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The Canadian Academy of Audiology

Editor's Note: From our cousins south of the border about advocacy and the Americans with Disabilities Act (ADA)

We find that patients are frustrated when they learn their hearing aids do not have telecoils, and therefore they are unable to access hearing loops and other assistive listening systems, to which they are entitled through the ADA. And once they learn about the options available to them by having telecoils, they do not understand why they cannot "have it all" in one pair of hearing devices. They want Bluetooth, telecoils, the potential for Auracast (for when it is available in the future) and they want rechargeable batteries. We know that such devices exist and wonder why decisions are made that preclude these options for patients who want them.

Assistive Listening Systems are mandated by the Americans with Disabilities Act (ADA) to give people with hearing loss clarity that is impossible to receive with hearing instruments alone. However, there are multiple challenges for users to access them.

Two documents can be found on the Declaration webpage, along with 15 years of international declarations (Center for Hearing Access)

- **Overview:** Changes Needed to Access ADA Assistive Listening Systems (1 page)
- **Declaration** with specific actions in five areas (5 pages): Hearing instrument manufacturers; audiologists and hearing instrument providers; professional organizations for audiologists and other hearing instrument providers; assistive listening system manufacturers; and assistive listening system installers.

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Center for Hearing Access

Founded in 2024, the nonprofit Center for Hearing Access is a national advocacy and education initiative of The John G. Shedd Institute for the Arts in Eugene, OR. We champion and educate users, sites, hearing instrument specialists, and audiologists about all ADA-compliant assistive listening systems and other strategies to increase access to theaters, libraries, conferences, government offices, courtrooms, places of worship, and other public and private spaces. Effective hearing access can be life-changing for people with hearing loss to maintain community engagement.

We create and provide advocacy materials, ADA information, a speaker's bureau, videos, templates for users and owners/operators, articles, and vendor lists.

Editor's Note: From our friends at Hearing Health and Technology Matters (HHTM), one of the most respected blogs in the hearing health care industry; here are their top ten news stories of 2024. We thank HHTM for permission to reprint these stories and urge our readers to sign up for free at https://hearinghealthmatters.org to access their regularly appearing blogs written by industry leaders.

December 23, 2024

In 2024, the world of hearing healthcare continued to evolve with groundbreaking research, innovative technologies, and meaningful policy discussions. From significant advancements in gene therapy and regenerative treatments to the growing role of consumer tech in hearing solutions, this year brought transformative developments that are shaping the future of hearing health.

Below, we present the *Top 10 Most Read news stories of 2024*, offering a snapshot of the key milestones and insights that defined an extraordinary year in hearing healthcare.

Top 10 Hearing News Stories of 2024

1) Eli Lilly: Gene Therapy Clinical Trial Restores Hearing in First Participant Within 30

Days

In January, Akouos, a subsidiary of Eli Lilly, announced that the first participant in their Phase 1/2 AK-OTOF-101 gene therapy trial experienced restored hearing within 30 days of administration. The 11-year-old participant, who had over a decade of profound hearing loss, achieved hearing thresholds within the normal range at some frequencies, with no serious adverse events reported.

2) Apple Introduces OTC Hearing Aid Function for AirPods Pro 2

In September, Apple announced that the AirPods Pro 2 would include over-the-counter (OTC) hearing aid functionality, allowing users with mild to moderate hearing loss to conduct a clinically validated hearing test and personalize their hearing experience directly through the earbuds following a simple software update. This advancement positions the AirPods Pro 2 as a significant step toward making hearing assistance more accessible, blending everyday technology with clinically validated hearing aid capabilities to reach a broader audience.

3) Study Shows Microplastics Can Cause Hearing Loss and Balance Issues in Mice

A study published in the *Journal of Hazardous Materials* in July found that exposure to polyethylene microplastics can lead to hearing loss and balance issues in mice. The research found that these microplastics can accumulate in the inner ear, causing functional impairments and triggering molecular pathways associated with inflammation and cell death.

4) Newly Developed Surgical Method Promises to Transform Hearing Loss Cell Therapy

Rinri Therapeutics, a University of Sheffield spinout, has developed a less invasive surgical technique to deliver regenerative cell therapy directly to the auditory nerve via the inner ear's round window. This method will be utilized in upcoming human trials for Rincell-1, their lead product aimed at treating hearing loss by restoring nerve connections between the inner ear and the brain.

5) Study Links Noise-Induced Hearing Loss to Zinc Levels in the Inner Ear

A study published in the *Proceedings of the National Academy of Sciences* in February, revealed that excess zinc in the inner ear following exposure to loud noise contributes to noise-induced hearing loss. Experiments in mice demonstrated that drugs acting as molecular sponges to trap this excess zinc can either restore lost hearing or prevent hearing loss when administered before exposure to loud sounds, suggesting a potential new treatment avenue for humans.

6) Sound Pharmaceuticals Completes Phase 3 Trial of SPI-1005 for the Treatment of Meniere's Disease

Sound Pharmaceuticals has completed its Phase 3 clinical trial of SPI-1005, an oral anti-inflammatory drug containing ebselen, for the treatment of Meniere's Disease. The trial demonstrated significant improvements in hearing loss and speech discrimination among participants, marking a potential breakthrough for a condition that currently lacks FDA-approved medical treatments.

7) Apple Hearing Study Unveils New Insights on Tinnitus in Landmark Survey

In March, Apple and the University of Michigan released findings from the Apple Hearing Study, analyzing data from over 160,000 participants to better understand tinnitus prevalence, causes, and management strategies. The study revealed that 77.6% of participants have experienced tinnitus, with noise exposure and stress identified as key contributors, highlighting the need for improved treatment approaches.

8) New Study Questions Benefits of High-Dose Steroids for Sudden Hearing Loss

Germany researchers examined the effectiveness of high-dose glucocorticoids for sudden sensorineural hearing loss (SSNHL) across 39 sites in Germany. Led by Prof. Stefan Plontke, the trial found no significant difference in hearing recovery between high-dose and standard-dose steroid treatments, while higher doses were associated with more adverse effects, underscoring the need for further placebo-controlled research.

9) Who Needs OTC Hearing Aids? New Research Offers Demographic and Audiological Breakdown of U.S. Adults Most Likely to Benefit

A study led by Dr. Larry E. Humes from Indiana University analyzed data from recent NHANES surveys to profile U.S. adults with perceived mild-to-moderate hearing loss, the primary target group for OTC hearing aids. The findings estimate that around 49.5 million adults fall into this category, with prevalence notably higher among older adults, males, and those with lower socioeconomic status—highlighting critical opportunities to improve hearing healthcare accessibility and inform future policy decisions.

10) Academy of Doctors of Audiology Launches Audiology 2050 Initiative

During the AuDacity 2024 Conference, the Academy of Doctors of Audiology (ADA) announced the launch of the Audiology 2050 Initiative. This strategic roadmap focuses on modernizing the scope of practice, establishing standardized clinical guidelines, and advocating for legislative changes to enhance patient care and professional standards in audiology. In a subsequent interview on *This Week in Hearing*, ADA President, Dr. Jason Leyendecker, and President-Elect, Dr. Amyn Amlani, provided further insights into the initiative, discussing its goals and the steps required to achieve them.

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Science Advances For Deaf And Hard Of Hearing Communities: Canadian Hearing Services Global Partnerships For Research & Innovation Awards Four New Research Grants

January 14, 2025, Toronto - CHS Global Partnerships for Research & Innovation, the research and innovation arm of Canadian Hearing Services, is proud to announce the awarding of four new research grants, totaling $315,000, to institutions leading research aimed at improving the quality of life for Deaf and hard of hearing people.

The selected research projects hold immense promise to advance understanding and foster breakthroughs in hearing health and Deaf studies.

“We are thrilled to congratulate this year’s grant recipients and celebrate their innovative contributions to advancing research that supports improving the quality of life for Deaf and hard of hearing individuals,” says Julia N. Dumanian, President & Chief Executive Officer of Canadian Hearing Services. “By supporting this essential work, we are driving meaningful impact for Deaf and hard of hearing communities worldwide.”

We are honored to present the following principal investigators and their host institutions with CHS Global Partnerships for Research & Innovation Research Grants:

John A. E. Anderson, Ph.D, Carleton University (Grant Award: $98,598)

Exploring Cognitive Reserve in Adults With Acute and Chronic Hearing Loss Using Multi-Modal MRI. Submitted by John A. E. Anderson, Ph.D, this project will identify brain regions associated with cognitive reserve in various types of hearing loss, determine how the type of hearing loss and cognitive reserve relate, and offer suggestions to mitigate the decline, providing a framework to assess cognitive intervention in the Deaf and hard of hearing community. Learn more.

Susan Scollie, Ph.D., Western University (Grant Award: $67,150)

Achieving Exercise Accessibility and Understanding Fitness Benefits for Adults Who are Hard of Hearing. Submitted by Susan Scollie, Ph.D., this project will develop new training methods for promoting hearing-accessible fitness classes, study important hearing technologies that can make hearing easier, and assess the benefits of a hearing-accessible fitness program on hearing function, cognitive abilities, and the satisfaction of the exercise participants. Learn more.

Ewan Macpherson, Ph.D., Western University (Grant Award: $49,815)

Perception and Joint Optimization of Reverberation and Hearing Aid Settings for Hard of Hearing Musicians. Submitted by Ewan Macpherson, Ph.D., this project will investigate the sensitivity to, and preferences for, the acoustic characteristics of performance spaces of musicians who use hearing aids. Findings from this project will inform the development of guidelines for acoustical treatments to optimize performance spaces for hard of hearing musicians, creating more inclusive and accommodating spaces for musicians with hearing difficulties. Learn more.

Walter Wittich, Ph.D., Université de Montréal (Grant Award: $100,000)

Growing Up & Being Deafblind: Analyzing Comparative Case Studies From the Global South and North to Illuminate Enablers That Lead Towards the Achievement of the UN Sustainable Development Goals. Submitted by Walter Wittich, Ph.D., this project will explore the experiences of adults with congenital or early-onset deafblindness, who may have finished compulsory/formal education, and/or might have had some experience of employment, and/or further studies. Findings will inform the development of an international project that will result in policy recommendations and contributions towards the achievement of the international community's agreed Sustainable Development Goals. Learn more.

The winning projects were rigorously evaluated by our Grant Review Panel, comprised of 55 established national and international researchers from different areas of the globe including Canada, the United States, Europe, and Australia.

"Understanding hearing access in a real-world setting is crucial for creating fitness programs that meet the needs of Canadian adults experiencing hearing loss. The CHS Global Partnerships for Research & Innovation grant gives us the opportunity to explore the impact of hearing-accessible fitness classes for those who use hearing technologies," said Dr. Susan Scollie, Director of the National Centre for Audiology at Western University and Principal Investigator on the research grant. "The collaboration between Western's Canadian Centre for Activity and Aging and the National Centre for Audiology is essential to the study, ensuring a co-design process where feedback from participants and instructors informs future exercise and training initiatives."

We are excited to announce that on January 20, 2025, CHS Global Partnerships for Research & Innovation will begin accepting call for proposals for the two-year funding cycle beginning in fall 2025. Visit our Funding Application page for more details.

About CHS Global Partnerships for Research & Innovation Research Grants

In January 2024, CHS Global Partnerships for Research & Innovation launched its call for proposals for the two-year funding period (2024-26). We received an overwhelming response from the scientific community, all of which aligned and supported our Research Areas of Focus, which are as follows:

HEARING HEALTH: Prevention, identification, assessment, treatment and (re)habilitation of auditory and balance difficulties.

HEARING SCIENCE: Research activities in the fields of acoustics, neuroscience, and psychology concerning perception of sound.

DEAF STUDIES: Research activities in the fields of sociology, language, and inclusivity of Deaf individuals.

QUALITY OF LIFE: Research related to the impacts of being Deaf or hard of hearing as it relates to an individual's ability to participate and enjoy life activities.

For several months, our Grant Review Panel, comprised of 55 established national and international researchers from different areas of the globe including Canada, the United States, Europe, and Australia, diligently reviewed research funding applications, ensuring that any grant

awarded by CHS Global Partnerships for Research & Innovation supports research of the highest quality and improves the quality of life for Deaf and hard of hearing individuals. Our Research & Innovation Advisory Council, comprised of senior researchers, acted as observers and strategic advisors to ensure a fair and transparent awards process, making recommendations to the Board of Directors on Full Applications approved for funding.

We are very grateful to our Research & Innovation Advisory Council and Grant Review Panel members for voluntarily contributing their time and expertise.

View the Research & Innovation Advisory Council here.

View the full list of Grant Review Panel members here.

About Canadian Hearing Services Global Partnerships for Research & Innovation

CHS Global Partnerships for Research & Innovation is a non-profit organization and strategic leader in the advancement of research and innovation that improves the quality of life for Deaf and hard of hearing individuals. As the research and innovation arm of Canadian Hearing Services, it supports intellectual inquiry by providing research grants that address multifaceted issues related to hearing loss and facilitates innovative solutions for the sector.

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