INFANT HEARING PROGRAM
Maryland Department of Health and Mental Hygiene
Family Health Administration
Office for Genetics and Children with Special Health Care Needs
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Anthony G. Brown, Lt. Governor
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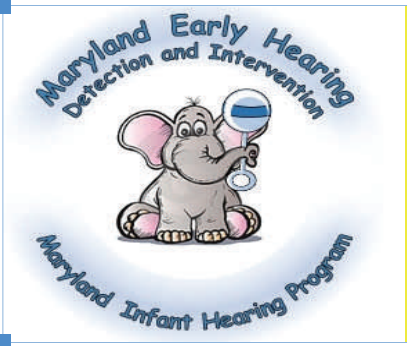


Infant Hearing News January 2009

MD EHDI 2008 in Review

2008 was a busy year for the Maryland Infant Hearing Program. After a long arduous journey, we were able to secure funding for a new online data management system, **eSP** by Oz Systems. **eSP** changes the way providers report infant hearing screening and test results. No longer will results have to be sent on paper forms. By being able to access the secure MD EHDI website, providers are able to enter hearing screening and evaluation results directly into the data base. Improving access to the results allows for better control of the data, and improved patient tracking, which in turn improves loss to follow up rates, and decreases time between follow-up tests and entrance into early intervention. All of which helps us to achieve our ultimate 1-3-6 goal: hearing screening by one month of age, diagnosis by three months of age, and early intervention by six months.

As of August 2008, all Maryland birth hospitals have been trained and are currently utilizing **eSP.** To introduce the pediatric audiologists to the new system and provide them with the information necessary to utilize the system, the Infant Hearing Program and Oz Systems hosted three web trainings. For the convenience of the audiologists, the trainings were done virtually, which allowed participants to attend the training from the comfort of their office or home. The training was recorded, and is available to any audiologist interested in obtaining access to **eSP.** Contact Linda Vaughan at lsvaughan@dhmh.state.md.us or 410-767-6432.

It is really too early to tell what kind of an impact the new system has had, but a look at the last month's data shows that Maryland's screening rate has gone from 88% in the first month of **eSP** use to 95.8% in November. So it definitely looks like there have been some positive changes since we started this journey, and it is all because of the dedicated and expert work of the providers who are MD EHDI.

Inside this issue:

UNHS in the news	2
UNHS in the news (cont)	3
Lost to Follow-up	4
EHDI Conference 2009 WebEx conference	5
For our eSP System users	6
Data-mining in eSP	8
Infant Hearing Program - Resources and contact information	9

Universal Newborn Hearing Screening in the news

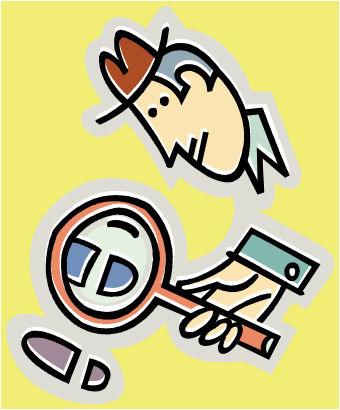
USPSTF Recommends Universal Newborn Hearing Screening

The United States Preventive Services Task Force (USPSTF) has updated its recommendation regarding newborn hearing screening. The USPSTF assesses scientific evidence of the effectiveness of health care services. It then assigns a rating for the service taking into consideration the degree of certainty of the evidence and the potential net benefit of the service. Since 2001, the task force rating for UNHS had been "I," which indicated that, although they found good evidence that UNHS programs led to earlier identification and treatment of infants with hearing loss, they felt there was not yet a sufficient amount of evidence to formulate a recommendation. In July 2008, the USPSTF changed its rating of UNHS from "I" to "B." The "B" rating signifies that the USPSTF recommends universal newborn hearing screening, and believes there is high certainty that there is at least a moderate net benefit from UNHS or that there is moderate certainty that the net benefit is moderate to substantial.

The USPSTF based its new recommendation on studies indicating that children whose hearing loss was detected early, as a result of being born in hospitals with UNHS, had better receptive language at eight years of age than those who were born in hospitals without a UNHS program. Infants identified with hearing loss through universal newborn screening had earlier referral, diagnosis, and treatment than those not screened.

For more information, the full text of the USPSTF recommendation can be found at http://www.ahrq.gov/clinic/uspstf/uspsnbhr.htm.

UNHS Can Aid in the Detection of Congenital CMV Infection



Research conducted at the University of Texas Southwestern Medical Center in Dallas, Texas has found that abnormal hearing screening results may be the only symptom for a significant number of infants with congenital cytomegalovirus. A team of researchers, led by Elizabeth Stehel, M.D., conducted a retrospective chart review of infants born over a five-year period between September 1999 and August 2004. The study is reported in the May issue of *Pediatrics*. The researchers concluded that the majority of the infants found to have congenital cytomegalovirus were identified on the basis of abnormal newborn hearing screening results.

A new way to evaluate infant hearing aid fittings

Universal Newborn Hearing Screening (UNHS) has allowed for infants with hearing loss to be fit with hearing aids at younger and younger ages. Unfortunately, it is difficult to know if the type of hearing aid or the settings of the hearing aid are appropriate for the infant. A new technology, called the HEARLab 1000, may give audiologists a valuable new tool for determining the effectiveness of the hearing aids used with infants. The device measures cortical (as opposed to brainstem) responses to speech stimuli. These responses are monitored while the infant is awake and wearing the hearing aid. Adjustments can be made to the hearing aid until optimal cortical responses are observed. The HEARLab 1000 can also be used to measure a "cortical threshold," i.e., the threshold at which sound is perceived in the cortex of the brain. The cortical threshold would allow the audiologist to predict auditory thresholds based on the presence or absence of the cortical response. Frye Electronics expects the device to be available in early 2009.

Cochlear implants and infants

A 2008 study by Holt and Sirvinsky looked at developmental differences between six children who received their cochlear implant prior to age one year as compared to another group who were implanted between ages one to four. The study concluded that the early implantation group (implanted at less than age one year) had significant advantages in all areas of speech and language development compared to the late implantation group. The authors then compared the performance of the early implant group with a subset of the late implant group - children implanted prior to age two years. This comparison revealed an advantage only in relation to receptive language development; in all other areas, development of those implanted by age two years was comparable to those implanted prior to age one. The full study can be found in *Ear and Hearing* 29 (4):492-511.

Did you know?

The first cochlear implant was performed in France in 1956.

Lost to Follow-Up

We are fortunate in Maryland to have very dedicated hospital personnel who ensure that nearly 100% of our newborns receive a hearing screening prior to discharge. Unfortunately, in Maryland and across the nation, far from 100% of the newborns who fail the hospital screening return for the follow-up screening and diagnostic evaluations when indicated. There are many theories as to why these infants are not brought back for this testing. The reasons most often identified are:

1. Parents did not fully understand the screening results
2. Parents did not fully understand the importance of the diagnostic evaluation
3. Parents did not have the necessary contact and resource information

To help address this issue, the National Institute on Deafness and other Communication Disorders (NIDCD) has published the fact sheet "How Medical and Other Health Professionals Can Help Increase the Number of Infants Who Return for a Follow-up Evaluation." It is aimed primarily at hospital staff, but is applicable to other settings. Among their recommendations are the following:

Take responsibility - Someone on the medical team must be responsible for understanding, interpreting, and carefully explaining to parents the infant's screening results. It is extremely important to explain to parents why a follow-up examination is needed.

Develop a protocol - Ensure that all parents receive the same information during their baby's hospital stay. The more consistent the procedure and message, the less likely that a family will leave the hospital without understanding the next steps they need to take and why.

Obtain the family's contact information - Ask families to complete a discharge questionnaire before leaving the hospital; include names, addresses, phone numbers, e-mail addresses, and any other useful contact information.

Connect the child with a "medical home" - The American Academy of Pediatrics recommends that as soon as a child is born, the family should be linked to a "medical home" that offers healthcare services that are coordinated, comprehensive, family-centered, and accessible.

Give office staff a lead role - Office staff should help families navigate the healthcare system, and provide easy-to-read checklists and contact information, assist in scheduling the follow-up appointment, and check in with families to make sure that the appointment has been kept.

Explain how a hearing loss can hamper a child's speech and language development - Parents may not understand how a possible hearing loss might impact their life and the life of their child. They may mistakenly think that little can be done about a child's hearing loss. It is important to explain to parents how detecting the hearing loss, and then introducing intervention by the time the infant is six months of age, can keep a child's communication development on the right track.

The complete fact sheet and other resource publications are available from NIDCD at 800-241-1044, TTY at 800-241-1055 or by email at *nidcdinfo@nidcd.nih.gov*.

Save the date

The Early Hearing Detection and Intervention (EHDI) conference will be held on March 9th and 10th at the Intercontinental Dallas Hotel in Addison, Texas. The conference is sponsored by the American Academy of Pediatrics, the Centers for Disease Control, the U.S. Department of Health and Human services, and the National Center for Hearing Assessment and Management. Continuing education credits are available.

For more information or to register for this conference, please visit the EHDI website at *www.ehdiconference.org/*.

Oz Systems Monthly WebEx conference

Each month, Oz Systems hosts a tele/web conference for all Maryland system users. These virtual conferences include audio and real-time web-based visual presentations. The live conferences are held during the noon lunch hour to enable providers to participate without interrupting their schedules. Each meeting includes a short session on one of the system's features. After the presentation, a question and answer session is held during which time conference attendees can share questions and answers on any subject related to use of the eSP system. This is an opportunity to "meet" and network with your infant hearing colleagues across the state without ever having to leave your office. Recordings of these meetings can be accessed from the infant hearing website, *www.fhamd.org/infanthearing*.

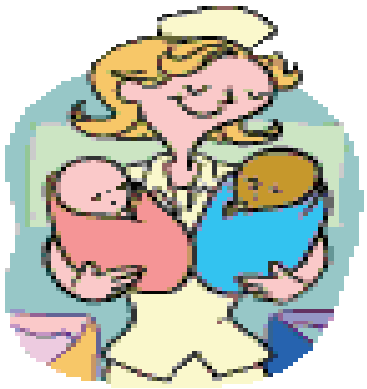
If you would like to receive emails with all conference details, please contact Alison Hart at *ahart@oz-systems.com* or contact any of the Maryland Infant Hearing Program staff.

Did you know?

Congenital, permanent hearing loss affects 2% - 4% of NICU infants.

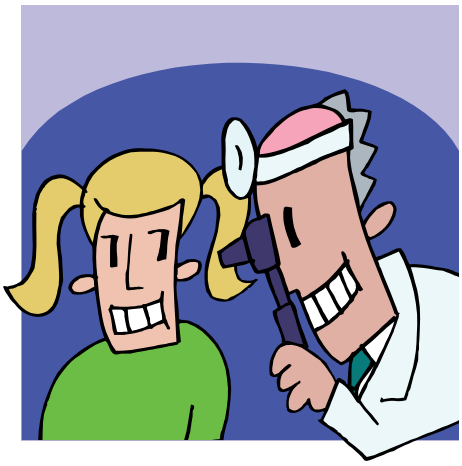
For our eSP system users

The Maryland Department of Health and Mental Hygiene relies on you for all the information we need to ensure that all Maryland babies receive hearing screenings as well as all appropriate follow-up care. Following are some reminders that would help us in achieving this goal:



For Hospital-based users:

1. The name of the infant's community pediatrician is a critical piece of information. Please add this to the infant's file for all your babies. Remember you can update a baby's record any time.
2. Infants who have risk factors continue to be monitored by the Infant Hearing Program even if they pass the birth screen. Please make sure that you are marking all the applicable risk factors for your babies.
3. For infants of multiple births, please remember to indicate the birth order in the appropriate section of the edit patient screen.
4. When you transfer a baby to another facility, please remember to assign access to that facility as soon as possible. Remember to remove your facility if you did not provide a hearing screen for that infant. Do not remove your hospital if you provided any hearing screening.
5. Please remember to periodically review your cases and move them to outpatient status as appropriate. By indicating that the baby is now an outpatient, the system will trigger the initiation of follow-up by the Infant Hearing Program staff.

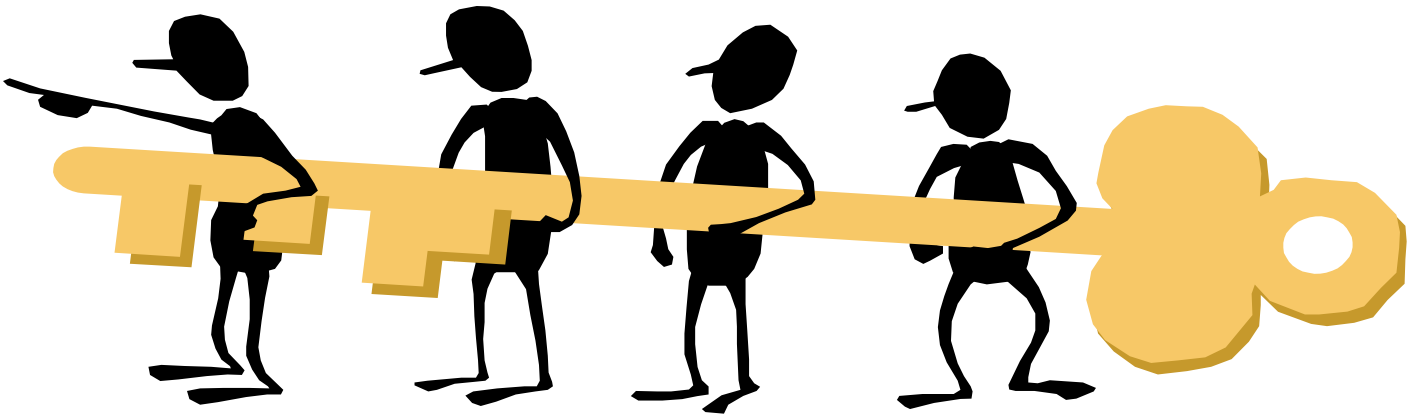


For Outpatient Screeners and Audiologists:

1. A significant number of infants have demographic changes shortly after hospital discharge, which makes it difficult for us to find them. Please ask the parents to confirm their address, their baby's permanent name, their pediatrician, etc., and update the record accordingly.
2. Please use the case note section to fill us in on patients who have been no-shows or who have rescheduled their appointments.
3. If you refer the baby to any other provider, please add that provider to the baby's file. This would include referrals to any audiologist, ENT, Infant and Toddler program, genetic counselor, etc.

For all eSP users:

1. Update your user profile with the correct phone and email address.
2. Data managers, please delete any users from your facility once they leave your employ.
3. Periodically review your facility's records for duplicates and bad import records.
4. If there is a change in data managers, please notify the Infant Hearing Program.
5. If you have any difficulties or issues, please call or email the Infant Hearing Program. We are more than happy to assist you. Contact information is listed on the last page of this newsletter. Additionally, technical assistance is available from Oz Systems 24 hours a day, seven days a week. You might also find the answer to your questions in the help section of eSP.

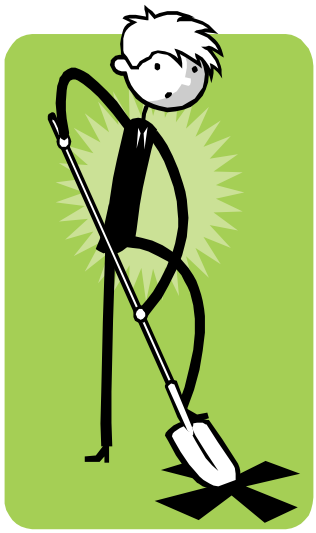


Your efforts are the key to the success of Universal Newborn Hearing Screening. Thank you for all you do in support of the Maryland Early Hearing Detection and Intervention program.

Did you know?

Each year in the United States, more than 12,000 babies are born with a hearing loss.

Data-mining in eSP



As with any new technology, it takes time to learn all the ins and outs and how to make use of the many capabilities of the eSP system. Now that there is a significant amount of data in the system, your facility can generate any number of reports and queries that will provide you with a great deal of information.

For example, you can generate reports that will give you a simple census, or you can generate reports as complex as percentages of patients by birth date, gender, zip code, and risk factors. Data can be compiled for use as a measure of your site's performance activities, as support for manpower, equipment replacement justifications, and retrospective research. Annual report data can be converted to table form, as shown, and/or to graph form. The eSP system can do an enormous amount of data-crunching for you.

2008	Total Births	Needed	In Process		Done		Pass Both		Refer		Missed		Needing F/U	
			No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
January	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
February	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
March	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
1st Quarter	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
April	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
May	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
June	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
2nd Quarter	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
July	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
August	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
September	361	360	1	0%	359	100%	358	100%	1	0%	0	0%	1	0%
3rd Quarter	361	360	1	0%	359	100%	358	100%	1	0%	0	0%	1	0%
October	335	335	3	1%	332	99%	332	100%	0	0%	0	0%	0	0%
November	314	313	11	4%	301	96%	299	99%	2	1%	1	0%	3	1%
December	0	0	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%
4th Quarter	649	648	14	2%	633	98%	631	100%	2	0%	1	0%	3	0%
Year Total	1010	1008	15	1%	992	98%	989	100%	3	0%	1	0%	4	0%

If your facility has reporting requirements on the infants you see, let eSP do the work for you. There are step-by-step instructions for running the annual report and designing queries in the program manager's manual. For assistance with this or more customized reports, you can contact the Oz helpdesk at 888-727-3366 or at the website, *www.ozhelp@oz-systems.com*.

Did you know?

The 2007 Joint Commission on Infant Hearing statement recommended that babies admitted to the NICU for five days or longer have an ABR screen as opposed to an OAE screening. The statement also recommended that NICU babies who fail their inpatient ABR hearing screening be referred directly to an audiologist for diagnostic follow up and not sent for a second outpatient screening.

Resources

We have a number of resources available to assist you on our website:

www.fhamd.org/infant hearing

Here you will find:

- Infant Hearing Newsletters – past and current editions
- Informational pamphlets and brochures – some available in Spanish
- Patient Education forms
- Level 2 and 3 screening forms
- Guidelines and Checklists
- Links to other helpful sites

The Infant Hearing Progam toll free phone number is 800-633-1316 and our toll free TTY number is 866-635-4410. The office fax number is 410-333-5047.

As always, the staff at Maryland DHMH would be happy to assist you in any way we can. We can be reached by phone:

- Linda Vaughan, Program Director 410-767-6432
- Erin Filippone, Program Audiologist 410-767-6762
- Theresa Thompson, Follow-up Coordinator 410-767-5093
- Stephanie Hood, Follow-up Coordinator 410-767-6659
- Hope Wharton, Administrative Assistant 410-767-5803

Or by mail: Infant Hearing Program
Maryland Department of Health and Mental Hygiene
201 W. Preston Street, Room 423A
Baltimore, MD 21201

This newsletter is intended to serve as a communication vehicle for all UNHS stakeholders. If you have any patient interest stories, photos, announcements, helpful hints, questions, or any information you would like to share with your Maryland colleagues, please e-mail them to Erin Filippone at *EFilippone@dhmh.state.md.us.*

WORKING TOGETHER… EARLY HEARING DETECTION AND INTERVENTION

THE KEY TO COMMUNICATION SUCCESS

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The Department, in compliance with the Americans With Disabilities Act, ensures that qualified individuals with disabilities are given an opportunity to participate in and benefit from DHMH services, programs, benefits, and employment opportunities.