PROJECT HIEDI
NEWSLETTER

For archives click here
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In this update:

1) PROGRESS AND NEWS

It has been quite a few months since our last Project HIEDI update, so this issue is packed with information including: details of Professor Peter Thorne's Queen's Birthday Honour, information about the Adelaide conference, progress towards *universal* screening in Australia, links to presentations from the recent EHDI conference and new literature.

If there is anything in particular you would like me to include in future updates, please don't hesitate to get in touch. I can be reached on (09) 4456006 or by e-mail: janet@levare.co.nz

LEADER OF PROJECT HIEDI HONORED

Professor Peter Thorne was appointed a Companion of the New Zealand Order of Merit in the Queen's birthday honours – for his contribution to auditory neuroscience.

Our HIEDI team would like to congratulate Peter – and notes that he has made an impressive contribution to a large number of areas outside auditory neuroscience, including, most obviously, toward the establishment of a universal newborn hearing screening and early intervention programme in New Zealand!

Peter was made a Companion of the New Zealand Order of Merit (CNZM) for services to auditory neuroscience through scientific research, discoveries, teaching, and developing services for the deaf and hearing impaired. He established the Audiology Section at the University (now in the School of Population Health) and co-directs the Auditory Neuroscience group in the Department of Physiology.

NEWS: SCREENING IN AUSTRALIA

Every newborn to have hearing test: Rudd
June 29th, 2009
Source: http://www.thewest.com.au/default.aspx?MenuID=2&ContentID=151586

"Every newborn child will be tested for hearing impairments under a new plan unveiled by Prime Minister Kevin Rudd.

Mr Rudd says only 75 per cent of young children are currently routinely tested for hearing deficiencies, which he says can lead to further complications in later life.

Under the new policy, which could be in place by next year, every newborn child will be tested, and fitted with hearing aids or cochlear implants where necessary.

"At the moment, across Australia, only an average of 75 per cent of children are being tested for hearing impairments at a young age," Mr Rudd told reporters on Monday.

"We can do better than that. Within 18 months we want every newborn child in Australia to be screened for hearing impairments.

"I'll be seeking the agreement of the states and territories on this and I hope to have this policy in place by the end of 2010. I think we can do this and we should do this."

Mr Rudd was speaking during a visit to the Shepherd Centre for deaf and hearing-impaired children.

He was joined by Liberal backbencher Dr Brendan Nelson, who has been lobbying for greater health care provisions for deaf children.

"We want to live in a society where children are tested for hearing impairments at a young age - as soon as is possible," Dr Nelson said.

"This will make us a leading nation for children's healthcare and it will give every child the ability to live in a hearing and speaking world."

Dr Bruce Shepherd, who established the Shepherd Centre in the 1970s, added: "This is so important. It is important these children are allowed to become productive members of the community."

2) INFORMATION FROM CONFERENCES AND PRESENTATIONS

2009 AUSTRALIA NEW ZEALAND CONFERENCE FOR EDUCATORS OF THE DEAF (ANZCED)

The Educators of Deaf Students Association are hosting the 25th ANZCED Conference from the 10th to 12th July, 2009 at Brighton Beach, Sydney.

Although Earlybird registration for this conference has now closed there are still places left for this conference. You can visit the conference website for more information.

ROYAL INSTITUTE FOR DEAF AND BLIND CHILDREN, AUSTRALIA

I would like to point readers to the Royal Institute for Deaf and Blind Children (RIDBC) website.

RIDBC Renwick Centre is a centre for research and professional studies in the field of education for children with sensory disabilities. The Centre is administered by the Royal Institute for Deaf and Blind Children in affiliation with the University of Newcastle.

RIDBC's website now contains PDF files of Professor Christine Yoshinaga-Itano's presentation titled "Newborn Screening: Progress Monitoring and Feedback in Early Childhood".

AUSTRALASIAN NEWBORN HEARING SCREENING CONFERENCE, ADELAIDE

Reports coming in about the Australasian Newborn Hearing Screening Conference, held in Adelaide in May would indicate this conference was a great success.

Presenters at this conference included Professor Adrian Davis (University of Manchester), Associate Professor Gary Rance (The University of Melbourne & Royal Victorian Eye and Ear Hospital) and Christine Yoshinaga-Itano (Department of Speech, Language and Hearing Sciences University of Colorado).

I will include a link to presentations in our next update or as soon as they become available.

Congratulations to members of the Organising Committee and to the Australasian Hearing Screening Committee for their hard work. The next conference will be held in Perth, Western Australia, in 2011.

EHDI CONFERENCE, MARCH 2009, TEXAS

You can click here to find information about The 8th Annual Early Hearing Detection & Intervention Conference, held in Texas.

The website contains online versions of a huge number of presentations that were delivered at this conference – well worth a look when you have some time.

3) NEW LITERATURE

Impact of newborn hearing screening: comparing outcomes in pediatric cochlear implant users.

Authors: Philips B, Corthals P, De Raeve L, D'haenens W, Maes L, Bockstael A, Keppler H, Swinnen F, De Vel E, Vinck B, Dhooge I.
Source: Laryngoscope. 2009 May;119(5):974-9.

OBJECTIVES/HYPOTHESIS: To evaluate the impact of a newborn hearing screening program on the management and outcome of deaf children and to identify underlying factors that may be responsible for the differences between high and low performing implanted children.

STUDY DESIGN: Retrospective cohort study of 391 implanted children in Flanders (Belgium).

METHODS: First, implanted children were sorted into two groups on account of screening age (early screened, n = 195 vs. late screened, n = 196). Both groups were compared with respect to several variables. Second, outcome of cochlear implantation was measured in terms of the child's speech perception and production skills (n = 355). A subgroup of high performing cochlear implant (CI) users was compared with low performing CI users with regard to several variables.

RESULTS: Early screened children differ significantly from late screened children with respect to age of hearing loss detection and age at cochlear implantation. Furthermore, early screening and implantation is associated with better auditory receptive skills and speech intelligibility. Additional impairments negatively influence both receptive and productive skills. In addition, children who communicate orally and wear bilateral cochlear implants perform better on speech production, whereas a better speech perception was found in children who became progressively deaf as opposed to congenitally deaf children.

CONCLUSIONS: The results of this extensive study of profoundly deaf children with CIs in Flanders indicate that a newborn hearing screening program results in earlier intervention in deaf children, which beneficially influences the auditory receptive skills and speech intelligibility.

Reading and communication skills after universal newborn screening for permanent childhood hearing impairment.

Authors: McCann DC, Worsfold S, Law CM, Mullee M, Petrou S, Stevenson J, Yuen HM, Kennedy CR.
Source: Arch Dis Child. 2009 Apr;94(4):293-7.

BACKGROUND: Birth in periods with universal newborn screening (UNS) for permanent childhood hearing impairment (PCHI) and early confirmation of PCHI have been associated with superior subsequent language ability in children with PCHI. However their effects on reading and communication skills have not been addressed in a population-based study.

METHODS: In a follow-up study of a large birth cohort in southern England, we measured reading by direct assessment and communication skills by parent report in 120 children with bilateral moderate, severe or profound PCHI aged 5.4-11.7 years, of whom 61 had been born in periods with UNS, and in a comparison group of 63 children with normal hearing.

RESULTS: Compared with birth during periods without UNS, birth during periods with UNS was associated with better reading scores (inter-group difference 0.39 SDs, 95% CI 0.02 to 0.76, $p = 0.042$) and communication skills scores (difference 0.51 SDs, 95% CI 0.06 to 0.95, $p = 0.026$). Compared with later confirmation, confirmation of PCHI by age 9 months was also associated with better reading (difference 0.51 SDs, 95% CI 0.15 to 0.87, $p = 0.006$) and communication skills (difference 0.56 SDs, 95% CI 0.12 to 1.00, $p = 0.013$). In the children with PCHI, reading, communication and language ability were highly correlated ($r = 0.62$-0.84, $p<0.001$).

CONCLUSION: Birth during periods with UNS and early confirmation of PCHI predict better reading and communication abilities at primary school age. These benefits represent functional gains of sufficient magnitude to be important in children with PCHI.

The epidemiology of hearing impairment in the United States: newborns, children, and adolescents.

Authors: Mehra S, Eavey RD, Keamy DG Jr.
Source: Otolaryngol Head Neck Surg. 2009 Apr;140(4):461-72

OBJECTIVE: Hearing loss ranks high among disabilities in the United States. The epidemiologic parameters of hearing impairment in the United States have not been systematically studied and important historic data have not diffused to relevant stakeholders; even otolaryngologists are unfamiliar with epidemiologic data. We wished to compile known studies to establish an epidemiologic baseline beginning with pediatric data.

DATA SOURCES: Relevant literature was retrieved from medical databases and Centers for Disease Control and Prevention reports.

METHODS: Candidate articles and national data sets encompassing pediatric hearing loss were analyzed and compared. Whenever possible, group analyses were performed.

RESULTS: The average incidence of neonatal hearing loss in the United States is 1.1 per 1000 infants, with variation among states (0.22 to 3.61 per 1000). Childhood and adolescent prevalence rates demonstrate variability. The prevalence of mild hearing impairment or worse (>20 dB) is 3.1 percent based on the average of comparable audiometric screening studies; self-reporting prevalence is 1.9 percent. Hispanic Americans demonstrate a higher prevalence of hearing impairment than other children. Low-income households demonstrate a higher prevalence of hearing loss compared to households with higher income levels. Genetic causes were attributed to 23 percent across studies.

CONCLUSIONS: Analysis of the data reveals gaps in our knowledge of the epidemiology of hearing loss and stresses the importance of consistent definitions of hearing impairment for systematic assessment of changes over time. Hearing loss in childhood deserves further epidemiologic investigation and elevated awareness among health care professionals and the public. Genetic etiologies are likely underestimated in this review.

Hearing screening for newborns: the midwife's role in Early Hearing Detection and Intervention.

Authors: Biernath K, Holstrum WJ, Eichwald J.
Source: J Midwifery Womens Health. 2009 Jan-Feb;54(1):18-26.

Universal newborn hearing screening is becoming the standard of care in the United States. However, there has been some controversy around this pediatric preventive health care practice. In 2001, the US Preventative Services Task Force (USPSTF), the leading independent panel of experts on prevention and primary care in the United States, reviewed the scientific literature and found inconclusive evidence to recommend for or against universal newborn hearing screening. As a result of this lack of recommendation, some pediatric providers were not screening the hearing of all newborn infants. The USPSTF released an update in July 2008 concluding there is scientific evidence to recommend newborn hearing screening for all infants. Universal newborn hearing screening is the first step in the national Early Hearing Detection and Intervention (EHDI) program. EHDI includes not only universal newborn hearing screening but also diagnostic evaluation for any infant failing the initial hearing screen and intervention services for any infant diagnosed with hearing loss. During the prenatal and postnatal periods, obstetric care providers can play a vital role in the EHDI process through education, screening, referral, and assistance with follow-up. Through these services, clinicians can work with parents and pediatric care providers to help newborns and infants develop communication and language skills that will last a lifetime.

PROJECT HIEDI

Project HIEDI is run by an independent group established in 2002 to see the introduction of a national newborn hearing screening and early intervention programme in New Zealand.

It has a Steering Team of volunteers, and a part-time Project Manager. The Steering Team is: Professor Peter Thorne (Project Leader), Dr Bill Keith, Dr Dianne Webster, Oriole Wilson, Margaret Cooper and Janet Digby (Project Manager).

For further information about Project HIEDI you can contact the Project Manager for HIEDI and author of these updates, Janet Digby by phoning (09) 445 6006 or e-mailing janet@levare.co.nz. You can also visit the Project HIEDI webpage on the National Foundation for the Deaf website.

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