(((SOUND IDEAS

Volume 1, Issue 4 *By the Year 2000, all children with hearing loss should be identified before 12 months of age* *October 1,1997*

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To receive a subscription or to submit an article for this newsletter, please contact:

(((SOUND IDEAS
Utah State University,
UMC 2880
Logan,UT 84322-2880

Phone: (435) 797-3589
Fax: (435) 797-1448

www.usu.edu/~ncham

Sherryj@fs1.ed.usu.edu

CDC Promotes Earlier Identification of Hearing Loss

During the past several months, the Centers for Disease Control and Prevention (CDC) have become actively involved in promoting effective strategies for early identification of hearing loss. Just recently, CDC announced the establishment of the Early Hearing Detection and Intervention (EHDI) program at CDC. The EHDI program will collaborate with other federal agencies to assist states and territories in developing and implementing programs to screen, diagnose, track, and refer infants with hearing impairments. EHDI is particularly interested in developing data systems, assessing the effectiveness and costs of early hearing detection programs, and identifying preventable causes of congenital hearing impairment.

Since April, 1997, CDC has sponsored a monthly teleconference in which they invite experts from around the country to address issues related to early identification of hearing loss. Anyone can paticipate in these teleconferences by calling June Holstum at (770) 488-7401 and asking to be added to the EHDI teleconference.

CDC is also in the process of establishing a World Wide Web site related to early identification of hearing loss. At this site, you will be able to find updated information about their activities in this area and other related issues. CDC staff were also instrumental in persuading Secretary Shalala to include newborn hearing screening as a part of the Department of Health and Human Services' (HHS) **Children's Health Care Initiatives**.

The EHDI program at CDC has also just announced a series of working meetings to address issues related to tracking, follow-up, data management, and reporting associated with universal newborn hearing screening (UNHS) programs. In addition to people who have implemented successful UNHS programs, people have been invited who have expertise and experience in managing various types of health-related data at the state level (e.g., immunology, birth certificate, hearing, birth defects), privacy and confidentiality issues, and other public health issues. The first two meetings of this group are scheduled in Atlanta on Oct. 22-23, and Dec. 10-11, 1997.

The goal of these meetings is to develop a plan to assist states in developing effective tracking, follow-up, and reporting systems related to early identification of hearing loss and to coordinate that system with other health-related databases states are now managing. The meetings of the working group are open to the public. Additional information can be obtained by contacting June Holstrum at 770-488-7401 or E-mail: edhi@cdc.gov

In this issue .....

Newborn Hearing Screening Expanding Rapidly in Europe

Until the last few years, many European countries have been far ahead of the United States when it came to early identification of hearing loss. Much of their success was the result of home-based behavioral screening conducted by trained home visitors who routinely visited the homes of families with infants and toddlers as a part of the national health care programs. Often referred to as the Health Visitor Distraction Test (HVDT), behavioral screening for hearing loss was generally done for children between 7 and 9 months of age and was quite successful in identifying bilateral hearing losses greater than about 50 dB. Countries with well-established HVDT programs include the United Kingdom, the Netherlands, and most of the Scandinavian countries.

Although these HVDT programs were much more successful than what was happening in the U.S. ten years ago, HVDT programs were not able to identify most children with mild to moderate bilateral or unilateral loss until much later. However, in part because these HVDT programs were relatively successful, western European countries have been slow to implement hospital-based universal newborn hearing screening (UNHS) programs. But that is beginning to change rapidly.

At the current time, at least the following 11 European countries have one or more hospitals with a UNHS program:

- Austria
- Netherlands
- Belgium
- Poland
- Denmark
- Spain
- Germany
- Sweden
- Italy
- United Kingdom
- Lithuania

Several of these countries are expanding at a dramatic rate, and others have made strong commitments at the national level. For example, Austria has 128 birthing hospitals and, as a result of a Ministry of Health commitment 2-1/2 years ago, has now established UNHS programs in 35 of them. These hospitals use a variety of techniques (ABR, automated TEOAE, TEOAE, and DPOAE) and have been very successful.

Poland is another country where the Ministry of Health has committed to implementing UNHS programs throughout the country. In spite of the serious financial challenges they are facing as a former East Bloc country, they are moving ahead rapidly with the

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European Consensus Development Conference on Neonatal Hearing Screening. Milan, Italy on May 15, 1998. www.ECDCevents.biomed.polimi.it.

Product Review: AUDx

Bio-Logic Systems Corp.
One Bio-Logic Plaza
Mundelein, IL 60060
1-800-323-8326

The AUDx is an automatic, handheld DPOAE test instrument and battery operated. Fitting easily inside an infant's crib, its 4" by 7" frame houses five operation buttons that allow you to turn the unit on/off, reset it, and make selections from a scrolling menu. It takes approximately 10 minutes to become familiar with screening features. System test specifications are user programmable. However the default test parameters are:

Stimuli: F2 of 4,3 and 2 KHz. F1:F2 ratio of 1.22. Level: 65/55 dB SPL.

Pass criteria can be programmed to serve the users' need, however, a default pass criteria is available set at: S/N: 6 dB for 2, 3 and 4 KHz with the absolute DP >= -7 for 2 KHz, >= -5 for 3 and >= -9 for 4 KHz. Test time is around 3 minutes per ear and like all otoacoustic emissions procedures, probe fit is crucial. Up to 100 screening results can be saved, displayed, and downloaded into a more comprehensive hearing screening data management system for generating report and letters.

"The product review section of this newsletter is not intended as a product endorsement. For further information, please contact the company directly"

Reporting Hearing Screening Results to Parents

There are many details to consider when initiating a universal newborn hearing screening program. One very important consideration is the manner in which screening results are reported to parents. The method of reporting results varies across programs depending on such factors as whether the results are a "pass" or "refer", the technology used in screening, and whether the screener or audiologist is reporting the results. We have found that parents appreciate being given both verbal and written results when their baby is referred for a second screening. The dialogue exchange that occurs between audiologist and parent via telephone or face-to-face communication can help "cushion the blow" if the baby requires follow-up screening. Regardless of the exact method of informing parents of screening results there are at least three important points to keep in mind:

1) Results indicating a "refer" should be reported in a way that does not cause undue parental distress, but invokes enough concern to ensure that the infant is brought back for follow-up. It may help to mention the percentage of newborns who require a second screening and some possible reasons why some newborns do not pass the first screening.

2) A "pass" result should be reported in such a way that the parent does not become complacent to the possibility of future hearing problems (i.e., those caused by middle ear pathology or those of delayed onset) and the need to return for audiologic management if a hearing loss is suspected later.

3) The parent should be given a point of contact to whom she/he may address any questions or concerns, especially if the results are presented in written format only.

Below are excerpts from a parent information sheet given mothers at the time of delivery. This same information, along with specific screening results, are given again after the initial screening is completed.

CONGRATULATIONS ON THE BIRTH OF YOUR CHILD!

Your baby's hearing will be screened using a quick, harmless measure called OAE (otoacoustic emissions) or AABR (automated auditory brainstem response). Both ears will be screened by a trained technician. Results are interpreted by an audiologist, and you will be informed in writing if your baby needs further screening.

About 1 out of every 20 babies needs to be screened a second time. Reasons that a baby requires rescreening include: an ear canal blocked with debris, middle ear fluid, or a possible hearing problem.

It is highly unlikely that your baby has a hearing problem, however, the reason we conduct infant hearing screenings is to identify hearing loss as early as possible. Good hearing is extremely important for the proper development of speech and language skills. Early diagnosis and management of permanent hearing loss leads to improved language, vocabulary, and academic performance. We design a follow-up and referral program for all babies for whom there is the slightest concern to ensure that they receive the best hearing health care.

Finally, the results of the hearing screening show how your baby hears at the time the screening is done. Even though he or she passes this initial screening you should continue to be aware of your child's responses to sound. For example, some infants with ear infections, other serious infections, chronic illness, or family history of hearing impairment develop hearing loss during the first year of life. If at any time you have concerns about your child's hearing ability or speech and language development, consult with your family doctor and arrange to have an audiologist test your child's hearing.

If you have any questions concerning this information, please contact .....

Program Spotlight : Iowa Methodist Medical Center - Des Moines, Iowa

Program Facts

Started: May 1996 in conjunction with Better Hearing and Speech Month

Screeners: Obstetric technicians

Technology: ILO88/HI*SCREEN

Program Statistics

Pass rate at discharge: 91%

miss/invalid rate: 4%

refer rate: 5%

Rescreen return rate: 85%

Rescreen pass rate: 90%

Iowa Methodist Medical Center is located in a metropolitan area in central Iowa, with the majority of patients living within a 70-mile radius. We have approximately 2000 births per year. Now in our second year of screening, our program is finally operating relatively smoothly. In reviewing the history of our program and its present operation, we have tried to identify our keys to success and areas targeted for improvement, which are listed below.

Things we did right!

1. Conducted a time study--found that it is necessary to allow 15 minutes per baby to accomplish the screening. This has been included in the obstetric technicians' work day in a hospital role redesign plan which will take effect next year.

2. Trained a satisfactory number of people to perform the screening. Presently, 8 people are qualified to conduct the screening. This has been a manageable number to obtain an acceptable referral rate, yet have adequate coverage.

3. Trained nursing students to perform the screening on a backup/ emergency basis. As we all know, the census varies greatly from day to day. Until the role redesign takes effect, sometimes staffing is problematic.

4. Enlisted the help of a volunteer to mail letters and check the birthing log to ensure that no baby is missed.

5. Scheduled a baby rescreening day! Babies are scheduled on the half hour for outpatient rescreening. Thursday mornings are reserved for rescreening, with the afternoons reserved for scoring new tests, updating files, and general program management. It has been our experience that a screening program can rapidly take up all your time if you let it.

6. Purchased an acoustic immittance analyzer with high frequency tympanometry capabilities to assess middle ear function in newborns. When a baby does not pass the rescreen, high frequency tympanometry is performed.

7. Release the names of those infants lost to follow-up to the Area Education Agency. A release of information is included in the discharge packet.

Areas targeted for improvement:

1. Identify the baby's follow-up physician. Often the physician examining the baby before discharge is not who will be caring for the baby, especially if the family lives out of town.

2. Obtain reimbursement to keep the program in operation. This issue is being addressed through our facility's health care contract negotiators.

Additionally, we strive to acknowledge those who are committed to the program and let them know when they are doing a good job. A pat on the back for a job well done is always appreciated!

Teresa Linde, M.S., CCC-A
Program Coordinator
515 - 241 - 6344

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Program Spotlight : .....

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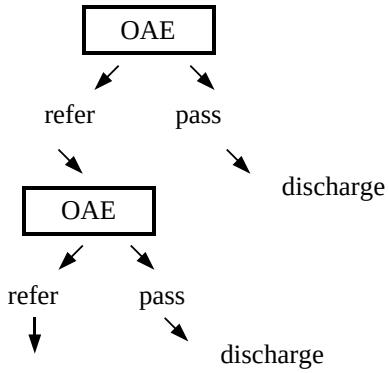
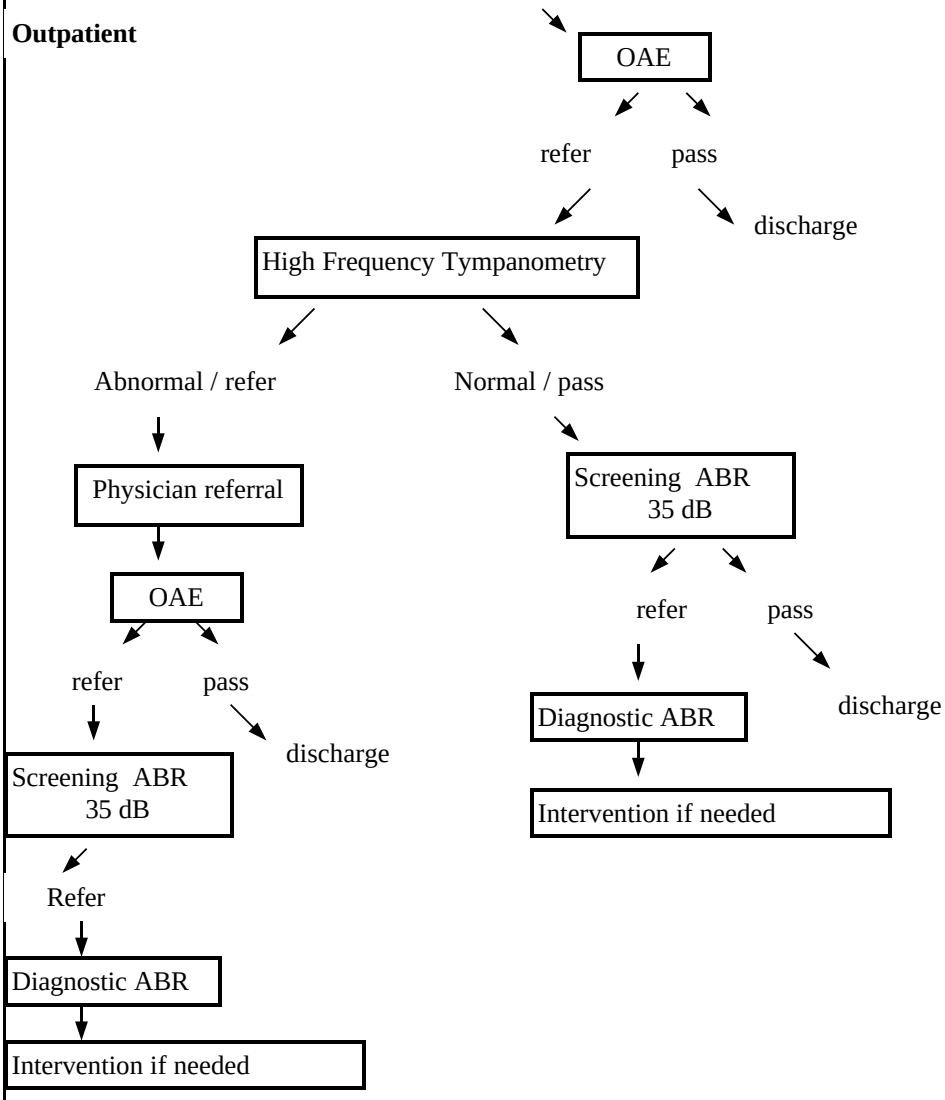
Inpatient



Hospital discharge

Outpatient



Free poster to promote Newborn Hearing Screening

Do you want to promote newborn hearing screening in your area?.
Copies of the poster pictured above are available from NCHAM for the cost of mailing. Printed in full color, these attractive 11" x 17" posters can be placed in doctors' offices, department of health, hospitals, audiologist offices, day care centers, or wherever. The cost of mailing is:
$ 8,00 for 10 - 15
$ 15,00 for 50
$ 25,00 for 100 - 250

Order yours today by calling 801-797-3584 or E-mail: susanf@fs1.ed.usu.edu

Newborn Hearing Screening .... in Europe

(Continued from page 2)
implementation of UNHS programs. Eight hospitals have implemented ABR or OAE-based newborn hearing screening programs, and 20,000+ babies have been screened in the last year.

As a result of the recent progress and interest in hospital-based UNHS programs, a **European Consensus Development Conference on Neonatal Hearing Screening** has been scheduled in Milan, Italy on May 15, 1998. Modeled after the NIH Consensus Development Conference held in 1993, this meeting promises to provide another significant boost to early identification of hearing loss. More information about the conference is available via E-mail from congress@science-park.hsr.it or on the Web at www.ECDCevents.biomed.polimi.it.

Updated List of UNHS programs in the U.S.A., New Additions Only

In our previous newsletter we printed a list of hospitals that are currently performing Universal Newborn Hearing Screening.

Posted on the right, are the additions that we received. We appreciate your prompt replies to help us to continually update our list.

North Colorado Medical Center	Greeley, Colorado	1997
Centura Health Avista Adventist Hospital	Louisville, Colorado	1993
St. Francis Medical Center - West	Ewa Beach, Hawaii	1996
Bannick Regional Medical Center	Pocatello, Idaho	1997
Mercy Medical Hospital	Nampa, Idaho	1997
Northern Illinois University	DeKalb, Illinois	1997
Saint Francis Medical Center	Peoria, Illinois	
Samaritan Health Systems	Clinton, Iowa	1996
Univ. of Iowa Hospital	Iowa City, Iowa	1997
Marchalltown Medical & Surgical Ctr.	Marshalltown, Iowa	1996
Iowa Methodist Medical Center	Des Moines, Iowa	1996
Trinity Regional Hospital	Fort Dodge, Iowa	1997
Genesis Medical Center	Davenport, Iowa	1996
St. Luke's Regional Medical Ctr	Sioux City, Iowa	1997
Borgess Hospital	Kalamazoo, Michigan	
Bronson Methodist Hospital	Kalamazoo, Michigan	
Butterworth Hospital	Grand Rapids, Michigan	
Crittenton Hospital	Rochester, Michigan	
Foote Memorial Hospital	Jackson, Michigan	
Garden City Osteopathic Hospital	Garden City, Michigan	1997
Lakeland Medical Center	St. Joseph, Michigan	
Marquette General Hospital	Marquette, Michigan	1997
Memorial Healthcare Center	Owosso, Michigan	
Munson Medical Center	Traverse City, Michigan	
Port Huron Hospital	Port Huron, Michigan	
Sparrow Hospital	Lansing, Michigan	1997
St. Johns Hospital	Detroit, Michigan	
William Beaumont Hospital	Troy, Michigan	
Union Regional Medical Center	Monroe, North Carolina	1997
Penn State Geisinger	Wyoming Valley, Pennsylvania	1992
University of Utah	Salt Lake City, Utah	1997
Utah Valley Regional Medical Ctr	Provo, Utah	1997
Brigham City Columbia Com. Hosp.	Brigham City, Utah	1997
Jordan Valley Medical Center	West Jordan, Utah	1997
American Fork Hospital	American Fork, Utah	1997
St. Mark's Columbia Hospital	Salt Lake City, Utah	1997
North Davis Community Hospital	Layton, Utah	1997
Mountain View Hospital	Payson, Utah	1997
Columbia Arlington Hospital	Arlington, Virginia	1996
Inova Fair Oaks Hospital	Fairfax, Virginia	1997
Children's National Medical Center	Washington, D.C.	1997
St. Mary's Hospital	Milwaukee, Wisconsin	1996
Star Valley Hospital	Afton, Wyoming	1996
Johnson County Memorial Hospital	Buffalo, Wyoming	1997
Wyoming Medical Center	Casper, Wyoming	1997
United Medical Center - West	Cheyenne, Wyoming	1994
West Park Hospital	Cody, Wyoming	1995
Memorial Hospital of Converse County	Douglas, Wyoming	1997
IHC- Evanston Regional Hospital	Evanston, Wyoming	1996

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Utah State University
2880 Univ. Blvd
Logan,Utah 84322-2880

Upcoming Events

October 1, 1997 **1:00-3:00 PM (EDT)**	**TeleSeminar: Issues in Pediatric Amplification, Fitting Strategies and Considerations for Counseling Multicultural Families** **American Speech-Language-Hearing Association**
October 17-19, 1997	**Developments in Pediatric Audiology. Boys Town National Research Hosp. Omaha, NE. Contact: Gail L. Binderup 1-402-498-6328**
November 8, 1997	**Implementing Universal Newborn Hearing Screening. Wyndham Emerald Plaza. San Diego, CA. American Academy of Audiology. 1-800-222-2336 ext 213**

Updated List ....

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Campbell County Memorial Hospital	Gillette, Wyoming	1995
St. Johns Hospital	Jackson, Wyoming	1995
South Lincoln Medical Center	Kemmerer, Wyoming	1996
Lander Valley Medical Center	Lander, Wyoming	1996
Ivinson Memorial Hospital	Laramie, Wyoming	1996
Weston County Memorial Hospital	Newcastle, Wyoming	1996
Powell Hospital	Powell, Wyoming	1997
Riverton Memorial Hospital	Riverton, Wyoming	1997
Memorial Hospital of Sweetwater County	Rock Springs, Wyoming	1996
Memorial Hospital of Sheridan County	Sheridan, Wyoming	1997
Hot Springs County Memorial Hospital	Thermopolis, Wyoming	1997
Community Hospital	Torrington, Wyoming	1997
Platte County Memorial Hospital	Wheatland, Wyoming	1997