
Early Hearing Detection and Intervention Program

Pennsylvania Department of Health
Early Hearing Detection and Intervention (EHDI)
Program Report on Screening and Follow-up
for 2012 Births

Bureau of Family Health
Division of Newborn Screening and Genetics
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Prepared Sept. 15, 2014



Introduction

Each year in the United States, more than 18,000¹ babies are born with a hearing loss, making it the most frequently occurring condition identified through newborn screening. The National Institutes of Health supported research suggests that the most intensive period of speech and language development occurs during the first three years of life—a period when a child’s brain is developing and maturing. If a child is not exposed to language during this period due to hearing loss, he or she will have more difficulty developing spoken or signed language and reading skills. In addition, during the early stages of life, the brain builds the nerve pathways necessary for understanding auditory information. For these reasons, identifying hearing loss as early as possible (by the time a child reaches 3 months of age) enables pursuing treatment options early so that a child can learn to communicate comparably with his or her peers.²

Several national committees, including the National Institutes of Health, the American Academy of Otolaryngology/Head and Neck Surgery and the American Academy of Pediatrics have recommended that hearing loss in infants be identified and, when possible, treated prior to 6 months of age. This recommendation is based on studies that have shown that children identified with hearing loss prior to 6 months of age have a better chance of developing skills equivalent to their hearing peers by the time they enter kindergarten. Children experiencing late identification may experience irreversible and permanent impairments in speech, language and cognitive abilities. In general, unidentified children with hearing loss have increased difficulties with verbal and non-verbal communication skills, increased behavioral problems, decreased psychosocial well-being and lower educational attainment compared with children with normal hearing.

Pennsylvania’s Infant Hearing Education, Assessment, Reporting and Referral (IHEARR) Act (Act 89 of 2001) enables the Department of Health (DOH) to administer a statewide comprehensive newborn hearing screening and follow-up program. This report is submitted to the General Assembly in fulfillment of the reporting requirements found in Section 5(d) (4) of the IHEARR Act. The report covers the results of in- and out-of-hospital screenings for infants born in 2012. Follow-up activities for infants referred to DOH for not passing their newborn hearing screening occurred from 2010 through 2012. This report also covers the status of ongoing program initiatives undertaken during state fiscal years 2012 and 2013.

Background

Due to the emergence of reliable, affordable technology for early hearing detection and intervention (EHDI) in the mid-1990’s, DOH began a pilot program with 26 birthing hospitals in 1999. The program proved the practicality of early hearing detection as a standard of newborn care throughout the commonwealth. Following the passage of the

¹ Centers for Disease Control and Prevention website: <http://www.cdc.gov/ncbddd/ehdi/default.htm>

² National Institutes of Health Fact Sheet-Newborn Hearing Screening- September 2006



IHEARR Act in November of 2001, Pennsylvania implemented a statewide universal newborn hearing screening and follow-up program beginning on July 1, 2002.

The Joint Committee on Infant Hearing's (JCIH) 2007 Position Statement on the Principles and Guidelines for Early Hearing Detection and Intervention Programs states that physiologic measures must be used to screen newborns and infants for hearing loss. Although there are several technologies available to screen newborns, JCIH recommends two technologies: Automated Auditory

Brainstem Response and Otoacoustic Emissions. Automated Auditory Brainstem Response (A-ABR) measures the brain's response to sound. Sound stimuli consisting of clicks or tones are administered to the baby through soft earphones, and electrodes placed on the baby's head measure the brain's response. Otoacoustic Emissions (OAE) measures sound waves produced in the inner ear. Sound stimuli consisting of clicks or tones are administered, and a tiny probe placed just inside the baby's ear canal measures the inner ear's response. Both technologies provide a non-invasive recording of physiologic activity of normal auditory functioning. Also, both tests are painless and can be performed in five to 10 minutes while the baby is sleeping or lying still. A single procedure or a combination of both procedures may be used for infants in the newborn nursery. For infants in neonatal intensive care units (NICU), the JCIH recommends A-ABR technology as the only appropriate technology for this population. Since many infants with neural hearing loss are in this target population, the committee recommends this distinction for those high risk infants.

Program Objectives

The primary objective of the EHDI program is to provide appropriate and timely screening to improve the quality of life for those infants identified with permanent bilateral or unilateral sensorineural or conductive hearing loss.

Consistent with national EHDI initiatives and the recommendations of the JCIH in 2007, the components of Pennsylvania's program are:

- Availability of initial and repeat hearing screenings for all infants before 1 month of age
- Appropriate audiological and medical evaluations for all infants to confirm hearing loss before 3 months of age
- Immediate access to high-quality technology for all infants with confirmed hearing loss (hearing aids, cochlear implants and other assistive devices when appropriate)

- Referral to local Early Intervention (EI) as soon as a diagnosis of hearing loss is confirmed, before 6 months of age. Services should be provided by professionals knowledgeable about childhood hearing loss
- Ongoing monitoring for hearing loss in the medical home through continued communication developmental assessments of infants and children both with and without risk indicators for late-onset or progressive hearing loss
- Family-centered services, access to information through culturally-sensitive approaches, informed choices, parent consent, and the guarantee of infant and family rights and privacy

Screening

Hospital Births

Newborn hearing screening is one component of a comprehensive approach to the management of early childhood hearing impairment that includes diagnostic services, early intervention, parent education and support.

Table 1 – Hospital Hearing Screening Performance								
All of the state’s 104 hospitals (in 2012) with functioning birthing departments reported monthly aggregate hearing screening results to the state EHDI program. Generally, initial hearing screenings occur prior to hospital discharge, and newborns who do not pass the initial hearing screenings receive a second screening.								
Calendar year	Total hospital reported births ³	Initial screen				Follow-up screen		
		Initial screens	Percent initial screens	Newborns passing initial screen	Newborns not passing initial screen	Newborns receiving follow-up screen	Newborns passing follow-up screen	Newborns not passing follow-up screen
2012	136,381	134,477	98.6	128,185	6,292	5,372	4,540	832
2011	137,925	136,490	98.9	128,552	7,938	6,905	5,986	919
2010	137,893	137,312	99.5	128,992	8,320	6,495	5,137	1,358

Infants not passing initial hearing screening during their birth admission receive a second screening either before discharge from the hospital or during an outpatient appointment, usually within the first month of life. If an infant does not pass the second screening, the screening provider notifies the state EHDI program and the child’s primary care physician (PCP). The PCP coordinates follow-up care by referring the newborn to an audiologist with pediatric diagnostic expertise, to a medical specialist and to EI services. The physician confirms that intervention services are being delivered, including the parent’s selection of a communication method/language and the fitting of amplification devices by 6 months of age.

³ Births as reported to the EHDI program by hospitals with a functioning birthing department

Out-of-Hospital Births

According to the Department of Health’s Bureau of Health Statistics and Research, approximately 3,600 to 3,900 babies are born annually in Pennsylvania in out-of-hospital settings. Midwives assisting in out-of-hospital births may participate in the out-of-hospital hearing screening program by obtaining screening equipment through the DOH. Participation in the out-of-hospital hearing screening program is dependent on birth volume and geographic concentration. The licensed freestanding birth centers are all equipped with hearing screening equipment. Infants can be referred to participating midwives or the licensed birth centers to have the initial hearing screening. Infants can also be referred to participating midwives or the licensed birth centers to have the repeat hearing screening if the baby does not pass the initial hearing screening. An infant can be referred to any local hospital that provides hearing screenings.

Program Components

Out-of-Hospital Newborn Hearing Screening Program Evaluation

There are 401⁴ Amish communities in Pennsylvania, thus accounting for a high percentage of home births. Health care practices vary considerably across Amish communities and from family to family. Many Amish use modern medical services, but others turn to alternate forms of treatment. Through previous analysis using statistical data provided by the Department’s Bureau of Health Statistics and Research and the electronic birth records system, EHDI program staff identified areas with the highest geographic concentrations of out-of-hospital births. Portable hearing screening machines were purchased and provided to both freestanding birthing centers and midwives in areas with high concentrations of out-of-hospital births. (Pennsylvania defines a birthing center as a facility, not part of a hospital, which provides maternity care to childbearing families who do not require hospitalization. A birth center provides a homelike atmosphere for maternity care, including prenatal, labor, delivery and postpartum care related to medically uncomplicated pregnancies). In some cases, the newborn hearing screening equipment is shared by a group of midwives in a geographic area, and this is known as a “traveling midwife network.”⁴

Representatives from the manufacturer of the portable hearing screening equipment and EHDI program staff provide hands-on training to midwife screeners. Each midwife signs an agreement indicating that she has been trained on the use of the equipment, affirming that she will use it only for the purpose of newborn hearing screening and affirming that she agrees to share the equipment (if in a traveling network). Midwives agree to report monthly screening performance data to the state EHDI



⁴ <http://amishamerica.com/amish-state-guide/#pennsylvania>

program and to refer the names of infants not passing rescreening to the EHDI program for follow-up. As a result of a review done in 2009, the evaluation of the Out-of-Hospital Births Hearing Screening Program, the goals to increase the number of out-of-hospital births that are screened for hearing loss to 50 percent or more was achieved. This initiative also improved the quality of midwife hearing screening and reporting and established cooperative relationships between the state EHDI program and leaders in the Amish Community (who tend to have a high number of out of hospital births).

As part of this document, please refer to Attachment 1, 2012 Out-of-Hospital Births by Health District. The map shows the number of out-of-hospital births by health district in Pennsylvania along with the range of out-of-hospital births per district. The largest number of out-of-hospital births occurs in the Southeast District. The largest range of out-of-hospital births belongs to the 1-25 category.

Follow-up and Diagnosis

Five community health nurses in the department's EHDI Program receive referrals (from both hospitals and midwives) for infants who did not pass either the first or second hearing screening. Letters are created through the data system and sent to the family and PCP to ensure the PCP is aware that an infant in his/her practice did not pass a hearing screening and that audiology assessment and evaluations must be completed. The nurses also confirm diagnosis, receipt of treatment and/or EI services by 6 months of age. The nurses record all of their contacts with the PCP, audiologist and family in the contact notes area of the newborn screening data system. Additionally, the screening results and diagnostic test results are also entered into the data system to complete the child's record.



Three-hundred-sixty infants born in 2012 were diagnosed with some form of hearing loss. In 2011, 358 were diagnosed, and in 2010, 369 were diagnosed.

Table 2 – Diagnostic Information

The table below summarizes activities for follow-up for 2012 births. The data for 2010 and 2011 births are provided for comparison.

2010-2012 Diagnostic Information			
	Calendar 2012	Calendar 2011	Calendar 2010
Total Not Passing Hearing Screening ⁵	2,270	2,007	1,931
Diagnosed With Normal Hearing			
Diagnosed with normal hearing before 3 months of age	107	1153	1016
Diagnosed with normal hearing before 6 months of age	70	82	80
Diagnosed with normal hearing after 6 months of age	34	26	24
Diagnosed with normal hearing age unknown	474	0	44
Total diagnosed with normal hearing	1,148	1261	1164
Diagnosed With Hearing Loss			
Diagnosed with permanent hearing loss before 3 months of age	107	105	97
Diagnosed with permanent hearing loss before 6 months of age	70	52	52
Diagnosed with permanent hearing loss after 6 months of age	29	20	25
Diagnosed with permanent hearing loss age unknown	0	0	2
Total diagnosed with permanent hearing loss	206	177	176
Diagnosed with non-permanent conductive hearing loss	154	181	193
Total diagnosed with hearing loss	360	358	369
No Known Diagnosis			
Infant expired	7	3	6
Parent declined services	337	157	220
Moved out of state	18	27	34
Unable to contact/unresponsive/unknown	176	201	138
Total no known diagnosis	538	388	398

⁵ Information presented includes both hospital and out of hospital births

Professional Development for Physicians and Medical Professionals

EHDI Website: The website <http://paearlyhearing.org> continues to provide continuing education to PCPs on newborn hearing screening and early childhood hearing loss. Established in 2006 between the state EHDI program and the University of Pittsburgh Center for Continuing Education in Health Sciences, the online EHDI website won the 2011 EHDI Website of the Year Award at the National Hearing Conference in April 2012. During this reporting period, the online EHDI website has been updated. There were six online courses that use a case-based format: healthy newborn that does not pass newborn hearing screening; child with profound hearing loss; baby with persistent middle ear effusion; child with unilateral hearing loss; bilateral neural hearing loss; and, late onset bilateral progressive sensorineural hearing loss. Training was promoted through the PA EHDI website and through articles in the Pennsylvania American Academy of Pediatrics E-News, a monthly newsletter that is sent to 2,100 pediatricians across Pennsylvania. Another milestone in 2012 was the development of a rack card, used to advertise the PA EHDI website. The rack card is routinely distributed electronically by the PA EHDI Program to hospitals, audiologists and others. Hard copies of the rack card are distributed at workshops and meetings. Lastly, information on the PA EHDI website is included in all EHDI program mailings to parents, PCPs, and audiologists.



GUIDE BY YOUR SIDE PROGRAM

The Pennsylvania EHDI Program has a robust Guide By Your Side Program (GBYS). GBYS is dedicated to supporting families and their infants and toddlers who are newly identified with hearing loss by offering them an opportunity to talk or meet face-to-face with a Parent Guide, a trained parent of a deaf/hard of hearing child, who can provide assistance using their personal experience and knowledge. Since the inception of the program, parent guides have been available regionally in all areas of the state with experience in a variety of communication options and with diverse diagnoses of their own children such as deaf blindness, sensorineural hearing loss, permanent conductive loss, unilateral loss, many ranges of hearing levels and differing technology choices. Parent guides have received training via classes such as Supporting Families without Bias, Encountering Emotions, and Role of the Parent Guide, Mandated Reporting, FM Systems, Cytomegalovirus, and Building Relationships with Families through Home Visits and Technology. Matches between parent guides and families have been made based not only on geographic proximity but also upon similarity of diagnoses, hearing levels, communication strategies, and technology choices

such as cochlear implants, or hearing aids. Families have also been provided with opportunities to meet deaf adults through community events and through GBYS program matches. The support provided to families who chose to enroll in GBYS included provision of unbiased materials on the communications, face-to-face meetings, newsletters, support via telephone, email, informational teleconference training calls, loans of library materials and postal mail of letters of support to families who do not use email. Parent guides have shared their children's stories with enrolled families through articles, photos and many different types of experience books. Parent guides provide outreach throughout the state to share information about the GBYS of Pa. program with professionals and parents. The GBYS team collaborated with many community partners to expand support received by enrolled families. Contracts and connections were made with the Special Kids Network, Parent to Parent of Pa., state schools and programs for deaf and hard of hearing children and their families. An example of other activities is inclusive story times and play groups at local libraries. The GBYS Parent Guide team presented at the Low Incidence Institute in sessions specifically designed for parents in a "make and take" format. These sessions have included topics such as developing a language focus in your home, while providing families with the opportunity to meet other Pennsylvania families that have children with hearing loss. "Getting Started" is Pennsylvania's family resource manual written with the support of parents of children who are deaf or hard of hearing. A review of the content by parents and members of the NHS Advisory Board began in 2012. The publication can be downloaded from www.pattan.net publications or ordered through the Early Intervention Technical Assistance office in Harrisburg.

EHDI Best Practices for Screening and Follow-Up

1. Have a designated hospital EHDI coordinator

Having a coordinator in place who is responsible for tracking positive screens, assuring reports are sent to DOH and coordinating screens from both NICU and newborn minimizes the number of possible errors in tracking, follow-up and reporting. This position should have clear roles and responsibilities defined. If more than one individual is involved in this role, it should be clear who has responsibility for: coordinating screens from NICU and newborn, assuring information gets to PCP, sending aggregate and individual reports to DOH, scheduling follow-up for those who fail the newborn screen, training and supervising staff who perform hearing screenings, and ensuring maintenance and updating of hearing screening equipment.

2. Link babies to follow-up prior to hospital discharge

Linking babies that do not pass their hearing screening to outpatient follow-up prior to hospital discharge will minimize the number of babies lost to follow-up. It is preferable to have a formal relationship with an audiology center, but obviously this is not always possible. However, knowing the centers to which a baby will be referred and giving parents information and/or making an appointment for them greatly increases the chances the family will follow up.

3. Track the number of no-shows if outpatient rescreens are done

If outpatient rescreening is done at the same institution, it is important to track the number of no-shows for follow-up. This is the only way of knowing how many babies with failed screens in the newborn nursery are being lost to follow-up. If this number is excessively high, steps can then be taken to correct this problem. This may involve sending out reminder cards, making phone contact or other methods. If the return rate cannot be increased, consideration should be given to referring those babies who fail the hospital screen directly to an audiology center for evaluation.

4. Identify and communicate with the baby's PCP prior to discharge

It is critical for a number of reasons to correctly identify the baby's PCP prior to hospital discharge and have a mechanism in place to send that PCP a complete summary of the newborn stay, including the results of the hearing screen. It is not enough to only send the PCP screening results if they are positive. All babies should have all results sent to their PCP in a timely fashion, preferably within 48 hours, when most babies will be seen for the first time after hospital discharge.

5. Assure that correct information is sent to DOH

In addition to communication with the PCP, the EHDI system requires that accurate information is sent to DOH regarding the number of babies screened, the number that fail the screen and individual information on those babies that either fail the hospital screen or do not return for a rescreen. In addition to this information being sent, it is vital that the data is accurate, including family demographics, the baby's last name after discharge, the correct PCP and alternate contact information. The reason this is so important is that DOH tracks and follows all individual referrals to assure that they receive appropriate follow-up. This cannot occur if inaccurate information is sent to DOH on the referral form. Finally, the number of individual referrals sent to DOH should regularly be reviewed to determine if this number is consistent with the monthly aggregate reports. Obviously, assuring correct information is being sent to DOH can best occur if this task is given to as few people as possible, preferably a hospital EHDI coordinator as outlined above.

6. Make hearing screening part of hospital QI activities

Improving the quality of newborn hearing screening can be accomplished in a number of ways, including: having a formal training for any new staff that will be involved in screening babies, making the performance of screening part of annual competencies, and working with an audiology center to assist in training staff.

In addition to setting quality standards for the actual performance of an OAE or A-ABR, quality measures can also be established for insuring that families are given appropriate information stressing the importance of follow-up for babies who do not pass and the need for families to seek care if they have any concerns about hearing, even if the baby passes. Finally, hospitals can create quality standards for: the number of babies screened, the percentage of babies who fail the screen and the number of parents who refused the screen for their newborn.

Monthly aggregate reports can be evaluated against these standards to assess the quality of screening and referral.

7. Identify high risk conditions in addition to screening

Although there is currently no system to report babies to DOH who pass the newborn screen but have high risk conditions, identifying these babies and assuring that this information is communicated to the PCP will increase the chances that these babies will be tracked appropriately and diagnosed more readily if hearing loss should occur.

8. Provide clear, supportive and easy to understand information to parents

It is important to provide parents with information on newborn hearing screening and the results of their baby's hearing screening in a clear, supportive and easy to understand manner. This helps ensure that babies who did not pass their hearing screening receive follow-up care. It also educates parents about the importance of hearing and the need to talk to their baby's PCP if they have any concerns in the future. Training staff on how to talk to parents and having printed materials on hearing screening for parents to take home helps ensure a consistent message. For parents of babies who did not pass their hearing screening, it is important to balance emphasizing the importance of follow-up without minimizing the potential problem.

9. Engage medical staff

Engagement of staff physicians in quality initiatives and communicating results of hearing screening to parents will reduce any mixed messages they receive in regard to the importance of follow up.

Professional Development for Early Intervention Service Providers

In January 2012, Susan Kershman and Julia Slater gave a three-hour workshop for Elwyn Philadelphia SEEDS (Special Education for Early Development Success) Preschool program titled "What's New in EI for Children with Deafness and Hearing Loss". Evaluations were very positive and indicated that the participants particularly valued the learning activities and the resources that were distributed.

During March of 2012, the Pittsburgh PaTTAN office hosted a full day workshop on “Serving Young Children with Unilateral and Mild Hearing Losses and Their Families.” The same workshops were hosted in Harrisburg and King of Prussia.

In June of 2012, Sally Tannenbaum, M.A. Ed., CED, LSLS CERT. AVT, from the Pediatric Hearing Loss and Cochlear Implant Center of the University of Chicago Hospital presented a videoconference broadcast to staff at PaTTAN centers on “Listening and Spoken Language in Early Intervention.”

In July 2012, the program coordinator and the parent guides participated in a training conference call on deaf-blindness. Two parent guides who are parents of children with deaf-blindness shared what they had gained from the Family Learning Conference the previous month. Kristen Parsons from the PaTTAN Deaf Blind Initiative participated in the call and provided specific information about their project. The intent of the conference was to have parent guides more fully understand the impact of a dual-sensory loss and the support that exists in Pennsylvania for families of children with deaf-blindness.

Early intervention workshops were hosted for Early Visual Language and Visual Learning in Infants and Children who are Deaf or Hard of Hearing in December 2012. Participants had the opportunity to learn about new and emerging research supporting the early use of American Sign Language (ASL), fingerspelling and other forms of visual communication. Information and strategies for improving children’s language outcomes were presented. Current beliefs and attitudes about deaf education (including early intervention) will be explored and compared with preliminary findings from a national longitudinal study. Each participant received a draft copy of a new assessment tool: Deaf and Hard of Hearing Children’s Visual Communication and Sign Language Milestones. In these workshops, intended for early intervention service coordinators, parents of infants and young children who are deaf or hard of hearing, early intervention service providers, teachers of the deaf and hard of hearing, special education and early childhood education teachers, speech and language therapists, audiologists, special health care needs consultants, physical therapists, occupational therapists, and nurses, training outcomes afforded the ability to:

- (1) Analyze prevailing attitudes toward American Sign Language and challenge existing myths about sign language in general;
- (2) Discover emerging research related to visual language and visual communication in children who are deaf or hard of hearing;
- (3) Compare and contrast brain development in bilingual, hearing children to young children who are deaf or hard of hearing acquiring two languages;
- (4) Identify malleable factors that have been found to improve the language outcomes of children who are deaf or hard of hearing; and
- (5) Examine new assessment tools that track language acquisition in children who are deaf or hard of hearing.

Hospital Workgroup

The Hospital Workgroup continues to meet. Discussion frequently includes the role of hospitals in the newborn hearing screening program; they review how the Department of Health uses the hospital monthly newborn hearing screening reports, how hospital newborn hearing screening referrals are used by the department's follow-up nurses and how the follow-up system works in Pennsylvania. They also examine how Pennsylvania's newborn hearing screening program performance compares to other states. These teleconferences also allow facilities to share "best practices" in an attempt to increase their screening rates.

Updating the Newborn Hearing Screening Program Guidelines

The Infant Hearing Screening Advisory Committee began the discussion on the importance of updating the Pennsylvania newborn hearing screening program guidelines by stating that it was important to bring the Pennsylvania guidelines into compliance with the JCIH national guidelines. The committee, EHDI program staff and key stakeholders discussed how to define follow-up or outpatient newborn hearing screening. It was mentioned that some hospitals bring the newborn back to the nursery for a follow-up hearing screening; some send the newborn to their audiology department for the screening; and, others send the newborn outside the facility for the screening. A decision was made by the committee to review the Information Bulletin for the Newborn Hearing Screening Monthly Report to bring the instructions for completing the report in line with the program guidelines. In late 2012, the program guidelines were approved by the DOH.

Infant Hearing Screening Advisory Committee

The successful progress of the Pennsylvania EHDI program is made possible largely by significant collaboration and input from the Infant Hearing Screening Advisory Committee. This six-member committee is appointed by the secretary of health and makes recommendations to the department on issues relating to regulation, administration, diagnostic testing, technical support and follow-up for the EHDI Program. The advisory committee established the practice to meet quarterly in Harrisburg. In addition to attending meetings, members provide program staff with ongoing advice and consultation on a variety of topics and occasionally serve as presenters at conferences, training workshops and presentations.

The committee is currently comprised of one neonatologist, two audiologists, one educator for the deaf and hard of hearing, one otolaryngologist and a parent advocate with a young child with hearing loss. The committee is a valuable part of Pennsylvania's hearing screening program.

CURRENT MEMBERS OF THE
INFANT HEARING SCREENING ADVISORY COMMITTEE

Elca Swigart, Ph.D. (audiologist) Committee Chair

- Director Speech and Hearing Center, Reading Hospital at Wyomissing Plaza
- Appointed June 2009

David H. Chi, M.D. (otolaryngologist)

- Assistant Professor Otolaryngology, University of Pittsburgh School of Medicine, Director Hearing Center, Children's Hospital of Pittsburgh
- Reappointed June 2009

Judith S. Sexton M.S., CED (educator)

- Director, Clarke School, Bryn Mawr, Pennsylvania
- Appointed June 2009

Hadley Haas (parent advocate)

- Pittsburgh, PA
- Appointed March 2011

Janet Juracich Trychin, Au.D. CCC-A

- Associate Professor, Adjunct Status at Edinboro University
- Appointed March 2013

Carol Knightly, Au.D.

- Director, Center for Childhood Communication at Children's Hospital in Philadelphia
- Appointed March 2013

Conclusion

The Pennsylvania newborn hearing screening program continues to progress to becoming a national top hearing screening program.

DOH has also made considerable progress in the areas of providing screening resources for out-of-hospital births and providing outreach to hospitals, primary care physicians and audiologists by offering technical assistance to select hospitals. Our website, www.paearlyhearing.org, continues to grow as a source of education and information. With the vast growth in internet learning, we are proud of our website design and award. It is a model for other states to grow their hearing screening programs.



Opportunities for improvement still exist, especially with Part C of the Individuals with Disabilities Education Act. Part C of IDEA requires “to the maximum extent appropriate to the needs of the child, early intervention services must be provided in natural environments, including the home and community settings in which children without disabilities participate.” (34 CFR §303.12(b)). Early intervention providers could be more aware of, and responsive to, the type and severity of each child’s hearing loss, each family’s preferences and the different communication options and instructional methods. Progress on these efforts will enable the Pennsylvania EHDI Program, with its partners, to mature to the level envisioned for model programs by the Health Resources and Services Administration and the Centers for Disease Control and Prevention.

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