with any person or agency at the parent's or guardian's discretion)
- copy to local school district
- copy to local public health agency
- copy to primary care provider:

_____	_____
(Full Name of Child)	(Date of Birth)
_____	_____
(Parent or Legal Guardian Signature)	(Date)

HEARING HISTORY

(to be completed through parent interview)

Child's Name _____ DOB _____ Date _____

High Risk Factors:

- Yes__ No__ Family history of congenital or childhood sensorineural hearing loss.
- Yes__ No__ Congenital infection known or suspected to be associated with sensorineural hearing loss such as toxoplasmosis, syphilis, rubella, CMV, and herpes.
- Yes__ No__ Family history of Ushers Syndrome
- Yes__ No__ Craniofacial anomalies.
- Yes__ No__ Birth weight less than 1500 grams (3.3 pounds).
- Yes__ No__ Hyperbilirubinemia at a level exceeding indication for exchange transfusion.
- Yes__ No__ Ototoxic medications used for more than five days.
- Yes__ No__ Bacterial meningitis.
- Yes__ No__ Respiratory depression at birth (i.e. Apgar scores of 0-4 at 1 minute, or 0-6 at 5 minutes).
- Yes__ No__ Prolonged mechanical ventilation (5days or longer).
- Yes__ No__ Other findings associated with a syndrome known to include sensorineural hearing loss.
- Yes__ No__ Head injury.
- Yes__ No__ Neurodegenerative disorders.

Other Information:

- Yes__ No__ Recent or current ear pain.
- Yes__ No__ Recent or current ear discharge (drainage).
- Yes__ No__ Auditory developmental delay (use a checklist).
- Yes__ No__ Speech/Language developmental delay.
- Yes__ No__ Parent concerns about child's hearing.
- Yes__ No__ Parents' use of drugs or alcohol before or during pregnancy.

Results of previous ear/hearing evaluations:

Visual Inspection (note any malformation or abnormality of the head and neck that has not received previous medical evaluation):

HEARING DEVELOPMENT CHECKLIST

These checklists may be used to obtain information from parents regarding developmental milestones for the auditory, language, and speech development of their child. They should not be used in place of an individually administered hearing screening. Every child should have his/her hearing screened annually.

Print checklist front to back with English and Spanish on opposite sides. There is also room for you to insert your agency's name when you reproduce these flyers.

DOES YOUR CHILD HAVE A HEARING LOSS?

(Two to five years checklist)

Questions for parents who suspect their child has a hearing problem.

Name of Child _____

Age _____ Today's Date _____

1. Does your child frequently ask you to repeat? Yes No
2. Does your child frequently request the TV or stereo be louder than others in the family? Yes No
3. Does your child often respond to a question with an unrelated answer?..... Yes No
4. Does your child daydream or seem inattentive?..... Yes No
5. Is your child a behavior problem or seem withdrawn?..... Yes No
6. Is your child's speech poorer than you expect for a child at this age?... Yes No
7. Does your child respond inconsistently to sound (hears it sometimes and other times does not?)..... Yes No
8. Does your child watch your face when you talk?..... Yes No
9. Does your child speak abnormally soft or loud, or is the pitch usually high or low?..... Yes No
10. Does your child have lots of ear infections or cold?..... Yes No

If your answer to any of these questions is "YES", a hearing evaluation is indicated.

Remember: The earlier a hearing problem is discovered, the earlier the child can be helped. No child is ever too young to be tested.

The above checklist is provided by the New York League for the Hard of Hearing.

DOES YOUR BABY HEAR?

(Birth to two years checklist)

The most important time for your baby's learning is between birth and 3 ½ years. This is also the time your baby will learn how to communicate – first to understand what people say and then to start talking. Your baby must have normal hearing for these skills to develop adequately.

As the parent, you are the best person to observe your baby's auditory development by being alert for the following symptoms.

Name of Child _____

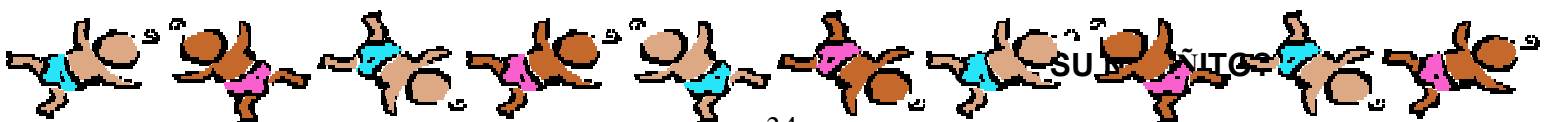
Age _____ Today's Date _____

1. Does your newborn baby startle to a loud sound or clap within 3-6 feet? Yes No
2. Does your three month old baby stop moving or stop crying when you call him/her or make an unfamiliar noise?..... Yes No
3. Does your fifteen month old baby turn toward you when you call his/her name from behind?..... Yes No
4. Does your fifteen month old baby identify familiar objects? Does he/she repeat simple words?..... Yes No
5. Does your two year old follow simple directions, repeat words and phrases?..... Yes No
6. Is your child disturbed by loud sounds when he's/she's asleep?..... Yes No
7. Does your child turn when you call? Yes No
8. Does your child pay attention to noises? Yes No
9. Does your child use gestures to communicate/point? Yes No
10. Does your child get frequent colds or ear infections? Yes No

If your answer to question 1-8 is "NO" or your answer to questions 9 or 10 is "YES", a hearing evaluation is indicated.

Remember: No baby is ever too young to have a hearing test. The earlier we discover the problem, the earlier we can help.

The above checklist is provided by the New York League for the Hard of Hearing.



(Lista para los de nacimiento a 2 años)

El tiempo más importante para el aprendizaje de un niño es entre el nacimiento y tres años y medio. Durante de este tiempo también es cuando el niño aprende a comunicarse primero para entender lo que dice la gente y entonces para aprender a hablar. Su niño tiene que tener un sentido normal para desarrollar estas destrezas adecuadamente.

Como padre, usted es la persona mejor para observar el desarrollo auditivo de su niño estando alerta sobre los síntomas si siguientes

Nombre del niño _____

Edad _____ Fecha de hoy _____

1. ¿Se asusta su niño recién nacido al oír un ruido o un palmoteo dentro de 3-6 pies? Si No
2. ¿Para de moverse o de llorar su niño de tres meses cuando usted le llama y cuando hace usted un sonido desconocido? Si No
3. ¿Voltea su niño de quince meses hacia usted cuando usted le llama por nombre detrás de él/ella? Si No
4. ¿Identifica su niño de quince meses objetos familiares? Repite palabras simples? Si No
5. ¿Seque su niño de dos años instrucciones simples; repite palabras y frases? Si No
6. ¿Le molestan ruidos fuertes a su niño cuando está dormido? Si No
7. ¿Voltea su niño cuando le habla usted? Si No
8. ¿Le pone atención su niño a los ruidos? Si No
9. ¿Usa su niño gestos para comunicarse/apuntar? Si No
10. ¿Tiene su niño catarros o infecciones del oído frecuentemente? Si No

Si Su respuesta a las preguntas 1-8 es "NO" o su respuesta a las preguntas 9 o 10 es "SI", se indica una evaluación del sentido (oído)

Acuérdese: Ningun niño esta muy joven (chiquito) para tener examen del sentido. Los mas temprono que encontremos un problema del sentido, lo más pronto que podamos ayudarle.

Esta lista se provee por la Lega del Sentido de Nueva York.

¿TIENE SU NIÑO PERDIDA DEL SENTIDO?

(Lista para los de 2-5 años)

Preguntas para padres que sospechan que su niño pueda tener problema con el sentido (oído).

Nombre del niño _____

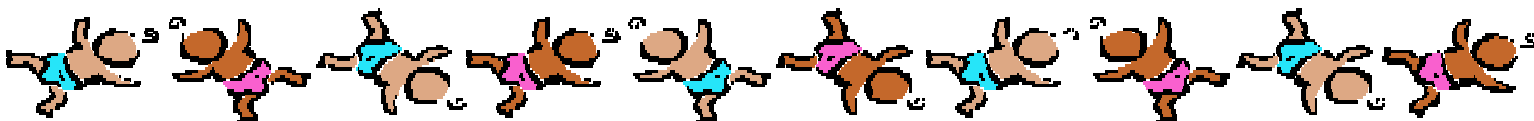
Edad _____ Fecha de hoy _____

1. ¿Frecuentemente le pide su niño repetir lo que dice usted? Si No
2. ¿Frecuentemente pide su niño que la televisión o el estereo este más fuerte de lo que lo que lo ponen otros en la familia? Si No
3. ¿Responde su niño con respuestas incorrectas a ciertas preguntas? Si No
4. ¿Ensueña (sueña despierto) o es desatento su niño? Si No
5. ¿Tiene su niño problema con el compartamiento o parece ser retirado? Si No
6. ¿Habla su niño peor de lo que se puede entender con otros niños de ésta edad? Si No
7. ¿Responde de niño inconsistentemente a los sonidos (algunas veces los oye y otras veces no los oye)? Si No
8. ¿Le mira a usted la cara su niño cuando usted habla? Si No
9. ¿Habla su niño demasiado callado o ruidoso, o con tono demasiado alto o bajo? Si No
10. ¿Tiene su niño muchas infecciones de los oídos o muchos catarros? Si No

Si su respuestas a cualquiera de estas preguntas es "SI" se indica una evaluación del sentido (oído).

Acuérdese: Lo mas pronto que se encuentre un problema del sentido, lo más pronto que le podamos ayudarle a su niño. Ningun niño esta muy joven para darle examen del sentido.

Esta lista se provee por la Lega del Sentido de Nueva York.



HEARING SCREENING – SUMMARY FORM (group)

Date: _____ Screener: _____

Site: _____

Screening environment adequate (noise, visual distraction)? Yes No

List any equipment problems: _____

CHILD'S NAME	AGE	At-RISK ¹	AUDIO	TYMP	OAE	RESCREEN	COMMENTS

P = Pass; N = Not Pass

All Children should have their hearing screened at least annually.

¹ Is the child “At-Risk” for hearing loss from history? (Yes or No)

HEARING SCREENING REPORT & REFERRAL

CHILD'S NAME: _____ D.O.B. _____ DATE: _____
 SCREENER: _____ AGENCY _____

HEARING SCREENING

	1000Hz	2000Hz	4000Hz
RIGHT EAR	PASS ___ (20dB) NOT PASS	PASS ___ (20dB) NOT PASS	PASS ___ (20dB) NOT PASS
LEFT EAR	PASS ___ (20dB) NOT PASS	PASS ___ (20dB) NOT PASS	PASS ___ (20dB) NOT PASS

OTOACOUSTIC EMISSIONS

	PASS	REFER
Right ear		
Left ear		

TYMPANOMETRIC SCREENING

	VOLUME	GRADIENT	RESULTS
RIGHT EAR			PASS NOT PASS
LEFT EAR			PASS NOT PASS

Norms: (.4-1.0cc) (less than 200)

COMMENTS:

FOLLOW-UP RECOMMENDATIONS:

- ___ PASS (Annual Rescreen)
- ___ AUDIOLOGICAL REFERRAL (to: _____)
- ___ MEDICAL REFERRAL (to: _____)
- ___ RESCREEN (date: _____)
- ___ MONITOR (date: _____)

Original – Child's File

Copy – Parents

MEDICAL REFERRAL AND RESPONSE

Dear: _____ :

This child is being referred to you for further evaluation. The following information has been gathered through recent screening. Please complete and return this form.

CHILD'S NAME: _____ D.O.B. _____ DATE: _____

SCREENER: _____ AGENCY: _____

HEARING SCREENING

	1000Hz	2000Hz	4000Hz
RIGHT EAR	PASS__ (20dB) NOT PASS	PASS__ (20dB) NOT PASS	PASS__ (20dB) NOT PASS
LEFT EAR	PASS__ (20dB) NOT PASS	PASS__ (20dB) NOT PASS	PASS__ (20dB) NOT PASS

OAE

	PASS	REFER
Right ear		
Left ear		

TYMPANOMETRIC SCREENING

	VOLUME	GRADIENT	RESULTS
RIGHT EAR			PASS NOT PASS
LEFT EAR			PASS NOT PASS

Norms: (.4-1.0cc) (less than 200 daPa)

COMMENTS:

MEDICAL EVALUATION OF: _____ (child's name)

Diagnosis: _____

Treatment Plan: _____

Comments: _____

Signature: _____ **Date:** _____

Return to: _____

Certificate for Hearing Screening



Hear! Hear!

_____ (name of child)

Passed Hearing Screening Today

Date: _____ Certified By: _____

The following procedures were used:

- Tympanometry
- Sound Booth VRA
- Pure Tone Screening
- Otoacoustic Emissions



OYE! OYE!

(nombre del niño)

*La Investigación de la Audición
fue Logrado con Exito*

Fecha: _____ Certificado por: _____

Los procedimientos fueron utilizados:

- Tympanometry
- Sound Booth VRA
- Pure tone screening
- Otoacoustic Emissions



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