25th ANNUAL CONVENTION

Redefining Audiology: Innovation in Service Delivery and Audiologic Care

The Brown Palace
Denver, CO
October 19-21, 2017
PROGRAM

- AGENDA
- SESSIONS & SPEAKERS
- POSTERS
- TECH SESSIONS
- CEU INFORMATION
- KEYNOTE ADDRESS, OPENING RECEPTION, & AUCTION
- PROFESSIONAL ISSUES COFFEE HOUR
- LUNCHEON, KEYNOTE ADDRESS, AWARDS CEREMONY, & BUSINESS MEETING
- SOCIAL EVENT
- THE BROWN PALACE MAP
- EXHIBITS
- VENDOR DIRECTORY
- 2017 BOARD
# AGENDA

**AGENDA**

**REDEFINING AUDIOLOGY: INNOVATION IN SERVICE DELIVERY AND AUDIOLOGIC CARE**  
**COLORADO ACADEMY OF AUDIOLOGY**  
**2017 FALL CONVENTION**  
**THURSDAY**

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<tr>
<td>12:00 PM</td>
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<tr>
<td>12:00 PM - 12:45 PM</td>
<td>Tech Session</td>
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<td><strong>HIGHLANDS</strong></td>
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<tr>
<td>12:45 PM - 1:00 PM</td>
<td>Break</td>
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<td>1:00 PM - 2:30 PM</td>
<td>Aural Rehab: The Right Way to Stay Ahead of the Game</td>
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<td><strong>Speaker: Dusty Jessen</strong></td>
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<td>2:30 PM - 2:45 PM</td>
<td>Break</td>
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<tr>
<td>2:45 PM - 4:15 PM</td>
<td>Effective Use of Speech-in-Noise Testing in the Clinic</td>
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<td><strong>Speaker: Cory Portnuff and Barbara Bell</strong></td>
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<td>4:15 PM - 4:30 PM</td>
<td>Break</td>
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<tr>
<td>4:30 PM - 6:00 PM</td>
<td>Navigating the Risks and Rewards of Non-Custom Amplification Devices &amp; Alternative Service Delivery Models</td>
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<td><strong>Keynote: Brian Taylor</strong></td>
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<td><strong>BALLROOM A</strong></td>
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<td>7:30 AM</td>
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<td>7:30 AM</td>
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<td>7:30 AM</td>
<td>Professional Issues Coffee Hour</td>
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<td>CAA Members</td>
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<td>Topics: OTC, Newborn Hearing, and other Legislation</td>
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<td>Talk with our Lobbyists, Debbie Mohney from HLAA, and our VP of</td>
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<td>Professional Issues</td>
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<td>LARIMER</td>
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<td>8:30 AM</td>
<td>Practice Survival in the 21st Century Competitive Environment, Part 1</td>
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<td>Speaker: Robert M. Traynor</td>
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<tr>
<td>10:00 AM</td>
<td>Break</td>
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<td>Practice Survival in the 21st Century Competitive Environment, Part 2</td>
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<td>Speaker: Robert M. Traynor</td>
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<td>CAA Business Meeting</td>
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<td>Third Party Program Strategies for Audiology</td>
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<td>Speaker: Daniel Keller</td>
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<td>UNITRON Tech Session</td>
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## REDEFINING AUDIOLOGY: INNOVATION IN SERVICE DELIVERY AND AUDIOLOGIC CARE
COLORADO ACADEMY OF AUDIOLOGY
2017 FALL CONVENTION
SATURDAY

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<tr>
<td>7:45 AM</td>
<td>Breakfast</td>
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<td>8:45 AM</td>
<td>RELAY COLORADO Tech Session</td>
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<td>WIDEX Tech Session</td>
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<td>LARIMER</td>
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<td>8:45 AM</td>
<td>Exhibits Open Skybridge</td>
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<td>9:30 AM</td>
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<td>9:45 AM</td>
<td>Telecommunications Equipment for Deaf, Hard of Hearing and Deaf-Blind</td>
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<td>Speaker: JoAnne Hirsch</td>
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<td>Update on Regenerative Therapies for Hearing Loss – What to Tell Your</td>
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<td>Patients</td>
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<td>11:00 AM</td>
<td>The VA – What can it offer my Veteran patient?</td>
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<td>Speaker: Tristan Lien</td>
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<td>BALLROOM A</td>
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Aural Rehab: The Right Way to Stay Ahead of the Game

(.15 CEUs)

Dusty Jessen

Aural rehabilitation is the comprehensive service that sets audiologists apart from the commodity options available to consumers today. However, current rehabilitative models tend to focus on technology and often omit the critical education and counseling that should be at the core of our treatment plans. Attendees leave this course equipped with a comprehensive aural rehabilitation plan that includes communication needs assessments, educational and counseling tools, auditory training programs, and strategies for effective follow-up care. Reimbursement models will also be discussed.

Bio:

Dusty Jessen is the owner of Columbine Hearing Care in Littleton, Colorado. She is also the founder of the 5 Keys Communication aural rehabilitation program and author of the "5 Keys to Communication Success" patient handbook. Dr. Jessen has presented nationally and internationally and her articles on aural rehab have been published in several industry journals. She is committed to helping hearing care professionals stand apart from the competition by providing a comprehensive communication solution that sets them apart from the commodity options available to consumers today.
Legal, Ethical, and Moral Obligations for Audiologists

(.3 Tier 1 CEUs)

Michael D. Page

Many clinicians are unaware of the nuances of the legal, ethical and even moral obligations to which they are subject. Each category has implications of relationships with patients, industry and colleagues. This presentation will provide overview and guidelines for knowing and applying the many aspects of these responsibilities within the everyday context of our worthy professional work. Some legal aspects even carry the disclaimer that “ignorance is no excuse,” where significant professional and financial penalties apply. It therefore behooves every professional to be aware of and be held accountable to these important professional aspects.

Bio:

Michael Page, AuD, has experience in adult and pediatric cochlear implants and aural habilitation, including surgical device training. He served as a member of the Utah Cochlear Implant team, president of the Utah Speech-Language-Hearing Association, chair of the Advisory Board for the Division for the Deaf and Hard of Hearing, member of the Primary Children’s Medical Center Bioethics Committee, and board chair for the Division of Occupational and Professional Licensing (Audiology and Speech Language Pathology). He has also held adjunct faculty positions at Utah State University, Brigham Young University, and University of Utah. He served as chair of the American Academy of Audiology Ethical Practices Committee, manager of the Audiology and Cochlear Implant team for Primary Children’s Hospital, and is currently directing his private practice business providing audiology and health care ethical practices leadership training.
Effective use of speech-in-noise testing in the clinic
(.15 CEUs)
Cory Portnuff
Barbara Bell

This presentation will discuss ways to incorporate speech-in-noise testing into your daily clinical practice, both for diagnostic and functional measures of speech perception as well as evaluation of hearing devices. Several options for speech-in-noise tests will be presented, and advantages of each options will be discussed. The presentation will discuss the role of evidence-based speech-in-noise tests in evaluation for hearing implants and single-sided deafness treatment options and protocols for both adults and children. Case studies will be included. In addition, emerging uses of speech-in-noise tests will be presented. Issues regarding insurance billing for speech-in-noise testing will be discussed.

Bio:

Dr. Cory Portnuff is a clinical audiologist at the University of Colorado Hospital with an Au.D. (Doctor of Audiology) and a Ph.D. in Hearing Science from the University of Colorado at Boulder. In the clinic, he works with patients of all ages, with a focus on audiologic rehabilitation, treatment for tinnitus and services for musicians. Dr. Portnuff is board certified in audiology with a specialty certification in pediatric audiology. His research focuses on noise-induced hearing loss in children, with a particular emphasis in understanding music-induced hearing loss and MP3 players using health belief modeling.

Dr. Barbara Bell is a clinical audiologist at the University of Colorado Health Hearing and Balance Clinic. She received her M.A. at the University of Northern Colorado and her Au.D. from Central Michigan University. She works mainly with adults, as well as the vestibular testing team. Her interests include single-sided deafness evaluation and rehabilitation, clinical efforts to improve outcomes and she enjoys working with AuD students.
Navigating the Risks and Rewards of Non-Custom Amplification Devices & Alternative Service Delivery Models

(.15 CEUs)

Brian Taylor

Most agree that audiology is embarking on a period of dramatic change. Although the underlying drivers of this change are complex and subject to debate, there are two long term consequences audiologists must confront: The provision of non-custom amplifiers sold directly to consumers and the use of alternative service delivery models involving tele-medicine & mobile health. Non-custom amplification devices, broadly defined entail everything from personal sound amplification devices (PSAPs), assistive listening devices (ALDs), amplification smartphone-based apps, and the yet-to-be-created category of over-the-counter (OTC) hearing aids. Part 1 of this course explores the underlying public health rationale for embracing these devices, an evidence-based review of their efficacy and effectiveness, and current real world examples of clinics that are using non-customized amplification devices to provide more comprehensive and inclusive solutions for patients. Part 2 will focus on interventional audiology and the use of alternative service delivery models involving tele-health, audiology assistants and automated testing using machine learning principles. The primary message of this presentation is that to grow their businesses and provide value to their communities audiologist must embrace both non-custom amplification and alternative service delivery models.

Bio:

Brian Taylor serves as director of clinical audiology for the Fuel Medical Group. He is also editor of Audiology Practices, the quarterly publication of the Academy of Doctors of Audiology, and hearing news section editor for the blog Hearing Healthcare and Technology Matters. Dr. Taylor has written and edited several articles & textbooks devoted to practice management and clinical audiology, including the soon-to-be-published 3rd version of Practice Management from Thieme Press. Brian resides in Golden Valley, MN
Practice Survival in the 21st Century Competitive Environment

(.3 Tier 1 CEUs)

Robert M. Traynor

Over the past 10 years the number of competitors in the hearing health care field has increased exponentially. Some of these clinics are newly established audiology or hearing aid dispensing practices, others are big box stores, government clinics, manufacturer’s competitive clinics, manufacturer owned buying group clinics, insurance companies, internet companies, and, now over the counter hearing devices. Audiology has now become a very competitive business. Competition, in general, is healthy as it keeps product and service costs down and promotes clinical competence within the marketplace. Competition is also a formidable adversary to business success as it reduces the number of individuals seeking products and services to individual practices. At first glance, this new competition may seem to be an unsurmountable challenge but this presentation offers an analysis of the Baby Boomer population that puts the competition and those that require products and services into the proper perspective. While there is a certain percentage of patients that will choose price over service and/or competence, the majority appreciates the benefits offered by full service practices. The goal then is to differentiate a particular practice from others that appear to provide the same products and services for less cost. Once the practice is differentiated and analyzed according to the competition, a strategy is developed that insures that each patient has a unique and better than expected experience from their first call to the their last follow up visit.

Three steps to practice differentiation are presented in this presentation, 1) understanding market forces, 2) conducting a detailed analysis of the competition, and 3) methods of developing a strategy to successfully compete in a specific market.

Bio:

Robert M. Traynor, Ed.D., MBA is the CEO and practicing audiologist at Audiology Associates of Greeley, Inc., Greeley, Colorado, offering all general audiological services to patients of all ages. Dr. Traynor holds degrees from the University of Northern Colorado (BA, 1972, MA 1973, Ed.D., 1975), the University of Phoenix (MBA, 2006) as well as Post-Doctoral Study at Northwestern University (1984). He taught Audiology at the University of Northern Colorado (1973-1982), University of Arkansas for Medical Sciences (1976-77) and Colorado State University (1982-1993)and Directed the Colorado State Audiology Program form 1986-1993. He was Senior International Audiology Consultant to a major hearing instrument manufacturer for 17 years serving on research and development committees and traveling all over the world providing academic audiological and product orientation for distributors and staff. Dr. Traynor is also a retired Lt. Colonel from the US Army Reserve Medical Service Corps and currently serves as an Adjunct Professor of Audiology at the University of Florida, the University of Colorado, and the University of Northern Colorado. The Colorado Academy of Audiology awarded Dr. Traynor their 2014 Lifetime achievement Award and inducted in to the National Academies of Practice in 2017. A clinician, professor and practice manager for over 35+ years, Dr. Traynor has lectured on most aspects of the field of Audiology in over 40 countries. Dr. Traynor is the current Chair of the American Board of Audiology and the co-author of Strategic Practice Management a text used in most universities to train audiologists in practice management, just updated to the 3rd edition.
What is the return on investment for innovations in pediatric audiology?

(.1 CEUs)

Kristin Uhler

The benefits of universal newborn hearing screening require no explanation. Over the past twenty years, we have gained tremendous awareness of the challenges for the pediatric audiologist, including variability in outcomes in spite of meeting the 1-3-6 guidelines and developing evidence based practices (e.g., Pediatric Minimum Speech Test Battery) for this ever-evolving healthcare field. We will discuss effectively managing pediatric patients using current best practice guidelines in the context of busy clinical setting and with patients and their families. New research will be presented aimed at identifying a biomarker if infant speech perception in an effort to improve hearing aid fittings. The potential role of new clinical diagnostics on management strategies and parent counseling will explored.

Bio:

Kristin Uhler, PhD is an Associate Professor in the Departments of Physical Medicine and Rehabilitation, Otolaryngology, and Psychiatry at the University of Colorado School of Medicine. She has been at the school of medicine since 2009 and at Children’s Hospital Colorado since 2015. Dr. Uhler received her B.A. from University of Northern Colorado in 1998, her M. A. in Audiology in 2000, and completed her Ph.D. from the University of Colorado in 2008. She has practiced as an audiologist since 2000, and works to refine the research tools in an effort to decrease the age at which speech perception can be assessed and how speech perception relates to later language development. Her research focuses on developing a biomarker of infant speech perception in infants with and without hearing loss. Clinically, she strives to standardize protocols to develop good clinical practices locally and nationally. She has successfully completed several research grants and project and is currently funded on a mentored K23 grant funded through the National Institute of Health/National Institute on Deafness and other Communication Disorders. She is the Chair of Audiology, Speech Pathology, and Learning Services; Kelley Family/Schlessman Family Scottish Rite Masons Chair in Childhood Language Disorders.
Third Party Program Strategies for Audiology

(.15 CEUs)

Daniel Keller

The second fastest growing channel in the hearing aid industry is the distribution of product within third party contracts. However, this model changes the economics of a standard hearing aid fitting. How does a clinic know if they should sign up to be a Network Provider for a contract that provides only a fitting fee? This course provides a formula to evaluate a contract, calculate the reimbursement rate and determine if a network contract holds value for the patient, the provider and the clinic.

Bio:

Daniel Keller is a Regional Manager at Fuel Medical Group where he helps develop customized growth plans for practices to increase their profitability. Following completion of his Au.D. from Utah State University he began a career as a Clinical Audiologist at Vanderbilt University. A year later he took a clinical position with Intermountain Health Care in Salt Lake City, Utah. These positions allowed him to excel in his areas of interest and specialize in vestibular assessment and intraoperative monitoring. Six years prior to working with Fuel Medical, Daniel was a Field Sales Executive for a leading hearing aid manufacturer.
Telecommunications Equipment for Deaf, Hard of Hearing and Deaf-Blind
(.1 CEUs)

JoAnne Hirsch

The Telecommunications Equipment Distribution Program (TEDP) is a state program that provides FREE telecommunication equipment, such as amplified and captioned phones and wireless devices as well as accessories (ring signalers and neck loops or head sets) and specialized equipment to qualified deaf, hard of hearing and deaf-blind. Individuals who are becoming or are hard of hearing or those that wear hearing aids or cochlear implants can benefit from amplified technology, as it amplifies their hearing and gives them the ease of using a phone with added benefits. Most consumers would benefit from an amplified phone, depending on their hearing acuity. Individuals with hearing aids or cochlear implants can benefit from this amplified technology as it amplifies and adjusts the tone of the caller's voice and gives them the ease of using a phone with added benefits. And with a neck loop or headset, which the program provides, they can get greater, direct amplification. The program also provides captioned phones, which allows a person who is profoundly deaf or hard of hearing to read the conversation and the phone provides some amplification. The person will need to be at the phone to read the conversation. Our program wants to match the right device for the individual to ensure the person uses it to the fullest capacity. The equipment itself gives the person independence and accessibility to family and the community at large.

Bio:

JoAnne Hirsch is the Communications Technology Program Manager at the Colorado Commission for the Deaf and Hard of Hearing (CCDHH). Through its Telecommunications Equipment Distribution Program (TEDP) she provides telecommunications-related equipment, resources and outreach to deaf, hard-of-hearing and deaf-blind Coloradoans. Prior to joining CCDHH in 2012, she worked for Business Wire, a global commercial press release distribution service, in Los Angeles and Denver for more than 19 years. She counseled clients and prospects from public and private companies on press release editing, writing, financial disclosure, search engine optimization (SEO) and social media. She also created and coordinated all local events, inviting media on various topics that assisted the community, and represented the company at trade shows. JoAnne has also worked as a marketing assistant for LA Parent Magazine, a marketing assistant for California State University, Northridge, and volunteered for various deaf and hard-of-hearing organizations, such as Tripod Open Caption Films and Deaf Arts Council. She holds Bachelor’s degrees in both Journalism and Deaf Studies from California State University, Northridge.
Update on Regenerative Therapies for Hearing Loss – What to Tell Your Patients
(.1 CEUs)

Samuel Paul Gubbels

The pursuit of novel therapies for the treatment of hearing loss through the regeneration of the hair cells of the inner ear has been the focus of intense research in auditory science for decades. A number of approaches have been taken in efforts to regenerate the hair cells of the inner ear in mammals to date, each with inherent advantages and limitations. The objective of this presentation is to describe the approaches being taken in the pursuit of regenerative therapies for hearing loss and to review some of the most important recent developments in this area. The presentation will include discussion of the major challenges facing this area of research and how emerging technologies may help to overcome them. This talk assumes no prior scientific research experience and aims to provide a framework for the practicing audiologist to interpret and critically evaluate published scientific findings in this area in the future so that they can counsel knowledgeably when asked by patients about future treatments for hearing loss.

Bio:

Samuel Paul Gubbels, MD, is an Associate Professor in the Department of Otolaryngology. He joined the University of Colorado in 2015 after a seven year period as a faculty member at the University of Wisconsin – Madison. Dr. Gubbels completed his Otolaryngology residency at the Oregon Health Sciences University then did his Neurotology fellowship at the University of Iowa. Dr. Gubbels has an Otology & Neurotology clinical practice dedicated to managing hearing loss, balance disorders and diseases of the skull base. He has particular interest in cochlear implantation, hearing preservation, acoustic neuroma, otosclerosis, Meniere’s disease and facial nerve disorders. In addition, he runs a research program focused on evaluating stem cells as a means to better understand and treat hearing loss in humans. Dr. Gubbels’ lab is interested in using a variety of stem cell types to model the development, disease and regeneration of inner ear hair and supporting cells in vitro. His research focuses on defining a method to reliably direct the differentiation of human pluripotent stem cells into auditory hair cells and other inner ear cell types. Furthermore, he seeks to evaluate the ability of these cells to integrate into the appropriate areas of the inner ear upon transplantation by using a novel, developmental in vivo model system. In addition, his research uses a number of transgenic mouse models to evaluate the persistence of a population of stem cell-like cells in the adult mammalian cochlea. His laboratory is funded by the NIH/NIDCD and University of Colorado School of Medicine.
The VA – What can it offer my Veteran patient?

(.1 CEUs)

Tristan Lien

Do you have questions about VA Audiology services? Unsure of whether your patient is eligible for VA Audiology services? Wondering what to tell your Veteran patients to help them get started? Let’s talk about it! This session is aimed at answering some common questions about Audiology within the VA and to increase your knowledge about available services so you are better prepared to help your patient start the process.

Bio:

Dr. Lien completed her Bachelor’s degree in Speech, Language, and Hearing Sciences in 2011 and Doctoral degree in Audiology in 2016 at the University of Colorado at Boulder. She completed her fourth year rotation at the Denver Veterans Affairs Medical Center (DVAMC). Dr. Lien currently works at the DVAMC as a clinical audiologist and the interfacility telehealth program manager. Specifically, she developed and manages a TeleAudiology program between Colorado and rural Wyoming sites that provides audiologic services to Veterans in underserved locations.
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<td>Caleb Kronen (presenter) Cory Portnuff</td>
<td>Output Levels of Volume-Limiting Headphones</td>
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<td>Nina Harris, B.A. (presenter) Hannah Glick, Au.D. Erin Duncan, B.A., B.S. Emily Deeves, B.A. Anu Sharma, Ph.D.</td>
<td>A new test for measuring speech in noise perception with and without visual cues</td>
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<td>The role of sensation level on speech discrimination for infant hearing aid users</td>
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<td>Erin Elizabeth Duncan, B.A., B.S. (Presenter) Hannah Glick, Au.D. Dennell Benson, B.A. Emily Deeves, B.A. Nina Harris, B.A. Anu Sharma, Ph.D.</td>
<td>Neuroplasticity &amp; Age-Related Hearing Loss</td>
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<td>Defining a severity scale for the Dizziness Handicap Inventory-Screener (DHI-S) and its correlation to specific vestibular pathologies</td>
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<td>Darcy Strong (presenter) Nyssa Farrell Samuel Gubbels</td>
<td>Spontaneous, Significant Migration of a Lateral Wall Electrode Necessitating Re-implantation</td>
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<td>Emily Deeves, B.A. (Presenter) Erin Duncan, B.A., B.S. Hannah Glick, Au.D. Nina Harris, B.A. Anu Sharma, Ph.D.</td>
<td>Clinical Utility of the P1 CAEP Biomarker in Children with Cochlear Nerve Deficiency</td>
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Output levels of volume-limiting headphones
(.025 CEUs)

Caleb Kronen
Cory Portnuff

With the advent of tablets, smart phones and many other portable ways of accessing media, children ages 8 to 18 spend an average of over seven hours per day to the use of entertainment media (Rideout et al., 2010). The headphone industry has responded to concerns of music-induced hearing disorders by creating a class of volume-limited earphones marked for children. Unfortunately, there has yet to be peer-reviewed scientific research examining the sound level produced by volume limiting earphones. This study measured the output levels produced by 30 of these products using measurements on an acoustical manikin. By recording the root-mean-square and the peak intensity level output of the earphones for inputs of pink noise and music, the results of this study show which earphones meet their manufacturer’s claims regarding their maximum output. The percentage of earphones which actually limited per manufacturer’s claims are 76% when the signal was music and 92% when the signal was pink noise. The earphones that did not have claims were examined to see which earphones limit to 85 dBA. Of the earphones without manufacturer claims, 25% limited output to 85 dBA when the input was music and 37.5% when the input was pink noise.

Bio:

Caleb Kronen is a third-year audiology doctoral student at the University of Colorado. After dedicating three years of research in the area of hearing loss, at the University of Colorado Hearing Research Laboratory, and working with patients of all ages in clinical rotations, Caleb Kronen has focused his research on noise-induced hearing loss in young children. He also has spent two years working on studies in the Laboratory of Dr. Yoshinaga-Itano, examining the effects that hearing loss has on the language, speech and social-emotional development of children.

Cory Portnuff (co author): I am a board certified clinical audiologist, and a researcher in hearing loss prevention with a long track record of research and teaching in this area. I wrote the study which is being presented and the initial research in the area of hearing loss due to headphone overuse. I am also a Certified Professional Supervisor of the Audiometric Monitoring Program.
Employment Hazards: A Case Study of Occupational Noise Exposure in the Music Industry

(.025 CEUs)
Madison Graham

Objective: This study examines how three professionals within the music industry (sound engineer, security guard, and lighting technician) experience noise exposure during the same live music events. Methods: Data were collected at one 25,000-seat outdoor music venue with a metal roof during four concerts. The three individuals were located in three separate areas of the venue, and the location remained constant for each concert. Integrated sound level averages were taken with an integrated sound level meter and noise exposure dosage for both NIOSH and OSHA criteria were measured using a Q-200 noise dosimeter. Results: When considering noise exposure as a dose and the NIOSH criteria, the dose was as follows: 653.2% (sound engineer), 801.1% (lighting technician) and 802.2% (security guard). When considering noise exposure as a dose and the OSHA criteria, the dose was as follows: 89.37% (sound engineer), 112.6% (lighting technician) and 113.3% (security guard). Conclusion: All three individuals within the venue were exposed to levels that are considered high risk. These measurements provide some preliminary insights into how sound levels may vary within the same venue for individuals with different professional roles. Therefore, the results have implications for hearing conservation programs for professionals in the music industry.

Bio:

Madison Graham is a second-year Doctorate of Audiology student at the University of Colorado- Boulder. She earned her Bachelor’s of Science in Speech, Language and Hearing Science and Business Management at The University of Wyoming. Before starting her doctorate, she worked in the music industry as a concert promoter for four years. During these years, she worked with national touring musicians and learned first hand the hearing protection habits of many employees and musicians in the industry. Two of her biggest passions are live music and audiology and hopes that one day the two can live in harmony!
A new test for measuring speech in noise perception with and without visual cues

(.025 CEUs)

Nina Harris (presenter)
Hannah Glick
Erin Duncan
Emily Deeves
Anu Sharma

Speech-in-noise perception is a frequently used clinical measurement to provide insight into how well a patient can understand speech with and without amplification. However, no clinically used assessments incorporate the reliance on visual cues. The Arizona State University Audiovisual (AZAV) speech-in-noise assessment allows clinicians to test speech perception in noise, in both auditory-only and auditory-visual conditions. The AZAV test has been administered to a small group of adult research subjects, to establish normative data. This poster outlines the findings of those tests in three different demographics: older adults with long-term hearing loss, older adults with recently diagnosed hearing loss participating in a hearing aid trial, and young adults with normal hearing. Clinical use of this test will allow provide deeper insight into real-life speech perception in noise, and may allow clinicians to provide individually tailored aural rehabilitation plans.

Bio:

Nina Harris (Presenter)

Nina Harris is a first year AuD/PhD student at the University of Colorado Boulder. She is interested in longterm and short-term effects of hearing loss on cortical development and function. She has been working in the Brain and Behavior Lab at the University of Colorado Boulder for over two years.
The role of sensation level on speech discrimination for infant hearing aid users

(.025 CEUs)

Paige Mowery
Melinda Anderson
Kristin Uhler

The clinical assessment of infant speech discrimination has the potential to enhance our ability to fine tune hearing aid (HA) settings, making intervention more effective for infants with hearing loss. Currently, primary clinical measures of speech discrimination for young children require a priori language. Visual Reinforcement Infant Speech Discrimination (VRISD) is a tool to assess infant speech discrimination and is recommended as part of the pediatric minimum test battery. VRISD assesses an infant’s ability to discriminate phoneme contrasts, using a head turn paradigm, similar to VRA. One unknown aspect of fitting infants with HAs is the impact various HA parameters have on speech discrimination. The purpose of the current study is to relate the results the behavioral performance of infants wearing HAs on the VRISD task for two contrasts (/a-i/ and /ba-da/) to an acoustic analysis of personal HA settings. The acoustic analysis will consider the effects of wide dynamic range compression (WDRC) on sensation level for each infant’s personal settings. The results of the study will be discussed in consideration of how knowledge of HA parameter settings may impact the discrimination abilities of infants with hearing loss. This work was supported, in part, by a grant from NIH.

Bio:

Paige Mowery, BA is a third-year audiology doctoral student at the University of Colorado Boulder. Paige received her BA in Speech, Language and Hearing Sciences from the University of Colorado Boulder in 2013. She serves as Treasurer of the University of Colorado Boulder chapter of the Student Academy of Audiology. Her research interests include the impacts of digital signal processing on speech understanding, the utilization of personal sound amplifiers for patients, and issues preventing successful hearing aid use.

Melinda C Anderson, PhD is an Assistant Professor at the University of Colorado School of Medicine in the Department of Otolaryngology where she leads the Hearing, Acoustics, and Perception Laboratory (HAP Lab). Dr. Anderson also serves as the Director of Audiology for University of Colorado Health. In addition to her research and clinical work, she teaches in the graduate audiology program at CU-Boulder. Dr. Anderson received her BA from University of Florida in 1999, her MS from Vanderbilt University in 2002, and her PhD from University of Colorado in 2010. Dr. Anderson’s primary research interests include exploring how individuals with hearing loss use their hearing aids. This path of work includes clinical outcomes for users of hearing aids, sound quality perception in those using hearing aids, the interaction between hearing aid outcomes and cognition, and the impact of age and memory status on speech perception.

Kristin Uhler, PhD, is an Associate Professor in the Department of Physical Medicine and Rehabilitation and has a Specialty Certification in Pediatric Audiology. She recently completed a National Organization of Hearing Research grant and is currently funded on a mentored K23 grant through the National Institute of Health/National Institute on Deafness and Other Communication Disorders. She is the Director of Audiology Research at Children’s Hospital Colorado. Her research focuses on developing a biomarker of infant speech perception in babies with and without hearing loss. Dr. Uhler continues to refine the research tools she uses in an effort to decrease the age at which speech perception can be assessed and how speech perception relates to later language development.
Neuroplasticity & Age-Related Hearing Loss

(.025 CEUs)
Erin Elizabeth Duncan (Presenter)
Hannah GlicK
Dennell Benson
Emily Deeves
Nina Harris
Anu Sharma

Cross-modal sensory re-organization occurs when deprivation in one modality (i.e. the auditory modality, as in hearing loss) results in the recruitment of cortical resources by other modalities (i.e. vision, somatosensation). The extent to which sensory pathways are re-organized in long-term hearing aid users may help explain some of the variability in behavioral outcomes in amplification use. We utilized high-density EEG to examine changes in cross-modal plasticity and its relationship to speech perception, cognitive function and social emotional status in long-term hearing aid users. The purpose of this study was to examine cross-modal re-organization from vision in adult long term hearing aid users and correlate the results with behavioral outcomes including auditory-visual speech perception, cognitive function, and indices of social emotional well-being.

Bio:

Erin Duncan (presenter)

Erin Duncan is a dual Au.D./Ph.D. student at the University of Colorado at Boulder, where she has fostered a strong interest in the functionality, maturation, and neuroplasticity of the central nervous system in normal hearing populations and clinical populations with hearing loss. Under the mentorship of Dr. Anu Sharma, Erin is investigating the effects of brain re-organization and cross-modal cortical plasticity as it relates to hearing loss and cognition.
Defining a severity scale for the Dizziness Handicap Inventory-Screener (DHI-S) and its correlation to specific vestibular pathologies

(.025 CEUs)

Laura Campos

The Dizziness Handicap Inventory (DHI) is a well-established clinical questionnaire for assessing a patient’s perceived handicap due to their dizziness. The DHI-S is a 10 question survey adapted from the original DHI and is more clinically advantageous as it only takes patients 2-3 minutes to complete. However, while a severity scale exists for the DHI, one has not been created for the DHI-S, making the interpretation of the results ambiguous. This retrospective study aims to create a severity scale for the DHI-S by creating interquartile ranges based on the DHI-S scores of patients presenting to the UCHealth Hearing and Balance Center (n=177). It then examines if there is any relationship between the final diagnosis of these patients and their perceived handicap as judged by their DHI-S score.

Bio:

Laura Campos is an audiologist at the University of Colorado Hospital specializing in vestibular assessment and cochlear implants. She received her Doctorate of Audiology from Missouri State University in 2012; following graduation, she worked in the Kansas City area holding several concurrent positions including with a private practice ENT clinic, a private practice vestibular and physical therapy clinic and a position as a local EHDI follow-up coordinator with the Missouri Department of Health. She moved to Colorado with her husband in 2016 to join the team at UCH. She has been interested in clinical research since participating in as a T35 grant program through Washington University in Graduate school and recently began her PhD in Clinical Investigation through the University of Colorado Denver in which she hopes to examine the contributions and interactions multisensory input plays in contributing to human balance system.
Developing Newborn Hearing Screening in Denver’s Sister City: Ulaanbaatar, Mongolia

(0.025 CEUs)

Stacy Claycomb

Colorado has a notable history for developing newborn hearing screening programs that incorporate not just screening, but also the integral support of pediatric audiology and early intervention. Global Foundation for Children with Hearing Loss is a charitable organization committed to implementing pediatric audiology and speech services by training local professionals to create programmatic sustainability. September 2017 is Global Foundation’s inaugural trip to Ulaanbattar, Mongolia with the aim to roll out a newborn hearing screening program in the city’s three birth hospitals in addition to developing the essential supporting roles of pediatric diagnostics, amplification, and speech therapy for long term programmatic sustainability. This poster will explore the successes and hurdles of programmatic implementation experienced in the first step of this 4-year program.

Bio:

Dr. Claycomb has worked at University of Colorado Hospital since 2007. She coordinates their newborn hearing screening program for the 4000+ babies born there each year. Stacy’s primary clinical focus is on pediatric diagnostics and amplification. She is an Audiology Regional Coordinator for the Colorado Early Hearing Detection and Intervention Program and serves on two state advisory committees: Colorado Infant Hearing Advisory Committee and Ad Hoc Content Expert appointment on the Colorado Newborn Screening Committee. Stacy has experience training rural professionals in pediatric audiology and has worked with Global Foundation for Children with Hearing Loss since 2015. Stacy is a board certified audiologist with Pediatric Audiology Specialty Certification.
Spontaneous, Significant Migration of a Lateral Wall Electrode Necessitating Re-implantation
(.025 CEUs)

Darcy Strong (presenter)
Nyssa Farrell
Samuel Gubbels

Cochlear implantation allows for direct stimulation of the cochlear nerve via electrical impulses through an electrode directly placed into the scala tympani. Given the expected lifetime of cochlear implants (CI) of greater than 20 years, it is vital that the electrode array remain in its intended position. Techniques to aid in electrode fixation have evolved over the years from fixation with bony cement, to tightly packing the electrode with bone pate, temporalis fascia or periosteum. Despite techniques for electrode stabilization, up to 9% of electrodes experience migration. This is most frequently seen in lateral wall electrodes utilized for hearing preservation. It is traditionally thought to be due to head trauma. However, spontaneous migrations have been documented. When migration occurs, it typically only involves 1-6 electrodes. The objective of this report was to describe the case of delayed spontaneous migration of 10 electrodes 7 months after implantation of a lateral wall electrode.

Bio:
Darcy A Strong, AuD is a clinical audiologist providing comprehensive hearing and balance services to adult patients. She specializes in cochlear implants and vestibular system assessment and management. She has been providing superior patient care at The University of Colorado Hospital for over twelve years. She also serves as Instructor for the Department of Speech Language and Hearing Sciences at the University of Colorado Boulder as well as through the Department of Otolaryngology, School of Medicine, University of Colorado Denver. Her research interests are in the areas of vestibular system management and cochlear implantation.
Therapy After Cochlear Implants Using Telemedicine (TACIT)

(.025 CEUs)

Hannah Glick (presenter)

Anu Sharma

Arlene Brown

Stacey Elder

The goal of this NIH-funded TACIT study is to compare and contrast the ways in which children with unilateral or bilateral cochlear implants or hearing aids benefit from therapy when the treatment is provided via telemedicine technology and in person. While most speech therapies have typically been delivered in person, many patients live in rural areas and do not have access to therapy services. Therapy over the internet is also becoming more and more common in the field of medicine. In this study, we are using both behavioral and neurophysiologic outcome measures at various time points to investigate the development of speech, listening, and language, as well as the development of the auditory cortex in children receiving in-person vs. telehealth therapy services.

Bio:

Hannah Glick received her Au.D. in May 2017 and is Ph.D. candidate at the University of Colorado-Boulder. With an interest in brain changes in hearing loss across the age spectrum, she hopes to combine her clinical and research skills to improve early detection, intervention, and rehabilitation for patients receiving hearing aids and cochlear implants.

Dr. Anu Sharma is professor and chair of the Dept. of Speech Language and Hearing and fellow at the Institute for Cognitive Science and Center for Neuroscience at University of Colorado at Boulder and adjunct professor in the Department of Otolaryngology and Audiology at the University of Colorado at Denver Medical School. Her research is focused on examining brain plasticity in children and adults with hearing loss.

Arlene Stredler Brown, Ph.D., CCC-SLP is a certified speech/language pathologist and a licensed teacher of the deaf and hard of hearing. She has spent her 43-year career working with infants, toddlers, and school-age children who are deaf or hard of hearing (DHH). Dr. Stredler Brown has worked in clinical, administrative, consultative, and research positions and on several NIH-funded studies.

Stacey Elder has a master’s of science in epidemiology and over 15 years working in the field. As a research analyst she is practiced in biostatistics, survey development, data collection, database management, data cleaning, combining large data files at different levels, determining measures, calculating reliability and validity, and extensive proficiency in data analysis using linear mixed effect modeling, survival analysis (Cox regression), time-dependent, and instrumental variable analysis ANOVA, OLS, GEE, and logistic regression analyses with SAS.
Clinical Utility of the P1 CAEP Biomarker in Children with Cochlear Nerve Deficiency
(.025 CEUs)
Emily Deeves (Presenter)
Erin Duncan
Hannah Glick
Nina Harris
Anu Sharma
Congenital hearing loss from cochlear nerve deficiency (CND) results from an undeveloped (aplastic), partially developed (hypoplastic), or post-developmentally degenerated auditory (VIII) nerve. CND has been identified as a leading cause of pediatric unilateral hearing loss, ranging in clinical presentation from mild to severe, and has been shown to coexist with auditory neuropathy spectrum disorder (ANSD). In the presented study, we investigate the utility of the P1 cortical auditory evoked potential (CAEP) biomarker in conjunction with the traditional audiological and imaging test battery to optimize the success rate of intervention, treatment, and management children with CND and/or ANSD.

Bio:
Emily Deeves (Presenter)
Emily Deeves is a dual Au.D./Ph.D. student at the University of Colorado at Boulder. Her interests lie in clinically based research and pediatric audiology. She hopes to combine these interests to use clinical research in pediatric populations to improve the clinical services provided to pediatric patients and their families.
TECH SESSIONS

OTICON MEDICAL
Thursday, 12:00 pm

Please check back for more details on this event.
UNITRON
Friday, 3:30 pm

Please check back for more details on this event.
MED EL
Friday, 3:30 pm

Please check back for more details on this event.
RELAY COLORADO
Saturday, 8:45 am

Please check back for more details on this event.
WIDEX

Saturday, 8:45 am

Please check back for more details on this event.
CEU INFORMATION

Over 13 hours of continuing education will be offered at the 2017 Fall Convention!

Convention participants will be required to document CEUs earned on the Session Code Worksheet. After each session is completed, the moderator will announce the session attendance code. Please record the session day/time, session code, and two items learned or better understood as a result of your participation.

Be sure to turn in your Session Code Worksheet at the end of your participation at the Convention. Your CEUs will be calculated and entered into your Certificate of Attendance. You will not be able to earn CEUs without the Session Code Worksheet.

Tier 1
There are two designated sessions offering Tier 1 credit. Both Tier 1 sessions will be interactive – no paper assessment is required.

Tech Sessions
Tech sessions may offer CEUs. Please check the program for further information.

Program Evaluation
Your feedback is critical for CAA to ensure we are meeting your educational needs. We would appreciate if you could take a few minutes to fill out the Program Evaluation. Please share your opinions with us so we can serve you better.
KEYNOTE ADDRESS, OPENING RECEPTION, & AUCTION

The Keynote address on Thursday by Brian Taylor exemplifies the 25th Annual Convention’s theme, Redefining Audiology: Innovation in Service Delivery and Audiologic Care. You won't want to miss it!

Join us in the Ballroom on Thursday evening after the Keynote to catch up with friends and colleagues, and mingle with exhibitors. This upbeat reception provides dedicated time to check out the exhibiting companies, socialize and network, all while recharging your battery with light snacks and drinks.

The Silent Auction will be kicked off at this event. Proceeds go to CAA to support educational programming, to keep abreast of professional issues, and to foster the growth of audiologists in our state.

The reception is open to all registered attendees.
PROFESSIONAL ISSUES COFFEE HOUR
CAA MEMBERS

Take this opportunity to discuss thoughts and concerns on your mind with other members, the Board Members, and the Colorado Academy of Audiology’s lobbyists. Grab some breakfast and join us for this important discussion.

Learn more about how your state board and lobbyists work together to protect and progress audiologists in Colorado. This special event will allow members to discuss current topics such as the national OTC bill that was passed, the future of the newborn hearing screening program in Colorado, and hearing aid dispenser scope of practice concerns. Share your thoughts on what changes you would like to see in your state in the future!

Agenda:
CAA Lobbyists
HLAA Representative, Debbie Maloney
Current Issues:
   Newborn Hearing Screening
   OTC Bill
   Hearing Aid Dispenser Scope of Practice Concerns
LUNCHEON, KEYNOTE ADDRESS, AWARDS CEREMONY, & BUSINESS MEETING

This year’s luncheon features a Keynote address from Colorado audiologist and researcher, Kristin Uhler. She will share her passion and invite you to see how pediatric audiology is redefining our children’s futures.

The CAA Awards Ceremony celebrates the highest achievements and excellence of audiologists in Colorado. Presentations will be made to recipients of the Peak Performance Award, the Lifetime Achievement Award, and the R. Steven Ackley Educators Award.

The luncheon will also feature the CAA Business Meeting. See what’s been happening at the Colorado Academy of Audiology and our plans for 2018!
SOCIAL EVENT

Please check back for more details on this event.
THE BROWN PALACE
CAA 2017 FALL CONVENTION
AT THE BROWN PALACE
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