

THE OFFICIAL PUBLICATION OF THE ACADEMY OF DOCTORS OF AUDIOLOGY®

# Audiology PRACTICES

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*The Power to Practice*

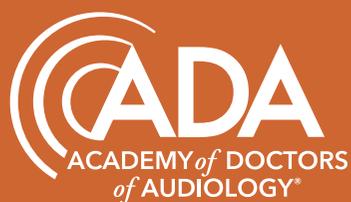
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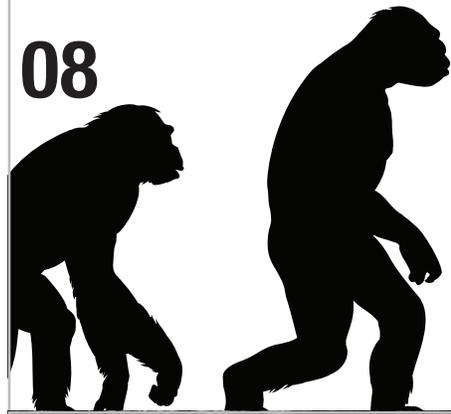
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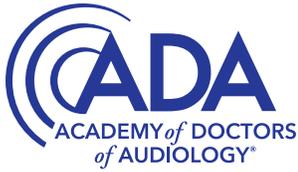


*The Power to Practice*

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## Lobbying Toward the Finish Line

On May 11, 2022, the Academy of Doctors of Audiology (ADA) hosted another virtual lobby day. Eighty-three participants met with seventy-seven legislative offices for a push for additional co-sponsors for the Medicare Audiologist Access and Services Act (MAASA) legislation (S 1731, HR 1587). In preparation for the virtual fly-in, ADA held online trainings to increase participants' confidence and comfort level to ensure successful meeting outcomes. On May the Fourth, thirty-seven individuals learned how to *Lobby Like a Jedi* and had a great evening reviewing MAASA lobbying points with a Star Wars theme. On May 5<sup>th</sup>, twenty-five individuals spent part of their Cinco de Mayo participating in the *Uno, Dos, Tres, MAASA* role-playing lobby day simulation.

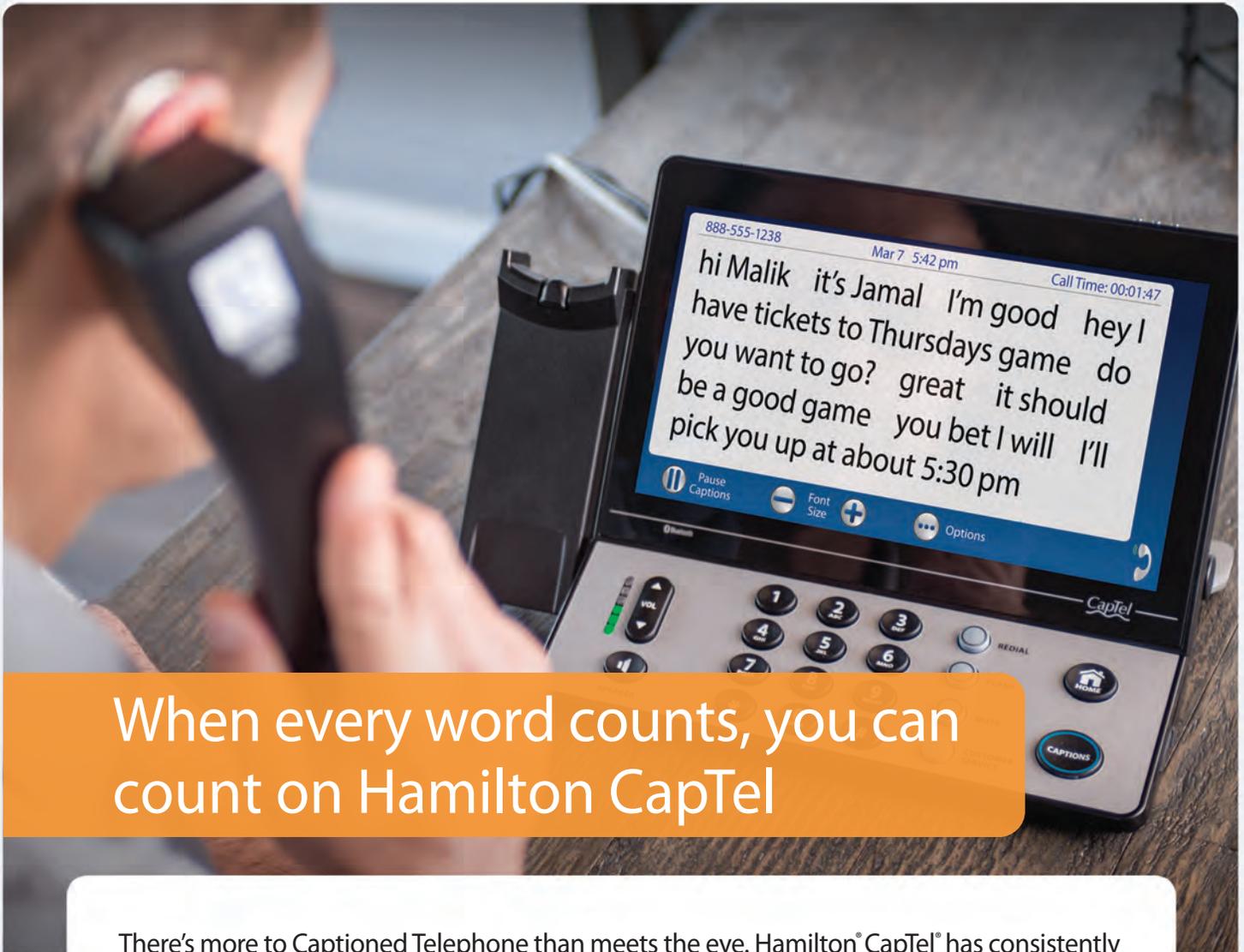
As many of you know, for the past several years, all three national audiology organizations, ADA, AAA, and ASHA have been working together for the passage of MAASA. If we want to move MAASA over the finish line this year, it is time for us all to individually engage to take the work of the past ten years to completion. 2022 presents audiology with the best opportunity we have had to date, as well as being a realistic closing window for the Medicare Audiologist Access and Services Act to pass anytime in the near future. It does not matter if you have NEVER been engaged before; it is currently time for all hands-on-deck. ADA is committed to making this happen, but it is going to take a concerted effort from as many audiologists as possible if this is going to happen!

There are multiple ways to contribute while staying within your comfort zone. If you do not feel ready to meet with legislative staff, then donate financially—no amount is too little (or too big). The reality is that it takes money to keep MAASA moving forward. Our lobbyist's time costs money, as it should. While Prime Policy has been collaborating with us all these years and has, I believe, a level of personal investment to pass MAASA, it still will never be the same level of investment audiologists SHOULD have for MAASA.

If you have the time and are willing to meet with your legislators, it is not too late; ADA can facilitate meetings with your Senators and Representatives virtually! It is also a great idea to have a



*Continued on page 46*



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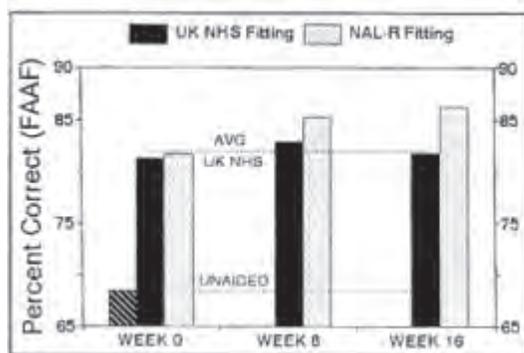
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## The Slow Progression of Research in a World of Constant Product Launches

In the early 1990's, the late Scottish researcher Stuart Gatehouse published data showing speech recognition ability in noise, although initially stable in the first days of a fitting, continued to improve as the individual continues to wear their devices. His work demonstrated improvements in speech understanding in noise continued to improve over a period of six to 12 weeks after the initial fitting for some individuals.

Importantly, these improvements in speech recognition over time tended to occur in individuals fitted with wideband hearing aids, matched to a NAL target. Results of one of Gatehouse's acclimatization studies are shown in Figure 1. Note that differences in performance between the wideband NAL and the narrowband "first fit" fittings started to become apparent at six weeks post fitting. Also note his results for the narrowband fitting plateaued at six weeks, while the wideband NAL fitting showed continued, gradual improvement between six- and 12-weeks post-fitting. Although hearing aid processing has become more sophisticated over the past 30 years, there is good reason to believe that a high percentage of hearing aids fitted today resemble the narrowband "first-fit" used in Gatehouse's research; thus, patients fitted with the narrow-bandwidth device might be at-risk for poorer than expected speech understanding results – even after several weeks of hearing aid use. In contrast, patients fitted with the wideband, NAL-matched devices, and given ample time to acclimatize to them, are likely to benefit from the guidance of an audiologist who understands the time course associated with "getting used" to new sounds.



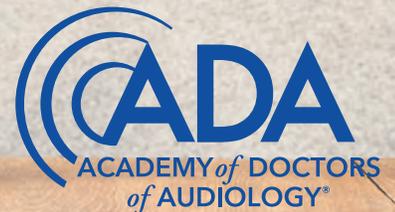
**Figure 1. Speech identification in noise scores comparing a wideband, NAL-matched response to a narrowband (UK NHS) fitting from Gatehouse's 1992 research.**

Gatehouse's findings—that a NAL-matched, wideband response yielded gradual speech understanding improvements that didn't become evident until six to 12 weeks post-fitting and that a narrowband hearing aid failed to do this — were not lost to history. Around the time these two studies were published, Mead Killion created the mythical Dr. ABONSO avatar to help bring the effects of acclimatization to life for clinicians. Dr. ABONSO (an acronym that stands for Automatic Brain-Operated Noise Suppressor Option) coined the term Hearing Aid Brain Rewiring Accommodation Time or HABRAT to describe this phenomenon. Killion and

*Continued on page 47*

# Contact Your Legislators!

Urge them to support the **Medicare Audiologist Access and Services Act** (H.R. 1587 and S. 1731)



The Medicare Audiologist Access and Services Act of 2021 (H.R. 1587 and S. 1731) will remove unnecessary barriers, allowing patients to receive appropriate, timely, and cost-effective audiologic care. This legislation can improve outcomes for beneficiaries by allowing direct access to audiologic services and streamlining Medicare coverage policies so that audiologists can provide the full range of Medicare-covered diagnostic and treatment services that

correspond to their scope of practice. The legislation would also reclassify audiologists as practitioners, which is consistent with the way Medicare recognizes other non-physician providers, such as clinical psychologists, clinical social workers, and advanced practice registered nurses.

## **Support the future of audiology!**

Contact Congress today and express your support for H.R. 1587 and S. 1731.

Visit [chooseaudiology.org/support](https://chooseaudiology.org/support) and contact your congressperson today!



## The 2022 AuDacity Program is “Ahead of the Curve” and Will Help You Stay Ahead of It Too

The 2022 AuDacity Conference Program, **Ahead of the Curve** is not for everyone—it is specifically geared for entrepreneurial audiologists, practice owners, and their teams. Ahead of the Curve is designed to deliver the resources and information they need to adapt to today’s challenges and to seize tomorrow’s opportunities.

The AuDacity Planning Committee cooked up the 2022 program from scratch, using a recipe that blends low-fat expertise, ideation, and inspiration that is reinforced with high-nutrient, peer-based panel discussions and workshops that provide step-by-step guidance for implementing key concepts and recommendations. In addition to the unmatched opportunities for information sharing and hands-on training, AuDacity attendees will receive a cookbook full of delicious ideas that they can customize and use in their practices. Practicing audiologists will share tips, tools, tricks, and timeless and time-tested protocols for success.

ADA is pleased to partner with Hearing Health & Technology Matters (HHTM) to develop a Pre-conference Workshop on Mobile Audiology, which will include opportunities for hands-on tours and exclusive product demonstrations.

The entire AuDacity program, which will run from October 20-23, 2022 in Dallas Texas, has been fashioned from start to finish to serve audiologists and audiology practice owners seeking to future-proof their practices. AuDacity 2022 is engineered to encourage innovation, idea sharing, and impact.

ADA is grateful for the ingenuity and tenacity demonstrated by the AuDacity Planning Committee members in the development of the 2022 Program:

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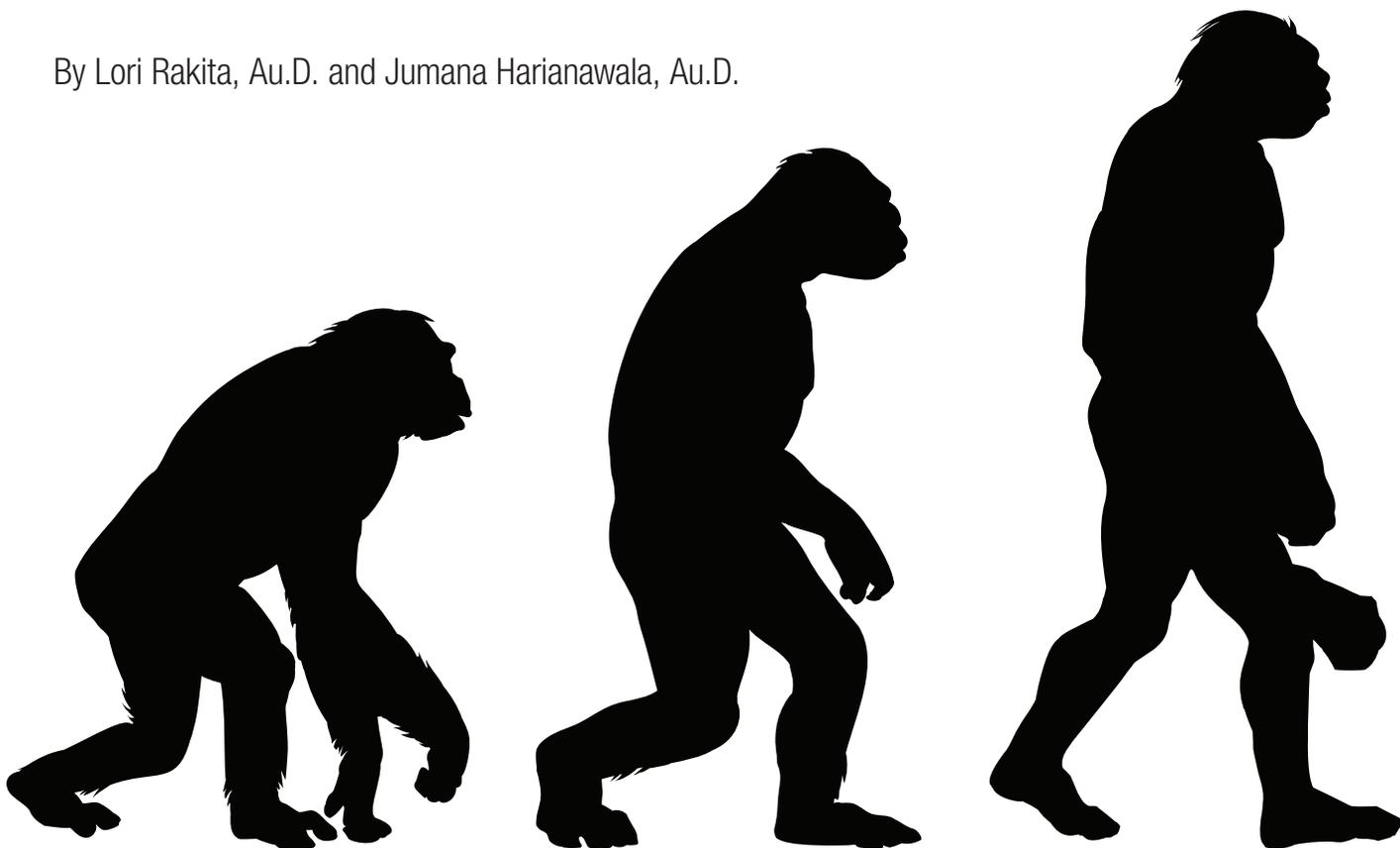
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Reimagine the future--from the big picture to the small details, AuDacity 2022 will help you and your team stay Ahead of the Curve. Please see page 45 and visit [www.audiologist.org](http://www.audiologist.org) for more information and to register. ■

# EDGE MODE

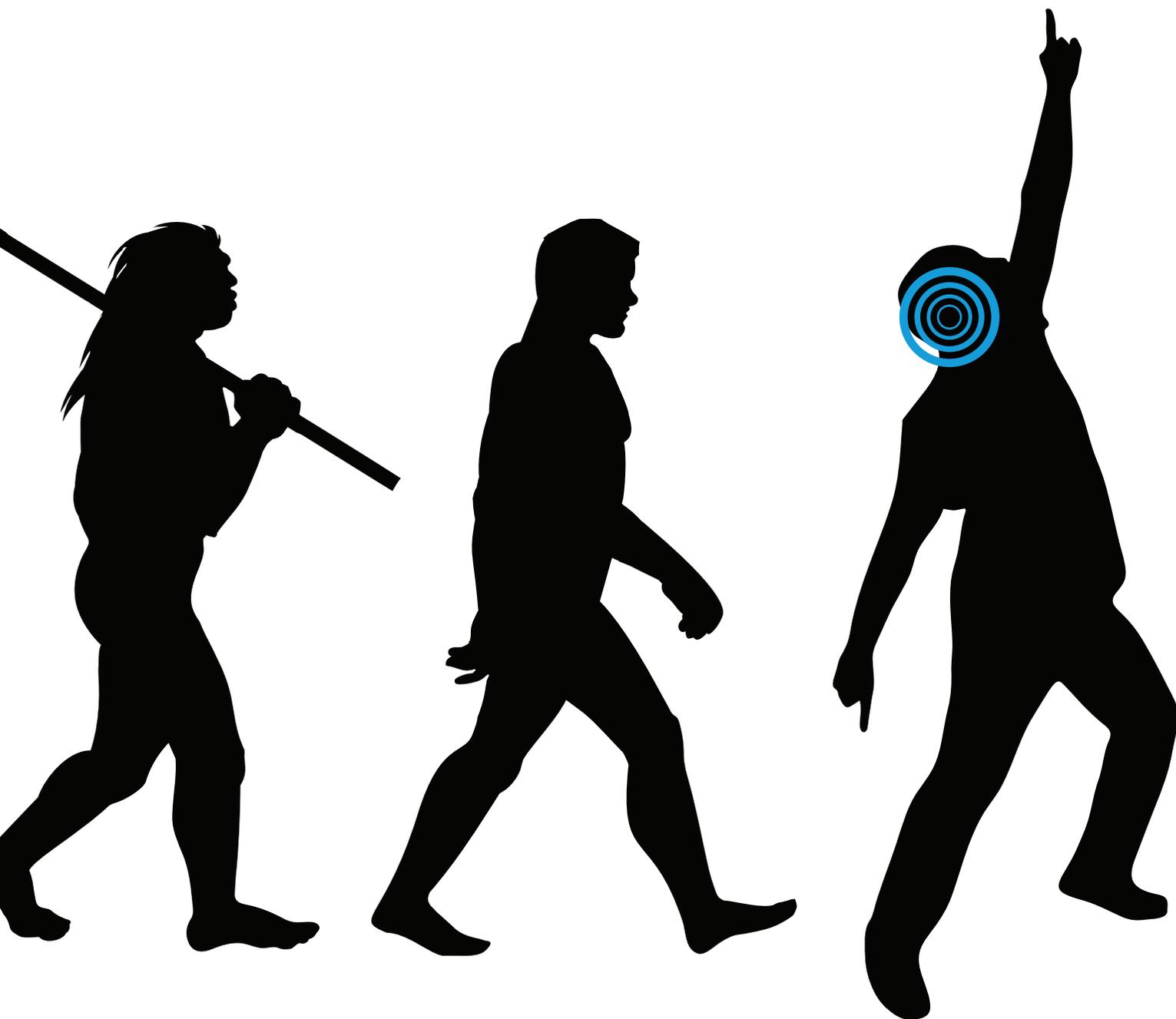
## EVOLVED WITH EVOLV AI

By Lori Rakita, Au.D. and Jumana Harianawala, Au.D.



### BACKGROUND

The chaotic and complex world of hearing cannot always be accommodated by concrete, manual hearing aid memories. Starkey hearing aids have always utilized an automatic environmental classification system that serves as the foundation for an effortless listening experience. This system monitors the environment and adapts the hearing aid parameters, accordingly. This automatic adaptation works seamlessly as the hearing aid user moves from one listening environment to another. Achieving this experience not only requires precise characterization of the environment and its acoustic properties, it also requires a technologically advanced system that provides the appropriate amount of adaptation. This allows the hearing aid wearer to keep attention focused on what's happening in the moment, and not on the hearing aids. This is an essential element of an effortless listening experience and has been incorporated into the Evolv AI hearing aids. The automatic environmental classifier, described above, can accommodate most listening situations, and relieves the hearing aid user from having to switch into manual hearing aid memories. However, some listening situations are particularly complex or particularly challenging, and require a more aggressive degree of signal processing to provide improved comfort or clarity. Edge Mode is an industry-unique, extra gear of adaptation, beyond the changes made by the automatic system, alone. Because Edge Mode is activated by the hearing aid user, the hearing

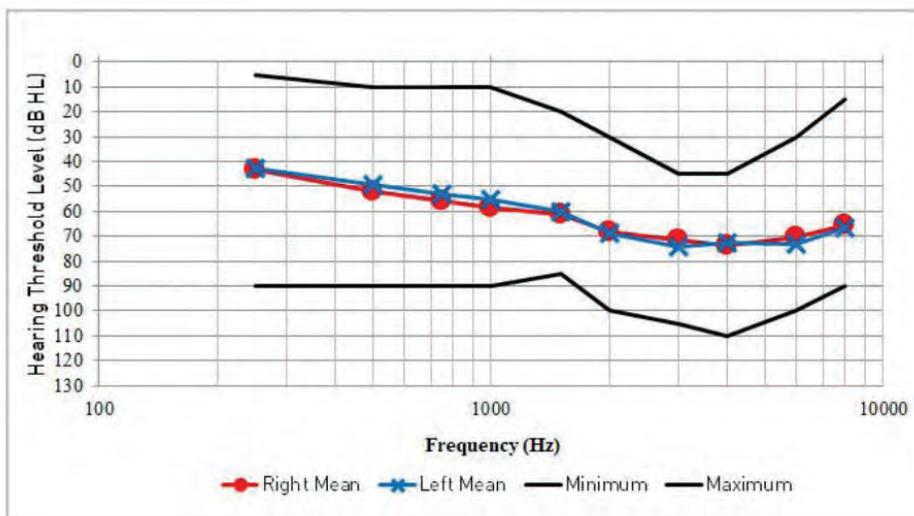


aid can enable more aggressive changes, providing impactful improvements, based on assumptions about listening intent. Edge Mode works by taking a “snapshot” of the acoustic environment. This involves a detailed analysis of acoustic nuances about the sound scene. Once this snapshot is captured and Edge Mode is engaged by the listener, Edge Mode automatically optimizes for comfort or clarity, depending on the listening situation. With the double tap of the hearing aid, and now, the tap of a button in the Thrive Hearing Control app, Edge Mode adjusts gain, noise management, and directionality to optimize the environment. In the latest Evolv AI product family, Edge Mode has been updated with new parameter adaptations based on expanded data analytics to provide comfort and clarity in the most challenging listening situations. This means the hearing aid is better able to recognize and adapt to environments with unique listening demands. For example, situations with continuous, diffuse background noise are clear for the hearing aid to detect and interpret. However, environments with sporadic speech at lower volumes, such as a small cafe or restaurant, or situations with louder, low frequency, steady-state noises (e.g., the car) require the system to account for very unique acoustic considerations. Edge Mode is now finely tuned to detect the various acoustic nuances of these more complex and ambiguous listening situations. The current studies were designed to better understand the capabilities of Evolv AI Edge Mode for improving comfort, clarity, and reduced listening effort in challenging and acoustically ambiguous listening environments.

## EXPERIMENT 1

The goal of the first study was to investigate key performance differences between the automatic environmental classification memory (“Normal Memory”) and Edge Mode. Two populations were used to assess Edge Mode performance for hearing aid users: moderate hearing loss (CIC users) and severe-to-profound degrees of hearing loss (BTE users). Of specific interest was the ability of Edge Mode to provide additional benefit in speech understanding and/or perceived listening effort over what is provided by the automatic environmental classification (“Normal Memory”). Listening effort was an important aspect of this study. Listening for individuals with hearing loss is reported as more taxing (Kramer et al., 2006), and more commonly associated with fatigue and stress (Hetu et al., 1988) than for normal-hearing listeners. Therefore, it was important to capture the degree to which a hearing aid user was exerting effort to understand speech, since this is something that is not captured by the speech intelligibility score. Lower perceived listening effort is (by definition) the most important indication of an effortless listening experience.

**Methods:** Twenty-six participants were enrolled in the current study. Thirteen participants had moderate to moderately severe degrees of hearing loss and were fitted with the Evolv AI CIC device. Thirteen participants had severe-to-profound hearing loss and were fitted with the Evolv AI Power Plus BTE 13 device. See Figure 1 for average audiogram of the participants.



**Figure 1: Average audiogram for research participants in Experiment 1. Red symbols represent average thresholds for the right ear, blue symbols represent average thresholds for the left ear.**

azimuth. A scene emulating a small café or restaurant was used for testing. This scene was selected because it can be challenging for a hearing aid to interpret a scene when background noise is more variable and lower in amplitude. IEEE sentences were presented from the front speaker at zero degrees azimuth at 65 dB SPL. Multitalker babble noise was presented from all other surrounding speakers at a summated level of 60 dB SPL.

**Outcome Measures:** There were two primary outcome measures of interest in this study. The first was speech understanding. Participants were asked to repeat back two lists of IEEE sentences in two hearing aid conditions: Edge Mode and the Normal Memory. These conditions were counterbalanced across participants, and the participants were blinded to the condition in which they were being tested. The number of words repeated back correctly was recorded for each list of IEEE sentences, and these scores across the two lists were averaged to achieve a final score for each participant. Perceived listening effort was also captured as Figure 1: Average audiogram for research participants in Experiment 1. Red symbols represent average thresholds for the right ear, blue symbols represent average thresholds for the left ear. Edge Mode: Evolved with Evolv AI the second outcome measure in this study. After completion of the two IEEE sentence lists for each hearing aid condition, participants were asked to rate their perceived listening effort on a scale of 1 (no effort) to 7 (maximum effort).

**Hearing Aid Programming:** The CIC devices and BTE devices were programmed to first fit (Best-Fit) to e-STAT, Starkey’s proprietary fitting formula via the Inspire X software. BTE users had either slim tubes or earhooks with traditional tubing and an earmold, depending on the degree of hearing loss. For participants with earmolds, venting was selected based on what was recommended in Inspire X software.

**Scene for Testing:** Testing was completed in a sound-treated booth. The participant was seated in the middle of an eight-speaker array, with a speaker positioned every 45 degrees from 0 degrees azimuth to 315 degrees

## Results

Results were averaged separately for the CIC users (Figures 2 and 3) and the BTE users (Figures 4 and 5). CIC users did not show any significant differences in speech understanding between the Normal Memory and Edge Mode but did show significant differences in perceived listening effort between the two memory conditions ( $p < 0.05$ ) and significantly lower perceived listening effort with Edge Mode compared to the Normal Memory ( $p < 0.05$ ).

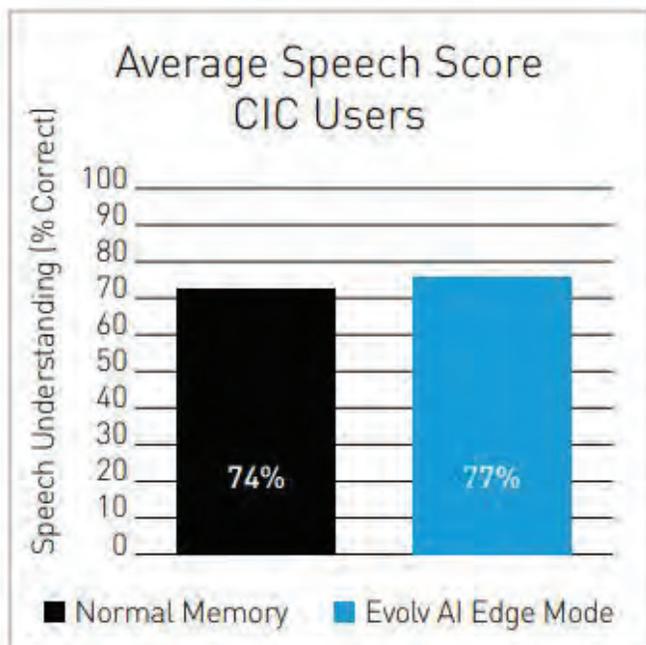


Figure 2: Average speech recognition scores for the CIC group in the Normal Memory and Edge Mode

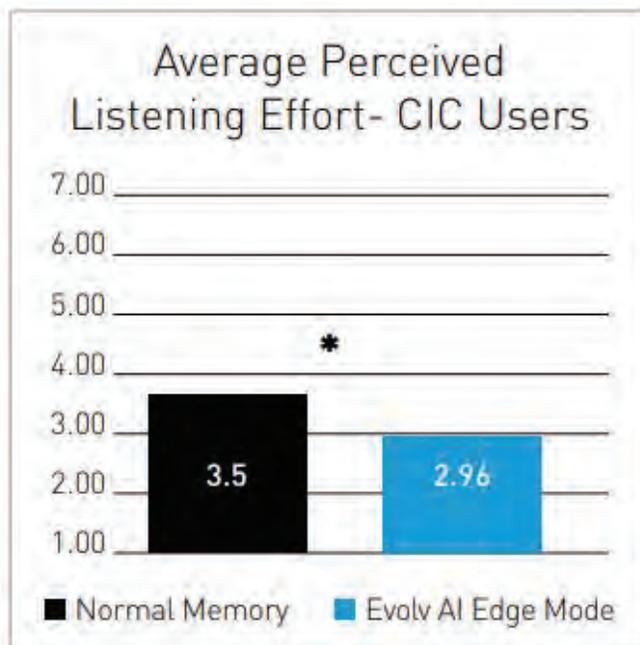


Figure 3: Average scores of perceived listening effort for the CIC group in the Normal Memory and Edge Mode. Scale used was 1-7, with 1 indicating no listening effort and 7 indicating maximum listening effort. (\* =  $p < 0.01$ )

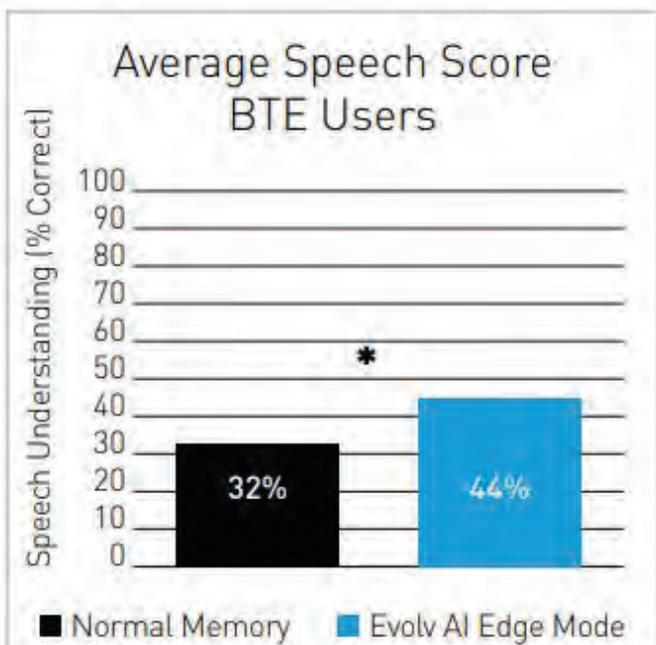


Figure 4: Average speech recognition scores for the BTE group in the Normal Memory and Edge Mode. (\* =  $p < 0.01$ )

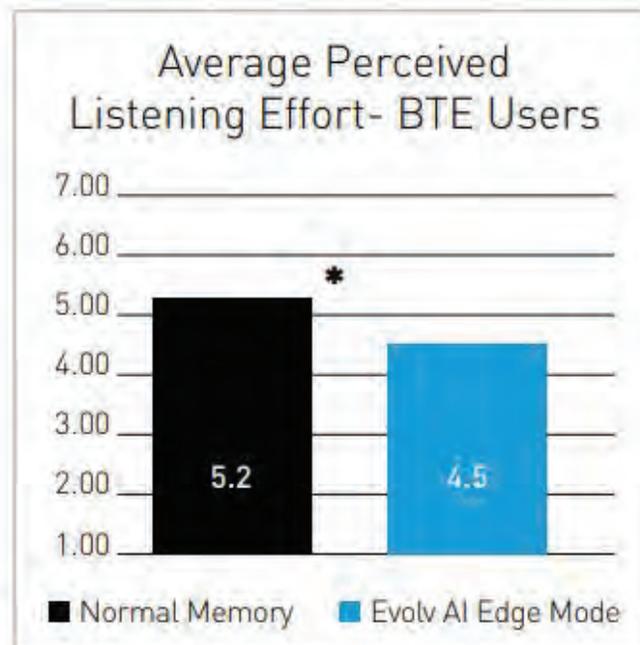


Figure 5: Average scores of perceived listening effort for the BTE group in the Normal Memory and Edge Mode. Scale used was 1-7, with 1 indicating no listening effort and 7 indicating maximum listening effort. (\* =  $p < 0.01$ )

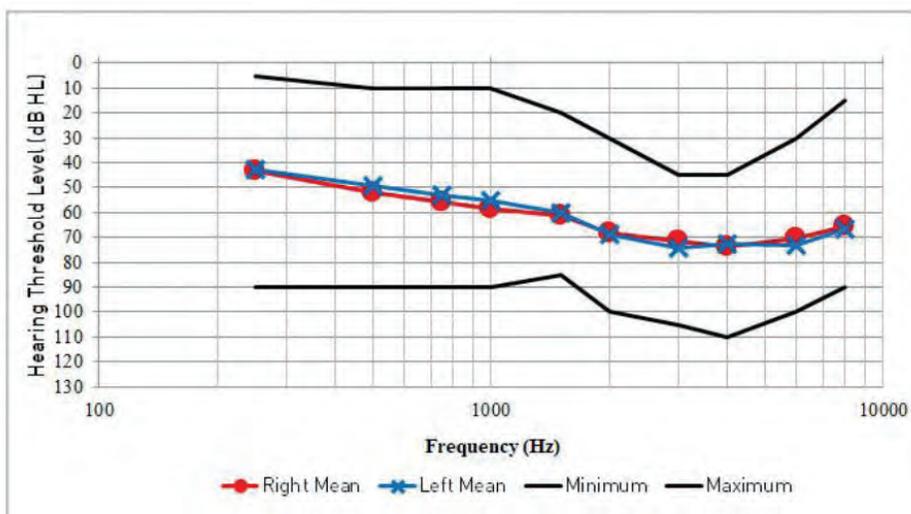
## Conclusion

The current study investigated comparisons between the automatic environmental classification system, alone (“Normal Memory”), versus Edge Mode for a complex acoustic scene: a small restaurant. Because there are more isolated interferers, as opposed to diffuse or steady-state background noise, this scene is more difficult for a hearing aid to interpret and provide adaptations. The new Evolv AI hearing aid has been optimized to handle these listening environments. The results of the study showed that CIC users, overall, did not have significant difficulty with speech understanding in this scene due to the lower levels of background noise. However, when assessing perceived listening effort, CIC users did indicate the scene was effortful, and had significantly less perceived listening effort in Edge Mode compared to the Normal Memory. This is an important finding that indicates the importance of collecting data related to listening effort in addition to speech understanding results. BTE users had significantly better speech intelligibility scores with Edge Mode compared to the Normal Memory. Listening Effort was also rated lower with Edge Mode compared to the Normal Memory. This shows that for individuals with greater degrees of hearing loss, even softer noise can be extremely difficult. The addition of Edge Mode can provide the extra boost in performance and reduce listening effort for these individuals. Overall, the current study provided evidence for the impact of Edge Mode, on top of the automatic environmental classification system. The results suggest that Edge Mode is making more extreme changes, as evidenced by lower ratings of listening effort as well as improved speech understanding in complex listening environments by some listeners.

## EXPERIMENT 2

Experiment 2 had three main purposes: The first was to extend beyond comparisons of speech understanding and listening effort to comparisons of preference for hearing aid users. The second goal was to explore more specific areas of comparison, including preference for speech clarity, listening comfort, and overall preference. Finally, the third goal was to investigate the degree to which Edge Mode provided benefit over a manually “optimized” dedicated hearing aid memory, as would be provided by a hearing healthcare provider for a particular problematic listening situation.

**Methods:** Fifteen participants were enrolled in Experiment 2. All participants had mild-to-moderately severe degrees of hearing loss and were fitted with the Evolv AI receiver-in-the-canal (RIC) devices. Average audiograms of the participants are shown in Figure 6 below.



**Figure 6: Average audiogram for research participants in Experiment 2. Red symbols represent average thresholds for the right ear, blue symbols represent average thresholds for the left ear.**

**Hearing Aid Programming:** The RIC devices were programmed to first-fit (Best-Fit) to e-STAT, Starkey’s proprietary fitting formula via the Inspire X software. Devices were fit with acoustic coupling appropriate for each participant’s hearing loss. Adjustments to the fittings were made upon participants’ request. Real Ear Measurements were completed for each participant to ensure acceptable hearing aid output for 55, 65 and 75 dB SPL International Speech Test Signal (ISTS) inputs.

**Scene for Testing:** A transportation scene was selected for testing due to the specific, acoustic characteristics

of this scene. Transportation noise is dominated by characteristically low frequency high-level noise. This complex listening situation requires a unique strategy for both identification and adaptation. A recording of actual male speech in high-level transportation noise was played from all eight loudspeakers at a summated level of 70 -75 dB SPL. An ambisonic approach to

recording and representing sound was used to not only capture the sound in the horizontal plane at the location of the side passenger but also to include the sounds and reflections from other sources and directions that make this listening environment complex and problematic.

**Outcome Measures:** Participants were asked to compare Edge Mode to the Normal memory and to an optimized, dedicated memory (i.e., the dedicated car memory), two at a time, in the transportation scene described above. Participants were asked to evaluate the hearing aid settings for three different judgement criteria – speech clarity, listening comfort and overall preference. Participants completed each paired comparison twice and were blind to the hearing aid conditions evaluated in each comparison.

## Results

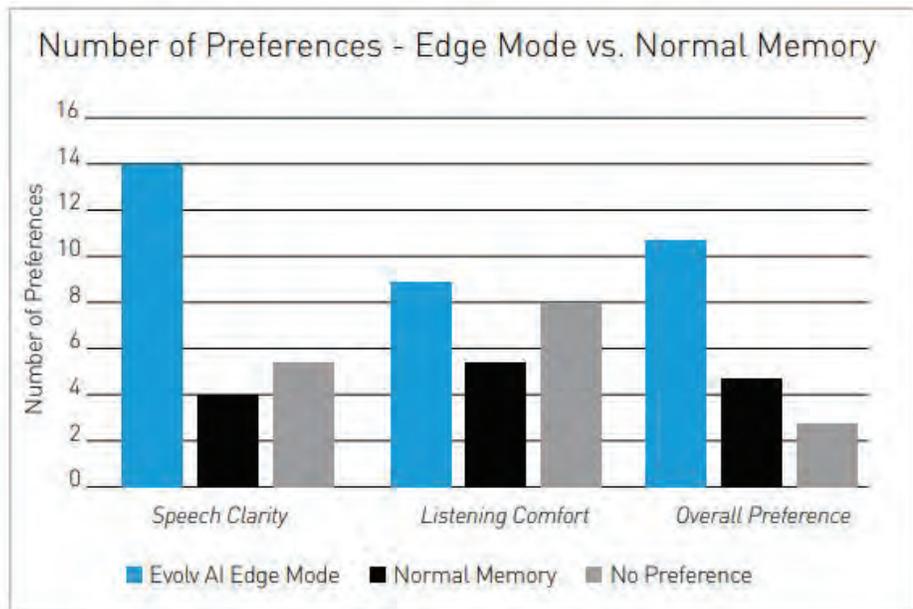


Figure 7: The number of preferences for speech clarity, listening comfort, and overall preference between Edge Mode and the Normal Memory (Automatic).

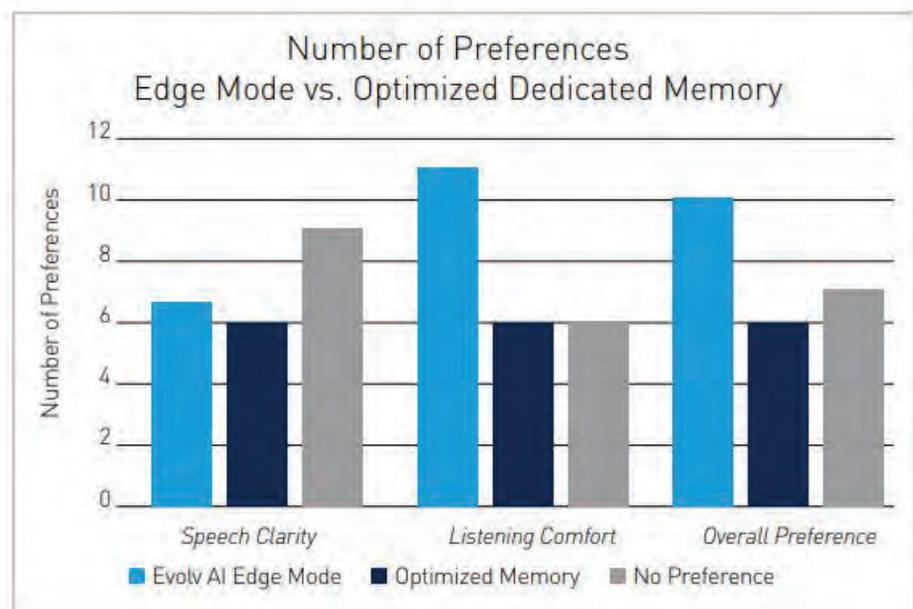


Figure 8: The number of preferences for speech clarity, listening comfort, and overall preference between Evolv AI Edge Mode and an Optimized Memory.

The number of preferences for each set of conditions is shown in Figures 7 and 8. Figure 7 shows the number of preferences for speech clarity, listening comfort, and overall preference between Edge Mode and the Normal Memory. The results indicate a greater number of preferences for Edge Mode over the Normal Memory regarding speech clarity and overall preference. Figure 8 shows the number of preferences for speech clarity, listening comfort, and overall preference between Edge Mode and an optimized, dedicated hearing aid memory. The results indicate a strong preference for Edge Mode over the dedicated hearing aid memory for listening comfort and overall preference.

## Conclusion

The results of Experiment 2 suggest that individuals with hearing loss show an overall preference for Edge Mode in challenging listening environments that require specific listening adaptations. Experiment 2 supports the results of Experiment 1, which demonstrated superior levels of speech understanding and perceived listening effort with Edge Mode. This study also indicates greater preference for Edge Mode over an optimized dedicated memory. These findings indicate that hearing healthcare providers can feel comfortable that Edge Mode will provide an appropriate level

of adaptation that will be equivalent or even better than what can be provided by a manual hearing aid memory, without counseling or assigning manual memories. The scenes used for testing in Experiment 1 and Experiment 2 were chosen because they a) can be very difficult for hearing aid users and b) are typically ambiguous and therefore more difficult for a hearing aid to interpret. Both studies demonstrate the benefit of Edge Mode for these types of listening situations. Tapping the hearing aid or activating Edge Mode in the app will adapt the hearing aid to any listening environment, including the complex or ambiguous listening environments that are typically difficult for a hearing aid to interpret and optimize. Without having to think about specific dedicated memories, Edge Mode provides the extra gear of adaptation, beyond the changes that happen automatically, to provide comfort, clarity, and reduced listening effort for the hearing aid user. ■

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**Lori Rakita, Au.D.**, joined Starkey Hearing Technologies in 2021 as the Director of Clinical Research. In her current position, she is responsible for output of the Research Department and organizing efforts related to product and feature development, validation, and studies that answer key audiological questions. Prior to Starkey, Dr. Rakita led teams in industry and medical settings in research efforts related to hearing aid performance, the effectiveness of signal processing, and the needs of individuals with hearing loss.

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## Vision, Alignment and Execution

By Julie Straw

**A**cross from our Minneapolis office is a restaurant called The Super Moon Buffet. The word “super,” however, is an almost coquettish understatement. It is massive. The theme is technically Chinese, but the ambition here goes way beyond what any single country could dream up. They’ve got sushi, French fries, ham, fresh fruit, roast duck, dim sum, apple pie, barbecued spareribs, stir-fried frog legs, baby octopus, pork chitterlings. It’s overwhelming. Each person has to come to terms with the Super Moon in his or her own way. Some people avoid paralysis by simply diving into the first dish that strikes them. Some rely on advanced mapping software. When we take out-of-towners there for lunch, they walk out the door and ask, “What just happened?” This experience is not completely unlike sorting through the selection of leadership books on Amazon. It is massive, but not necessarily in a bad way. Just like the buffet, of course, there’s some junk in there. (What is a chitterling anyway?) But mostly there are really brilliant, helpful, and practical insights. People who’ve spent a lifetime leading or studying leadership are willing to share their wisdom with the rest of us. The problem, however, is organizing and making sense out of all this information. To say the least, it’s overwhelming. We work for a company that’s in the learning business. It’s our job to make sure that people not only have access to information, but that they can actually absorb it. So, we had a major task ahead of us when we set out to develop our own leadership training program more than a decade ago—make this wealth of leadership insight accessible to all kinds of people in all kinds of organizations. The key word here is “accessible.”

Now, we know that people want to access this information, and we’re not just talking about the people at the top. We asked more than 5,900 training participants in which skill areas they would voluntarily spend their time attending training. Table 1 shows the top five results. Not surprisingly, people are most willing to attend training that has direct, concrete applications in their world—“technical knowledge related to my job.” It’s good to know how to do your job. But look at what’s a close second with 81 percent: “Leadership skills.” In fact, when we asked people what training would greatly increase their effectiveness knowledge



related to my job the number one answer, by far, was also leadership skills. More than half of the workers in our sample said they've read one or more leadership books in the past two years. Managers are more interested in attending leadership training than management training. People feel that there's a lot to learn—and there is. But again, this information has to be accessible if it's going to make a real difference in anyone's work. So that's what we set out to do—make leadership accessible. In essence, our goal was to study all of the most respected thinking and research on leadership, focusing on common themes and major breakthroughs, and follow up with our own research, gaining clarification on the most promising ideas.

**Table 1. Interest by survey respondents of type of training they desire**

Skill	Percent Who Said They Would Attend This Type of Training
Technical knowledge related to my job	86%
Leadership skills	81%
Innovative thinking skills	76%
Management skills	76%
Dealing with conflict and difficult people	74%

The first stage, our literature review, was, frankly, exhausting. Over the course of about five years, we worked with a team of people finding the best thinking on leadership. Now, it turns out that finding the best thinking also means reading a lot of the less-than-best thinking. But that's okay; nobody got hurt. We also realized that if we wanted to come up with a truly comprehensive view of leadership, we would have to include writers from a broad range of perspectives: Contemporary authors like Marcus Buckingham and Seth Godin and classic authors like Peter Drucker and Warren Bennis. Authors who come from an academic background like Peter Senge and Daniel Goleman and authors who come from a consulting background like Liz Wiseman and Patrick Lencioni. Leaders who have thrived in the non-profit sector like Frances Hesselbein and Gloria Duffy and leaders who have thrived in the corporate world like Larry Bossidy and Harry Jensen Kraemer, Jr. Authors who come from a highly philosophical perspective like John Maxwell and Max De Pree and authors who come from a highly research-based perspective like Jim Collins and Jim Kouzes and Barry Posner. The goal was to pull out a simple structure that still captured the richness within





all of this thinking. That is, what are the biggest, most important ideas? Then we moved on to verify and build on what we had learned. We wanted clarification on these big, important ideas. How do they hold up under scrutiny? How do they apply to the work leaders do on a daily basis? As it turns out, we were in a highly enviable position to take on this sort of inquiry. We work for an organization that, among other things, helps hundreds of thousands of managers and leaders every year understand the relationship between their personalities and their work. We have as many as 3,500 people a day completing one of our online assessments, many of whom are gracious enough to help us out with our leadership research. As a result, we can study the attitudes and behaviors of literally thousands of leaders every week. Collecting data of this magnitude usually takes months. Extensive resources are needed. Undergraduate psychology majors can be locked in rooms for weeks until they tabulate piles of surveys. Our setup, on the other hand, gave us the opportunity to quickly test hypotheses, look at the results, then test some more. We could pit grand theories and conventional wisdom against the real work that leaders do, every day. Ultimately, the VAE model was created in ten stages of development. You can read in more depth about this process in our book, *The Work of Leaders*. And so, we're happy to say that, throughout that book, we are able to provide results from dozens of studies that we have conducted over the past ten years with hundreds of thousands of participants. Given all this information, however, we were sure not to lose sight of our end goal—to create a framework of leadership that was accessible and actionable for everyone—not just the CEOs. We wanted to take the mystery out of leadership and spell out a leader's responsibilities as clearly as possible.

The result was a leadership model of Vision, Alignment, and Execution—what we call the VAE model. The VAE Model suggests leaders have three fundamental responsibilities: They craft a vision, they build alignment, and they champion execution. Of course, there's a lot of skill that goes into each element of the VAE Model.

First, it helps to have some quick definitions of each of the three elements.

- **Crafting a Vision:** imagining an improved future state that the group will make a reality through its work
- **Building Alignment:** getting to the point where everyone in the group understands and is committed to the direction
- **Championing Execution:** ensuring that the conditions are present for the imagined future to be turned into a reality.

All three are part of a dynamic, fluid process. While there is a loose order implied in the VAE model, the actual Work of Leaders is not strictly sequential. Although it makes sense to craft a vision before aligning around it and executing on it, leaders are continually revisiting and reshaping their visions of the future. Likewise, we need to have buy-in before any major push toward execution, but maintaining alignment is an ongoing process. There is, obviously, a great deal of complexity in doing the work of a leader, but the true value of this model is that it lays out a manageable, realistic framework to guide the process. The goal is to provide straightforward explanations of where you might choose to target your personal development efforts.

Now, let's look at some cornerstone principles of leadership, according to our model.

- The VAE model approaches leadership as a one-to-many relationship, as opposed to the one-to-one relationship of management.
- The Work of Leaders is done by leaders at all levels. Whether you are a senior executive or a leader on the front line, the process of leadership follows the same path.
- The Work of Leaders is a collaborative process, but the journey to becoming an effective leader is a personal one. Some of the skills and best practices outlined here may come to you more easily than others.



Last, let's examine some of the key behaviors associated with each of the three elements of the VAE Model. They are outlined in Table 2.

**Table 2. The Work of Leaders Overview**

Vision	Alignment	Execution
<p><b>Exploration</b></p> <ul style="list-style-type: none"> <li>• Remaining open to new ideas</li> <li>• Prioritizing the big picture</li> </ul>	<p><b>Clarity</b></p> <ul style="list-style-type: none"> <li>• Explaining rationale</li> <li>• Structuring message</li> </ul>	<p><b>Momentum</b></p> <ul style="list-style-type: none"> <li>• Being driven</li> <li>• Initiating action</li> </ul>
<p><b>Boldness</b></p> <ul style="list-style-type: none"> <li>• Being adventurous</li> <li>• Speaking out</li> </ul>	<p><b>Dialogue</b></p> <ul style="list-style-type: none"> <li>• Exchanging perspectives</li> <li>• Being receptive</li> </ul>	<p><b>Structure</b></p> <ul style="list-style-type: none"> <li>• Providing a plan</li> <li>• Analyzing in-depth</li> </ul>
<p><b>Testing Assumptions</b></p> <ul style="list-style-type: none"> <li>• Seeking Counsel</li> <li>• Exploring Implications</li> </ul>	<p><b>Inspiration</b></p> <ul style="list-style-type: none"> <li>• Being expressive</li> <li>• Being encouraging</li> </ul>	<p><b>Feedback</b></p> <ul style="list-style-type: none"> <li>• Addressing problems</li> <li>• Offering praise</li> </ul>

You certainly don't need to be a master in all of these areas: vision, alignment and execution, but our research suggests that to be an effective leader some level of skill in all three drivers is a must. In the end, leadership development, like any personal development, is about energy. Where do you put your energy and how much do you put in?

To learn more about the VAE Model and how to bring it to life in your practice, please see *The Work of Leaders: How Vision, Alignment, and Execution Will Change the Way You Lead* by Julie Straw, Barry Davis, Mark Scullard, and Susie Kukkonen. Wiley Press. ■

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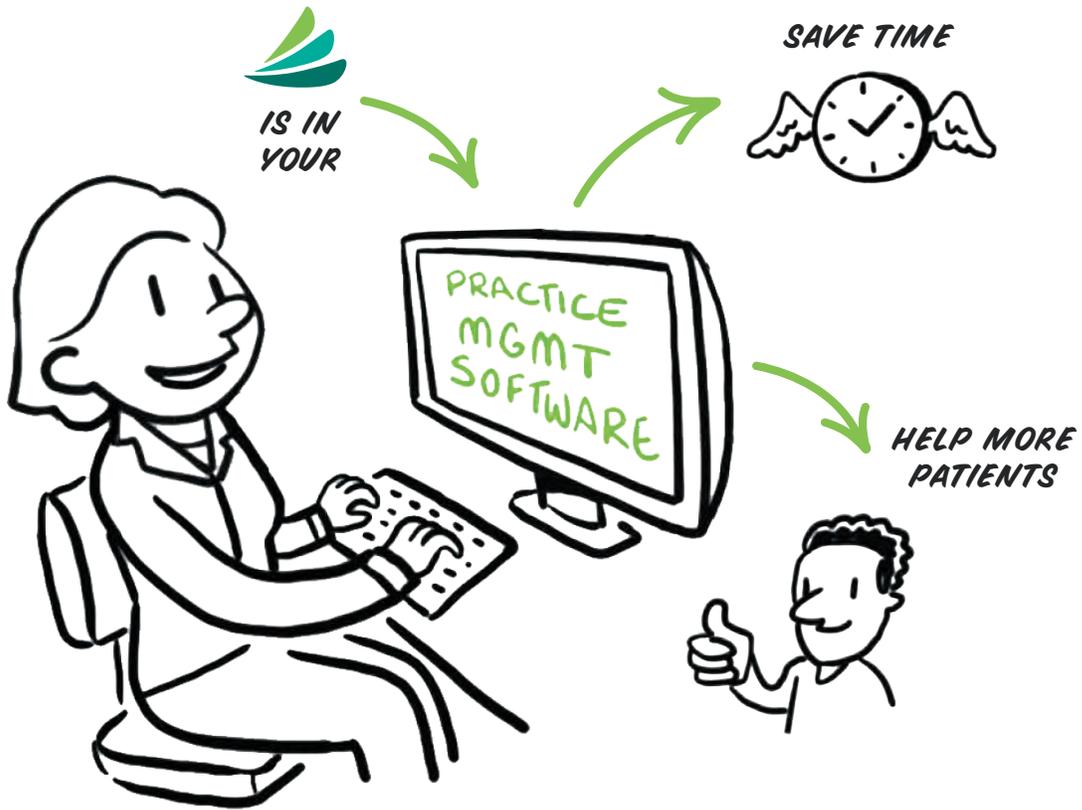


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# AUDIOLOGY ASSISTANTS AND STATE REGULATION

## What's Best for Audiology?

By Carolyn Smaka, Au.D.

### **Audiology Assistants: Key Strategy for Practices to Thrive**

Disruption to audiology practices is coming from many sources today—inflation, the labor shortage, industry mergers and acquisitions, competition from retail and big box stores, declining reimbursement rates from third-party payers, and over-the-counter hearing aids on the near horizon, to name a few. Audiology thought leaders have recommended several strategies for audiologists to compete and thrive in these changing times. These include practicing to the full scope of practice as allowed by state law, unbundling the cost of services from devices, offering concierge level services, providing ancillary, related services like cognitive screenings, and increasing the use of audiology assistants and support personnel (e.g., Larkin et al., 2016; Cavitt, 2018; Taylor, 2016; Kingham, 2022). Research indicates that the use of audiology assistants is indeed increasing (Wince et al., 2022). Audiology assistants are intended to improve the accessibility, productivity, and profitability of audiology practices. By taking on administrative and routine tasks, audiology assistants enable audiologists to focus on activities that require complex diagnostic and treatment expertise. Additionally, research suggests that

re-allocating administrative tasks to audiology assistants may have a positive outcome on workplace stress for audiologists (Emanuel, 2022).

Dr. Kristin Davis, audiologist and owner of Davis Audiology, a private practice with three locations in South Carolina, reports that audiology assistants allow her practice to provide excellent patient care and support, at a level that would not be possible without the use of assistants. Davis states, “In our practice, audiology assistants significantly improve access to care for patients by providing same day/next day availability for device clean and checks, device repair processing and check in/out, and Bluetooth troubleshooting, among other services.”

More autonomy for audiologists to hire, train and use audiology assistants supports our professional future.

## Regulation is Increasing

In 2014, Liebe reported that “few states presently regulate or define the scope of practice for audiology support personnel”. In 2018, Karzon et al. noted a trend toward more regulation for audiology assistants. Since that time, new initiatives to regulate audiology assistants have emerged. It seemed like a good time to review what’s happening overall to help empower audiologists with information so that they can lead and support initiatives that will best serve their practices, their patients, and consumers in their state.

## Inconsistent Laws and Rules Across States

If you practice or have practiced in more than one state, you are familiar with the wide variability in audiology state laws and rules. There is even more inconsistency in regulation when it comes to audiology assistants. The following summary of state regulations is provided as an overview; it was compiled from information from state licensing agencies and is subject to change. As always, consult your state directly as well as your attorney to guide any decisions for your practice.

### LICENSURE

The purpose of licensure is to protect consumers and ensure quality, although research on occupational licensure indicates that licensure requirements do not always align with public health or safety concerns (National Conference of State Legislatures, 2017).

Today, six states (OH, OK, MA, MD, MT, TX) and the District of Columbia require licensure for audiology assistants. Montana has not yet started issuing licenses for assistants; it is anticipated to start accepting applications in Fall 2022. Maryland’s law indicates an October 1, 2022, start date for assistant licensure.

The minimum educational requirements for licensure as an audiology assistant varies by state, ranging from a high school diploma to a bachelor’s degree in speech-language pathology or audiology plus additional observation and/or training. Texas requires Certification from the Council for Accreditation of Occupational Hearing Conservation (CAOHC) or a bachelor’s degree in communicative sciences and disorders; 25 hours of on-the-job training is also required for all Texas applicants.

Fees, training, amount of supervision, permitted and prohibited duties, duration of licensure, renewal requirements including continuing education requirements, maximum number of allowable assistants per supervisors, and other parameters also vary among these states.

If public health and safety is the goal of licensure, the question is how these disparate licensure requirements - for the same profession - can all purport to meet that goal.

### REGISTRATION

Today, 11 states require registration for audiology assistants (AL, CA, DE, GA, MO, MS, NC, NE, RI, WV, WY).

Registration requirements also vary widely. For example, Rhode Island refers to ‘audiometric aides’ and requires applicants to have a high school diploma and on-the-job training, while applicants in Alabama must possess a bachelor’s degree in communication sciences or a related field.

## Terminology

The term ‘audiology assistant’ is consistent with the terminology used by the Academy of Doctors of Audiology (ADA), the American Academy of Audiology (AAA), and the American Speech-Language-Hearing Association (ASHA) to refer to audiology support personnel. States’ laws and rules include other terms (in addition to ‘audiology assistant’): audiology aides; audiologist assistant; audiometric technician; audiometric aides. These terms may or may not be equivalent and are noted when referenced.

Although registration may be intended or perceived as a looser regulatory path than licensure, registration requirements can be rigorous. In Nebraska, for example, the minimum educational requirement for registering as an assistant is a bachelor’s degree or an associate degree from an accredited training program in communication disorders or the equivalent. The regulations further stipulate specific requirements for 70 hours of the applicant’s coursework (or equivalent training), and additional training requirements for those who will provide aural rehabilitation.

### OTHER REGULATION OR MENTION: IT’S COMPLICATED

Fourteen states do not require licensure or registration for audiology assistants but have some type of state guidance in place for use of assistants via their laws, rules and/or practice acts (AR, CT, FL, ID, IL, IN, IA, KS, LA, ME, PA, UT, VA, WI).

These regulations vary considerably from state to state. Some regulations are more detailed, for example, Iowa has two categories of audiology assistants, Audiology Assistant I and II, which have their own training and supervision requirements. Florida requires a state certification for assistants.

Other states have more general guidelines. For example, the Connecticut Audiology Practice Act stipulates supervision requirements for assistants (i.e., direct and on-site from a licensed audiologist) as well as prohibited activities for assistants. This brief section in the CT Audiology Practice Act ensures that licensed audiologists have the autonomy and flexibility to use assistants in their practices to improve productivity and profitability, and at the same time provides common-sense guidelines to ensure patient safety.

Arkansas and Maine have rules that simply state that audiologists may delegate certain tasks under supervision.

Two states do not appear to allow audiology assistants. New York’s practice guidelines for support personnel indicate that the terms “audiology assistants” and “audiology aides” may not be used although certain support tasks that do not require a professional license may be delegated to unlicensed personnel. New Mexico’s Board has a letter posted on its website indicating that audiologist assistants are not allowed per the state statute.

### NO MENTION OF ASSISTANTS

The remaining 17 states have no mention of audiology assistants in their laws or rules. In these cases, it does not mean audiology assistants are ‘allowed by omission.’ When state laws and rules are lacking or unclear, audiologists should inquire in writing with the state licensing entity and consult their own legal counsel to determine whether/how to use assistants.

## Best Practice in Regulation: Less May Be More

Head spinning? Given the hodgepodge of existing regulations around audiology assistants, it is hard to discern what is actually best practice, especially when evidence that it improves the quality or safety of audiology services is lacking.

Regarding licensure, there is little evidence that it improves service quality, health, or safety (Kleiner, 2017), particularly for occupations like audiology assistants where the risk to public health and safety is low. The argument for licensure is strongest when low-quality practitioners can inflict serious harm (e.g., pilots, physicians, etc.), or when it is difficult for consumers to select a quality provider (White House Report, 2015), neither of which applies to audiology assistants. The negative impacts of licensure are also well documented (see NCSL, 2017; Kleiner, 2017) and may include:

- **Reduced employment, smaller application pool.** Imposing requirements such as additional training and education, fees, exams, and paperwork, reduces employment in licensed occupations.
- **Higher costs to businesses.**
- **Increased prices of goods and services for consumers.**
- **Reduced competition and market innovation.**
- **Reduced geographic mobility for workers** due to inconsistent licensure requirements across states. This impacts military families and others.

The licensure of audiology assistants comes with additional potential risks for the audiology profession: Licensure may be a path to autonomy and independent practice; licensure may be a means of becoming credentialed with insurance and third-party payers; and licensure plus an established scope of practice may be the first step toward expanding that scope of practice.

A best practices approach to occupational licensing and regulation should strike a balance between benefits and costs (National Conference of State Legislatures, 2017). Revising or removing regulations is typically much more difficult than enacting them. Therefore, when considering new regulations, it is important to conduct comprehensive cost-benefit analyses and to avoid unnecessary and overly restrictive requirements.

## Professional Associations: Positions and Initiatives

### AMERICAN ACADEMY OF AUDIOLOGY POSITION STATEMENT

In 2021, the American Academy of Audiology (AAA) issued a position paper on audiology assistants. The AAA position statement does not support licensure for audiology assistants.

The statement indicates that there is no need for state licensing of audiology assistants since assistants should only work under the supervision of a state-licensed audiologist, who is ethically and legally responsible for all services provided, for patient safety, as well as for the assistant's training and ongoing competency.

### AMERICAN SPEECH-LANGUAGE-HEARING ASSOCIATION ASSISTANT CERTIFICATION

The American Speech-Language-Hearing Association (ASHA) recently introduced the ASHA Assistants Certification Program to certify Audiology Assistants (AA) and Speech-Language Pathology Assistants (SLPA). According to the January 2022 ASHA Board of Directors Meeting Report, there are currently 24 Certified Audiology Assistants (C-AAs). Five states have proposed or made changes to their SLPA regulations to align with or recognize the ASHA certification, and several other states are considering similar changes. Whether or not similar changes to audiology state regulations will be introduced is not noted in the report. The report states that the ASHA staff working group will recommend future initiatives, programs, and priorities in this area.

### ACADEMY OF DOCTORS OF AUDIOLOGY POSITION STATEMENT

The Academy of Doctors of Audiology (ADA) position statement (ADA, 2021) defines audiology assistants as unlicensed, entry-level support personnel, trained by audiologists to carry out routine tasks so audiologists can focus on complex clinical diagnostic and treatment procedures. Per this definition, the audiology assistant's role is consistent with the assistant's role in other clinical doctoring professions, e.g., medical assistant, optometric assistant, chiropractic assistant, dental assistant, veterinary assistant, and occupational and physical therapy aides. The ADA statement provides an extensive review of research on occupational licensing and concludes that the risks outweigh the benefits when it comes to licensure for audiology assistants.

## **ADA Model State Licensure Law for Audiology**

In 2005, the ADA developed a Model State Licensure Law that suggests best practices in audiology state regulation. Recently, the ADA Model Licensure Committee reviewed the Model State Licensure Law to ensure that the language aligns with changes in audiology practice and the regulatory environment. Figure 1 includes those sections of the ADA Model State Licensure Law that reference audiology assistants. It may serve as guidance for audiologists looking to enact or change state regulations for audiology assistants.

**Section 2.6** “Audiology assistant,” an unlicensed individual who is trained to provide dedicated, specified services under the supervision of a licensed audiologist.

**Section 5.0** An audiology assistant shall work under the supervision of a licensed audiologist. A licensee supervising an audiology assistant shall account for the performance and all services provided by the assistant, consistent with rules established by the board. Training for such activities must be completed by the licensed supervisor.

### **Section 5.1** Restriction on audiology assistants

The assistant may not engage in any of the following activities:

- Interpreting obtained observations or data into diagnostic statements of clinical management strategies or procedures.
- Transmitting clinical information including data or impressions relative to client performance, behavior, or progress either verbally or in writing to anyone other than what was directed by the supervisor licensee.
- Independently composing clinical reports except for progress notes to be held in the client’s file.
- Using any title either verbally or in writing other than that determined by the licensee.

**Figure 1. Audiology assistant language in the ADA Model State Licensure Law.**

## **Summary**

Hamil and Andrews estimated the number of audiology assistants in the U.S. to be 4,250 in 2017, and a recent study indicated that the employment of audiology assistants is increasing (Wince et al., 2022). There currently exists a patchwork of different requirements across states, and the trend is toward more regulation for audiology assistants.

When considering new regulations for audiology assistants, due diligence is required to look at both benefits and risks. Although revising and removing regulations is typically more difficult than enacting them, there are means to do so if existing regulations do not serve the needs of audiology practices, patients, and consumers. Licensed audiologists should be the primary drivers of legislation and legislative changes in their states when it comes to audiology assistants.

### **RECOMMENDED QUICK READ**

*Licensing of More Occupations Hurts the Economy*, by Martin Kleiner, PhD, one of the foremost leading experts on occupational licensing and its impacts. Available at [www.umn.edu](http://www.umn.edu). ■

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# RESILIENCE 101

## A Letter About Living Your Mission and Values

By Kim E. Fishman, MA

*Dear Fellow Audiologists,*

It isn't easy. Our parents have told us this a number of times. We tell our kids, life isn't easy. Although they don't know anything about working in the field of audiology.

Helping people is why so many of us clinicians come into this field. And what is not to like about changing people's lives in such a short amount of time? My path to where I am today has not been direct, and most definitely has not been easy. I am sure many of you have experienced a variety of events along your path in this career. Here is my story.

Since I graduated, every step along the way has been a search for the truth.

From figuring out how many channels in a cochlear implant are needed for best outcomes to what are the best hearing features for people.

For the last 10 years, my focus has been on accessibility and affordability. I want people to help themselves hear better and get access to the information we, as hearing health care providers, can share with others. It is our mission. Protect your hearing, get in the loop, get some kind of assistance, don't go crazy with your tinnitus; we can help! We love to help. This is why we went to school, learned and trained in this field.

In 2018, I thought I came up with the perfect solution. So I created a space where people could walk on in to "shop" in a retail space that shows everything our industry can showcase. I worked with an architect who created custom shelves that ultimately displayed hearing protection, accessories, cleaning supplies, treatment ideas for tinnitus, PSAPs, and yes, even over-the-counter hearing aids. They were beautiful pieces and I was able to fill the shelves with product. As you know we were missing—and still are missing—the over-the-counter hearing aids. Additionally, we had three sets of shelves for hearing aids and those shelves were given to those who helped sponsor or paid "slotting fees". The patients knew the shelves were sponsored. Just like how Walmart works, although I don't think Walmart shares transparency like we did.

It was a brilliant idea (if I must say so myself). But it didn't really work because, as you may know, our industry doesn't work that way.

The space created had a large beautiful custom table with a built in power supply like an apple store and high top chairs. This enabled us to host events. Our people came for an experience. They came for coffee, treats, lunch, and joined an *event*. We had many a fun event. Lots of great conversations. We even had one of my patients (the walking Atmosphere) come and play drums and tell poems. It was beautiful. They got to experience a loop, watch TV with a TV streamer piece of their brand, and even demo a hearing aid of their choice! What is not to like.

Now, my practice had previously been in St. Louis Park (SLP), MN a very close suburb to the city. My sister and others warned me that when I moved it wasn't going to work for such-and-such a reason. Did I listen? Nope. I was sure this was the solution. Move from St. Louis Park to Minneapolis, into the city, in Uptown, and create accessibility to people who are not all wealthy. It seemed ideal. Not that everyone in SLP is wealthy. Minneapolis is much more populated with a huge diversity of people. Our new space was off a bus line, in a very young and hip area.

I loved going to work in the morning. Visiting with people, perfect acoustics for hearing in the clinic, with drop ceilings in the store. Music from the Sonos speakers played daily. The people that came in loved it (other than the parking, which was another issue I won't get into here). We were near great authentic food including a famous donut store next door! Lots of small businesses. At first all was great, besides gaining weight.

People who lived in the city flocked to our new location. Our population was so diverse, young with more musicians than I have ever seen. True, we had some scary moments of drunken people walking in looking for food (yes, we gave them food), but mostly, we were helping people that summer.

Then came the brutal winter of 2019. It was so cold and snowy no one came out. I was starting to get scared. (My bookkeeper warned me that I was spending or had spent too much money.) In March, people started coming back in and the schedules were full again. I thought I might just make it. Then Covid-19 happened. The schedule was wiped out – just like that.

What happened, what do I do, I thought? The products were unbundled and my fees were probably not enough. Maybe I had too much staff. But we had to have them for our walk-ins. Maybe the costs of goods were still too high. Too much stock. My build-out was definitely too expensive. What do I know about business? I am an audiologist! Did I have any classes or training on running a business? NOPE.

My landlords were horrible. One even shot his wife in domestic abuse. The other was bilking me for CAM fees that were never used. Sewer bugs started showing up from a sewer issue downstairs, in our stock area, that was never addressed in the buildout. Mice were in our space from a hole that was never repaired because the sound booth blocked it. No rodents in the lease, but the landlord said, “what do you expect in an old building?”

I realized I had made a BIG mistake. It wasn't the first time, and it probably won't be the last. There were not enough unique amplification products at this point. I was too early out of the gate. And I had no money to market the new concept. I had too much debt. My plans of creating a store that I was going to tell all of you about and how to make it work, failed.

Long story short, I chose bankruptcy as I saw no other way out so that I could continue to help people. Thank goodness I had no real money, boats, big houses, etc. Just debt and more debt and school debt (which, by the way, a bankruptcy does not remove).





After talking to some of my peers and the attorneys, I risked starting up a new clinic back in the suburbs. I found an adorable small space in a historic house; only female owned small business owners are here with me. I moved during the beginning of COVID-19. Those were scary times.

My patients came back to me and I even had new patients come during the beginning of COVID, where we worked outside in the nice sunshine that summer. Many of my SLP patients came back. Some told me they were happy I moved back as they were not going to follow me to the city.

We still create fun events, outside now, although we are doing more inside now, too, without masks. I love helping people. We mostly get people from referrals of our patients. I don't market my clinic right now.



Affordability and accessibility is still my top priority. I am pooling my resources to our online store. My goal is to reach those rural areas, keep costs low for the consumer, while offering the best of the best hearing technology. I don't have deep pockets and I don't have credit. I have kids going to college soon. I'm always looking for vendors and partners that will align with my values. Feel free to reach out to me if you are interested in becoming part of this movement.

It isn't easy, but yes, it is fun and it is my passion. I do love my people. Helping is what drives me every day.

Stay well and keep the faith in your own mission and values. ■

*Kim*



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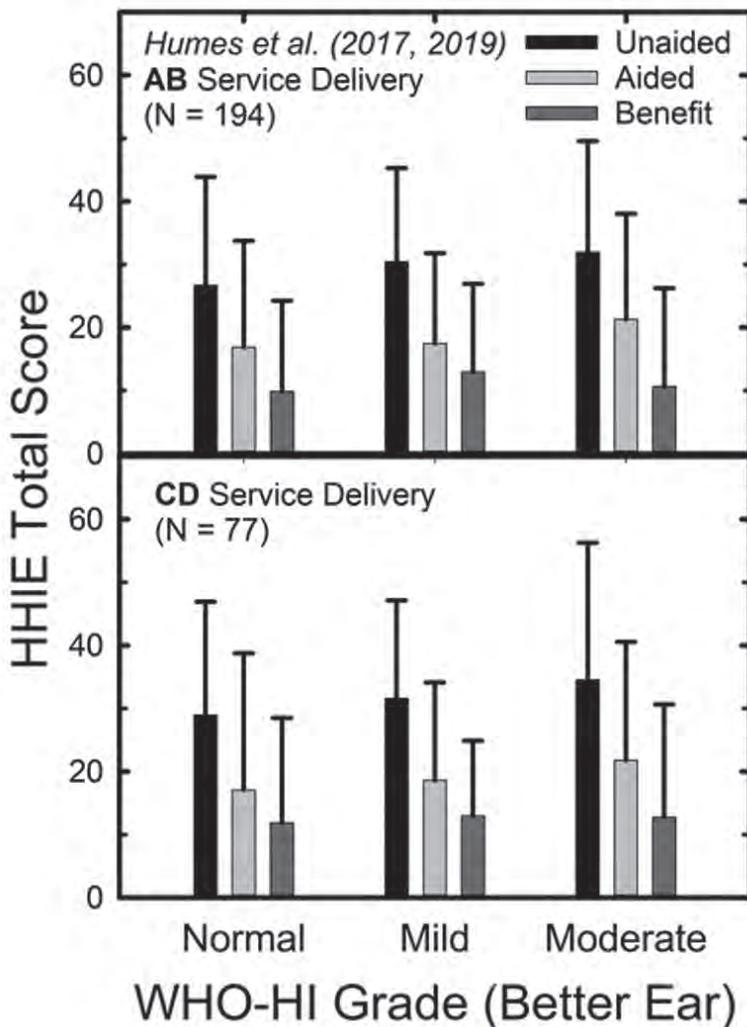
**Kim E. Fishman, MA**, is a licensed audiologist with experience helping people achieve healthy hearing. She specializes in the evaluation and non-medical treatment of hearing loss and has extensive training in hearing evaluation and rehabilitative audiology including hearing instrument dispensing and patient-centered counseling.

# Go Figure

## I Didn't Know I Could Successfully Fit Patients with Normal Audiograms

By Brian Taylor, Au.D.

**M**any audiologists politely cringe when confronted with the possibility of fitting hearing aid on a person with normal hearing. On the surface, after all, fitting someone with normal hearing doesn't make much sense: how could someone benefit from amplification when their hearing thresholds are normal. And, even if you did fit them, they are likely to complain of circuit noise, or worse yet, the maximum output could cause a permanent threshold shift if set too high. Recent hearing aid sound quality improvements, combined with fresh thinking about the limitations of the pure tone audiogram and auditory wellness have changed this mindset.



It is clear, today, that successful outcomes can be obtained for those with normal audiograms when fitted with modern hearing aids. This statement is supported by evidence, illustrated in the Figure, which comes from Humes (2020). Here, the means and standard deviations for the Hearing Handicap Inventory for the Elderly (HHIE) are shown for unaided and aided conditions with the difference shown as the benefit received. Note the higher the bar in the Figure, the worse the self-reported communication difficulty as measured by the HHIE. Also note there is a companion version of the HHIE, called the HHIA (A is for adults), intended to be used with adults of working age. Both the HHIA and HHIE, along with a revised version, the Revised Hearing Handicap Inventory (RHHI), are essentially interchangeable. Since the family of HHIE/A questionnaires are not copyrighted, we have printed the screening version at the end of this article. This is the version that most clinical audiologist opt to use.

The top panel shows the results for those fit using audiology best-practices fitting (AB) and the bottom panel a consumer-decides (CD) try-and-select self-fitting method. Recall that Humes, et al (2017) published a landmark study that compared outcomes from these two groups. As part of that study, individuals in the Bloomington, Indiana area were recruited to participate in this study. As most private practice audiologists know, it is relatively common for a modest number of people with normal hearing

and self-reported hearing difficulties to respond to these types of ads. Historically, when individuals presented to the clinic with a normal audiogram, even though they may self-report communication problems, they were not considered candidates for hearing aids. The data reported in the Figure should change that thinking in a couple of different ways.

The data shown in the Figure are stratified by the degree hearing loss, and several remarkable points are clinically relevant. First, notice the HHIE benefit, unaided score minus aided score, is about the same in both panels and across all hearing loss groups, including the group with normal audiograms. Given the comparable benefit measured across hearing-loss groups in both the AB and CD panels, this finding suggests those with “normal hearing” show measurable benefit that is on par with individuals in mild and moderate hearing-loss groups.

Second, the HHIE, a validated self-report which measures the impact hearing loss has on daily activities, identifies people who struggle with communication and could benefit from amplification. Even though their pure-tone audiograms were in the normal-hearing range, many individuals in this group perceived communication problems, as shown by the unaided HHIE scores in this figure. Interestingly, these communication problems as noted on HHIE were about the same magnitude as those reported by individuals with mild or moderate hearing loss. Moreover, all the individuals in this study were first-time hearing aid purchasers – exactly the type of people who sometimes respond to advertising but are then told by the audiologist they didn’t have enough hearing loss to warrant the use of amplification.

There are several key considerations gleaned from the Figure. One, the HHIE, including the shortened 10-question screening version, validly measures self-reported difficulty and ought to be administered to all help seeking patients. Further, it is advisable to administer the HHIE before and after fitting to generate a measure of relative benefit. As Humes and Weinstein (2021) suggest, the HHIE/A are effective tools that gauge the auditory wellness of individuals, and provide valuable insight on the functional abilities of the individual, often missed by the pure tone audiogram.

Two, individuals who are motivated to try hearing aids, and score poorly on the HHIE/A should be considered candidates for amplification – even when their audiograms are normal. As Edwards (2021) pointed out in a recent video course, restoring audibility by following best practice fitting guidelines results in real world benefit for patients with normal audiograms, when they are motivated to use hearing aids

and self-report hearing difficulty. Three, audiologists should be mindful that the traditional audiogram has a normal range of 30 dB with a limited bandwidth of relatively 8000 Hz. A sizeable number of patients with self-reported hearing difficulties have substantial hearing loss at frequencies above 8000 Hz when tested. It is also common that many patients with normal audiograms may have experienced a drop from thresholds better than zero to 20; thus, their audiogram is within normal limits, but their hearing has shifted by more than 20 dB. Given the limitations of the traditional pure tone audiogram, audiologists should include other more objective testing in their repertoire, including extended high frequency pure tone testing and speech intelligibility in noise testing that may uncover communication deficits.

Fourth, based on the similar outcomes between the AB and CD panels in the figure, individuals who opt to self-fit their hearing aids and purchase amplification over the counter (OTC) could potentially experience the same level of outcome as those who seek the guidance of an audiologist. For the right person, OTC might be a viable option that results in reasonably good outcomes. Fifth, recent advances in hearing aid technology result in low distortion amplification, reduction of the occlusion effect and improved audibility of soft inputs – critical improvements in sound quality that improve the probability that people with normal audiograms can be fit successfully with hearing aids. ■

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# Doing More to Enhance Cognitive Health

By Nancy Tye-Murray, PhD

An increasing number of audiologists are finding that new patients arrive at their clinic, not because a family member or friend has urged them to do something about their hearing loss, but rather, these (perhaps formerly reluctant) patients have read in a newspaper or heard in a news interview that hearing loss and cognitive decline go hand-in-hand, and they fear becoming victims of dementia or Alzheimer's. Only recently have audiologists begun to think about how to expand their services to address such concerns. In this article, we will first consider the link between hearing loss and cognitive decline and then review one of the therapies that has been designed to address it.

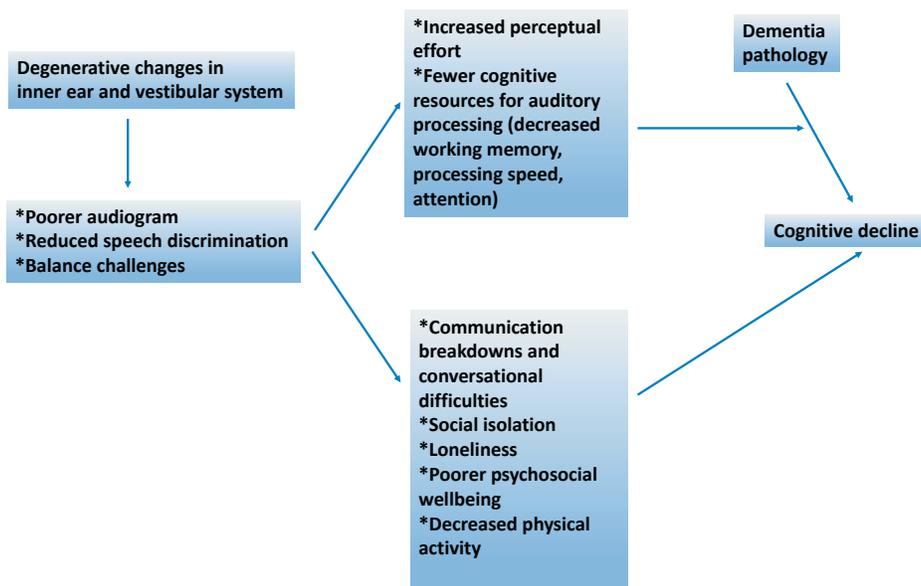


Figure 1. Factors affecting the link between hearing loss and cognitive decline.

turn cause hearing thresholds to rise and speech discrimination to decline and may cause balance challenges. The subsequent consequences are both neurological and behavioral.

The linkage between hearing loss and cognitive decline is indeed well-established and is believed to be multi-dimensional, which means that as audiologists, we need to take a multidimensional approach to treatment and not just end our intervention with the provision of hearing aids.

Figure 1 captures the linkage's multidimensional nature. It begins with degenerative changes in the inner ear, such as the loss of inner and outer hair cells, the decline of spiral ganglion cells, and the atrophy of the stria vascularis. For some individuals, there is also a corresponding degenerative change in the vestibular apparatus. These changes in

Neurologically, listening requires greater perceptual effort—as the name implies, more cognitive resources must be allocated towards decoding the acoustic signal so fewer resources are available for deciphering meaning. In addition, fewer resources are available for auditory processing. This is because neurons in the temporal cortex may have atrophied from lack of stimulation or may have been co-opted by other regions of the brain. Moreover, because of the lack of activity in one part of the brain (i.e., the temporal cortex), other regions of the brain may become less active and undergo neural atrophy as well. There may be changes in executive functions such as working memory and changes in the brain’s processing speed and attention mechanisms. These neurological changes may dovetail with changes that might be happening as a result of neurological changes associated with early dementia.

Behaviorally, listening challenges may cause a person to avoid conversations for fear of communication breakdowns or simply because conversation is too effortful with hearing loss. As a result, the person may experience social isolation and loneliness and overall decreased psychosocial wellbeing. Balance challenges may cause a person to avoid physical activity. As the person becomes increasingly isolated and physically inactive (and possibly depressed), the brain receives less stimulation, thereby exacerbating any age-related cognitive decline that might be occurring.

By giving patients hearing aids, we can possibly mollify the linkage between hearing loss and cognitive decline because the patient will be able to hear softer sounds and more high frequency sounds and will have overall better speech discrimination in both quiet and noise.

But the intervention does not have to stop with hearing aids. By using a hearing healthcare therapeutic (DTx), audiologists can begin to address some of the other factors that affect the hearing-cognition linkage.

DTxs have been used to manage diabetes (Omada), asthma (Propeller Health), weight (Noom), and mental health (Headspace). A DTx is a software-based intervention for a disease and/or disorder that is clinically validated to achieve a desired outcome, and is often coupled with a medical intervention . Commonly, a DTx includes a daily, interactive curriculum, online support from a trained coach, and an online peer support group.

Amptify™ is a hearing healthcare DTx and was designed to provide follow-up care after the hearing aid fitting. The DTx includes an interactive, daily curriculum, an online hearing health coach who can be messaged 24/7, auditory training video games, and a social chat group that is overseen by the hearing health coach. Table 1 lists the four components along with the factors from Figure 1 for which they were designed to target. In sum, the Amptify DTx is comprised of the following:

**Table 1. The components of the Amptify DTx and how they address the linkages illustrated in Figure 1.**

Auditory training games	Interactive curriculum	Hearing coach	Social support group
<ul style="list-style-type: none"> <li>• Speech discrimination</li> <li>• Perceptual effort</li> <li>• Auditory working memory</li> <li>• Auditory processing speed</li> <li>• Auditory attention</li> <li>• Conversational difficulties</li> </ul>	<ul style="list-style-type: none"> <li>• Communication breakdowns</li> <li>• Conversational difficulties</li> <li>• Social isolation</li> <li>• Physical activity</li> <li>• Psychosocial wellbeing</li> </ul>	<ul style="list-style-type: none"> <li>• Social isolation</li> <li>• Communication breakdowns</li> <li>• Conversational difficulties</li> </ul>	<ul style="list-style-type: none"> <li>• Social isolation</li> <li>• Communication difficulties</li> </ul>

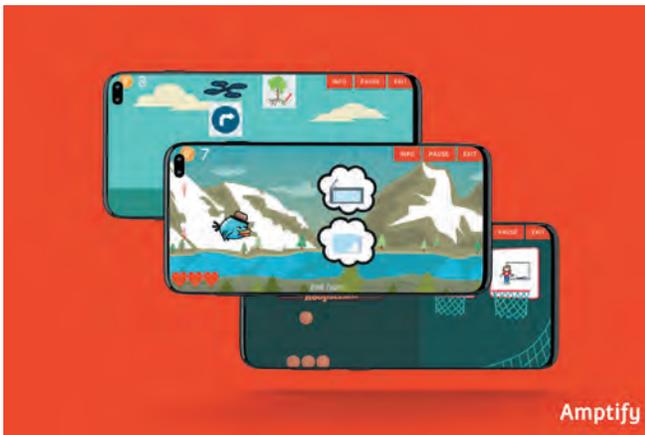


Figure 2. Screen shots from one of the Amptify auditory training games.

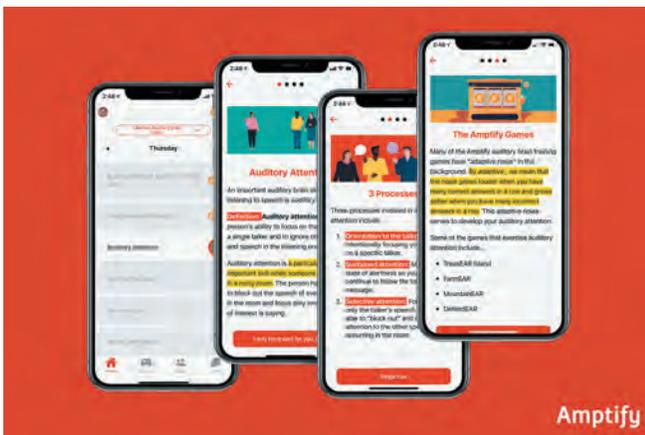


Figure 3. A screen shot from the Amptify curriculum.

- **Auditory training video games.** The games include animation and colorful graphic design to ensure entertainment and compliance (Figure 2). They target speech discrimination skills and exercise auditory attention, auditory processing speed, and auditory memory. The auditory training games have been shown to enhance speech discrimination (Barcroft et al., 2016), reduce perceptual effort (Sommers et al., 2015), increase listening confidence (Tye-Murray et al., 2012), and improve those communication situations that patients deem challenging (Tye-Murray et al, 2017).

- **A daily interactive, illustrated curriculum.** The curriculum engages patients through quizzes, tutorials, balance exercises, and social diaries (Figure 3). The 12-week curriculum includes such topics as preventing and rectifying communication breakdowns, structuring the listening environment to promote successful communication, nutritional tips to promote hearing health, and tinnitus management. Every week, a new balance exercise is included in the curriculum and patients are encouraged to perform the exercise by their coach. Each week, patients are also asked to reflect on and to record their social interactions via a simple three-item questionnaire embedded within the curriculum. Completing an online questionnaire can be a reactive experience, where patients will purposely engage socially so to show improvement on their “socialization feedback charts” that are part of the Amptify feedback system. The curriculum’s theme is empowerment, and patients acquire the “tools” for ensuring successful conversations.

- **An online Amptify hearing health coach.** Starting in the first week, users are paired with a hearing health coach, who is an audiologist and who has completed the Amptify coach training program. The coach provides support, encouragement, empathy, and hearing-related information, and works to decrease social isolation. The audiologist ensures quality-control and is available to answer questions or handle issues that might be technical in nature, as when a member might want to know about how to insert a battery into a new hearing aid.

- **An online customized social peer support community.** The Amptify team creates communities of users who share the same hearing health coach. This coach leads chats and promotes social interaction. Members are encouraged to share their experiences, find commonalities, and learn new ways to manage hearing loss through vicarious experiences. Over time, they create a friendship network.

The Amptify DTx is easy to integrate into routine clinical care and virtually all patients (and not just the I-don’t-know-what-to-do-with-them-next patients) stand to benefit from their enrollment. Amptify provides the clinics with customized clinic brochures with QR codes so their audiologists can onboard their patients. An email can also be generated to invite patients. Invitations can be integrated into the office management systems of either CounselEAR or Blueprint. Routinely including Amptify as part of the conversation a patient takes only a few minutes and can even be performed by a audiologist assistant.

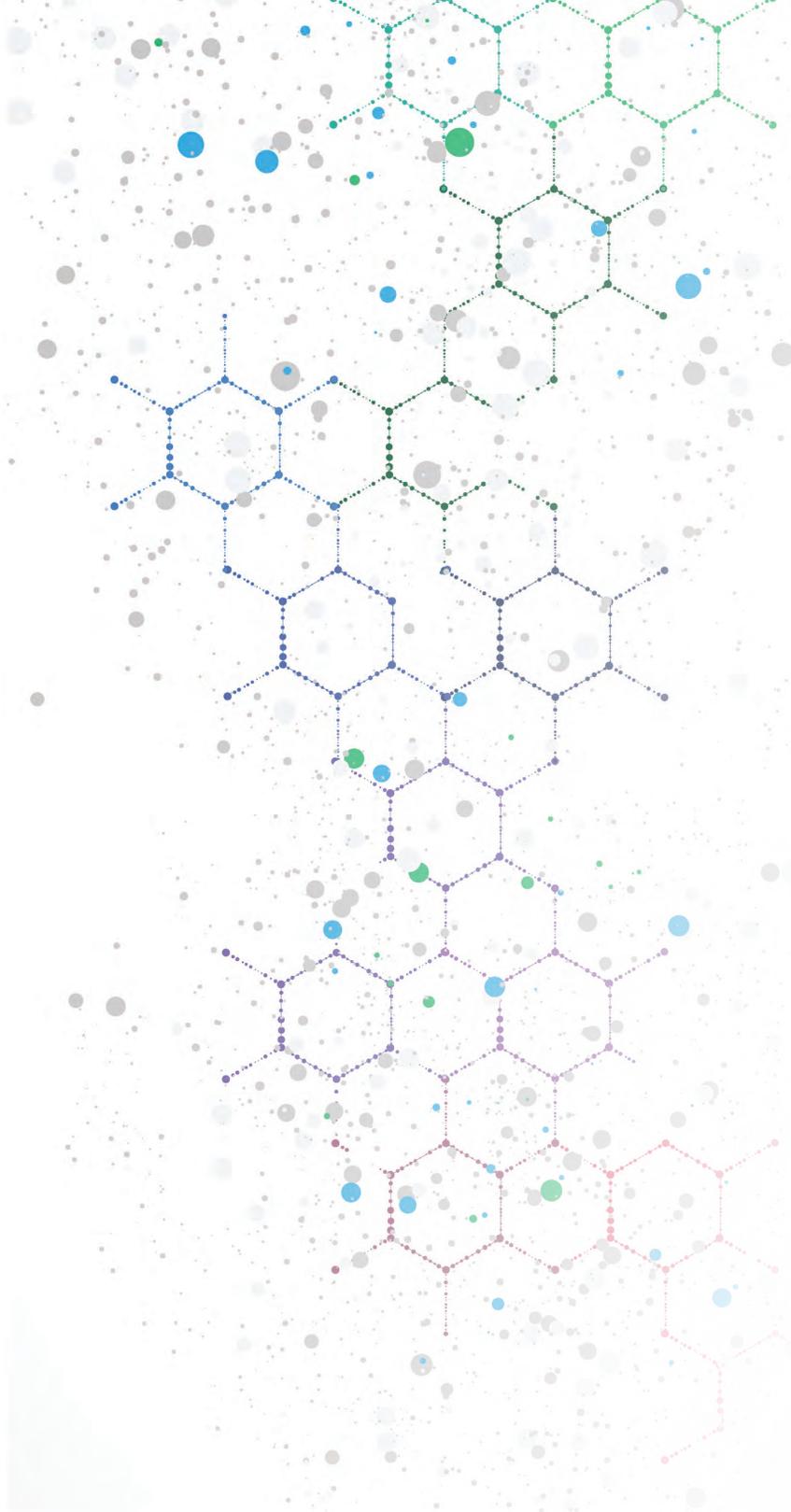
Audiology can be so much more than diagnostics and listening devices. By addressing those factors that link hearing loss and cognitive decline, we can begin to provide the comprehensive hearing healthcare that we all learned about in graduate school but never had the opportunity to provide because of either time constraints or lack of effective means to provide it. The profession of audiology is changing rapidly these days, and follow-up services such as Amptify are bound to become more prevalent. ■

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**Dr. Tye-Murray** is a Professor of Audiology at Washington University in St. Louis and the founder of Amptify. She serves as Amptify's CEO and is the lead scientist of the Amptify research team.

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# 10 Things Audiologists Need to Stop Doing If In-Network with Insurance

BY KIM CAVITT, Au.D.

The business practices outlined below effect the perception of our profession by health plans and patients. They also help drive health plans to third-party networks and administrators. These are choices being made by providers and their practices. There are many audiology practices that do not do any of these things yet are still profitable and financially and clinically successful. If state or federal governments or health plans were to choose to audit audiology and hearing aid claims, many providers and practices would not survive these audits without claims repayment or further legal scrutiny.

- 1 Do not provide free hearing tests (any aspect of 92557) to some patients and then bill a health plan for the same hearing tests.**

If the service is free to one individual, it should be free to all individuals. This has been clearly documented (<https://www.asha.org/practice/reimbursement/medicare/audiology-medicare-prohibitions-faqs/>). The ONLY exceptions are indigence or if your practice were to ONLY bill insured patients (<https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c16.pdf>).

***The solution: Bill the patient or their health plan for all services rendered and items dispensed and stop providing free care.***

- 2 Do not bill a health plan for hearing aids that have yet to be fit.**

This is an example of a false claim (<https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Fraud-Abuse-MLN4649244.pdf>; <https://www.bcbs.com/healthcare-fraud>; <https://www.uhc.com/fraud/faqs>). There are no loop holes around this (i.e. fitting a patient with a loaner or demo set of hearing aids).

***The solution: Verify coverage and benefits, fit within the hearing aid benefit, applicable medical policies, and coverage allowances and bill hearing aids on the date of dispensing.***

**3****Do not fit stock hearing aids on a patient and bill the hearing aids to a health plan.**

Medical necessity for the item being dispensed must be documented in the medical record. Many payers, in their coverage and benefits language, medical policies, or contract language require a manufacturer's invoice be submitted when requested. Also, some health plan's allowable is based upon a percentage of the manufacturer's invoice cost and, as a result, the invoice must be submitted as part of the claims process. This invoice must reflect the actual invoice cost (and not single unit or MSRP), be dated after the date of the hearing aid evaluation and should contain the name of the patient.

***The solution: Select and order hearing aids for each specific patient from the manufacturer following the communication needs assessment/hearing aid evaluation when a health plan is paying in whole or in part of the item.***

**4****Do not bill a health plan for an item you received at no charge.**

This is a potential violation of false claims and anti-kickback legislation ([https://oig.hhs.gov/documents/physicians-resources/947/roadmap\\_web\\_version.pdf](https://oig.hhs.gov/documents/physicians-resources/947/roadmap_web_version.pdf)) and has been well documented in healthcare (<https://www.justice.gov/opa/pr/united-states-settles-false-claims-act-allegations-cochlear-americas-880000>; <https://www.justice.gov/usao-edmo/pr/united-states-reaches-291288-civil-settlement-dr-sherry-ma-and-aima-neurology-llc>).

***The solution: If the item was free, provide it to the patient for free.***

**5****Do not bill services provided by unlicensed or non-credentialed provider to a health plan under another provider's national provider identifier.**

Recent graduates are unlicensed providers. They cannot see any patient, regardless of payer, until they are licensed (unless their state has clear provisional or temporary licensure or privileges, which is not common). The newly licensed and new employees cannot see patients and bill the items and services to a health plan until the audiologists are credentialed providers for the health plan (with few exceptions). Otherwise, this is a false claim (<https://www.fbi.gov/scams-and-safety/common-scams-and-crimes/health-care-fraud>; [https://oig.hhs.gov/documents/physicians-resources/947/roadmap\\_web\\_version.pdf](https://oig.hhs.gov/documents/physicians-resources/947/roadmap_web_version.pdf)).

***The solution: Do not begin employment as an audiologist until licensure is conferred and do not allow audiologists to see patients where insurance claims are being submitted for covered services until the provider has been credentialed with the health plan.***

**6****Do not market to existing patients that they are “due” or “eligible” for new hearing aids.**

This can be seen as a solicitation or as potential fraud, abuse or waste when medical necessity for the replacement device has not been clearly documented (<https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Fraud-Abuse-MLN4649244.pdf>; <https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Fraud-Abuse-MLN4649244.pdf>). Some health plans, including most state Medicaid programs, have medical policies that clearly require documentation of medical necessity (not just that the eligibility date has arrived) for replacement devices ([https://www.anthem.com/dam/med-policies/abcbs/active/guidelines/gl\\_pw\\_c185384.html](https://www.anthem.com/dam/med-policies/abcbs/active/guidelines/gl_pw_c185384.html)).

***The solution: Recommend, fit and bill health plans for replacement hearing aids when it is medically reasonable and necessary to replace existing hearing aids.***

7

**Do not assume an item or service is non-covered just because the treatment plan includes hearing aids and, as a result, charge the beneficiary privately for the service.**

While Medicare does not cover “examination for the purpose of prescribing, fitting, or changing hearing aids” or “routine” services (<https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/bp102c16.pdf>), coverage of audiometric testing is not automatically precluded JUST because the patient is a hearing aid user or because the treatment plan includes hearing aids. The Update to Audiology Policy (<https://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads/r84BP.pdf>) indicated: “It is appropriate to pay for audiological services for patients who have sensorineural hearing loss and who wear hearing aids if the reason for the test is anything other than evaluation of the hearing aid. For example, there may be a perceived change in hearing or tinnitus that makes testing appropriate and covered. Such testing might rule out other reasons for the symptoms (auditory nerve lesions, middle ear infections) and result in subsequent evaluation of the hearing aid (not covered) or aural rehabilitation by a speech-language pathologist (covered)”. So, in other words, if the testing is physician ordered and medical necessity has been documented, Medicare will cover the testing. The patient should not be held financially responsible.

***The solution: Allow the patient to access their health plan benefits by reviewing the patient’s case history, documenting medical necessity for the services provided, and billing the health plan for medical necessary services.***

8

**Do not fit hearing aids on normal hearing individuals and bill the health plan, unless explicitly allowed by medical policy.**

Many health plans, including state Medicaid programs, Aetna and Tricare, have degree of hearing loss requirements for hearing aid coverage and/or have medical policies restricting coverage of hearing aid for treatment of tinnitus or auditory processing disorders or for hearing protection purposes (for example <https://www.aetna.com/health-care-professionals/clinical-policy-bulletins/medical-clinical-policy-bulletins.html>, <https://www.uhcprovider.com/en/policies-protocols/commercial-policies/commercial-medical-drug-policies.html>, and <https://www.tricare.mil/CoveredServices/IsItCovered/HearingAids#:~:text=TRICARE%20doesn't%20cover%20hearing,aids%20through%20other%20government%20programs.>).

***The solution: When the audiologist is in-network provider, the provider should educate themselves on the contracts terms and applicable medical policies governing coverage.***

9

**Do not uniformly upgrade hearing aid technology from a basic or standard item to a deluxe item without documentation of medical necessity for the deluxe item, without first offering a patient a standard item within their benefit, without having the patient acknowledge, in writing, their rights and responsibilities prior to dispensing, and, most importantly, without ensuring that the health plan contractually allows for upgrade.**

Every health plan does not allow for upgrade from a standard item to a deluxe item. As a result, the audiologist could be violating their payer agreement by having the beneficiary pay, privately, for anything other than unmet deductible, applicable co-insurance or co-payments, or for prior notified non-covered services. This capacity for upgrade is determined by the health plan and your agreement with that health plan. If the health plan does not allow for an upgrade, the patient is not allowed to upgrade.

***The solution: The practice needs to educate themselves on each payer agreement and medical or payment policies, create verification processes and policies and implement upgrade forms and processes.***

# 10

## Do not bill health plans differently than you bill your private pay patients for the same items or services.

Billing in excess of your usual and customary rate to a health plan can be construed as abuse (<https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/Downloads/Fraud-Abuse-MLN4649244.pdf>).

**The solution: Bill insurance the same rate as you bill your general population for the same item or service.**

This list, unfortunately, is not inclusive. There are many, many other areas of concern. All of these listed activities and behaviors are 100% avoidable. This just requires investment (time and treasure) in managed care credentialing and contracting processes, creation of no exceptions office policies and procedures, and obtain education and training on revenue cycle and your office management system capacities. If we want to be doctors and play in the healthcare sandbox, we must begin to provide and bill for care consistent with healthcare rules, regulations and billing and medical policies. ■

*Dr. Kim Cavitt was a clinical audiologist and preceptor at The Ohio State University and Northwestern University for the first ten years of her career. Since 2001, Dr. Cavitt has operated her own Audiology consulting firm, Audiology Resources, Inc. She currently serves on the State of Illinois Speech Pathology and Audiology Licensure Board. She also serves on committees through AAA and ASHA and is an Adjunct Lecturer at Northwestern University.*

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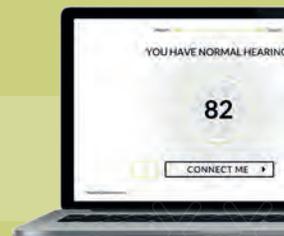


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# HAVE YOU HEARD?

## AuDvocates Advance MAASA During May's Cyber Lobby Day: June Brings Opportunities to Grow Support

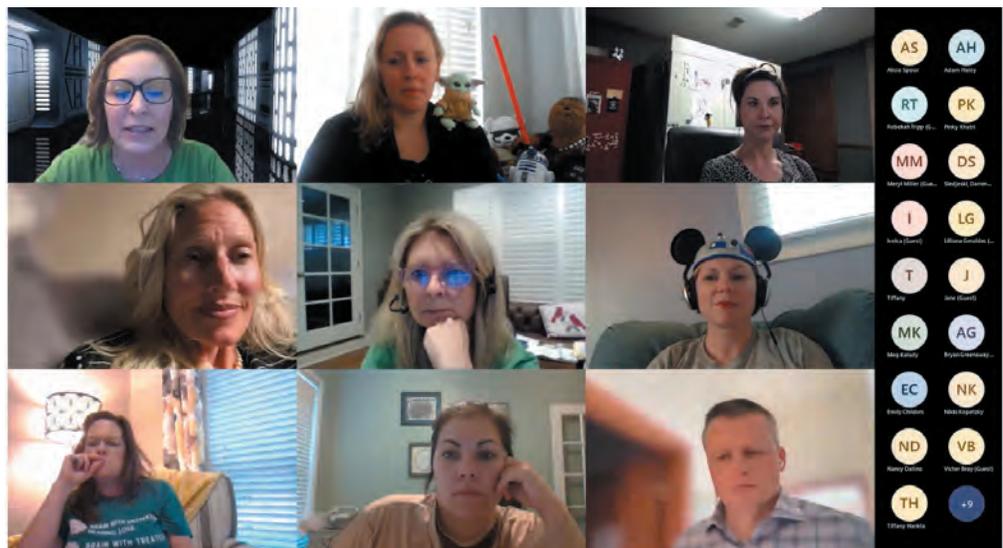
A huge thank-you to the 83 AuDvocates who signed in on May 11th for ADA Cyber Lobby Day and asked their members of Congress to sign on to co-sponsor the Medicare Audiologist Access and Services Act (MAASA)! Together, we made virtual visits to 77 Congressional offices and made the case for MAASA as an essential Medicare reform.

Better Hearing Month presented a perfect opportunity to plant the seeds for better access to audiology services for Medicare beneficiaries—and June brings opportunities to bring the heat and keep the momentum going to grow bi-partisan, bicameral support for H.R. 1587 and S. 1731.

You can take two minutes and two steps today to help move MAASA through Congress in this session.

1. Contact your member of Congress using Congressional Connect. If you have already contacted your legislators, now is the perfect time to do it again.
2. Donate to the Eric N. Hagberg Advocacy Fund. Your contribution will be used to cover ADA's professional lobbyists in Washington D.C. so that they can continue to develop the strategies and relationships that protect and elevate the profession of audiology and patient care.

Visit [www.chooseaudiology.org](http://www.chooseaudiology.org) for more information about the Medicare Audiologist Access and Services Act and to complete Steps 1 and 2 above.



ADA Cyber Lobby Day Training 1



## Stay Ahead of the Curve: Register for AuDacity 2022 Today

Innovators rejoice — registration is now open for **AuDacity 2022: Ahead of the Curve!** Meet-up with friends and thought leaders where audiology meets avant-garde, October 20th – 23rd at the Gaylord Texan Resort in Grapevine, Texas.

## Reserve your Room Today and Save!

Standing on the shores of the majestic Lake Grapevine, Gaylord Texan Resort & Convention Center welcomes guests to a stunning, one-of-a-kind experience. Explore four-and-a-half acres of airy, indoor garden atriums, four award-winning restaurants, bars, the world-class Relâche Spa, a state-of-the-art fitness center. Located just minutes from DFW Airport, LEGOLAND® Discovery Center, Cowboys Golf Club, Historic Downtown Grapevine, and just steps from the Paradise Springs Water Park! An exciting lineup of activities and entertainment awaits—there's something for everyone at the Gaylord Texan! Visit [www.audiologist.org](http://www.audiologist.org) for more information!





Scott Steinberg

## **AuDacity 2022 to Feature Two Keynote Presentations to Help Keep You and Your Practice Ahead of the Curve**

**Thursday, October 20, 2022, at 3:00 p.m. Central/Local**

### ***The Curve is Coming: What You Need to Do to Adapt, Adopt, and Stay Ahead of It***

This innovative keynote session will be led by **Scott Steinberg**, hailed as *The Master of Innovation* by *Fortune* magazine! This world-class business strategist and the author of *Make Change Work for You* and *Millennial Marketing* will help attendees identify emerging trends to drive growth and success through dynamic change.

**Friday, October 21, 2022, at 8:30 a.m. Central/Local**

### ***Mind the Gap: Diagnose and Treat the Problems in Your Practice for Better Outcomes***

This informative keynote presentation will be led by **Kasey Compton, M.Ed., LPCC-S**, a licensed professional clinical counselor and author of *Fix this Next for Healthcare Providers*. Kasey is on a mission to help private practice healthcare providers find entrepreneurial confidence. Her superpowers include cutting through the clutter to identify a strategic starting point, increasing efficiency through systems, and tapping into a person's highest potential. She helps others by designing maps for their entrepreneurial journeys, while she stands confidently as their guide.

Kasey will teach you to treat your business is like a patient—Diagnose the problem. Create a treatment plan. Design interventions. Level up your practice!



Kasey Compton, M.Ed., LPCC-S

## **Register to Exhibit and Sponsor**

If your company is interested in reaching the top decision makers and purchasers in audiology private practice, then the Academy of Doctors of Audiology (ADA) annual conference, AuDacity, is the event you can't afford to miss! AuDacity 2022 offers opportunities for companies to showcase their products and services directly to their target audience. Sign up today to exhibit at AuDacity 2022 - Ahead of the Curve and combine your exhibit with one of our sponsorship options!

<b>THURSDAY, OCTOBER 20, 2022</b>				
12:30 PM - 1:45 PM	Concurrent Sessions			
1:45 PM - 3:00 PM	Concurrent Sessions			
3:00 PM - 4:30 PM	The Curve is Coming: What You Need to Do to Adapt, Adopt, and Stay Ahead of It - <i>Scott Steinberg</i>			
4:30 PM - 4:40 PM	Break			
4:40 PM - 6:00 PM	Financial Management and Forecasting for Audiology Practices: The Must-Know Figures, Formulas, and Factors			
6:00 PM - 8:00 PM	Opening Reception in the Exhibit Hall			
<b>FRIDAY, OCTOBER 21, 2022</b>				
7:00 AM - 8:00 AM	Breakfast in the Exhibit Hall			
8:00 AM - 8:30 AM	President's Address			
8:30 AM - 9:30 AM	Keynote Address: Mind the Gap: Diagnose and Treat the Problems in Your Practice for Better Outcomes - <i>Kasey Compton, M.Ed., LPCC-S</i>			
9:30 AM - 10:00 AM	Break in Exhibit Hall			
10:00 AM - 11:30 AM	Closing the Gap with People, Products, Promotion, Pricing, Processes, and Performance Indicators			
11:30 AM - 1:00 PM	Lunch in Exhibit Hall			
1:00 PM - 2:30 PM	Price Modeling for Your Practice	Provider Referral Development and Promotional Strategies	Analysis and Models for Staffing, Scheduling, and Service Delivery	Service Selection (Analysis of Service Opportunities/Expansion)
2:30 PM - 3:00 PM	Break in Exhibit Hall			
3:00 PM - 4:30 PM	Price Modeling for Your Practice	Provider Referral Development and Promotional Strategies	Analysis and Models for Staffing, Scheduling, and Service Delivery	Service Selection (Analysis of Service Opportunities/Expansion)
4:30 PM - 6:00 PM	Reception in Exhibit Hall			
<b>SATURDAY, OCTOBER 22, 2022</b>				
7:00 AM - 8:30 AM	Member Business Meeting			
8:00 AM - 10:00 AM	Reimbursement Reckoning: Getting Paid What You're Worth for What You Do			
10:00 AM - 10:15 AM	Break			
10:15 AM - 11:45 AM	Your Independent Practice: Creating Your Personal Road Map for Success			
11:45 AM - 12:30 PM	Lunch			
12:30 PM - 2:00 PM	Amplification Amplified (OTC, Cochlear Implants, Cerumen, Cognition, F&CNA, AR), Part 1	Get Vested in Vestibular Without Investing a Fortune, Part 1	The ABC's of APD, Part 1	A Ringing Endorsement for Tinnitus Services, Part 1
2:00 PM - 2:15 PM	Break			
2:15 PM - 3:45 PM	Amplification Amplified (OTC, Cochlear Implants, Cerumen, Cognition, F&CNA, AR), Part 2	Get Vested in Vestibular Without Investing a Fortune, Part 2	The ABC's of APD, Part 2	A Ringing Endorsement for Tinnitus Services, Part 2
3:45 PM - 5:00 PM	Fired Up for the Future of Independent Practice: Networking Reception and Meetup (Peer Mentor/Accountability Partner)			
<b>SUNDAY, OCTOBER 23, 2022</b>				
8:00 AM - 11:30 AM	Clinical Workshops			

## PRESIDENT'S MESSAGE

*Continued from page 3*

patient or team member join you, if possible. During the virtual fly-in, several audiologists participated in meetings which were not for their home state. I can, without reservation, share that the legislative offices would much rather have heard from any audiologist from their home state, versus those of us from other areas of the country. Despite this, there was still engagement, and follow-up is on-going.

Many legislators are now taking in-person meetings in their districts. Just last week, Congresswoman Mace's office in South Carolina took an in-person meeting with me. If I can get comfortable doing this, you can too! Increasing the number of bipartisan co-sponsors for MAASA is the next step to ensure this legislation's viability for inclusion in any bill this summer. By getting involved you may surprise yourself at the impact you can have! It truly is empowering advocating for your patients and your profession. It is common knowledge that when audiologists are asked why they entered the profession, the most prevalent reply is to help people. Audiologists are the hearing and balance experts; it is time to channel your passion for helping people into the Medicare Audiologist Access and Services Act! Realize that there are ways to help people in addition to your clinical skills. We as a profession have the opportunity to make a lasting impact in access to healthcare and efficiency in hearing healthcare delivery. MAASA is the crucial next step.

ADA continues to put great resources into getting MAASA over the finish line. For MAASA to be realized, audiologists should increase their individual level of commitment with their time, talent, and/or treasure. If each one of us do our small part, we will start a wave of momentum to ensure the future of Audiology. Now is the time for all audiologists to take ownership of their destiny. ■

## HOW IMPORTANT IS IT FOR YOU TO DOCUMENT AND BE RECOGNIZED FOR YOUR PATIENT OUTCOMES AND PERFORMANCE?

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## EDITOR'S MESSAGE

*Continued from page 5*

Gatehouse, in fact, went to great lengths to state that HABRAT was more than merely “getting used” to hearing aids. HABRAT is a fundamental perceptual process in which hearing aid wearers are, when exposed to new speech information through their recently fitted devices, need considerable time to learn to make use of the new speech cues to eventually optimize benefit. In a 1993 article published in *Hearing Instruments*, Killion and Gatehouse asserted that the brain is plastic and needs time to rewire to the new sound inputs.

When the HABRAT principle was published thirty years ago, there was no direct physiologic evidence of cortical changes in the brain associated with properly fitting hearing aids on individuals with sensorineural hearing loss. Gatehouse and Killion did, however, surmise that because of the lack of stimulation associated with sensorineural hearing loss, the brain begins to allocate surrounding areas to those unstimulated regions. Recent research confirms what Gatehouse deduced in the early 1990's: the human adult auditory system is indeed plastic.

### **Re-purposing and Reversing Auditory Cortical Function**

Recently, Anu Sharma and colleagues at the University of Colorado Boulder have demonstrated that the adult auditory cortex is a highly adaptive system that re-organizes itself quickly in response to changing inputs. Known as neuroplasticity, the capacity for the human auditory system to adapt to changes results from several factors including learning, maturation, injury, disease, sensory stimulation, and sensory deprivation. (A June 2021 20Q article at *Audiology Online* is probably the most assessable entry point into Sharma's work).

Their work has shown that the cortex of individuals with hearing loss exhibit signs of cross-modal plasticity in which portions of a damaged auditory region of the brain are taken over by unaffected regions. Stated differently, when a peripheral hearing loss deprives the auditory cortex of sound stimulation, other areas of the brain commandeer that area and repurpose that cortical space for other activities. Using cortical evoked potentials, Sharma and colleagues have shown there is a physiologic basis for the laboratory findings, surmised by Gatehouse thirty years ago. Importantly, their research shows that with proper stimulation the effects of cross-modal plasticity can be reversed. These cross-modal neuroplastic effects seem to occur in all individuals with hearing loss even those with mild hearing loss, including persons who do not self-report hearing loss.

Further, the key to reversing these effects with amplification appears to be a properly fitted hearing aid, as those who were under-fitted tended to not see the same improvement compared to those who were properly fitted. Another task that requires the expertise of an audiologist who ensures gain targets are met and the time course to acclimatization is well-understood by the patient.

Cross-modal plasticity and the role of the audiologist in optimizing benefit speaks to the value of the audiologist throughout the treatment process — a critical point as over-the-counter devices loom. It also speaks to the fact that gathering a complete picture of hearing loss and its consequences is a continual work-in-progress in which information is pieced together over decades. A notion that is often lost in a profession that launches new hearing aid products and features about every six months. ■

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– Charles, Owner

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The purpose of the **ADA Student Academy of Doctors of Audiology (SADA)** is to serve the varied needs and concerns of student and emerging graduated members of ADA. SADA members have access to exclusive student resources, ADA's mentoring program, eligibility to participate in the Student Business Plan competition at the annual AuDacity Conference, and can help set the direction of ADA student initiatives.

**Get involved today! Visit [audiologist.org/sada](https://audiologist.org/sada) for more information.**

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# AuDACITY

*Ahead of the Curve.*

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