**NCAHR 2019 Conference: Today's Technological Advances**

**April 5 and 6, 2019**

**Time-Ordered Agenda**

12:15 pm – 12:45 pm Exhibits and Sign In/Registration

**Friday - April 5th - 5.5 hours of presentations, sessions starting at 12:45 pm**

- **Session 1:** *Signia: Tinnitus Notch Therapy*  
  (1.5 hrs) – 12:45 – 2:15 pm - **HALB** Cat 1 – Bridget A. Novey, Au.D./Clinical Education Specialist/Signia USA

- **Session 2:** *ReSound: The Evolution of the LiNX Quattro*  
  (1 hr) – 2:25 – 3:25 pm - **HALB** Cat 1 – Sabrina [Mussawar] Calcara, Au.D./Field Training Audiologist/GN ReSound

3:25 pm – 4:00 pm Break: Exhibits and Refreshments

- **Session 3:** *UNC Cochlear Implant Programs: Transitioning from a Hearing Aid to a Cochlear Implant*  
  (1.5 hrs) – 4:00 – 5:30 pm - **HALB** Cat 1 – Shelley L. Anderson, Au.D. and Ellen Deres, Au.D./Clinical Audiology Specialists/University of North Carolina Health Care/UNC; **AND** Brendan O’Connell, M.D./Otolaryngologist/UNC Department of Otolaryngology/Adult and Children’s Cochlear Implant Teams/Chapel Hill & Durham, N.C.

5:30 pm – 6:15 pm DINNER Buffet

- **Session 4:** *Starkey: Livio AI – Fall Detection & Healthable Hearing Technology*  
  (1.5 hrs) – 6:15 – 7:45 pm - **HALB** Cat 1 – Shannon D. Swink, Au.D. & Ph.D./Field Sales Representative - Southeast/Starkey Hearing Technologies

12:15 pm – 12:45 pm Exhibits and Sign In/Registration

5:30 pm – 6:15 pm DINNER Buffet

**Saturday - April 6th - 5 hours of presentations, sessions starting at 8:20 am**

7:00 am – 8:15 am BREAKFAST Buffet and NCAHR BUSINESS MEETING

- **Session 5:** *CaptionCall: Internet Protocol Captioned Telephone Services (IPCTS) For Your Patients*  
  (1 hr) – 8:20 – 9:20 am - **HALB** Cat 1 – Hansen Phangia, BC-HIS/National Account Director/CaptionCall

- **Session 6:** *Oticon: The OpenSound Navigator Experience*  
  (1 hr) – 9:30 – 10:30 am - **HALB** Cat 1 – Candace M. Depp, Au.D./Manager of Sales Excellence & Customer Service Training/Oticon USA

10:30 am – 10:45 am Break: Exhibits and Hotel Checkout

- **Session 7:** *Phonak: The Multifunctional MARVEL Platform*  
  (1 hr) – 10:50 – 11:50 am - **HALB** Cat 1 – Brandy Heckroodt, Au.D./Manager of Clinical Training/Phonak LLC

11:50 am – 12:20 pm LUNCH Buffet

- **Session 8:** *Oticon: OPN Technology – Redefining Pediatric Hearing Care*  
  (1 hr) – 12:20 – 1:20 pm - **HALB** Cat 1 – Candace M. Depp, Au.D./Oticon USA (See Session 6, above)

- **Session 9:** *Widex: EVOKE – Machine Learning-Based SoundSense Technology*  
  (1 hr) – 1:30 – 2:30 pm - **HALB** Cat 1 – Laura A. Kearns, Au.D./Clinical Product Specialist/Widex USA, Inc

*HALB = N.C. State Hearing Aid Dealers & Fitters Board (aka Hearing Aid Licensing Board) CE Topic Content Category (Cat)

This course is offered for 1.05 ASHA CEUs (Intermediate level, Professional area). No course planner has disclosed any relevant financial or non-financial relationships. Our presenters are employees of their respective companies or UNC.

See the Conference Registration Form regarding other CEUs being offered.
## NCAHR 2019 Conference: Today's Technological Advances

**Instructional Personnel Disclosures**

_In compliance with the requirements concerning transparency in course planning, delivery, and marketing, below is information on presenters' financial and non-financial interests relevant to the content of their presentation and/or relevant to the field of Hearing Rehabilitation, in general._

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Session Title</th>
<th>Financial Relationship</th>
<th>Relevant Non-financial Interests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridget A. Novey, Au.D.</td>
<td><strong>Signia: Tinnitus Notch Therapy</strong></td>
<td>Employee of Signia USA (salaried)</td>
<td>Former Signia Hearing Instruments Advisory Board Member</td>
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<td><strong>Widex: EVOKE – Machine Learning-Based SoundSense Technology</strong></td>
<td>Employee of Widex USA, Inc (salaried)</td>
<td>None</td>
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PRESENTERS

● **Session 1:** Bridget A. Novey, Au.D./Clinical Education Specialist/Signia USA
  Bridget A. Novey, Au.D., CCC-A, began her role as a Clinical Education Specialist with Signia in 2017. She received her Master’s degree in Audiology in 2002, as well as her Doctorate of Audiology in 2004, from the University of Pittsburgh, PA. Bridget moved to North Carolina in 2004, to work at Duke University Medical Center. She has also served as the Director of Audiology at N.C. Eye, Ear, Nose & Throat (Cary, N.C.). Dr. Novey is licensed by the N.C. Board of Examiners for Speech Language Pathologists and Audiologists. Prior to joining the Signia team, she served on the Signia Hearing Instruments Advisory Board.

● **Session 2:** Sabrina [Mussawar] Calcara, Au.D./Field Training Audiologist/GN ReSound
  Sabrina Calcara, Au.D., CCC-A, joined the ReSound team in April 2018, as a Field Training Audiologist. Sabrina earned her Doctor of Audiology degree in 2012, from City University of New York (CUNY) Graduate Center. Prior to ReSound, she worked at a large hospital center in NYC (New York Eye and Ear Infirmary of Mount Sinai). For 7 years prior to beginning her role as a trainer for ReSound, Dr. Calcara conducted diagnostic audiological testing and adult hearing aid fittings.

● **Session 3:** Shelley L. Anderson, Au.D. and Ellen Deres, Au.D./Clinical Audiology Specialists/University of North Carolina Health Care/UNC; AND Brendan O’Connell, M.D./Otolaryngologist/UNC Department of Otolaryngology/Adult and Children’s Cochlear Implant Teams/Chapel Hill & Durham, N.C.

  **Shelley L. Anderson, Au.D.**
  Shelley L. Anderson, Au.D., CCC-A, is a Clinical Audiology Specialist at University of North Carolina Health Care. She received her Doctorate degree in Audiology in 2015; and she began her clinical audiology career at Tampa Bay Hearing and Balance Center in Tampa, FL. Shelley moved to North Carolina in April 2018, to work at UNC Health Care. Dr. Anderson is licensed by the N.C. Board of Examiners for Speech Language Pathologists and Audiologists.

  **Ellen Deres, Au.D.**
  Ellen Deres, Au.D., CCC-A, is a Clinical Audiology Specialist at University of North Carolina Health Care. She received her Doctorate in Audiology in 2011, from the University of North Carolina at Chapel Hill. She has worked at UNC Health Care since May 2011, where she performs adult audiological diagnostics and adult cochlear implant fittings. Dr. Deres is licensed by the N.C. Board of Examiners for Speech Language Pathologists and Audiologists.

  **Brendan O’Connell, M.D.**
  Brendan O’Connell, M.D., is an Assistant Professor in the Department of Otolaryngology at the University of North Carolina (UNC); and he is a surgeon on the Adult and Children’s Cochlear Implant Teams at UNC. He completed his Otolaryngology training and obtained his medical degree in 2010, at the Medical University of South Carolina, Charleston, S.C. Before joining the faculty at UNC, he was a fellow in Otology/Neurotology and Skull Base Surgery at the Vanderbilt Bill Wilkerson Center, in Tennessee.

● **Session 4:** Shannon D. Swink, Au.D. & Ph.D./Field Sales Representative - Southeast/Starkey Hearing Technologies
  Shannon D. Swink, Au.D., CCC-A, joined Starkey Hearing Technologies as a Field Sales Representative with the Southeast Sales Team in September 2016. She received her Au.D. and Ph.D. degrees from East Carolina University, Greenville, N.C., in 2010. Prior to her position with Starkey, she worked as a clinical and dispensing audiologist for 6 years with Carolina East ENT, in New Bern, N.C. Dr. Swink is licensed by the N.C. Board of Examiners for Speech Language Pathologists and Audiologists.
● **Session 5: Hansen Phangia, BC-HIS/National Account Director/CaptionCall**
Hansen Phangia, BC-HIS, is the National Account Director with CaptionCall. He received his B.S. degree in Economics from the University of Utah. Hansen has had over a decade of experience creating creative marketing campaigns, and implementing innovative training programs for the professional development of individuals in the hearing healthcare industry. He is a member of the International Hearing Society; and he is nationally board certified in hearing instrument sciences.

● **Session 6 AND Session 8: Candace M. Depp, Au.D./Manager of Sales Excellence & Customer Service Training/Oticon USA**
Candace Depp, Au.D., CCC-A, F-AAA, is Oticon USA's Manager of Sales Excellence and Customer Service Training. Dr. Depp earned both her Master of Arts in Audiology in 2007, and her Doctor of Audiology with a pediatric aural habilitation concentration in 2009, from the University of Tennessee, Knoxville. She had initially joined the Oticon team in 2012, as a pediatric account manager/audiologist for their Southeastern region. In 2016, she became the Manager of Education & Training (Pediatrics). Prior to working with Oticon, Candace served as an audiologist at Wilmington Hearing Specialists, PA, and at Duke University Medical Center, both in North Carolina.

● **Session 7: Brandy Heckroodt, Au.D./Manager of Clinical Training/Phonak LLC**
Brandy Heckroodt, Au.D., F-AAA, is a Manager for Phonak's Northeast and Southeast Clinical Training Teams. A native of New Hampshire, Brandy received undergraduate degrees in English and Communication Sciences in Disorders from the University of New Hampshire. In 2008, she earned her Doctor of Audiology degree from Nova Southeastern University. Before joining Phonak in July 2012, Brandy practiced in South Florida. Dr. Heckroodt has been fortunate to donate her professional services in Guatemala, Trinidad and Tobago, and Haiti where she was part of Sonova’s 2013 Hear The World mission trip.

● **Session 9: Laura A. Kearns, Au.D./Clinical Product Specialist/Widex USA, Inc**
Laura A. Kearns, Au.D., CCC-A, F-AAA, joined the Widex team in April 2018, as a Clinical Product Specialist. She received her Bachelor of Science and Doctorate of Audiology from the University of Cincinnati, in Ohio. Laura earned her Au.D. degree in 2012. Dr. Kearns previously worked as a clinical and dispensing audiologist, at a large ENT practice in Louisville, KY for over 7 years. She is licensed to practice as an Audiologist in Kentucky.

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See Session Learning Outcomes AND Topic Descriptions, below
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#### SESSION LEARNING OUTCOMES

At the end of the session, the participants will be able to:

<table>
<thead>
<tr>
<th>SESSION TITLE</th>
<th>LEARNING OUTCOME #1</th>
<th>LEARNING OUTCOME #2</th>
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<tbody>
<tr>
<td><strong>Signia: Tinnitus Notch Therapy</strong></td>
<td>Define the term: “Tonal Tinnitus”</td>
<td>Describe how Signia’s Notch Therapy affects the brain</td>
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<tr>
<td><strong>ReSound: The Evolution of the LiNX Quattro</strong></td>
<td>Identify (2) benefits of ReSound’s extended input dynamic range</td>
<td>Explain the function of the LiNX Quattro’s impulse noise reduction feature</td>
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<td><strong>UNC Cochlear Implant Programs: Transitioning from a Hearing Aid to a Cochlear Implant</strong></td>
<td>List (2) benefits of transitioning from a hearing aid to a cochlear implant</td>
<td>Describe (2) of the steps involved in cochlear implant candidacy determination</td>
</tr>
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<td><strong>Starkey: Livio AI – Fall Detection &amp; Healthable Hearing Technology</strong></td>
<td>Explain why Starkey incorporated a fall detection feature into Livio AI hearing aids</td>
<td>List (2) reported advantages of Starkey's Healthable Hearing Technology</td>
</tr>
<tr>
<td><strong>CaptionCall: Internet Protocol Captioned Telephone Services (IPCTS) For Your Patients</strong></td>
<td>Explain how the Americans with Disabilities Act impacted those with hearing loss</td>
<td>Identify (2) requirements for patients to receive CaptionCall's free captioning telephone</td>
</tr>
<tr>
<td><strong>Oticon: The OpenSound Navigator Experience</strong></td>
<td>List the purpose for Oticon's OpenSound Navigator feature</td>
<td>Describe (2) results of recent studies involving the OpenSound Navigator</td>
</tr>
<tr>
<td><strong>Phonak: The Multifunctional MARVEL Platform</strong></td>
<td>Identify the purpose for development of lithium-ion rechargeable batteries</td>
<td>Describe how Phonak MARVEL hearing aids classify streamed signals</td>
</tr>
<tr>
<td><strong>Oticon: OPN Technology – Redefining Pediatric Hearing Care</strong></td>
<td>Explain what is meant by “non-traditional signal processing for children”</td>
<td>List (2) of the reported latest assessment and fitting recommendations for children</td>
</tr>
<tr>
<td><strong>Widex: EVOKE – Machine Learning-Based SoundSense Technology</strong></td>
<td>Define the term: “Fluid Sound Analyzer”</td>
<td>Describe (2) consumer survey findings concerning Widex's Evoke hearing aids</td>
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9 Sessions: Topic Descriptions

• **Session 1: Signia: Tinnitus Notch Therapy**
  (1.5 hrs) – 12:45 – 2:15 pm - Bridget A. Novey, Au.D./Clinical Education Specialist/Signia USA

  **TOPIC DESCRIPTION:**

  The most common form of tinnitus is reported to be tonal tinnitus. Tonal tinnitus is defined by the American Tinnitus Association as the “perception of near-continuous sound (or overlapping sounds) with well-defined frequencies.” Unlike traditional sound therapy for the treatment of tinnitus, which uses acoustic stimuli or noise, Signia's Notch Therapy is inaudible. This new, proprietary feature enables a patient's hearing aids to be programmed so that a filtered “notch” is centered at the reported pitch that corresponds to the patient's tonal tinnitus. This session's presenter will explain that this therapy technique utilizes cortical lateral inhibition, a neural mechanism which reduces the activity in the over-stimulated region of the brain that is responsible for many types of tinnitus. Notch Therapy has been shown in multiple clinical studies to be highly effective because it allows the brain to learn to disregard the tinnitus sound over time.

• **Session 2: ReSound: The Evolution of the LiNX Quattro**
  (1 hr) – 2:25 – 3:25 pm - Sabrina [Mussawar] Calcara, Au.D./Field Training Audiologist/GN ReSound

  **TOPIC DESCRIPTION:**

  During this session, the presenter will discuss ReSound's new product, LiNX Quattro; its 3 new audiologic features; and the accessory options for the available models. She will explain the evolution of ReSound's technology which uses 2.4 GHz connectivity. The brand new ReSound chip is reported to deliver twice the memory, 100% more speed, 30% more computing power, and a new radio with 20% reduced power consumption. The details regarding the extended input dynamic range; the improved frequency response obtained by increasing the frequency bandwidth; the stronger wireless signal strength allowing enhanced ear-to-ear performance and localization of sound; and the impulse noise reduction feature will be reviewed.

• **Session 3: UNC Cochlear Implant Programs: Transitioning from a Hearing Aid to a Cochlear Implant**
  (1.5 hrs) – 4:00 – 5:30 pm - Shelley L. Anderson, Au.D. and Ellen Deres, Au.D./Clinical Audiology Specialists/University of North Carolina Health Care/UNC; AND Brendan O’Connell, M.D./Otolaryngologist/UNC Department of Otolaryngology/Adult and Children's Cochlear Implant Teams/Chapel Hill & Durham, N.C.

  **TOPIC DESCRIPTION:**

  The presenters for this session will be explaining what today's cochlear implants offer patients, that their current hearing aids are not successfully capable of performing. They will also address what it is like to use a hearing aid on one ear and have a cochlear implant on the other ear. This team of presenters will focus on the benefits of transitioning from a hearing aid to a cochlear implant; the major differences among manufacturers of cochlear implant devices; and how long a duration is the typical surgery, recovery, and healing process after implantation. Other topics to be covered include a description of what happens when your patient goes for cochlear implant candidacy determination, as well as what happens on the day that the device is initially programmed.

• **Session 4: Starkey: Livio AI – Fall Detection & Healthable Hearing Technology**
  (1.5 hrs) – 6:15 – 7:45 pm - Shannon D. Swink, Au.D. & Ph.D./Field Sales Representative - Southeast/Starkey Hearing Technologies

  **TOPIC DESCRIPTION:**

  Among the most recognizable devices in the wearable tech industry are smartwatches and fitness trackers, popularized by companies like Apple and Fitbit. While these products empower users to take control of their physical and mental health, these wearable devices are actually not particularly adept at reliably measuring or predicting pertinent health
data. As a result, this earlier technology inspired the development of medical wearable devices. This session will focus on the world’s first hearing aid with artificial intelligence and integrated 3D sensors – the Starkey Livio AI. These hearing aids can actually track a person’s movement, activities, and gestures in order to gather meaningful, real-time feedback concerning cognitive and bodily fitness. During this session, the presenter will describe how and why Starkey incorporated a fall detection feature into their Livio AI hearing aids. She will also discuss how Starkey’s Healthable Hearing Technology promotes a healthier lifestyle; restores a person’s desire to socialize and engage in group outings; and can even help ward off future cognitive conditions like dementia.

**Session 5: CaptionCall: Internet Protocol Captioned Telephone Services (IPCTS) For Your Patients**
(1 hr) – 8:20 – 9:20 am - Hansen Phangia, BC-HIS/National Account Director/CaptionCall

**TOPIC DESCRIPTION:**
People with hearing loss are at a distinct disadvantage compared to people with normal hearing, when communicating on the telephone. This session’s presenter will discuss the role of the Federal Communications Commission (FCC) in the Internet Protocol Captioned Telephone Services (IPCTS) industry. He will explain how the Americans with Disabilities Act, which was passed in 1990, impacted those with hearing loss and led to the development of relay and captioned telephone services. He will also identify the eligibility requirements for your patients to receive a captioning telephone from CaptionCall, at no cost to the hearing healthcare provider or the consumer.

**Session 6: Oticon: The OpenSound Navigator Experience**
(1 hr) – 9:30 am – 10:30 am - Candace M. Depp, Au.D./Manager of Sales Excellence & Customer Service Training/Oticon USA

**TOPIC DESCRIPTION:**
OpenSound Navigator is an evidence-based communication-enhancement feature that preserves speech and reduces noise in complex listening environments; thus, leading to improved performance with less listening effort for the patient. This session introduces new developments in Oticon’s patented OpenSound Navigator. Its benefits to your patients, user involvement, and clinical applications will be covered by your presenter. Also in this session, Oticon’s next generation of brain-hearing technologies will be reviewed; and results of recent studies will offer proof that this new unique solution to the noise problem offers unprecedented benefits for hearing aid consumers.

**Session 7: Phonak: The Multifunctional MARVEL Platform**
(1 hr) – 10:50 – 11:50 am - Brandy Heckroodt, Au.D./Manager of Clinical Training/Phonak LLC

**TOPIC DESCRIPTION:**
During this session, your presenter will share details regarding AutoSense OS 3.0 which is the newest generation of the proprietary Phonak Marvel technology platform, available in 5 receiver-in-the-ear (RITE) models of the Audéo Marvel hearing aid. She will address how Phonak's technology is based on the fact that two ears hear better than one; and Phonak has designed the world's first hearing aid that classifies streamed signals. It streams the full audio bandwidth in real time and bidirectionally; thus, simulating what the brain does with sounds from both ears. Marvel hearing aids also distinguish between streamed speech and music signals, and automatically adjust to give an optimized sound quality. Phonak’s pioneering of lithium-ion rechargeable batteries, engineered to last 6 years, will be discussed.

**Session 8: Oticon: OPN Technology – Redefining Pediatric Hearing Care**
(1 hr) – 12:20 – 1:20 pm - Candace M. Depp, Au.D./Manager of Sales Excellence & Customer Service Training/Oticon USA

**TOPIC DESCRIPTION:**
Your presenter for this session will provide attendees with updated knowledge in areas relevant to optimizing listening and learning opportunities for your pediatric patients. Current research findings, as well as the latest assessment and fitting recommendations, will be reviewed. Conventional technology can overload young minds in noisy environments; and, thus, restrict the child from optimal conditions to learn. New evidence will be reviewed in support of non-traditional signal processing for children, as well as the benefit of having freedom to choose who and what to listen to; so your pediatric patients no longer have to live with the constraints of traditional technology.
With Widex SoundSense Technology, when patients personalize their listening experience, their EVOKE hearing aids learn from different situations; and EVOKE will remember all changes made and intelligently apply them to similar situations – even if your patient is in a totally new environment. This is possible because EVOKE reacts to the environment around the listener, through its Fluid Sound Analyzer; and it has a built-in Fluid Sound Controller that sets the optimal sound for different sound environments. This hearing aid knows the difference between classical and pop music, and how a meeting sounds different than a party. During this session, your presenter will share the consumer survey findings on Evoke; and she will also provide an overview of machine learning in hearing aids, as this process relates to the survey results.