News From NAL



Hi Everyone,

As the Director of National Acoustic Laboratories, I am pleased to present the first edition of News From NAL - created for ACAud members.

The National Acoustic Laboratories is one of the world's oldest and leading hearing research and evidence-based innovation institutions. We are proud of our almost 80-year history, but we are also excited to share what we're working on now to transform hearing care and improve the lives of those with hearing difficulties.

In each bi-monthly newsletter I will provide a brief update, followed by articles in which you will learn more about NAL's work, updates from the industry and our partners and the impact of what we do.
For this edition's update, I'll share that NAL leaders and I recently attended the most important hearing aid conference in the world, which occurs every two years and attracts the best researchers from industry, academia, and healthcare institutions. We got a good look at what research is being done to apply AI to advance hearing

healthcare, and the future looks amazing.

The most interesting statement at this international conference was by Dr Matthew Fitzgerald, the Chief of Audiology at Stanford University and head of audiology for the Stanford Hospital and the Lucille Packard Children's Hospital. Matt is a world leader on the practice of audiological care. Matt commented that he would like to abolish the term "Best Practice" in audiological care because he sees it as a barrier to progress and an excuse to not introduce new approaches to hearing healthcare. In his experience, people say they do Best Practice to avoid doing anything different: If an audiologist is conducting "Best Practice", then clearly there is nothing more to improve because it is already the best. Matt suggested that what we are really doing when we follow professional guidelines for hearing care is the Minimum Standard of Care, which means that no one should be doing less than this and we should always be striving to do better. Matt embodies this with the advanced protocols of care that he has introduced at the Stanford Hospital. Matt provided a great example of how the words that we use can affect action and culture of an organisation, and Matt's comments caused a lot of interesting discussion for the rest of the conference.

Take care everyone, until next time,
Brent Edwards

In This Edition:

- **NAL Listens! *Contribute to NAL Research and Innovation***
- **Samsung collaborates closely with NAL for new OTC solution**
- **Strategic projects commenced to accelerate NAL's impact**
- **Community-Led Research for Better Childhood Hearing Outcomes**
- **Learnings from the LOCHI study**
- **NAL on the Global Stage**
- **NAL Publications**

Partnerships

NAL Listens

Contribute to NAL Research and Innovation



NAL Listens - and wants to hear from you! NAL's mission is to transform hearing care and improve the lives of those with hearing difficulties. For us to achieve our mission, we need to hear from clinicians to gather informed perspectives that will shape our research and future innovations. NAL Listens is NAL's Hearing Health Professionals Network connecting clinicians with opportunities to contribute to research and receive the latest updates from NAL.

If you're passionate about improving hearing outcomes through evidence-based practice, we'd love to hear from you.

NAL Listens! Sign up to contribute to NAL Research and Innovation

Innovation

Samsung collaborates closely with NAL for new OTC solution

Samsung has announced that its Galaxy Buds Hearing Aid feature has received U.S. FDA clearance, allowing compatible earbuds to function as Over the Counter (OTC) hearing aids for adults with perceived mild to moderate hearing loss. To develop this new OTC solution, Samsung collaborated closely with the National Acoustic

Laboratories (NAL) and Samsung Medical Center (SMC). The resulting technology is backed by robust clinical validation studies conducted at Vanderbilt University Medical Center, San Jose State University and the University of Memphis. Combined with a self-administered hearing test and personalised amplification, the technology brings clinically established hearing aid fitting principles into a consumer device. For people with hearing loss, this may help improve access to hearing support through familiar technology, while for clinicians it reflects the growing influence of NAL research beyond traditional hearing care settings, helping shape the next generation of consumer hearing technologies.

Read more: Samsung's Hearing Aid Feature on Galaxy Buds Cleared by FDA – Samsung Global Newsroom

Insights

Strategic projects commenced to accelerate NAL's impact

Following the launch of NAL's new Strategic Research Priorities, our organisation introduced a new call for acceleration project proposals to rapidly explore opportunities aligned with key challenges and unmet needs in hearing healthcare. Designed to support agile research and innovation, acceleration projects focus on quickly testing ideas, building capability, generating early evidence, and identifying opportunities for larger programs of work aligned with NAL's strategic direction.
The response from staff at NAL was strong, with dozens of project proposals submitted from across the organisation, and while there were many creative and innovative proposals, we could only select a few to proceed, with examples of the successful proposals that became projects including:

- Understanding Clinician Perspectives on AI-Supported Clinical Tools: Balancing Perceived Benefit, Risk, and Practical Use
- Discovery of Clinician Perspectives on Hearing Aid Follow-Up Methods to Inform Future Research
- Immersive Technologies for Hearing Healthcare: Opportunity Discovery and Prototyping
- Expanding the Possibilities with Digital Health & AI Technology for Hearing Healthcare
- Unlocking Insights from Real-World Sensor Data to Advance Research Insights

These projects reflect NAL's commitment to delivering research that informs clinical practice, generates real-world evidence, drives innovation in hearing healthcare technologies, and addresses evolving needs across the hearing health landscape.

Community-Led Research for Better Childhood Hearing Outcomes

Over the past five years, NAL's HearOut project has worked with Aboriginal and Torres Strait Islander communities to identify the outcomes that matter most for children affected by otitis media and related hearing difficulties, and to understand whether existing tools are suitable for tracking and supporting these outcomes. The project established community partnerships and the NAL Aboriginal and Torres Strait Islander Research Leadership Group, helping to ensure the research was guided by community priorities.
The research found that families and health professionals identified five key outcome areas:

- Ear and nose health
- Hearing
- Listening, speech and language
- Quality of life
- Treatment and care delivery

Families and health professionals also highlighted the importance of outcomes such as *hearing to be safe*, the impact of hearing on social situations, family empowerment to advocate for their child, and accessibility of treatment, care, and support.
To address gaps in available resources, the HearOut team co-adapted four existing tools with partner communities: **ERLI, PLUM, HATS, and OM-6**. The adapted tools, along with audio versions, supporting resources, and a guide for future adaptations and translations, were trialled with families, educators, and health workers and found to be feasible and acceptable for use. HearOut aligns with NAL's Strategic Priority of **Improved Outcomes for Childhood Otitis Media** and provides a foundation for culturally appropriate monitoring approaches, service delivery, and future research to improve hearing health outcomes for Aboriginal and Torres Strait Islander children.
In response to community feedback in NSW, NAL also commissioned the following artwork by Dharug artist Liam Fogg.



Learnings from the LOCHI study

New findings from the **Longitudinal Outcomes of Children with Hearing Impairment (LOCHI) study** suggest that children with mild bilateral hearing loss may continue to experience speech production difficulties even when hearing aids are fitted early. The study compared the speech production skills of five-year-old children with mild bilateral hearing loss who used hearing aids with their peers with typical hearing.

Key findings: Children with mild bilateral hearing loss demonstrated lower speech production accuracy than their peers with typical hearing, despite being fitted with hearing aids at an early age. The study found that children with mild hearing loss were more likely to have difficulty producing several speech sounds accurately, including **"s", "z", "v", and "ch"**, as well as higher rates of delayed speech patterns such as cluster reduction, final consonant deletion, stopping, and voicing errors. Importantly, there was considerable variation within the mild hearing loss group, highlighting that outcomes can differ substantially between children. The team also found no significant relationship between the age of first hearing aid fitting and speech production accuracy at five years of age, suggesting that ongoing monitoring and speech-language support may also play an important role throughout the preschool years.

While hearing aids remain an essential part of intervention, the findings reinforce the importance of continuing to monitor speech, language, listening, and hearing outcomes in children with mild hearing loss. The research highlights that hearing aid fitting alone does not guarantee age-appropriate speech production and that some children may benefit from additional support throughout the preschool years.

Partnerships



NAL researchers recently shared their work at two major international conferences, showcasing research spanning hearing technology, clinical care, AI, and real-world outcomes.

At the **World Congress of Audiology in Seoul**, presentations covered outcomes from the Nuance Hearing Glasses trial, support for people with subclinical hearing difficulties, and the NAL-NL3 Fitting System. Brent Edwards also presented on the future of AI in audiology, while **Vicky Zhang** received a **Best Poster Award** for her research.

NAL was also represented at **IHCON 2026**, with presentations on the NAL-NL3 Fitting System, the real-world use of AirPods Pro 2 as OTC hearing aids, and wearable-informed monitoring of listening effort and fatigue, highlighting NAL's ongoing contribution to evidence-based hearing healthcare and emerging technologies.

These conferences highlighted the breadth of NAL's research and provided valuable opportunities to share knowledge, exchange ideas, and strengthen collaborations across the global hearing research and audiology community.

NAL Publications

- Using NAL-NL3 in clinical practice: a modular NAL fitting system for real-world listening needs.

Learn how the NAL-NL3 Fitting System can be applied in everyday clinical practice. This article translates the research behind the NAL-NL3 Fitting System into practical guidance, helping clinicians select the most appropriate fitting approach based on patients' communication needs and everyday listening environments.

- **Evolving the philosophy: from the NAL rule to NAL-NL3**.

As hearing aid fitting becomes more sophisticated, understanding the philosophy behind a prescription is just as important as understanding the targets it generates. This article explores the thinking behind the NAL-NL3 Fitting System and why NAL has evolved to a modular approach, giving clinicians greater flexibility to address different hearing needs, technologies, and listening situations.

For more NAL publications click here.

We acknowledge the Aboriginal and Torres Strait Islander peoples, the Traditional Owners and Custodians of the land that we live and work on, and we pay our respects to Elders past, present and future.

NAL researchers are focused on projects that deliver impact and address unmet needs in hearing healthcare through translational research.