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**Research Symposium:
*Hearing Aids and Cochlear Implants:
Merging Technologies, Expanding Benefits***

**June 23, 2017
9 a.m. - Noon**

Hearing aids and cochlear implants are no longer separate, distinct and mutually exclusive technologies that serve disparate populations of people who are defined as either “hard of hearing” or “deaf.” Increasingly people are combining the benefits of both platforms to reach even higher levels of performance. Research suggests that combining acoustic and electric signals can be synergistic, providing the listener with natural sound quality as well as clarity and intelligibility. Technologies that combine these devices utilize improved sound processing strategies, new electrode configurations, sleek processor designs, Bluetooth, and telecoil to enhance usability and performance. These changes have expanded the candidate population and blurred the lines between hearing aids and cochlear implants.

Looking ahead, even greater numbers of people will wear devices that combine the two technologies. Among the greatest challenges will be improving awareness about the benefit derived from such technology mergers and ensuring that access to care is available for all who need it. Collaborations between consumers, hearing care professionals, researchers, insurers, manufacturers, and government can help bridge the enormous gap that currently exists between who can benefit and who has access to care.



Hearing Technology Definitions: Where Do We Draw the lines?

Meredith Holcolmb, Au.D., Clinical Director, Cochlear Implant Program, Medical University of South Carolina

What’s a hearing aid? What’s a cochlear implant? How have the two evolved and where do they meet up?

- Function of cochlear implant
- Function of hearing aid
- Differences/similarities

- Changes over time in both
- Melding the two—either in one device or on opposite ear
- Where is technology progress going
- Research outcomes



Candidacy and Outcomes for CIs and Hybrids

Holly Teagle, Au.D., Clinical Associate Professor, Co-director of the Children's Cochlear Implant Center at University of North Carolina
Board of Directors Vice Chair, American Cochlear Implant Alliance

Who is a candidate for a “traditional” cochlear implant? Who would benefit from a hybrid combining a cochlear implant and hearing aid in one device? What does the research show about outcomes?

- Outcomes with cochlear implant alone
- Hybrid outcome
- Hearing aid on contralateral ear (from cochlear implant) given expansion of candidacy criteria
- Outcomes in various settings for each including hearing in noise, speech perception, music, and “quality” of the sound signal?
- What has cochlear implant designed learned from hearing aids and vice versa?
- What does this mean for a hearing aid user’s decision to move forward?



What Is the Next Big Leap for Cochlear Implant Technology?

Colin Driscoll M.D., Chair, Otolaryngology, Mayo Clinic (MN)
Board of Directors Chair, American Cochlear Implant Alliance

- What have cochlear implants “learned” from hearing aid technology and vice versa
- Changes we expect to see in the future
- Impact on future candidacy criteria



Impact of Cochlear Implantation on Cognition

Richard Gurgel, M.D., Division of Otolaryngology, University of Utah

Studies have implied an association between hearing loss and cognitive health in older adults. What does this suggest about such benefits in cochlear implant users? Apart from the benefits for speech perception and social interaction, is there a cognitive effect for those who are candidates to move from hearing aid to cochlear implant?



Benefits of Cochlear Implant Rehabilitation for Adults

Lindsay Zombek M.S., CCC-SLP LSLC Cert. AVT, University Hospitals Cleveland Medical Center

While there is variability in how much and what type of rehabilitation program adults should follow post cochlear implantation, most will enjoy improved outcomes and more rapid progress with rehabilitation. Although cochlear implant technology provides greater access to sound for appropriate individuals who had been using hearing aids, adults often require assistance in learning to comprehend speech and recognize other sounds including music. Research on rehabilitative benefits and types of programs for cochlear implants after hearing aids will be explored. This section will also explore the benefits of connectivity with other hearing devices via Bluetooth, telecoil and direct connect and how this compares to similar linkages with hearing aids.



Access to Hearing Technology

Donna L. Sorkin MA, Executive Director, American Cochlear Implant Alliance

Utilization of cochlear implants by adults who could benefit remains low—even below the utilization by individuals who could improve their access to sound with hearing aids. As candidacy expands with a wider range of cochlear implant technologies available as a hearing solution that can improve the lives of even more individuals, it is imperative that we work together to improve awareness about the benefits. This will only happen through collaborations between consumers, hearing care professionals, researchers, manufacturers and government. This segment will suggest activities that all of us might pursue collaboratively to improve awareness and access to care.

Panel Discussion Involving All Speakers