

Ear Care and Audiology Bulletin

Summer 2013

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HEARING SCREENING FOR LIFE LAUNCH

In June 2013 a campaign was launched to carry out a pilot, and then hopefully roll out, a programme of hearing screening at 65 years of age – “Hearing Screening for Life” It is recognised that many people delay acting on their hearing loss for many years, and that this has significant negative consequences on individuals, their families and wider society. Hearing screening would allow early identification and early intervention, which would be both highly beneficial and highly cost effective.

The launch of the Hearing Screening for Life Document was sponsored by Member of Parliament Stephen Lloyd. The document can be read [here](#).

Stephen Lloyd: "We are calling on the Coalition Government to support our campaign, starting with a pilot and then, if the results are what we sincerely believe they will be, it can be rolled out across the country."

Age-related hearing loss is a disability which affects millions of people and it has a much wider impact on people's lives than simply being unable to hear properly. This is why I am very grateful our campaign is supported by so many charities across the ageing and disability spectrum. They know how much positive difference to the lives of their beneficiaries universal hearing screening at 65 will have."



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Noise-induced hearing loss: a potential new drug?

New research has shed light on a substance called PEDF (pigment epithelium growth factor) which plays an important role in protecting our hearing from noise damage.

Find out more about this research and its potential to help develop drugs which can protect against noise-induced hearing loss here: <http://www.actiononhearingloss.org.uk/community/blogs/our-guest-blog/noise-induced-hearing-loss-a-potential-new-drug.aspx>

UK National
Screening Committee

Communications Improvements for Hearing Screening and the Newborn and Infant Physical Examination

At the end of March the UK NSC successfully demonstrated that screening test results from the NHSP and NIPE Smart system could be transferred directly into Child Health Information Systems with the potential to save many hours of administrative time for NHS colleagues.

The project

The project saw the UK NSC form a partnership with Northgate, CSE Healthcare and McKesson to send electronic results messages into the widely used RiO and McKesson systems. Having now proved this is possible, the project team is working on plans to make the messaging more widely available.

It was funded from a successful bid to the Interoperability Toolkit (ITK) 2012/3 Challenge Fund and the project team is hoping to attract similar funding this year to deliver quality outcomes for patients in time and cost saving initiatives for the NHS.

For more information

For more information please contact Shona Golightly on 07952 767332.

New study on genetic deafness

Researchers at the Cincinnati Children's Hospital in the USA have shed light on a gene which causes a form of early-onset deafness in families.

This recent study, published in [Journal of Clinical Investigation](#) is interesting because the researchers have created a mouse model of deafness by inserting the same TRIC gene mutation that has been found in humans into the mouse tric gene. This type of study is carried out so that researchers can better investigate the effects of a particular genetic mutation and understand what is happening in the cochlea to cause deafness in people.





NHSP Education and Training

Mind The Gaps: Minimising risk across the Newborn Hearing Screening Programme (NHSP). The benefits of screening must outweigh any potential harms. NHS screening programmes are pathways, not just screening tests. Standards are set, and QA applies, across the whole of that pathway. Errors or omissions in the screening process are more likely to occur at points of transition, or transfer of responsibility, between staff and between different departments or organisations.

To support a pro-active approach to risk management, a new NHSP eResource was launched in March 2013 which identifies points along the NHSP pathway where risks are most likely to occur.



This NHSP resource compliments the UK NSC cross-programme Screening Incident resource by providing a more in-depth study of the Hearing Screening pathway.

This resource details the failsafes and best practice at each step along the pathway with the aim of reducing errors and improving quality. To foster a culture where all staff thinks about risk reduction, the resource is open to all NHSP extranet users.

Access or register via the [NHSP website](#)

audiology useful links

[British Academy of Audiology](#)

[Evidence update on hearing disorders](#)

[British Society of Audiology](#)

[British Association of Audiovestibular Physicians](#)

[Royal National Institute for the Deaf](#)

[ENT UK](#)

[National Deaf Children's Society](#)

[British Tinnitus Association](#)

[Sense, for deaf blind people](#)

[Lean explained](#)

[Auditory Processing Disorders Resources](#)

[British Cochlear Implant Group](#)

WHICH? Launches new hearing aid guide with hearing loss charity.

Action on Hearing Loss have joined forces with consumer champion Which? To launch a comprehensive guide to hearing aids.

This [new guide](#) will give people with hearing loss the help they need to ensure they get the hearing aid that is right for them



New five-year strategy designed to meet the needs and aspirations of people across the UK with diagnosed hearing loss or tinnitus

The strategy – which focuses on shaping the charity to achieve its long-term goal of finding cures for hearing loss and tinnitus through biomedical research as well as ensuring life choices by people who are deaf or hard of hearing are not limited and they have better access to life-changing information and services – follows extensive research with supporters, service users and partners.

Find out more information about the new strategy [here](#)

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Latest research

Qualitative interviews on the beliefs and feelings of adults towards their ownership, but non-use of hearing aids

International Journal of Audiology. October 2013, Vol. 52, No. 10, Pages 670-677

Objective: Up to a quarter of the adults who own hearing aids never use them. To provide these 'non-users' with the best help, hearing care professionals need to have an in-depth understanding of the non-users' beliefs and feelings with regard to the non-use. This qualitative study explored these beliefs and feelings in order to increase our understanding of hearing aid non-users. Design: Individual face-to-face semi-structured interviews were completed. Study sample: Eleven hearing aid owners (aged 54–80 years) who reported that they never or hardly ever used their hearing aids. Results: The participants expressed a variety of feelings towards their non-use, including indifference, self-annoyance, frustration, powerlessness, shame, and guilt. Their feelings were related to beliefs about: (1) the severity of their hearing handicap with and without hearing aids, (2) whom or what was responsible for the non-use, and (3) the attitudes of significant others towards the non-use. Conclusions: Hearing-aid non-users differ in their beliefs and feelings towards the non-use. A patient-centred approach is needed.

How Hearing Aids, Background Noise, and Visual Cues Influence Objective Listening Effort

Ear & Hearing: September 2013 - Volume 34 - Issue 5

Objectives: The purpose of this article was to evaluate factors that influence the listening effort experienced when processing speech for people with hearing loss. Specifically, the change in listening effort resulting from introducing hearing aids, visual cues, and background noise was evaluated. An additional exploratory aim was to investigate the possible relationships between the magnitude of listening effort change and individual listeners' working memory capacity, verbal processing speed, or lipreading skill.

The results of this study suggest that, on the average, hearing aids can reduce objectively measured listening effort. Furthermore, people who are slow verbal processors are more likely to derive hearing aid benefit for listening effort, perhaps because hearing aids improve the auditory input. Although background noise increased objective listening effort, no listener characteristic predicted susceptibility to noise. With regard to visual cues, while there was no effect on average of providing visual cues, there were some listener characteristics that were related to changes in listening effort with vision. Although these relationships are exploratory, they do suggest that these inherent listener characteristics like working memory capacity, verbal processing speed, and lipreading ability may influence susceptibility to changes in listening effort and thus warrant further study.

Copies of the articles listed in this bulletin are available on request:

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Latest research

Systematic Review of Cochlear Implantation in Children With Developmental Disability

Otology & Neurotology: October 2013 - Volume 34 - Issue 8 - p 1385–1393

A systematic review comparing the outcome of cochlear implantation in children with developmental disability with children without developmental disability. Seven studies demonstrated a worse outcome for children with developmental disability. Six articles showed no difference in the outcome between the 2 groups. Children with developmental disability may not benefit from cochlear implantation based on traditional assessment tools but appear to improve their environmental awareness and quality of life. More work is needed to define the term benefit when used in this context for this vulnerable group. Autistic children consistently had a negative outcome.

Tot 10: The Ten Commandments of Pediatric Hearing Healthcare

Hearing Journal: August 2013 - Volume 66 - Issue 8 - p 14–16

Should we recommend an implant, or are hearing aids enough? Should we choose frequency-lowering technology or go with wideband amplification? Should we use sign support for a child with auditory neuropathy or only focus on spoken language?

Although the technologies and services we offer in pediatric hearing healthcare are leaps and bounds better than what were available just a decade or two ago, we undoubtedly will continue to face difficult questions surrounding the care we provide to our youngest patients. With that in mind, our responses to these questions should be predicated upon principles that are tried and true.

Acoustic and Semantic Enhancements for Children with Cochlear Implants

Journal of Speech, Language, and Hearing Research Vol.56 1085-1096 August 2013

In this study, the authors examined how signal clarity interacts with the use of sentence context information in determining speech-in-noise recognition for children with cochlear implants and children with normal hearing.

Results: Word recognition in noise improved significantly for both groups of children for high-predictability sentences in clear speech. Children with normal hearing benefited more from each source of information compared with children with cochlear implants. There was a significant correlation between more developed language skills and the ability to use contextual enhancements. The smaller context gain in clear speech for children with cochlear implants is in accord with the effortfulness hypothesis (McCoy et al., 2005) and points to the cumulative effects of noise throughout the processing system.

Conclusion: Modifications of the speech signal and the context of the utterances through changes in the talker output hold substantial promise as a communication enhancement technique for both children with cochlear implants and children with normal hearing.

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