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Raleigh audiology clinic adjusts hearing aids to fit each patient's pitch

By David Ranii

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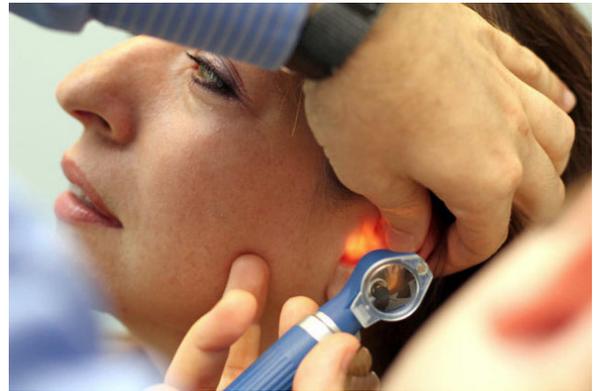
Eddie McDonald recently flew from his home in Texas to have his hearing aids adjusted at Raleigh audiology clinic Now Hear This.

McDonald, who has been hard of hearing for decades and learned about Now Hear This from a friend, left the clinic with his hearing improved considerably even though he didn't change hearing aids.

"You hear more detail. You hear more sounds," said McDonald, 69, who hails from Bridgeport, a town about 45 miles northwest of Fort Worth. "You can enjoy a little bit more of life, understand a little bit more in business."

Now Hear This, which also sells hearing aids, is the nation's first audiology practice to use an innovative \$25,000 system to adjust hearing aids so that the sound works best for the patient. The ACAM 5, produced by a company whose U.S. division is based in Research Triangle Park, combines audio measurements that account for the size and shape of the ear and the ear canal with a technology that determines the patient's perception of loudness. Stephanie Sjoblad, an audiologist who is an associate professor at UNC-Chapel Hill's Division of Speech and Hearing, is enthusiastic about the ACAM 5's potential.

"If people who are providing hearing health care were utilizing this to customize the fitting process of each person they work with, there would be happier patients and more people utilizing hearing technology to solve their hearing loss," said Sjoblad, who is also president-elect of the state chapter of the American Academy of Audiology.



Casey Toth

Dr. Philip Griffin checks Allison Kenny's left ear during her checkup at Now Hear This in Raleigh on Wednesday May 23, 2012. Allison has an ACAM 5 hearing aid. Allison has hearing loss in her left ear from abnormal genetic bone growth and the hearing aid allows her to experience her environment as she used to.

Just one-fourth of the more than 34 million Americans with hearing loss own hearing aids, according to a 2010 study published by industry publication Hearing Review. In addition, more than 1 million people with hearing aids keep them in the drawer.

"If you were to ask the average person about hearing aids," Sjoblad said, "they'll say, 'I know someone who has hearing aids and ... never wears them.'" The problem typically isn't that the hearing aids don't work properly, said Sjoblad. Instead, the issue is that the hearing aids aren't adjusted properly to account for individual differences.

"If the hearing aids aren't properly programmed, the patients are going to be very disillusioned," Sjoblad said.

Small operation

Now Hear This, which opened on Creedmoor Road near Crabtree Valley Mall in mid-February, is a strategic initiative of Acousticon USA, the U.S. arm of Acousticon Horsysteme, the small, privately held German company behind the ACAM 5. The CEO and sole full-time employee of Acousticon USA, Robert Keefer, is a former partner at TCG Medtech, a Durham consulting firm initially hired by the German company to determine whether there was a U.S. market for the ACAM 5. Keefer, who said he is in the process of acquiring the U.S. business from the German parent, also is the majority owner of Now Hear This.

Keefer said that the prospect of filling a major need for the hearing-impaired was a factor in his decision to devote his full attention to Acousticon and Now Hear This, which has two full-time and two part-time employees.

“While I am a capitalist and I’m not entirely altruistic, that is important to me,” he said.

The hope is that Now Hear This, in addition to providing quality care to patients, will demonstrate the ACAM 5 can improve the productivity of an audiology practice, Keefer said.

Productivity, in this context, means significantly reducing the number of times a patient needs to return to the clinic for follow-up adjustments of their hearing aids. That’s important because the price of hearing aids frequently includes free adjustments for anywhere from two to five years.

The ACAM 5 is the fifth generation of a system that has been available in Europe for more than two decades but wasn’t approved by the U.S. Food and Drug Administration until last year. The hardware and software system enables “real-ear measurements” – that is, adjusting a hearing aid after taking into account the size and shape of a patient’s ear and ear canal.



Casey Toth

Dr. Philip Griffin checks the wax build up on Allison Kenny’s (cq) new custom ACAM 5 hearing aid during her checkup at Now Hear This in Raleigh on Wednesday May 23, 2012.



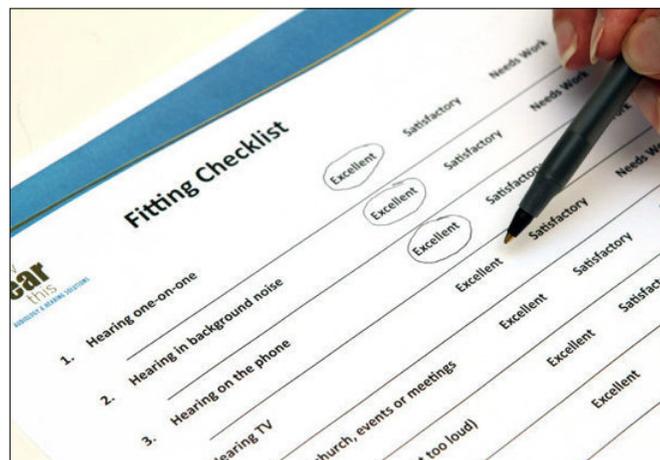
Casey Toth

Allison Kenny discusses her new custom ACAM 5 hearing aid with Dr. Philip Griffin at Now Hear This in Raleigh on Wednesday May 23, 2012.

Complex calibration

Just as stereo systems sound different depending on the size and shape of the room, hearing aids sound different depending on the unique characteristics of the user's ear.

Adding to the complexity is that hearing aid volumes can be individually adjusted for different frequencies – bass, middle and high frequencies. And patients themselves can have differing amounts of hearing losses in different frequencies. For example, many patients hear bass sound well but have difficulty with high frequencies.



Casey Toth

Allison Kenny completes a Fitting Checklist for her new ACAM 5 custom hearing aid during her check up at Now Hear This in Raleigh on Wednesday May 23, 2012.

“We actually have to tune the device to that person’s particular hearing,” said audiologist Philip Griffin of Now Hear This.

There are other real-ear measurement systems available, but the ACAM 5 also includes a unique system for “loudness scaling” that involves exposing the patient to about 40 finely calibrated sounds to determine how they perceive volume.

“The thing about loudness is everyone has a different opinion of what loudness is,” said Griffin.

Other tests used by audiologists to determine a patient’s perception of volume lack the precision of the ACAM 5 system, Griffin said. Those tests determine the softest sounds a patient can hear and extrapolate how they would react to louder sounds.

Costly innovation

The ACAM 5’s innovation comes at a price. It’s about \$5,000 more than the most popular competing system.

“It’s the BMW of fitting systems,” said Keefer. “It could be argued that it is as much for researchers as it is for audiologists.”

Moreover, many hearing aid professionals – which include audiologists with advanced degrees as well as licensed hearing-aid dispensers who must pass a state exam but aren’t required to have a college degree – don’t use real-ear measurement systems. A 2006 survey of dispensers of hearing aids by Hearing Review reported that 57 percent of them own real-ear measurement equipment, but only 23 percent used them “routinely.”

Griffin, meanwhile, estimates that only 10 percent of hearing aid providers do real-ear measurements on every patient they see.

Consequently, Acousticon USA sees the ACAM 5 as a niche product and is focused on selling it to university-operated audiology clinics, research scientists and hearing aid manufacturers. The sole buyer to date, said Keefer, is hearing aid manufacturer Starkey Hearing Technologies, which purchased it as a research tool, Keefer said. A Starkey official couldn't be reached for comment.

But Keefer hopes to broaden the devices' appeal to audiology practices by coming out with a next-generation version later this year that, among other things, will have an improved user interface and a lower price tag that is comparable to the competition.

Muting extra noise

Meanwhile, Now Hear This is working on proving that the technology can be the centerpiece of an audiology practice that both serves patients and makes money by selling hearing aids at what it contends are competitive prices.

Allison Kenny, 39, of Raleigh, was concerned about buying her first hearing aid after her ear-nose-and-throat doctor diagnosed her with a genetic condition that affected the hearing in her left ear.

"I had heard that people found it almost worse to have a hearing aid because there was a lot of extra noise, or there was some ringing," she said.

Nor was she able to find a hearing aid to her liking when she tried a few out at her doctor's office. "I felt like I was in a tin can or something," Kenny said. "It was disorienting."

But the outcome was different when she stumbled across Now Hear This – she noticed the small signs the practice has placed along Creedmoor Road – and purchased her hearing aid there.

Now Hear This "really corrected my hearing," she said. "I've been to loud restaurants. I went to a birthday party that had a DJ and was able to talk to everyone and never have to ask, 'What?' I'm thrilled."