



THE EAR FOUNDATION®

OF ARIZONA

2002 Arizona Medical Guide to Early Hearing Detection and Intervention

Published by:

**The EAR Foundation of Arizona
668 N. 44th Street, Suite 300
Phoenix, AZ 85008**

Telephone: (602) 685-1050

Corporate FAX: (602) 275-5709

FAX for HEAR For Kids and Newborn Hearing

Screening Programs: (602) 296-0425

e-mail: melissa@earfoundationaz.com

**Please visit our Web Site at
www.earfoundationaz.com**



The EAR Foundation of Arizona (EFAz) is a local affiliate of the EAR Foundation, a not-for-profit organization established in 1971 by Dr. Michael Glasscock III in Nashville, Tennessee. John Macias, MD, an Otologist in Phoenix established EFAz in 1995. Since its inception, EFAz has been involved in early hearing detection and intervention efforts in Arizona through collaborative projects with the Arizona Department of Health Services, Never Too Young (NTY) Program. Part of the EAR Foundation's mission is to educate health care professionals about hearing loss.

Board of Directors, The EAR Foundation of Arizona

John Macias, MD (President)

Steven L. Seiler, Chairman

Melissa Selbst, MPH, CHES.
Executive Director, EFAz

Theodore Glattke, Ph.D.
University of Arizona

Robert Milligan, Esq
Gallagher and Kennedy

Peter Nutley, MD
Otolaryngologist

Rick Berkheimer
Chase Bank
Frank Rivera
Glendale Community
College

Sheila Zuieback
Community Volunteer

Publication of the 2002 Medical Guide to Early Hearing Detection and Intervention was made possible by a grant from MCHB in conjunction with the Arizona Department of Health Services.

Author: Lylis Olsen, Consulting Audiologist

Editors: Amy Hugo and Sharon McKarns, M. A., CCC-A

With special thanks to Jane Pearson of St. Luke's Health Initiatives for their support of the 2001 Medical Guide.

American Academy of Pediatrics

“Appropriate and necessary care for the infant with significant hearing loss should be directed and coordinated by the child’s physician within the medical home, with support from appropriate ancillary services.”

1999 Policy Statement

Delayed identification of a hearing loss, beyond six months of age, is likely to result in delayed speech and language acquisition as well as other preventable outcomes. Universal newborn hearing screening is the first step, but audiological and medical assessment and the critical link to early intervention services must be made. The Physician or Medical Professional can expect families to look to him or her for answers and direction at each of these stages of the process from the initial screening soon after birth to early intervention.

- Screen at birthing hospital (or by 1 month of age)
- Rescreen by 1 month, those who are referred or missed
- Complete frequency-specific Auditory Brainstem Response test by a qualified Pediatric Audiologist by 3 months of age
- Complete medical evaluation to determine etiology of hearing loss and provide medical clearance for hearing aids as soon as possible
- Enroll in Early Intervention (EI) by 6 months of age
- Fit with hearing aids by 6 months of age

The EAR Foundation of Arizona hopes that this guide is a valuable resource in your practice. However, this guide is not intended to replace a physician’s clinical judgement for providing medical care.

This document is intended to be consistent with the Joint Committee on Infant Hearing (JCIH) -2000 position statement and the American Academy of Pediatrics (AAP) Policy Statement February 1999 Pediatrics Vol. 103 No. 2 pp. 527-530.

Table of Contents

Screen for Hearing Loss by 1 Month	1
At the First Well Child Visit.....	1
At the Second Well Child Visit	2
Late Onset or Progressive Hearing Losses.....	3
Resources for 2nd Or Missed Screen	4-6
Additional Information about Hearing Screening.....	7
<i>Methods Used to Screen Newborns</i>	<i>7</i>
Screening Auditory Brainstem Response	7
Otoacoustic Emissions.....	7
<i>Auditory Neuropathy.....</i>	<i>8</i>
Complete Audiologic Assessment by 3 Months	9
At the Second or Third Well Child Visit.....	9
Resources for Frequency-Specific ABRs.....	10
Additional Information about Assessment	11
<i>Hereditary Hearing Loss.....</i>	<i>11</i>
<i>Interim Service Coordination</i>	<i>11</i>
<i>Insurance Coverage for Assessment</i>	<i>11</i>
<i>Methods Used to Assess Hearing in Infants.....</i>	<i>12</i>
Auditory Brainstem Response (ABR) Testing	12
Behavioral Assessment.....	12
Tympanometry.....	12
Fit Amplification and Enroll in EI by 6 Months	13
When a Hearing Loss is Identified.....	13
Resources for Early Intervention and Hearing Aid Fitting	14-16
More about Early Intervention and Hearing Aids.....	167
<i>Early Intervention (EI).....</i>	<i>17</i>
<i>Clearance for Hearing Aids</i>	<i>17</i>
<i>Loaner Hearing Aids.....</i>	<i>17</i>
<i>Payment for Hearing Aids.....</i>	<i>17-18</i>
<i>Cochlear Implants.....</i>	<i>18</i>
Other Resources for Families	19-21
<i>Arizona Commission for the Deaf and the Hard of Hearing.....</i>	<i>19</i>
<i>Auditory Options.....</i>	<i>19</i>
<i>Desert Voices Oral Learning Center</i>	<i>20</i>
<i>HEAR for Kids</i>	<i>20</i>
<i>RAISING Special Kids.....</i>	<i>21</i>
<i>Pilot Parents.....</i>	<i>21</i>
<i>Sign Language Classes.....</i>	<i>21</i>
References	22
Commonly Used Acronyms	23





Screen for Hearing Loss by 1 Month

At the First Well Child Visit



Check if the infant was screened for hearing loss during the inpatient stay. If the infant was missed or referred, you will receive notification from the hospital (if you were the physician on record). If the infant was not born at a hospital it is likely that no screening has been done.

Status of screening	Action Required	Purpose/Resources
Passed	<i>Determine if there are risk factors for late onset or progressive hearing loss</i>	Monitoring usually includes hearing assessment every 6 months for the first 3 years. See page 3 for more information on risk factors for progressive and late onset hearing loss.
Unknown	<i>Assure that screening takes place within the 1st month</i>	Many hospitals place stickers with the screening results on the back of the blue immunization folder. Contact the newborn hearing screening coordinator in the newborn nursery. See pages 4-6  for phone numbers for hospital screening programs.
Missed or Referred	<i>Assure that screening takes place within the first month</i>	Most hospitals have an outpatient screening protocol. Contact the newborn hearing screening coordinator in the newborn nursery at the birthing hospital. See pages 4-6  for phone numbers for hospital screening programs.






The likelihood of hearing loss is approximately:

- ◆ 3:1000 (0.3%) for all well babies.
- ◆ 3:100 (3%) for Neonatal Intensive Care Unit graduates.

At the Second Well-Child Visit



Check that outpatient screening has been completed for infants that were missed or referred. This should be completed within 2-4 weeks of the initial abnormal screen.

Status of screening	Action Required	Purpose/Resources
Risk factors for Progressive or late onset hearing loss present	<i>Assure hearing assessment is completed every 6 months</i>	See page 3 for more information on risk factors for progressive and late onset hearing loss. See pages 10 and 14-15   for phone numbers of Pediatric Audiologists.
Referred Second Screen	<i>Refer for Frequency-Specific ABR</i>	See pages 4-6  for phone numbers of resources for screening. See page 7 for additional information about screening.
Incomplete	<i>Coordinate pre-authorization for insurance</i>	Contact the newborn hearing screening coordinator in the newborn nursery at the birthing hospital. See pages 4-6  for phone numbers for screening programs. See pages 14  for phone numbers of Arizona State School for the Deaf and the Blind EI Coordinators.

The likelihood of hearing loss is approximately:

- ◆ **10%** for infants who do not pass the initial screen.
- ◆ **30%** if a second screen also results in a “refer”.

Indicators for Children Who Are At Risk for Late Onset or Progressive Hearing Losses

The Joint Committee on Infant Hearing 2000 position statement suggests that the following indicators “...place an infant at risk for progressive or delayed-onset sensorineural and/or conductive hearing loss. Any infant with these risk indicators for progressive or delayed-onset hearing loss who has passed the birth screen should, nonetheless, receive audiologic monitoring every 6 months until age 3 years.”

- † Parental or caregiver concern regarding hearing, speech, language, and or developmental delay
- † Family history of permanent childhood hearing loss
- † Postnatal infections associated with sensorineural hearing loss including bacterial meningitis
- † Head trauma
- † Recurrent or persistent otitis media with effusion for at least 3 months.
- Stigmata or other findings associated with a syndrome known to include a sensorineural or conductive hearing loss or Eustachian tube dysfunction
- In-utero infections such as cytomegalovirus, herpes, rubella, syphilis and toxoplasmosis
- Neonatal indicators-specifically hyperbilirubinemia at a serum level requiring exchange transfusion, persistent pulmonary hypertension of the newborn associated with mechanical ventilation, and conditions requiring the use of extracorporeal membrane oxygenation (ECHMO)
- Syndromes associated with progressive hearing loss such as neurofibromatosis, osteopetrosis, and Usher’s syndrome
- Neurodegenerative disorders, such as Hunter syndrome, or sensory motor neuropathies, such as Friedreich’s ataxia and Charcot-Marie-Tooth syndrome.

† *Pay special attention to these children, as they are likely to be identified only through the primary care physician.*

Resources for 2nd or Missed Screen



It is likely that phone numbers will change. If a more current number is needed, contact the well baby nursery.

<u>Bullhead</u>	Western Regional.....	928-763-0676
<u>Casa Grande</u>	Casa Grande Hospital.....	520-426-6475
<u>Chandler</u>	Chandler Regional	480-821-3160
<u>Chinle</u>	USPHS-Chinle	928-674-7453
<u>Globe</u>	Cobre Valley Community	928-402-1260
<u>Cottonwood</u>	Verde Valley	928-639-6566
<u>Flagstaff</u>	Flagstaff Regional.....	928-773-2054
<u>Glendale</u>	Arrowhead	623-561-7225
	Maryvale Community	623-848-5450
	Thunderbird Samaritan	602-588-4605
<u>Keams Canyon</u>	USPHS Hopi Healthcare Center.....	928-737-6377
<u>Kingman</u>	Kingman Regional	928-757-0651
<u>Lake Havasu</u>	Havasu Regional	928-855-8185
<u>Mesa</u>	Desert Samaritan	480-512-3087
	Mesa General	480-844-6272
	Mesa Lutheran	480-824-8211
	Valley Lutheran	480-981-4240
<u>Nogales</u>	Holy Cross-Carondelet.....	520-287-8099
<u>Page</u>	Page Hospital	928-645-2424
<u>Payson</u>	Payson Regional	928-472-1226



Second or Missed Screen (continued)

<u>Phoenix</u>	Phoenix Children's Hospital	602-546-0905
	John C. Lincoln-North Mountain	623-879-6060
	(Ext. 3252)
	Maricopa Medical Center.....	602-344-5185
	Paradise Valley	602-923-5677
	Phoenix Baptist	602-246-5877
	Phoenix Indian Medical Center.....	602-263-1514
	Phoenix Memorial	602-824-3174
	St. Joseph's	602-406-3605
<u>Prescott</u>	Yavapai Regional	928-771-5220
<u>Safford</u>	Mount Graham Community	520-348-4188
<u>Sage</u>	Sage Memorial	928-755-4566
<u>Scottsdale</u>	Scottsdale Healthcare-Osborn/Shea..	480-860-3808
<u>ShowLow</u>	Navapache Regional	928-537-6355
<u>Sierra Vista</u>	Sierra Vista Regional	520-417-3184
<u>Sun City</u>	Del E. Webb Memorial.....	623-876-5398
<u>Tuba City</u>	USPHS Tuba City	928-283-2629
<u>Tucson</u>	Northwest	520-877-4200
	St. Joseph-Carondelet.....	520-873-3761
	St. Mary's-Carondelet.....	520-620-4846
	Tucson Medical Center	520-324-1179
	University Medical Center	520-694-7625
<u>Whiteriver</u>	USPHS Whiteriver	928-338-4911
	(Ext. 356)
<u>Winslow</u>	Winslow Memorial	928-289-4691
	(Ext. 312)
<u>Yuma</u>	Yuma Regional Hospital.....	928-341-7503

Developmental Clinic Sites



The hospital programs should be the first choice of referral for children under six months of age. Developmental clinic sites primarily serve NICU graduates.

Apache County

Nutrioso - Hummingbird EI Svcs.928-339-4465

Cochise, Graham, Greenlee, and Santa Cruz

Sierra Vista - The Blake Foundation520-452-7920

Coconino County

Flagstaff - Coconino Health Dept.....928-522-7835

Gila, Pima, and Pinal County

Tucson - University of Arizona520-694-9954

La Paz and Mohave County

Lake Havasu - Baby Steps Dev. Svc.....928-680-1637

Maricopa County

Mesa - Desert Samaritan480-835-3410

Phoenix - Phoenix Children's602-239-3555

Phoenix - St. Joseph's602-406-6443

Navajo County

Show Low - Northland Therapy Svc, Inc.....928-537-7739

Yavapai County

Prescott - Yavapai County Health Dept.928-771-3129

Yuma County

Yuma - Yuma Regional Medical Center928-344-7158

Additional Information about Hearing Screening

Methods Used to Screen Newborns

Trained personnel can do either of the following screening methods in 5 to 15 minutes, any time after birth. Screenings done before 24 hours of age are more likely to be affected by the presence of vernix/debris in the ear canal. Screenings done later in infancy are more likely to be affected by the presence of middle ear effusion.

Screening Auditory Brainstem Response

In an Auditory Brainstem Response (ABR) test, clicks are introduced into the ear canal from either a probe or over-the-ear coupler. An electroencephalographic (EEG) response is measured from electrodes placed on the scalp. The waveforms generated are measured against an internal template to determine a pass or refer result.

ALGO[®] refers to a common brand of equipment used to perform the screening and is limited to screening at ages below six months. Frequency specific ABR used in assessment requires separate equipment and specially trained pediatric audiologists.

Otoacoustic Emissions

For an otoacoustic emissions (OAE) test, a microphone placed in the ear canal measures sound waves generated in the **cochlea** in response to clicks or tone bursts. A pass or refer result is automatically generated based on preset criteria.

None of the screening methods directly measure the brain's ability to process sounds or true "hearing." Screening results only reflect the likelihood of hearing loss **at the time** of the screening. Some children are at risk for progressive or late onset hearing loss. See page 3 for more information.

Auditory Neuropathy

Recently auditory neuropathy was identified as affecting a small number of children with hearing loss, most of whom appear to be NICU graduates, some with hyperbilirubinemia. The exact prevalence of this disorder is unknown. This disorder is *only* identifiable through the combined use of ABR and OAE tests.

The primary characteristics of this disorder are absent or abnormal ABR results and normal OAE results, which suggests that outer hair cells are functioning and that there is a problem with neural conduction.

Some NICU screening programs choose to use only ABR or a combination of OAE and ABR to detect this disorder. Most well baby screening programs target only significant sensorineural hearing loss for identification and therefore may use ABR or OAE.

Complete Audiologic Assessment by 3 Months

At the Second or Third Well Child Visit



For those children who have referred from the outpatient screening, check that the frequency-specific ABR has been scheduled.

Status of ABR	Action Required	Purpose/Resources
Normal	<i>Determine if there are risk factors for late onset or progressive hearing loss</i>	See page 3 for more information on risk factors for progressive and late onset hearing loss.
Incomplete	<i>Under 3 months refer for unsedated ABR Over 3 months refer for sedated ABR</i>	Not all sites will have the ability to provide the monitoring necessary for a sedated ABR. See page 10 📞 for phone numbers for frequency-specific ABR providers.
Abnormal	<i>Complete audiological assessment by three months of age Fit hearing aids by six months of age Initiate Early Intervention (EI) as soon as possible</i>	ASDB Parent Outreach Program provides Early Intervention and should be contacted as soon as possible to provide information and family support. See pages 14-15 📞 for phone numbers for EI and hearing aids providers.

Sedated/Unsedated ABR

- ◆ Up to 3 months, an ABR can usually be done unsedated through natural sleep.
(Some clinics sedate all infants due to difficulty in bringing babies back for follow up testing or time constraints.)
- ◆ By 4 months, sedation is usually necessary to complete the evaluation.

Resources for Frequency-Specific ABRs



Providers were self-identified through a survey. Phone numbers and provider information may change. EFAz does not recommend or endorse any of the providers.

Flagstaff

- * Flagstaff Medical Center/CRS 928-214-3728
928-773-2054
1-800-232-1018

Gilbert

- * Arizona Hearing & Balance Center 480-558-5306

Mesa

- * Desert Samaritan 480-835-3630
- Valley Lutheran 480-981-4240

Phoenix

- * Children's Rehabilitative Services 602-406-6420
- * Phoenix Children's Hospital 602-546-0905
- * Phoenix Indian Medical Center 602-263-1514
- * St. Joseph's Hospital 602-406-3605

Scottsdale

- * Mayo Clinic 480-301-8000

Sierra Vista

- Dr. Jasin/Kresent Gurtler 520-459-0688

Tempe

- Arizona State University Hearing Clinic 480-965-2373

Tucson

- * St. Joseph's Hospital-Carondelet 520-873-3761
- University Medical Center 520-694-7222
- University of Arizona 520-621-7070
- St. Mary's Hospital-Carondelet 520-872-2550

Yuma

- * Dr. Paquin/Michael Sexton 928-783-4476

Rural Northern Arizona (Chinle, Colorado City, Tuba City)

- ASDB-Early Childhood & Family Education 928-774-0655

***monitoring available for sedation if needed**

Additional Information about Assessment

Unilateral Hearing Loss

Children with a unilateral hearing loss should receive the same medical assessment as children with bilateral hearing loss to determine etiology and monitor loss. CRS will provide audiological and specialty medical services to children with unilateral hearing loss. The ASDB Early Intervention Program does not serve children with unilateral hearing loss, although they may be referred to AzEIP for monitoring of developmental milestones.

Hereditary Hearing Loss

Nearly 200 syndromic and nonsyndromic forms of hearing loss have been identified (JCIH-2000). Most congenital hearing loss is hereditary. For many of these children the associated clinical findings can be of importance in patient management. Related medical specialty areas may include: developmental pediatrics, neurology, ophthalmology, cardiology and nephrology. References for genetic hearing loss are listed on page 20.

Interim Service Coordination

The Arizona Early Intervention Program (AzEIP) has contracted Interim Service Coordinators available statewide to assist families of children who are at risk for hearing loss. Any family whose child has referred from a second newborn hearing screening can choose to participate. Free assistance may include identifying resources, applications and tracking referrals to assure follow up.

Insurance Coverage for Assessment

Children enrolled in Arizona Health Care Cost Containment System (AHCCCS) must first receive their diagnostic Auditory Brainstem Response (ABR) test through their AHCCCS health plan before they are eligible for Children's Rehabilitative Services.

Some AHCCCS health plans, as well as private health plans, require pre-authorization from the primary care provider before the ABR is completed. Unfortunately this can delay services beyond the time when the ABR can be performed unседated and may result in the need for authorization for a sedated ABR. This may also be complicated by the need for referral to a Pediatric Audiology center capable of performing frequency-specific ABR, which may be outside the preferred provider list for the health plan.

Insurance Coverage for Assessment (continued)

It is in the best interest of the child and family to expedite the process as much as possible to meet the goals of early detection and intervention. Delayed identification beyond 6 months of age is likely to result in delayed speech and language acquisition and other preventable outcomes.

An ABR test is also covered by KidsCare, Indian Health Services and most private health plans. The EAR Foundation of Arizona's HEAR for Kids Project will authorize payment for a sedated or unsedated ABR for families who do not have other coverage and who meet certain financial criteria. You can reach the HEAR for Kids project at 602-690-3975.

Methods Used to Assess Hearing in Infants

Auditory Brainstem Response (ABR) Testing

An ABR test is the accepted method of evaluating infants under the developmental age of 6 months. An ABR test allows not only an estimation of hearing thresholds, but can also indicate the possibility of a conductive component to the hearing loss and can give some frequency specific information. Frequency-specific ABR is important when assessing hearing for determining hearing aid fitting.

Behavioral Assessment

Behavioral testing should also be done to validate the physiological results obtained. Behavioral test results become more accurate as a baby approaches 6 months of age.

Tympanometry

Due to the plasticity of the newborn's ear canal, normal tympanometry results cannot be considered accurate until approximately 6 months of age.

Fit Amplification & Enroll in Early Intervention by 6 Months

When a Hearing Loss is Identified



Check that the family has enrolled in Early Intervention (EI) services, is able to access resources for fitting hearing aids and specialty medical services.

Service	Required Action	Purpose/Resources
Early Intervention Services	<i>Refer the family to ASDB Parent Outreach Program. All children 0-3 years of age identified with a hearing loss and their families are eligible for free EI services</i>	The ASDB early childhood family education program provides home-based services statewide through parent advisors. Preschool and toddler classes are available in some communities. See page 14 for phone numbers for EI services.
Medical Services	<i>Refer to CRS if Eligible. Unilateral or bilateral sensorineural or permanent conductive hearing loss is an eligible condition for CRS services. Generally children enrolled in an AHCCCS or a KidsCare health plan are eligible for free services, others may be charged a fee for services.</i>	JCIH-2000 recommends that each infant with confirmed hearing loss and/or middle ear dysfunction should be referred for otologic and other medical evaluation. The purpose of the medical evaluation is to determine etiology, if possible, to identify any related conditions, make recommendations for medical treatment and provide medical clearance for hearing aid fitting. See the page 20 for additional references.
Hearing Aids	<i>Refer to Pediatric Audiologist (CRS if Eligible) Provide medical clearance for hearing aid fitting</i>	See pages 14-15 for phone numbers for hearing aid providers. Treatment of otitis media should not preclude proceeding with assessment, hearing aid fitting and EI services.

30-40% of children with hearing loss will demonstrate developmental delays or other disabilities. JCIH-2000

Resources for Early Intervention



Arizona State Schools for the Deaf and the Blind

All children with bilateral hearing loss should be referred to the Parent Outreach Program as soon as the loss is identified.

Parent Outreach Programs

Phoenix and Central Region	602-544-1670
Southern Arizona	520-770-3677
Northern Arizona	928-774-0655

Resources for Pediatric Hearing Aid Fitting



Providers were identified through a survey. Every effort was made to provide accurate information, however phone numbers and provider information may change. EFAz does not recommend or endorse any of the providers. Only those who also indicated that they had the necessary equipment were included. The information is alphabetical by city.

Casa Grande

Arizona Hearing Centers	520-836-4618
-------------------------------	--------------

Flagstaff

Flagstaff Medical Center/CRS.....	928-214-3728
Children's Rehabilitative Services.....	1-800-232-1018
	928-773-2054

Gilbert

Arizona Hearing & Balance Center	480-558-5306
--	--------------

Glendale

Metro Hearing Services	602-866-0147
------------------------------	--------------



Resources for Pediatric Hearing Aid Fitting (continued)

Mesa

East Valley Otolaryngology Consultants.....	480-833-7320
Desert Sounds	480-649-8150
Valley Lutheran	480-981-4240
Cigna (Stapley Center).....	480-345-5212

Paradise Valley

Cigna.....	602-996-9012
------------	--------------

Phoenix

Affiliated Audiology Consultants.....	602-254-6041
Children’s Rehabilitative Services.....	602-406-6420
Phoenix Children’s Hospital.....	602-546-0905
Phoenix Indian Medical Center	602-263-1514
St. Joseph’s Hospital.....	602-406-3605
Cigna (McDowell Center).....	602-271-3940

Pinetop/Showlow

White Mountain Hearing	928-368-8052
------------------------------	--------------

Scottsdale

Mayo Clinic	480-301-8000
-------------------	--------------

Sierra Vista

Dr. Jasin/Kresent Gurtler	520-459-0688
---------------------------------	--------------

Sun City

Cigna.....	623-876-2101
------------	--------------



Resources for Pediatric Hearing Aid Fitting (continued)

Tempe

Arizona State University.....480-965-2373

Tucson

Center for Hearing Impaired Children.....520-770-3002

Children’s Clinics for Rehabilitative Services520-324-3600

University of Arizona520-621-7070

Sun City

Cigna623-876-2101

Yuma

Audiology and Hearing Aid Associates.....928-341-1330

More about Early Intervention and Hearing Aids

Early Intervention (EI)

It is usually traumatic for a family to identify that their infant has a hearing loss. Parents will need assistance to work through grief issues and to answer the many questions that they will have. Early Intervention is critical to optimal outcomes and should be initiated as soon as the hearing loss is identified. EI, including family support and information, can begin even before the hearing aid is fit and often before assessment is complete. The lead agency for EI in Arizona is the Arizona State Schools for the Deaf and the Blind, Parent Outreach Program. See page 14 for phone numbers.

Clearance for Hearing Aids

State law and the Arizona Pediatric Audiology guidelines require that medical clearance be obtained before hearing aids are fit on any child. JCIH-2000 states that management of OME, however, should not delay the prompt fitting of amplification unless there are medical contraindications.

Loaner Hearing Aids

The initial hearing aid fitting for newborns often requires more flexibility and options than may be needed later. The EAR Foundation of Arizona's **HEAR for Kids Program** provides 6 month loaner, advanced technology, hearing aids for *any* child identified through newborn hearing screening. This allows the audiologist the time and flexibility to complete the assessment and to modify according to the changing needs of the child. The program can be accessed through any of the Pediatric Audiologists listed on page 10 and 14-15.

Payment for Hearing Aids

Hearing aids are expensive and not covered by most insurance policies. Children who are eligible for AHCCCS or KidsCare are usually also eligible for Children's Rehabilitative Services if they have a permanent childhood hearing loss. (Children with chronic otitis media-related hearing loss do not qualify.)

Payment for Hearing Aids (continued)

The **HEAR for Kids Program through the EAR Foundation of Arizona** also has funding for permanent hearing aids for families that meet certain financial criteria and do not have private insurance coverage or qualify for CRS, AHCCCS, KidsCare or Indian Health Services. This program can also be accessed by any Pediatric Audiologist in Arizona who agrees to follow the Arizona Pediatric Audiology Guidelines. Please call 602-690-3975 if you have questions or would like additional information.

Cochlear Implants

Nearly all children who are Deaf or Hard of Hearing initially receive amplification through personal hearing aids. Some children who are Deaf, who do not benefit from the use of hearing aids, may be candidates for cochlear implants. Evaluation for cochlear implantation can begin as soon as the hearing loss is identified. Usually, implantation does not occur until approximately 12-18 months of age.

Cochlear implants require extensive rehabilitation and a team approach to assessing candidacy. In Arizona, the following centers perform Cochlear Implant surgery and the required rehabilitative follow up.

Phillip Daspit, M.D.
St. Joseph's Hospital
Phone: 602-297-5444

Michael Fucci, MD
Desert Samaritan
Phone: 480-558-5307

Glen Green, M.D.
University of Arizona
Phone: 520-694-6144

John Macias, M.D.
Phoenix Children's
Hospital
Phone: 602-257-4228

George Facer, M.D.
Mayo Clinic Scottsdale
Phone: 480-301-5256

Other Resources for Families



Every effort was made to provide accurate information; however, phone numbers and provider information may change. Inclusion in this directory should not be interpreted as an endorsement by the EAR Foundation of Arizona.

Arizona Commission for the Deaf and the Hard of Hearing

ACDHH provides information and referral, advocacy, community awareness, community development, outreach and education. They distribute telecommunication equipment and operate the telecommunication relay service. ACDHH distributes a bi-monthly newsletter, TTY directory and provides legal certification for interpreters. They can be contacted at:

1400 W Washington Room 126 Voice/TTY 800-352-8161
Phoenix, AZ 85007 Voice/TTY 602-542-3323

Web Site: www.acdhh.state.az.us

Auditory Options

Auditory Options is a private practice specializing in Auditory-Verbal aural (re) habilitation for children and families with hearing loss. The pediatric program is family-centered and starts as soon as hearing loss is identified. The goal of the program is to facilitate the development of speech, language and listening skills in infants and children with hearing aids or cochlear implants, and to promote listening and speaking as a way of life. For more information contact:

Sharon McKarns, M, A., CCC-A,
Certified Auditory-Verbal Therapist
7650 S. McClintock, #103-390 Voice 480-861-9106
Tempe, AZ 85284 e-mail: smckarns@msn.com

Other Resources for Families



Desert Voices Oral Learning Center

Desert Voices is a non-profit private, oral language school for children ages six weeks to eight years. The Birth to Three program provides one-on-one therapy with a speech pathologist several times a week. Parents participate in the sessions to learn how to work with their child independently. Tuition assistance is available based on need. They can be contacted at:

3426 E. Shea Blvd.
Phoenix, AZ 85028

Phone: 602-224-0598

Web Site: www.oraldeafed.org

Ear Foundation of Arizona HEAR for Kids Program

This program is a resource for *loaner* hearing aids for any child and *permanent* hearing aids for children who meet financial criteria and do not have other resources. HEAR for Kids is a program of the EAR Foundation of Arizona that is funded by St. Luke's Health Initiatives and private donations. They can be accessed through any pediatric Audiologist and can be contacted at:

668 North 44th Street Suite 300
Phoenix, AZ 85008

Phone: 602-690-3975

FAX: 602-296-0425

Web Site: www.earfoundationaz.com



Other Resources for Families

(continued)

RAISING Special Kids

RAISING Special Kids serves families of children and youth with disabilities and special health needs. It is one of 99 Parent Training and Information Centers in the United States providing parent to parent support as the heart of its mission. Information, resources, referrals, and training programs are available to support families. RAISING Special Kids serves the Phoenix Metro area, the central and northern counties of Arizona. All services are provided at no charge to families. They can be contacted at:

4750 N. Black Canyon Hwy, #101 800-237-3007
Phoenix, AZ 85017 602-242-4366

Pilot Parents

Tucson.....520-324-3150

Sign Language Classes

ASDB..... 520-770-3700
ALOHA-Tucson..... 520-795-9887
Easter Seals Society..... 520-745-5222
Phoenix Day School for the Deaf 602-336-6800
St. Mathew Methodist Church..... 480-838-7309
Tri-City Baptist..... 480-838-5430
Valley Center of the Deaf..... 602-267-1921
Community Parks/Recreation Programs
Local Community Colleges and Universities

For current information, visit the ACDHH web site at:

www.acdhh.state.az.us

References

- 2000** **Joint Committee on Infant Hearing Position Statement**
August 2000, Audiology Today, Special Issue
- 1999** **American Academy of Pediatric Policy Statement**
February 1999, Pediatrics Vol. 103 No. 2 pp. 527-530.
- 1999** **Arizona Pediatric Audiology Guidelines**
Arizona Department of Health's Never Too Young Program
- 2001** **Arizona Hospital Screening Guidelines**
Available through the EAR Foundation of Arizona

SELECTED TEXTS

General Overview

Infants and Hearing

Deborah Hayes, PhD and Jerry Northern, PhD
1996, Singular Publishing Group, Inc.

Hearing Care for Children

Edited by Frederick N. Martin and John Greer Clark
1996, Allyn and Bacon

Hearing Aids and Habilitation

Amplification for Children with Auditory Deficits

Edited by Fred H. Bess, Judith S. Gravel and Anne Marie Tharpe
1996, Bill Wilkerson Center Press

Genetics

Genetics and Hearing Impairment

Alessandro Martini, Andrew Read and Dafydd Stephens
1996, Singular Publishing Group, Inc.

American Journal of Medical Genetics

Seminars in Medical Genetics-*Hereditary Deafness*
Guest Editor William J Kimberling
September 24, 1999, Volume 89 Number 3

Commonly Used Acronyms

AAP	American Academy of Pediatrics
ABR	Auditory Brainstem Response, also known as BAER and BSER
ACDHH	Arizona Commission for the Deaf and the Hard of Hearing (Formerly the Arizona Council for the Hearing Impaired)
ADHS	Arizona Department of Health Services
ALGO	Automated screening ABR equipment
ASDB	Arizona State Schools for the Deaf and the Blind
AzeIP	Arizona Early Intervention Program
BAER	Brainstem Auditory Evoked Response (ABR)
BSER	Brainstem Evoked Response (ABR)
CHIC	Center for Hearing Impaired Children
CI	Cochlear Implant
CRS	Children's Rehabilitative Services
DPOAE	Distortion Product Otoacoustic Emissions
EI	Early Intervention
ENT	Ear, Nose and Throat Doctor
HA	Hearing Aid
JCIH	Joint Committee on Infant Hearing
NTY	Never Too Young Program (Arizona Department of Health Services)
OAE	Otoacoustic Emissions
OCSHCN	Office for Children with Special Health Care Needs
PA	Parent Advisor
POP	Parent Outreach Program
TEOAE	Transient Evoked Otoacoustic Emissions