

# UNHS in Ohio

## Report to the Legislature

Fall 2013



Ohio Department of Health Infant Hearing Program

The State of Ohio has had a mandate in place since 2004 for **Universal Newborn Hearing Screening (UNHS)**. All birthing hospitals, freestanding birthing centers and all of the children's hospitals conduct hearing screenings and report results to parents, the nurse practitioner, nurse midwife, or primary care provider, and the **Ohio Department of Health (ODH)**.

The mandate for universal screening supports the goals of the national Early Hearing Detection and Intervention program. The Ohio newborn hearing screening program is critical for identifying the approximately 425 infants in the state, about three per 1,000, that have a permanent childhood hearing loss.

Screening, diagnosis, and early intervention are all key provisions to providing families with the necessary support for their deaf or hard of hearing infants and toddlers in order to help them build the best possible communications skills during the developmental stage for communications skills development. Ideally, our goal is to identify, diagnose and offer early intervention so that by the time the child with a hearing loss reaches the age of three, his or her communications skills are comparable to those of a child without a hearing loss.

This report highlights activities and data in the three categories of screening, diagnosis and early intervention. It also includes the story of a family helping their child overcome a hearing loss. Their experiences illustrate the importance of early and ongoing monitoring for hearing loss.

According to the *2007 Position Statement of the Joint Committee on Infant Hearing* all infants, regardless of newborn hearing screening outcome, should receive ongoing monitoring for the development of age-appropriate auditory behaviors and communications skills. Any infant who demonstrates delayed auditory and/or communication skills development, even if he or she passed newborn hearing screening, should receive an audiological evaluation to rule out hearing loss.

### National Standards for Early Hearing Detection and Intervention

Joint Committee on Infant Hearing 1-3-6 Goals	
1	All newborns have a hearing screening before 1 month of age.
3	Diagnostic audiologic evaluation performed by 3 months of age for babies not passing UNHS.
6	Early Intervention services start before 6 months of age for babies with permanent hearing loss.

## 1 Screening

Ohio hospitals use **Automated Otoacoustic Emissions (AOE)** and **Auditory Brainstem Response (ABR)** hearing screening methods to test newborns before discharge.

	2009		2010		2011	
	Number	Percent	Number	Percent	Number	Percent
Total Babies Born	145,546	100	139,841	100	138,571	100
Reported Hearing Screenings	140,412	97	136,416	98	135,351	98

**Challenge:** Reduce the number of missed hearing screenings.

**Action:** Hospitals in Ohio screen nearly all of the babies born in their facilities. ODH Consultant Audiologists regularly monitor hospital reports and verify documentation for hospital screenings. Many of the remaining two percent of infants are born at home and information about the importance of hearing screening is provided to parents when they register the birth at their local health department.

## 3 Diagnosis

Newborns not passing UNHS are referred to audiologists for follow-up hearing evaluations. ODH funds nine **Regional Infant Hearing Programs (RIHPs)** to help arrange for prompt follow-up appointments. Audiologists can perform tests to evaluate hearing while very young infants sleep. After 6 months of age, sedation (in a hospital) often is necessary in order to complete the testing.

	2009		2010		2011	
	Number	Percent	Number	Percent	Number	Percent
Total Non-pass Screening Results	4,388	100	4,865	100	4,302	100%
RIHP Follow Up and Tracking						
Diagnostic Evaluations Completed	2,360	54	2,684	58	2,652	62
Lost to Follow-up: Unable to Contact or Unknown	1,953	45	1,788	39	1,444	34
Other: Infant Died, Family Non-responsive, Declined Evaluation or Moved Out of Jurisdiction	75	1	393	3	206	4

**Challenges:** Reduce lost to follow-up and assure RIHPs obtain and document audiology follow-up/ diagnosis by 3 months of age.

**Actions:** ODH Consultant Audiologists monitor audiology evaluations provided to RIHPs. Sometimes evaluations cannot be completed in one visit if the infant is awake or hungry. Families may be reluctant to schedule another visit due to

lost work time or a long commute to the audiologist's office. Sometimes the phone is disconnected and the RIHPs or Primary Care Provider are unable to contact the family. Protocols have been implemented to ensure additional tracking is done to obtain and document missing diagnostic reports.

## 6 Early Intervention

Infants diagnosed with permanent childhood hearing loss are eligible for Early Intervention services. The RIHPs provide language and auditory stimulation, information about communication options, counseling and family support, and interaction with the deaf community. RIHP services are provided in all 88 Ohio counties. Families of infants with hearing loss are enrolled in **Help Me Grow (HMG)**, Ohio's birth to age 3 early intervention program, and may receive assistance with other developmental delays in addition to the hearing loss. (Please visit [www.ohiohelpmegrow.org](http://www.ohiohelpmegrow.org) to learn more.)

	2009		2010		2011	
	Number	Percent	Number	Percent	Number	Percent
Number Diagnosed with Hearing Loss	150	100%	183	100%	214	100%
Number Enrolled in EI by 6 Months	65	43%	53	29%	110	51%
Infants and Toddlers, Birth to Age 3, Receiving RIHP EI Services Annually	520		601		580	

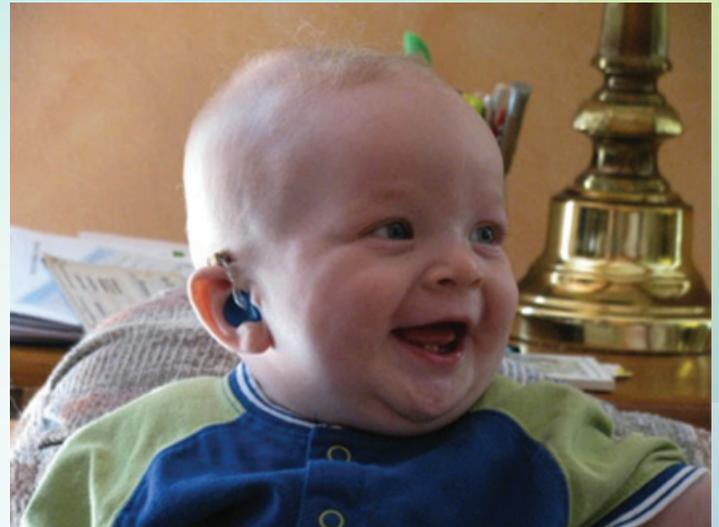
**Challenge:** Ensure infants with confirmed hearing loss receive intervention services by 6 months of age.

**Actions:** The ODH Consultant Audiologists have worked closely with RIHPs and in coordination with HMG Service Coordinators to ensure referred infants are enrolled in HMG and Individual Family Service Plans include provision for RIHP habilitative services for early intervention. Some infants continue to be identified after six months of age, especially those with serious medical concerns or late onset hearing losses. All deaf or hard of hearing infants and toddlers are eligible for habilitative services up to the age of three after they enroll in **HMG**.

For more information about the Infant Hearing Program, please contact the Bureau for Children with Developmental and Special Healthcare Needs at the Ohio Department of Health at 614.644.8389 or see [www.ohiohelpmegrow.org/](http://www.ohiohelpmegrow.org/) (infant link)

## Elliot: An Early Hearing Detection and Intervention (EHDI) Success Story

by Elliot's Mom



Elliot was two days old when we discovered that he might have a hearing loss. I'm also hard of hearing and many people in my family are as well, however it never occurred to me that Elliot might have a hearing loss too. When the audiologist screened him at the hospital and told us that he didn't pass the hearing screening, I was devastated. I remember when she came into the room and introduced herself my heart dropped. I was already feeling such a range of emotions after giving birth and this was not the news I wanted to hear. The audiologist explained that some newborns that do not pass the hospital's UNHS will not have hearing loss, especially babies born via C-section, like Elliot. Babies born by C-section can have debris in the ear canals that may affect the hearing screening results. Babies who do not pass the first hospital screening are required to have a second hearing screening before discharge. The second hearing screening would be conducted the following day to allow time for the ears to clear. I hoped that the second hearing screening would indicate pass results; however, I was not terribly optimistic. Needless to say, the second screening produced similar results. The audiologist explained the next step would be to get a more thorough audiologic hearing evaluation.

We called the children's hospital closest to our home and got an appointment where the audiologist conducted an **Auditory Brainstem Response (ABR)** test on Elliot. The audiologist placed electrodes on Elliot's head and then presented soft clicks through headphones. The ABR would tell us how his brainstem responded to the soft clicks. This was quite an ordeal because Elliott needed to be asleep or quiet during the

evaluation and he kept waking up. Luckily, we were able to continue with the evaluation. After the diagnostic tests, the audiologist confirmed that Elliot (at one month of age) had a permanent hearing loss. Elliot's hearing loss was a sloping mild to moderate sensorineural hearing loss for the lower frequencies and a moderate to severe sensorineural hearing loss for the higher frequencies. The audiologist charted his hearing loss to give us an idea of what he could hear and what he couldn't hear. His hearing loss seemed to be similar to mine.

We were referred to Ohio's HMG early intervention program and made an appointment right away. HMG performed assessments to see how Elliot was developing. HMG referred Elliot to the **Regional Infant Hearing Program (RIHP)**. The next step was to go to the hearing clinic, where we saw the ENT doctor, a speech pathologist, the audiologist, and a nurse practitioner. The speech pathologist was confident that since Elliot would be getting his hearing aids so early, he shouldn't have language delays, which was a big relief for us. When we met with the audiologist we were tickled by the different color options. We chose beige hearing aids and blue ear molds. Next, we had our first appointment with the RIHP parent advisor, who came to our home and conducted a test to obtain a baseline language development score. We were thrilled that they would be coming to our home for the appointments. The RIHP parent advisor was wonderful. She gave us some pointers and reiterated what the speech pathologist at the hospital had said; since Elliot would be getting his hearing aids so early, he shouldn't have language delays.

Elliot's hearing aids finally arrived at 4 months of age. We were anxious to see how he would do with them and relieved that he didn't mind wearing them. The audiologist told us that the more he wore them, the better. We made sure he wore them most of the day and took them out when he slept. Due to the RIHP parent advisor's help, support, and habilitation services, by the time Elliot had his hearing aids for three months; his language development had improved significantly. The parent advisor came to our home and conducted a second language development assessment. Elliot's expressive language development score was within the 6-8 month range and his receptive language development score was within the 4-6 month range.

I wrote this story when Elliot was nine months old and had his hearing aids for about five months. We see the audiologist once a month and the RIHP parent advisor comes every other week. The RIHP parent advisor develops lesson plans, models and reinforces activities for developing Elliot's auditory, language and communication skills. We've learned so much throughout this process. Every time the RIHP parent advisor comes she gives us tips and information for Elliot and teaches

us something new to try with him. I am finally coming to terms with Elliot's hearing loss and my husband and I are grateful for all the help we've received. I often wonder how his hearing loss compares to mine. I know that if I'm not wearing my hearing aids, there are certain sounds I can't hear. I also rely a lot on reading lips and contextual clues when someone is speaking. Elliot cannot rely on these things, so it is critical he wear his aids so he's not missing anything.



Even though it was devastating to find out Elliot didn't pass the hospital hearing screening we're so grateful that the UNHS was available so we could follow-up with an audiologist. If not for the UNHS at the hospital we probably wouldn't have known about his hearing loss until he was older and his language was delayed. I often wonder when we would've discovered Elliot's hearing loss and how much sound and language he would've missed. We are fortunate he was diagnosed early and that we were connected with Ohio's early intervention resources HMG and RIHP. I just don't know what we would've done without the early help and support. With their continued help, support, and education, I'm confident Elliot will grow up to reach his full potential in whatever he chooses.

Ohio's **Early Hearing Detection and Intervention (EHDI)** Goals are **0/3/6**. Screen at **Birth**; Diagnose by **3 months**; Early Intervention by **6 months**. Elliot's parents ensured he met and exceeded the national EHDI goals of having his hearing screening completed before hospital discharge, was diagnosed at 1 month of age, and started EI at 2 months of age.

**Elliot's story and EHDI** research supports that when infants with hearing loss receive timely and appropriate screening, diagnostic, and intervention services, they have positive speech, language and listening developmental outcomes similar to their hearing peers.



