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Audiology PRACTICES

INSIDE THIS ISSUE

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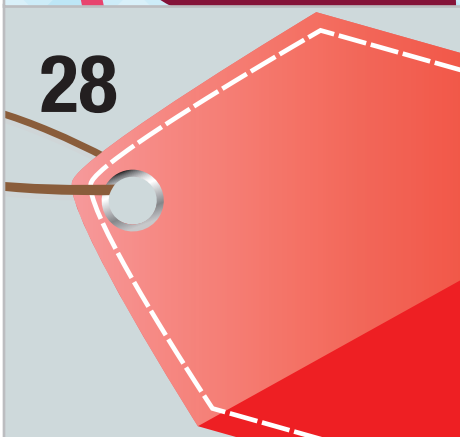

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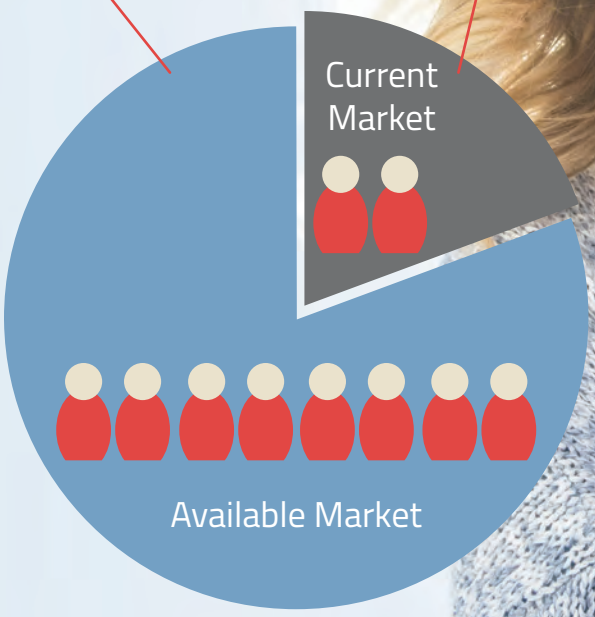

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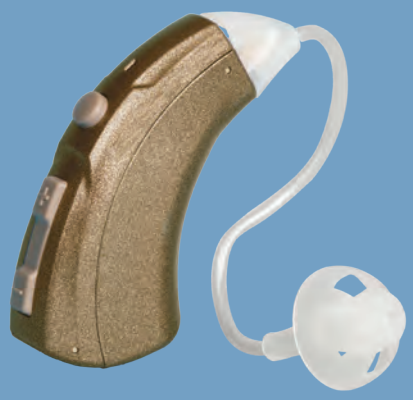

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*As reported in Hearing Health Care for Adults: Priorities for Improving Access and Affordability National Academics of Sciences Engineering and Medicine

Alicia D.D. Spoor, Au.D.

Summer Days Drifting Away— Fall Brings Member Ideas to Fruition

I look forward to summer almost as much as an elementary school teacher. Each year, I have plans to take a relaxing vacation, increase my exercise routine with the longer days and warm weather, and plan the rest of the year so I am organized. The summer, alas, begins and ends in the blink of an eye and my glorious plans are all distant memories as Labor Day pops up on the calendar. This summer, ADA members have been productive, and I am pleased to share some of their great work with you.

Over the past nine months, ADA members have participated with other hearing healthcare provider groups to discuss, vigorously debate, and reach consensus on recommendations for the safe and effective introduction of Over-the-Counter (OTC) hearing aids. Lead by ADA member Dr. Tom Tedeschi, of Amplifon, the final consensus whitepaper was published in mid-August. ADA's contributions helped ensure the OTC recommendations were based on available evidence and that the devices will be beneficial to the consumer. While the FDA may not choose to adopt all of the paper's recommendations in its final regulations, the consensus paper demonstrates the ability of allied organizations to collaborate effectively towards a common goal. The complete consensus paper is available at https://www.hearabouthearing.org/.

Summer also brought forward ADA's exclusive Audiology Mastermind Groups, which were announced in August. These groups will work within the concept initially introduced by author Napoleon Hill: Peer-to-peer mentoring to solve problems with input and advice from other group members (https://en.wikipedia.org/wiki/Mastermind_group). Members are required to be ADA members and participants will be grouped to ensure no conflicts of interest arise. This is a great opportunity to get involved with like-minded individuals to discuss topics that relate to practice ownership. The initial Mastermind Groups will have an opportunity to meet in-person at AuDacity in October. To register for an ADA Mastermind Group, contact Carrie Puyear at cpuyear@audiologist.org.

Over the summer, ADA also finalized plans for the AuDacity convention. This year's event, titled "Bolder Than Ever," will be held at the Gaylord Palms Resort in Orlando, Florida from October 22-24, 2018. AuDacity will open with a very special symposium, *Co-management of Comorbid Diseases*, lead by ADA member and symposium chair, Dr. Victor Bray. This first-of-its kind event will kick-off the AuDacity regular program on Monday morning (the 6-hour symposium is included in the regular conference fee). *Co-management of Comorbid Diseases* will bring together leading experts to discuss co-morbid conditions that audiologists will encounter including audiovestibular, neurologic, oncology, kidney, diabetes, and cardiopulmonary diseases. I encourage you to read an important introduction to the AuDacity Symposium, *Co-management of Comorbid Diseases,* beginning on page 34.

AuDacity continues Tuesday with featured general sessions and keynote speakers, while Wednesday offers a wide-range (more than 20) member-driven and member-developed courses, which will be offered throughout the day. See page 41 for the full AuDacity schedule.

Continued on page 59

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Brian Taylor, Au.D.

The Evolving Role of Audiology Requires Mastery of New Skills, Delegation of Others

Several studies suggest the needs of adults with hearing loss are not being met. Some of these studies demonstrate audiologists would rather focus on test results and levels of amplification technology instead of the social and emotional needs of persons with hearing loss. Further, certain educational needs of hearing aid owners are not being adequately addressed. In one study, 90% of hearing aid owners demonstrated difficulty with basic hearing aid management tasks, such as inserting the device into the ear or properly cleaning it. Another study, published in 2013, reported that almost one-half of hearing aid owners did not receive enough practical help about their hearing aid use. Obviously, insufficient training and support can lead to poor outcomes and non-use of hearing aids. But just how widespread of a problem this poses is a question that warrants further analysis.

Elizabeth Convery of Australia's National Acoustic Laboratory and colleagues at the University of Queensland has addressed some of these apparent gaps in the needs of adults seeking help from audiologists. The results of their studies, summarized in their article in this issue of AP, support the fact that a clinician's role is more than discussing test results or providing verbal instructions on how to handle and maintain hearing aids. It is equally important to establish whether patients have learned mastery of their device and self-managed problem solving skills. Audiologists who are proficient at teaching patients both of these skills, especially in a market where patients can purchase hearing aids on-line and then seek professional guidance, offer a service that cannot be duplicated by lesser skilled technicians or machine learning algorithms.

Using Convery and colleagues article as a springboard, audiologists would be wise to ensure the following tasks are being completed with their adult amplification candidates:

1. **Empower patients** to recognize and independently solve communication problems. The process of empowerment can be facilitated by getting patients involved in decision making and supporting their treatment choices. The use of easy-to-understand, visually appealing decision aids that present patient's with a range of treatment options can be used to help patient's feel empowered in their choices.

2. **Convey technical information** in ways that are easy for patients to understand. Provide them with concise printed materials that they can refer to after the appointment. Websites, like the University of Nottingham's C2HearingOnline, reinforce the audiologist's message and free-up valuable clinical time.

3. **Break appointments into smaller chunks**. To ensure patients understand all aspects of successful hearing aid use, consider bringing the patient back more often for follow-up appointments, or better yet, use Skype and other forms of tele-health to relay information to the patient in smaller chunks. Utilize support personnel whenever possible in the follow-up care and support process to ensure your clinic operates efficiently.

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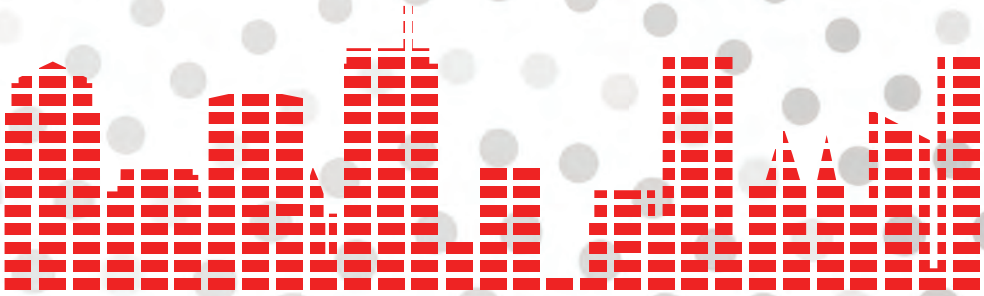

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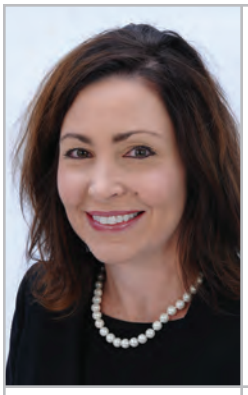

AuDacity: Roots of Autonomy, Growth through Community

ADA was formed and founded for the express purpose of advancing the autonomous practice of audiology. The word autonomous is of Greek origin; a combination of roots autos (self) and nomos (law). Thus, autonomous means "having its own laws." Autonomy is the "freedom from external control or influence; independence."

The commitment to autonomous practice makes ADA, both by design and by necessity, bolder than other audiology organizations. ADA is a product of its members, and ADA members are quite simply more likely to hold bolder views, make bolder statements, and take bolder positions than other segments of the audiology community. ADA attracts audiologists who are entrepreneurial. These innovators and early adopters are more willing to take bold risks to advance their practices and are less likely to give in to fear or failure.

Not only do ADA members walk the walk, they often walk it alone, either ahead of everyone else—or in a completely new and different direction altogether. You can usually identify them by the scrapes and bruises they've acquired along the way. ADA members have an innate ability to turn a lesson learned into a legacy, and the foresight to recognize that a sacrifice today will bring a sea-change tomorrow.

A hearing industry executive once told me that ADA is considered by many to be the "libertarian wing" of the audiology community. After 10 years of service, I have yet to meet an ADA member that likes to be told what to do. This propensity toward free will, necessary for a culture of autonomy, can make it more difficult to create a sense of community. Enter AuDacity. AuDacity is the place where autonomous audiologists come together to learn, network, advocate, mentor, and plan—so that they can go back to their practices and be more independent. Since 1977, ADA members have convened annually to forge a framework for the future, and to develop the ideas that have literally changed the trajectory of the profession.

The 2018 AuDacity educational program is exceptional. However, it will be the informal education and networking that happens in the hallway, in the exhibit hall, and yes in the bar that will undoubtedly make history and change the future. Just as it always has. AuDacity is renowned as a safe environment to debate controversial and cutting-edge notions, to propose the unimaginable, and to encounter colleagues who are equally devoted to taking audiology to the next level.

AuDacity's culture of autonomy and community is like an 'enchanted' forest. Each tree is a unique creative force rooted in autonomy—but it is only when all of the trees stand together in community that magical growth and transformation happens profession wide.

More than 40 years after the first Convention, ADA members are bolder than ever, and so too is AuDacity. So bring your bold ideas and let's formulate a bolder-to-boldest vision for the autonomous practice of audiology. Visit www.audiologist.org to register now.

Adapting Your Practice to a **New Generation** of Consumers

By Austin Singleton, Au.D. and Patty Greene, M.A

For years, the hearing care industry has been saying, "Get ready, the Baby Boomers are coming!" But for most audiologists the "boom" has never materialized. They're still waiting for Baby Boomers to storm their offices and increase hearing aid sales like never before. For most dispensing practices, hearing aid sales rely heavily on Traditionalists (those born prior to 1946), but Traditionalists are dwindling in numbers. On the other hand, 10,000 Boomers turn 65 years old every day, and the oldest Boomers are turning 72 this year. Given that nearly 25% of Boomers are experiencing meaningful hearing loss[1], there is only one conclusion: Attracting Baby Boomers is key to long term growth of hearing aid sales.

Audiologists are accustomed to working with Traditionalists—they know how to market to, communicate with, and care for them—but what about Boomers? Each generation has their own attitudes, behaviors, expectations, and ways of communicating, making Boomers culturally and behaviorally different from Traditionalists. These fundamental differences mean Boomers will not transform into Traditionalists as they age. Audiologists with a clear understanding of how Boomers differ, and who adapt their practice accordingly, will more effectively attract and address Boomer needs and expectations, than those who continue with business-as-usual. This is not to imply that audiologists are not successful with the Boomers they see in their practice today. However, audiologists who wish to attract and retain a greater share of this new generation of consumers must evolve as the consumers they serve change. To successfully adapt will require an understanding of how Boomers think and act.

How do Boomers think and act?

By and large, Boomers are accustomed to using their mobile phones, tablets, and computers to communicate, research, and shop. They go online for everyday needs such as clothing, electronics, and home goods as well as expensive items like cars. Boomers value the ease and convenience of readily available information, pricing and purchasing options. Therefore, it's natural to expect Boomers to go online to research their hearing care needs. Information about hearing loss, hearing aids and pricing widely available online, arguably leads many Boomers to purchase through channels other than local hearing care providers – channels including online retailers, big box retail stores, and Third-party managed care companies. Understanding how Boomers differ from Traditionalists will help audiologists position their practices to attract more Boomers.

How do Traditionalists and Boomers differ?

Baby Boomers and Traditionalists both value good customer service and quality of care. They want to get the best perceived value when buying hearing aids. Both are concerned about cosmetic appearance and want a comfortable fit. However, there are many distinct differences as well. As the hearing aid consumer demographic shifts from predominantly Traditionalists to more Baby Boomers, it's important for audiologists to evaluate each patient individually and determine their generational tendencies. This will allow the audiologist to offer communication options, and testing and treatment services, based on the individual's preferences, as opposed to a one-size fits all approach. The table below describes some of the values and characteristics that are unique to each generation[2].

Traditionalists (Age 73+)	Baby Boomers (Age 54-72)
Core Values	
• Conformity • Trust in authority • Having a nest egg is important	• Individuality, being in control • Skeptical of authority • Willing to spend if they're "getting a good deal"
Hearing Aid Consumer Characteristics	
• Loyal to provider • Places high value on provider relationship • Trusts provider as "the authority" and follows recommendations • Accustomed to paying out of pocket, little or no hearing aid coverage or benefit from their health plan • Accustomed to bundled pricing • Responsive to traditional marketing methods like direct mail and print advertising	• Likely to research online and comparative shop • Explores multiple options before deciding • Well informed about hearing loss, hearing aids, and pricing • Values convenience and choice • Expects health insurance to help cover cost of hearing aids and looks to health plan for guidance • Influenced more by online information, pricing, and reviews than traditional marketing methods

In essence, Baby Boomers are much more likely than their older counterparts to take an active role in their health care. The internet has been a key driver in shaping Boomer behaviors and expectations relative to their hearing care. This is a generation accustomed to going online to research, read articles, blogs and consumer reviews, and explore purchasing options. Boomers weigh consumer reviews and recommendations prior to making a hearing aid purchase decision. This allows Boomers to follow the same patterns when purchasing hearing aids as they do in other consumer transactions.

What Do Boomers Want from Their Hearing Care?

Boomers want options, ease, convenience, and control over their hearing care. It might appear that these needs are already being served under the current audiologist business model. However, Boomers differ in ways that make the business model, which has been successful with Traditionalists, not as well suited for Boomers. It is important for audiologists to offer different communication, care, and service options to better support the varying needs of different consumers. The following table describes some suggestions for how the current dispensing audiology business model could be adapted to attract and improve interactions with Baby Boomers.

What Boomers Want	What Audiologists Can Do
To be involved and in control	• Engage throughout the decision-making process and answer questions thoroughly • Define expectations and get agreement along the way • Offer hearing aid apps and accessories
Options for service and communication	• Offer online appointment scheduling and extended hours • Provide email, text, and chat options
Quick, efficient, personalized service	• Streamline visits for quick in/out service • Offer remote hearing aid programming • Personalize communication methods, care, and services
To make an informed decision/to know what they are paying for	• Provide printed information, news articles, and consumer views on: » Hearing loss, technologies, hearing aid experience, and provider value proposition • Offer choice of bundled/unbundled products and services: » Gives consumers a control/say in their care » Provides desired price transparency » Places value on care and services when these are clearly outlined and itemized
Health plan referral and hearing aid coverage	• Partner with health plans: either directly or through Third-party managed care companies

Baby Boomers are a growing and influential market segment. Their influence on the hearing aid industry is evidenced by the various distribution channels now available to address Boomer expectations. Managed care is one of the distribution channels which continues to expand its presence in the hearing healthcare industry year after year. As a result, hearing care providers are faced with deciding whether to participate in managed care and how to integrate the operational demands of managed care into their clinic. While many audiologists view managed care as an opportunity to attract more of this growing consumer segment, others have an opposing view.

Managed Care: Threat or Opportunity?

Independent hearing healthcare providers have been feeling increasing pressure on the hearing aid market for years. Not only are they facing competition from other independent providers, but big players like Costco, United Healthcare, and manufacturer-owned retail are making aggressive inroads into the hearing aid market. Additionally, many more health plans are starting to offer hearing aid benefits and are turning to third parties to administer their hearing aid benefit programs. What are the implications of these changes for the independent audiologist? Does this change present a threat or an opportunity? To answer these

questions, it's important to understand both the dynamics of today's hearing industry and the influence hearing aid consumers have on these changes.

The Hearing Industry Today

Most U.S. adults with hearing loss do not wear hearing aids. In fact, of the 37.5 million adults with some degree of hearing loss[1], only about 1 in 4 (27%) purchase hearing aids, leaving approximately 73% untreated (based on our calculations from industry sources[1,4]). These statistics have caused many within the hearing industry, as well as outside the industry, to express concern and look for ways to address this problem.

Some approaches to increasing hearing aid adoption rates include hearing care providers as part of the hearing aid delivery process, while others do not. For example, the passage of the over-the-counter (OTC) legislation to create a basic hearing aid category would, at least in part, exclude hearing care providers in an effort to reduce consumer costs and increase hearing aid adoption. Some companies like UnitedHealth Group's hi HealthInnovations®, Buyhear.com, iHear and others are already trying a direct-to-consumer approach, removing local hearing care providers from the delivery process.

In recent years we've also seen managed care expand its reach in the hearing care industry with more health insurance plans offering hearing aid benefits through a third-party company such as TruHearing, EPIC, or Hearing Care Solutions. While this approach does include the hearing care provider through participation in the third-party network, some providers have questioned whether they can accept referrals from these programs and maintain a successful practice.

What Is Managed Care?

Managed care is "a health care delivery system organized to manage costs, utilization, and quality." In a health insurance setting, this consists of restrictions around which providers you can see, which products and services are covered and the financial contribution from your plan. For example, dental insurance may provide coverage for a crown but not a dental implant and may require the patient to be seen by an in-network dentist, and then only cover a portion of the total cost of the crown. With hearing aid benefits, health plans may limit the amount of coverage, products and services included, and may require members to be seen by an in-network provider to use their benefits, which are increasingly being administered by third-party companies.

Why Is Managed Care Expanding Its Reach within the Hearing Industry?

To understand why more health plans are now offering hearing aid benefits and partnering with third-party companies to administer them, it is necessary to consider the market conditions that have contributed to this industry development. The health plan landscape is becoming more and more competitive. Consumers have many choices for health insurance, and health plans are under increased pressure to provide high quality benefits, while keeping their costs and their members' out-of-pocket expenses low. This influences which benefits a health plan may elect to offer.

As a health plan's membership grows, it can offer better benefits to beneficiaries through economies of scale. However, because health plans have struggled to control costs for hearing aids, the majority have not offered hearing aid benefits. For those plans that do, the most common benefit is an allowance that can be applied towards the purchase of hearing aids (e.g. a $500 or $1000 allowance). This effectively controls the health plans cost exposure but does not address the underlying cost of the hearing aid, which can still leave beneficiaries with significant out-of-pocket costs. Beneficiaries are pushing health plans to address their costs through increased benefits or more effective cost controls.

The health plan landscape is especially competitive for those plans wishing to attract consumers aged 65 years and older. These consumers can elect to enroll in a Medicare Advantage plan, which is privatized insurance, or traditional Medicare (Medicare Parts A and B), which is administered by the Federal government. Medicare Advantage plans have limited budgets to offer "extra" benefits and must decide which combination of benefits like vision, dental, transportation, fitness, or hearing aids will best attract and retain members. Plans seek solutions that allow them to offer valued benefits but still control costs. This is one of the reasons why more health plans are offering hearing aid benefits administered through a third party; it offers a way to provide a high value benefit to their members while still controlling costs for both themselves and their members.

In fact, plans that previously offered a hearing aid allowance can often achieve significant cost reductions for their beneficiaries by partnering with a third party to administer the benefits. This in turn increases subscriber satisfaction, making it easier to retain and recruit new subscribers.

Why Are Third-Party Companies Involved?

In recent years, the hearing industry has experienced a rising trend of health plans offering hearing aid benefits, increasing hearing aid accessibility and reaching some of the 73% of U.S. adults with untreated hearing loss. Some involve hearing care providers in their programs while others do not. For example, the largest health insurer in the country, United Healthcare, utilizes a primarily direct-to-consumer model, eliminating in-person fitting and programming services. Without the need to manage a large provider network or reimburse hearing care providers for their services, their costs are reduced.

Another approach many health insurers have adopted is to partner with third-party companies. This approach is attractive to insurers, because it allows them to control costs by outsourcing the management of the provider network, administration of the benefit, hearing aid price negotiation with manufacturers, and product expertise. Though health plans excel at these functions in other major areas of healthcare, they do not have the resources or knowledge to effectively handle these items for smaller, more specialized disciplines like hearing aids. In fact, many health insurers had never offered hearing aid benefits prior to partnering with low-cost third-party solutions and may have never chosen to do so without these alternatives.

Direct-to-consumer and third-party benefit programs are reaching more adults with untreated hearing loss, and both are a viable option for health insurers. Each insurance company will seek to offer the best value proposition they can to their members, weighing the benefit and cost of including professional services from local providers.

What Role Does the Consumer Play?

Clearly, consumer pressure is one of the reasons health insurers are including hearing aid benefits as a valuable differentiator. People in the market for both hearing aids and health plans are more likely to choose a plan that offers an attractive benefit than one that does not. So how and why did this consumer pressure increase?

In addition to today's consumers being more informed about hearing healthcare solutions, pricing, and purchase channels, they have different attitudes and behaviors towards hearing care and hearing aids than their predecessors. In general, they are more likely to exercise their buying power in the market than the hearing aid consumers of 5-10 years ago, whether it's shopping around for better pricing or being more demanding about the products or services they receive.

For their overall healthcare needs, consumers are accustomed to reaching out to their health insurance company and primary care physician (PCP). Given that most view hearing loss as a healthcare issue, it's not surprising they reach out to their PCP or health insurer first and expect their health plan to offer a benefit and a provider recommendation. Understanding these consumer behaviors helps provide insight into why health insurers want to offer a hearing aid benefit. An affordable benefit both attracts subscribers and satisfies consumer demand, resulting in higher satisfaction.

Threat or Opportunity?

To get back to the original question - with more health plans offering hearing aid benefits to attract consumers, what does this mean for audiologists: a threat or an opportunity? There are several factors to consider in answering this question.

Can Managed Care Increase Hearing Aid Adoption? Despite decades of trying, providers, hearing aid manufacturers, the Veterans Health Administration (VHA), and retail chains have only been able to reach 27% of adults with hearing loss, in part due to financial constraints[3]. Today's consumers are more informed about hearing loss, hearing aids and prices, and many expect their health plan to offer a hearing aid benefit. They also report being more motivated to purchase with greater insurance coverage[3]. These consumer dynamics make managed care a promising solution to expand the hearing aid market by reaching more first-time users. Audiologists who align themselves with health plans either directly or through partnerships with third-party companies, will have access to those first-time users.

How Does This Compare to Alternative Solutions? Consumers are increasingly aware they have many choices for hearing care, from direct-to-consumer solutions to local independent providers to big box retailers. When compared to direct-to-consumer options and the market potential of OTC hearing aids, managed care is the solution which is most likely to drive more consumers to local provider clinics.

Some existing hearing aid users are likely to explore cost-saving options being offered through their health plan if they previously paid out-of-pocket for their hearing aids. In that respect, managed care does represent a threat—turning a previous retail customer into a third-party referral. On the other hand, it's also an opportunity for providers

to participate in the customer's health plan network, either directly or through a third-party company. In-network providers will have an opportunity to retain their relationship with existing patients who elect to take the health plan route, as well as to receive referrals for potential first-time users.

How Will Managed Care Affect Providers? In 2018, 73% of Medicare Advantage enrollees nationwide chose a Medicare Advantage plan that offered a hearing aid benefit. This is an increase over 47% in 2015 and 65% in 2017. While hearing aid benefit adoption is lower in other health plan segments, there are others where hearing aid benefits are increasingly being adopted. As mentioned previously, to handle the administration of these benefits, more health insurers are partnering with third-party managed care companies. This trend is a clear indication of the direction the healthcare industry is going.

To be successful with third-party managed care referrals, audiologists will need to adapt many areas of their practice. For example, audiologists will need to determine whether to selectively or completely unbundle services for their retail patients to be consistent with the service model offered to third-party managed care referrals. While this allows audiologists to put more value on their expertise and services and not just product, audiologists must determine how they will incorporate this into practice. Providers may also need to adapt to working with a higher volume of patients and manage the different requirements of the various third-party companies.

Traditional marketing methods will continue to be a necessary and important part of a successful practice. However, it would be a mistake to ignore the first-time users that managed care has been successful in reaching, especially because there is no marketing cost to acquire referrals through this channel.

Any one of these changes may cause some providers discomfort. However, with the number of health plans offering hearing aid benefits expected to grow, managed care presents an opportunity for the provider who is willing to evolve and adapt.

A Changing but Promising Outlook

Baby Boomers are a growing hearing aid consumer segment with different expectations and demands than their Traditionalist predecessors. Although Boomers are buying hearing aids, they research and shop for them in more diverse ways than Traditionalists. Therefore, employing a marketing, communication, and service approach designed for Traditionalists is unlikely to achieve the same effectiveness with Boomers. Consideration of the core generational differences will empower audiologists to make the changes needed to attract and retain a greater share of this growing consumer segment.

Managed care presents a promising solution to reach many adults with untreated hearing loss who have not been attracted through traditional marketing methods, because it can maintain both quality of product and quality of care, while dramatically reducing their out-of-pocket costs. Providers who evolve to successfully incorporate these patients into their practices will be able to take advantage of this growing opportunity.

The hearing care industry is evolving. Opportunities exist for audiologists willing to evolve with it. ■

Patty Greene, M.A.,F-AAA *is the Director of Provider Engagement for TruHearing. She can be reached at patty.g@truhearing.com.*

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2. For a more in depth study of the generational differences, a good source is Boomer Consumer: Ten New Rules for Marketing to America's Largest, Wealthiest and Most Influential Group, by Matt Thornhill and John Martin (July 2007).
3. See Abrams HB, Kihm J. An introduction to MarkeTrak IX: A new baseline for the hearing aid market. Hearing Review. 2015;22(6): 16-23. Available at: http://www.hearingreview.com/2015/05/introduction-marketrak-ix-new-baseline-hearing-aid-market/
4. See Strom KE. Hearing aid sales increase by 7.2% in 2015 after strong Q4 by private sector. January 13, 2016. Available at: www.hearingreview.com/2016/01/hearing-aidsales-increase-7-2-2015-strong-q4-private-sector/

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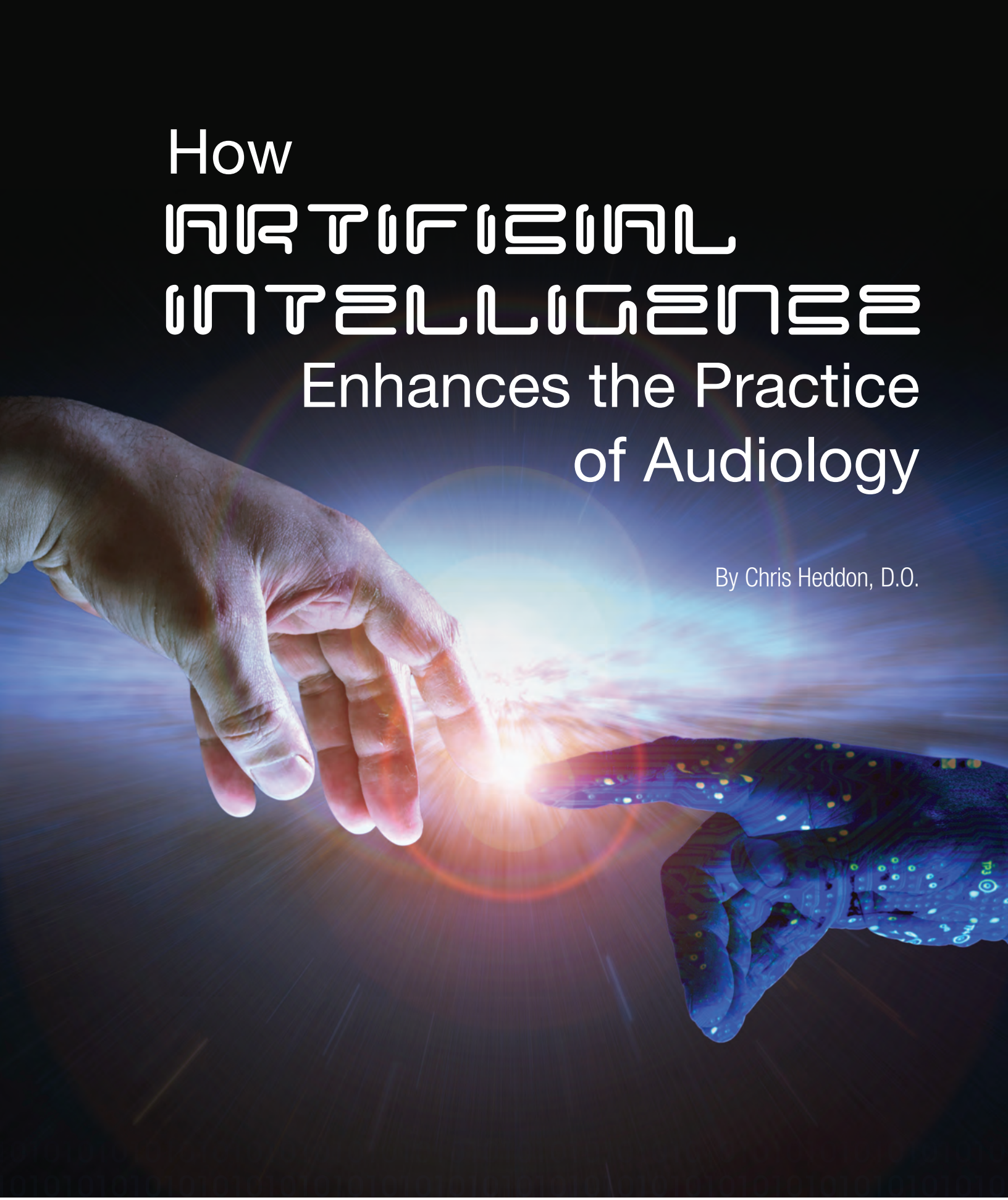
How Artificial Intelligence Enhances the Practice of Audiology

By Chris Heddon, D.O.



How much time per day could hearing care practices save by incorporating automated pure-tone audiograms into a busy clinical practice? Having this technology in place not only saves time, it also changes the clinic staffing model for hearing assessment. Can we gain insights about changes in overall health by assessing changes in cochlear health over time – even daily? If you believe that hearing thresholds change in response to changes in cochlear perfusion pressure (cardiovascular health marker) and cellular stress (immune response marker), then the answer obviously must be yes. In the next few years, automation of the hearing assessment, like automation of blood pressure assessment before it, will not only save time spent doing sound booth-based audiograms in the clinic, it will also give astute audiologists insights into the general health of the patient that few other healthcare providers have the training and clinical expertise to assess. In the very near future, pharmacies will have kiosks that perform automated hearing assessments, in addition to blood pressure readings, and mobile device operating systems will incorporate hearing assessments into their integrated health apps. Where will these pharmacy kiosks and mobile device health apps send users when there is change other irregularity in the user's hearing assessment? It is incumbent upon audiologists and hearing care professionals to realize the opportunity that artificial intelligence (AI) and machine learning (ML) present to their profession. While automation technologies like these will do a great job of screening for threshold changes, only clinically trained human beings are suited to assess the ambiguous signal of hearing assessments and diagnostic audiograms. In the coming months you will be seeing a great deal of hype around AI in hearing aids, and it will be important to have a clear-eyed view of what is a business opportunity for you versus a marketing tool intended to sell more hearing aids.

Since the early 2010's, artificial intelligence AI and ML have been grabbing headlines in the popular media. This has not been just hype. There has been tangible value creation in terms of market capitalization, user adoption, and our understanding of machine intelligence by companies like Google, Amazon, and Facebook who have invested in AI by hiring neuroscientists formally trained to program models of brain function into computers. With big tech companies spending billions on AI and hiring from an incredibly small talent pool of around 25,000 AI researchers worldwide, the market rate for candidates just out of PhD programs is well in excess of $300,000 per year. For experienced AI talent, salaries balloon above seven figures—not including signing bonuses. As high-tech and innovative as hearing aid companies are, this is not a space in which they are well positioned to compete for talent. Nevertheless, before the market for AI researchers became white hot, hearing aid companies had been working on various AI and ML approaches for quite some time. The removal of specific technological constraints, combined with the hearing aid industry's need to address new and disruptive service delivery models, indicates that the time to bring AI to the hearing care market is now.

Until the widespread adoption of Bluetooth Low Energy (BLE)-enabled hearing aids, there was not a clear use case for either ML or AI in hearing aids. Hearing aids were small islands of computing power limited by their small energy-efficient microprocessors. There was simply no option to perform the computationally intensive processes necessary for AI. Now, BLE connectivity grants hearing aids connection, not just to mobile devices, but also to our greater cloud computing infrastructure.

Given the high cost of premium clinic-based audiology services bundled with today's hearing aids, the next evolution necessary for the hearing industry to reach additional markets is in providing an intelligent hearing aid that can be programmed outside of the clinic. These next generation intelligent hearing aid systems require three specific elements: (1) hearing aids with energy-efficient wireless connectivity, which gives them access to external computing power; (2) the ability for an audiologist to securely program a hearing aid from a distance, which gives the user access to the highest level of hearing care at all times—even in real-world environments; and (3) mobile phones with sufficient computing power to run AI on-device, which support the dynamically responsive intelligent hearing aids and provide the additional benefits of protecting user privacy and reducing the mobile device power consumption associated with cellular connection to a cloud based server (which would have been needed if the AI was run in the cloud rather than on the user's mobile device). The first element enables the latter two, while the latter two elements give end-users access to the best combination of human and machine intelligence.

Given the high cost of premium clinic-based audiology services bundled with today's hearing aids, the next evolution necessary for the hearing industry to reach additional markets is in providing an intelligent hearing aid that can be programmed outside of the clinic.

Audiologists provide fantastic quality service to people who need hearing aids. This is the kind of personalized service I prefer as a hearing aid user, but with 15% market penetration among those who need a hearing aid, and an existing shortage of audiologists in the US market, it is clear that these professionals will not be able to serve all who need quality hearing care without a marked change in the technology underpinning the hearing care industry's service delivery model. In addition to taking the much-needed step of making hearing aids over-the-counter (OTC), the industry needs to find a way to program OTC hearing aids to fit the specific needs and preferences of the end-user. Without the automation of initial and ongoing fitting, the OTC designation for hearing aids will be much ado about nothing. Look no further than Japan's longstanding OTC market, which was often, and rightfully, referenced as a counterpoint to the OTC model in the United States. With device return rates approaching 50% for some online direct-to-consumer (DTC) channels, OTC, without intelligent connected hearing aids that give the end user some degree of personalization, is an unsustainable proposition. Perhaps more important than the OTC category in the United States, China is the hearing industry's fastest growing market (between 3-4x current US and EU growth, according to publicly available Big 6 investor reports). According to the World Health Organization (WHO), over 45% of people 65 or older in China have moderate-severe hearing loss. With these numbers in hand, hearing aid manufacturers have an obligation to their shareholders to begin deploying novel service delivery models that respond quickly to the Asian market with economics that compete with commodity Chinese hardware—and that means embracing automation!

How close are we to intelligent connected hearing aids? Widex appears to be first to market with the announcement of their mobile-based ML platform at the 2018 American Academy of Audiology (AAA) conference, which was also described in an overview of the technology in the April 2018 Hearing Review. For clarity, AI and ML are terms often used interchangeably by companies to describe their products. Technically speaking, AI is a broader system of machine intelligence that embodies a set of more narrowly focused ML algorithms. Widex's ML approach appears to be a method of determining the end-user's "auditory intention" as it relates to a particular acoustic environment in order to reduce the amount of clinic time spent fine-tuning a hearing aid to the end-user's preferences. It would be reasonable to assume that Widex will also compare the individual preferences of large sets of anonymized users in order to more efficiently suggest appropriate settings to each user. Over time, this population level approach should reduce the number of end-user interactions to something smaller than the current 20 interactions reported by Widex.

Again, Widex and others have been working on ML and AI solutions for quite some time. GN Hearing and Starkey have also built and published papers on desktop computer-based AI prototypes, However, these solutions have generally remained confined to the research lab. The real challenge with creating AI-driven hearing aids is in taking these novel technologies and deploying them on mobile devices. Without securely pairing with mobile devices capable of performing AI processes, hearing aid performance is held hostage to the connection speed of the mobile device as it attempts to offload AI operations to a server and, as noted above, increases the risk of exposing protected health information.

A connected, intelligent hearing aid requires the support of AI researchers who select appropriate algorithms for optimizing the performance of hearing aids, as well as specialized developers who know how to *efficiently* program high performance AI into mobile platforms. Right now, this talent predominantly works at places like Apple and Google, where they have recently begun publishing mobile AI tools for developers to incorporate into their apps, including hearing-related apps. However, these general-purpose AI tools have not been specifically tailored to the needs of hearing assessment, environmental detection, and device programming, so there is still a lot of customized development required when creating a mobile-optimized AI architecture for hearing aids, even when using the best available off-the-shelf solutions.

Based on the above, and despite their developmental costs and challenges, AI-driven hearing aids will drive the next wave of growth in the hearing aid market. They will provide better quality experiences for users, reach additional markets, and perform functions that will be seen as essential to users who benefit from the power of these AI-driven tools.

Five-Year Outlook in the Hearing Aid Industry

What will the next five years look like in the hearing aid industry, and how does AI fit into the future of hearing care?

There are several factors that will influence the hearing aid industry over the next five years to drive hearing aid prices down, increase the funds available for addressing hearing-related health issues, increase market penetration, and improve customer outcomes with improved hearing aids and hearing aid functionality.

A first significant factor affecting the hearing aid industry over the next five years is the introduction of over-the-counter (OTC) hearing aid sales and their effect on the price of hearing aids. With the OTC category soon opening in the US, ON Semiconductor, a major US-based manufacturer of chips for the global hearing aid industry, has released a system-on-a-chip platform that is specifically intended to allow startups and second-tier manufacturers to create hearing aids aimed at the OTC category in the US and the direct-to-consumer (DTC) Chinese market. If these new hearing aids, and others like them, gain traction in the mild hearing loss market (which is currently only 10% penetrated and makes up 75% of the overall market) and/or with value-conscious users who otherwise balk at the current average of $2,000 per hearing aid from premium first-tier manufacturers, there will be a sizeable downward shift in the price points of hearing aids. Return rates on OTC hearing aids are expected to present a challenge to retailers; however, embracing the automated personalization that AI offers may be exactly what is needed to reduce device return rates to a sustainable level and allow the hearing aid prices to fall.

A second factor is the increased recognition of the economic and emotional burden that the co-morbidities of hearing loss present to our healthcare system, our seniors, and their families. The ongoing Baltimore Longitudinal Study of Aging by Dr. Frank Lin and colleagues at Johns Hopkins demonstrates that hearing loss is independently associated with an increased risk of dementia (2x increased risk dementia for mild hearing loss; 5x increased risk for severe hearing loss) and accelerated loss of brain tissue on magnetic resonance imaging (MRI). In addition, Drs. Lin and Luigi Ferrucci, of the National Institute on Aging (NIA), have demonstrated that *mild* hearing loss is also associated with a three-fold increased risk of a fall, with a 1.4x increased risk for every additional 10dB of hearing loss. Even if there were no other co-morbidities associated with hearing loss, a reduction in the risk of dementia and falls alone are likely enough to offset the cost of covering a sub-$1000 pair of hearing aids. It is likely that more health insurance payors will follow UnitedHealthcare's lead in offering a full hearing aid benefit, especially with the lower price points that the OTC category will bring to the US market.

A third factor will be the extent to which modern hearing care practices embrace AI and tele-audiology as tools for increasing throughput and margin for clinic services and the extent to which hearing aid market penetration increases

above today's current 15% penetration rate. There are several reasons to be optimistic that the penetration rate will grow, including: (1) the expansion of DTC service delivery models (including the OTC category in the US); (2) the related reduction in device cost; (3) increasing health insurance coverage; and (4) new entrants into the hearing aid manufacturing market, particularly at the value-conscious end of the market. In today's market, it takes an average of around ten years for a person who could benefit from a hearing aid to actually purchase one. Lower cost, favorable form factors, and increased accessibility from pharmacies and online channels should reduce this adoption time.

Increased penetration in the value-conscious end of the market is likely to also lead to growth in the premium side of the market. Market data from commercial hearing aid pilots shows that, once a potential hearing aid consumer buys a value-focused hearing aid and sees a benefit, the customer is more likely to trade that model in for a premium hearing aid—the trade-in process ideally involving a referral to a hearing care practice for formal clinical exam. Similarly, if an OTC hearing aid offers a hearing aid screening for initial device fitting, the screening may also include an automatic referral for a full clinic-based hearing evaluation. .

Based on these factors, the next five years in the hearing aid industry will see the price of hearing aids come down, an increase in the funds available for hearing-health expenses, an increase in market penetration, and an improvement in customer-patient outcomes.

What Does Artificial Intelligence Mean for the Practice of Audiology?

Patients with hearing loss are being underserved by the current service delivery model, which to date has not had time to fully incorporate technologies like AI and device programming-over-air. Modern audiology practices should embrace these emerging tools as a means of channeling underserved patients to receive appropriate hearing care and increasing their bottom line.

For example, it is evident that many people who should be screened for hearing loss are simply not being screened. Surprisingly, the American Academy of Family Physicians (AAFP) still does not recommend hearing screenings for asymptomatic patients over the age of 50. The low rate of screening contributes to hearing aids' low market penetration. Factory-calibrated OTC hearing aids that perform an AI-driven, mobile-based, hearing screening for fitting should be positioned, in partnership with hearing aid manufacturers, as a customer acquisition tool for modern audiology practices. In such a role, OTC hearing aid sales will increase the number of people receiving hearing screenings, increase the referrals to audiology practices, and thereby improve the hearing outcomes for a greater percentage of the population.

The belief that the practice of audiology will change significantly with the introduction of intelligent, connected hearing aids is well-founded, but the idea that AI will steal market share from modern audiology practices is not. Look at the recent troubles that Uber and Tesla's self-driving car programs have had as evidence that complex tasks in ambiguous circumstances are best performed by humans. Audiology is no exception. By embracing the value that AI brings to the field, audiology practices can expand the reach of their services and improve the outcomes for their patients. This is the power of AI and this is what is best for our patients and the growth of the industry ■.

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Portions of this article were published at Hearing Health & Technology Matters (HHTM) blog and are reprinted here with their permission.

The Role of Hearing Loss Self-Management in Older Adults

Summary of Research Conducted by Elizabeth Convery, MSC, Carly Meyer, Ph.D., Gitte Keidser, Ph.D., and Louise Hickson, Ph.D.

Permanent hearing loss is a chronic condition that affects the whole person: their communication, psychosocial wellbeing and health-related quality of life are among the key factors influenced by age-related hearing loss.

Adults with hearing loss can manage these effects through an active process called hearing loss self-management (HLSM). Recent research suggests that hearing health care tends to follow an acute rather than chronic model of care: biomedical focus, device-centric practice, clinician-led decision-making. As a result, adults with hearing loss are not always afforded the opportunity to develop HLSM knowledge and skills.

Many audiologists think of "hearing loss self-management" as synonymous with "hearing aid self-management" and believe that if a patient has acquired hearing aids and wears them long-term, their job is essentially done. Gaining an understanding of the multidimensional nature of hearing loss self-management could enable audiologists to start thinking more holistically and begin those oft-difficult conversations with patients about the problems they're experiencing that aren't necessarily directly related to hearing aid use. Further, understanding the multiple dimensions of hearing loss might help audiologists identify interventions and strategies that address the non-device-related needs, such as more fruitful spontaneous conversations with their family and friends or more effectively coping with conversations in a noisy listening situation.

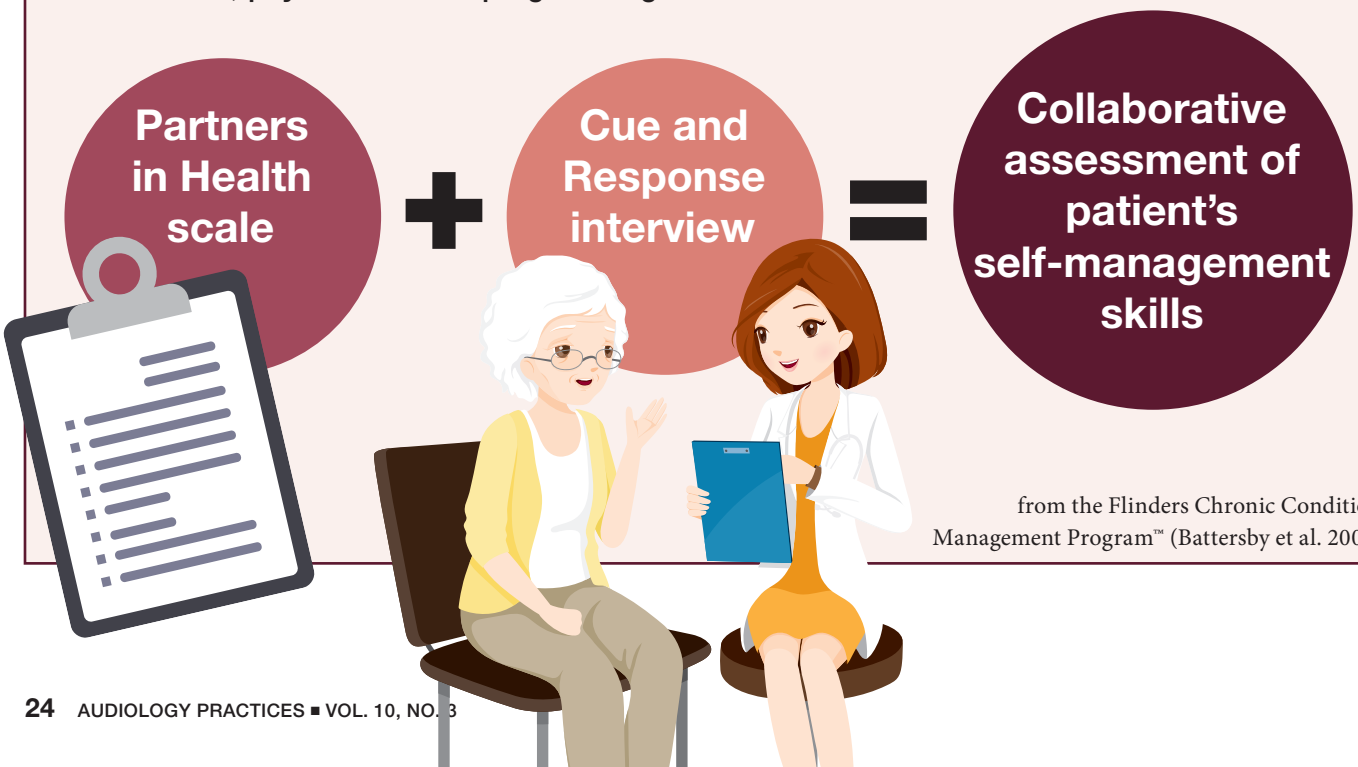
The objective of this clinical research was to examine the use of a Hearing Loss Self-Management (HLSM) program with a group of older Australian adults as a means of improving outcomes in this population. It is believed that HLSM could be a stand-alone, fee-for-service opportunity offered by clinics to adults who purchase hearing aids elsewhere. Additionally, HLSM skills could be offered to patients purchasing their hearing aids from the clinic as part of a larger professional service package.

Key Questions of this Research

1. Can clinicians assess HLSM skills using the Partners in Health scale and the Cue and Response interview? These are two complementary tools that have been developed for other chronic conditions.
2. What do the results of the assessment tell us about the individual patient? What do they tell us about current clinical practice more generally?

What are the Partners in Health scale and the Cue and Response interview?

- Validated pair of clinical tools for collaboratively assessing chronic condition self-management –now modified for audiology use
- Assessments of a patient's participation in shared decision-making, ability to monitor/respond to functional changes, HL and treatment knowledge, access to services, psychosocial coping strategies



from the Flinders Chronic Condition Management Program™ (Battersby et al. 2003)

Method and Results

Data was collected at the University of Queensland in Australia. Thirty adults (aged 51-85) with mild to moderately severe hearing loss participated in this study. All study participants were recipients of hearing health care from either the public (n =16) or private (n=14) Australian healthcare system.

Both individual and group results analyzed. Group results were examined for three themes pre-selected from the existing literature: (1) clinician minimization of the psychosocial impact of hearing loss, (2) lack of patient knowledge about non-technological interventions, and (3) audiologist-led versus shared clinical decision-making.

Clinical audiologists completed routine assessments on each participant. The dialogue between the audiologist and participants was recorded and provided a picture of the whole patient in their own words. The recorded assessments were used to identify specific HLSM strengths and weaknesses (e.g. consistent hearing aid user, but not coping emotionally.)

There were three overarching themes identified in the data.

1 Clinician minimization of the psychosocial impact of HL

Patients reported social isolation; reduced value from the social events they continued to attend; and feelings of anger, anxiety, and frustration when communicating with others. Few of these issues had been raised in past audiology appointments.

2 Lack of patient knowledge about non-technological interventions

As a group, patients demonstrated a high level of knowledge about the characteristics of their HL. However, their knowledge of strategies for treating and managing HL was limited to hearing aids and other technology-based interventions.

3 Audiologist-led versus shared clinical decision-making

There was considerable variation in the extent to which patients reported taking part in shared decision-making with their audiologist. Some described a highly paternalistic, clinician-led style of practice, while others described their relationship with their audiologist as a partnership.

What can clinical audiologists learn from this hearing loss self-management research?

Patients who participated in this study indicated the need for audiologists to focus more on the psychosocial consequences of hearing loss, offer interventions beyond technology, and engage in shared decision-making. Discussing these three components allows patients to become actively involved in their own hearing care treatment goals and plans.

The Partners in Health scale and the Cue and Response interview could help audiologists have more effective dialogue with patients:

1. Assess and address hearing loss more holistically. During the communication assessment appointment, audiologists would gain a deeper understanding of the emotional and social consequences of hearing loss by using these two tools.
2. Tailor interventions to the unique needs of each patient. These interventions could stand alone from the delivery of a device. Thus, HLSM has the potential to be a service that audiologists offer patients. Those patients may opt to buy HLSM skills training as part of a larger comprehensive service package, or ala carte after they have purchased hearing devices elsewhere. ■

This pictogram is based on a poster session by the authors at the HEARING CRC meeting in Melbourne, Australia. Contact: Elizabeth.Convery@nal.gov.au

Putting

into Action in a Medical Audiology Practice

An Interview with Dr. Meagan P. Lewis of Wake Forest University Hospital

A 2014 survey[1] published by the American Speech-Hearing and Language association indicated the three-quarters of audiologists worked in healthcare settings, with 25.1% employed in a hospital and 47.3% working in nonresidential health care facilities, such as private physicians' or audiologists' offices. Given the large number of audiologists working in medical settings, it's imperative they stay current in their credentialing, coding and billing practices.

One important aspect of administrating an audiology practice within a medical setting is setting fees. As many readers know, historically, audiologists have included several components, including device, service and fitting fees into a single price charged to the patient (or third-party payer). For a variety of reasons, including the rise of Medicare Advantage programs and looming over-the-counter hearing aid purchases, audiologists are exploring alternatives to the traditional bundled pricing model.

Transitioning from a bundled pricing model to one that unbundles fees for individual services can be risky. For the consumer an unbundled model adds complexity to the transaction. In addition to adding more choices, which can be overwhelming for some consumers, an unbundled model has the potential to incentivize individuals to *not* get the follow-up care they might need. After all, who doesn't want to save money or avoid what may seem like unnecessary visits to the clinic.

For the clinic, switching to an unbundled pricing model has the very real potential of losing money for the practice. In almost any unbundled pricing scenario, patients are prepaying for service that is rendered over several years. In the unbundled pricing model, the relatively large margins associated with the initial hearing aid transaction is narrowed, and the practice counts on making up the reduced margins, paid upfront, with a smaller, incremental stream of revenue tied to the follow-up visits over many years. For an unbundled model to yield revenue like the traditional bundled model, the practice needs patients to attend all their scheduled follow-up appointments over the course of several years. These follow-up appointments are usually scheduled every six months, and in a completely unbundled model, a fee would be associated with them.

Practices can very easily begin to lose money when they unbundle because it is extremely difficult to make up all the initial pre-paid revenue generated in the bundled model with

incremental revenue over time. Many patients, for a variety of reasons, simply do not maintain a regimented follow-up schedule in which they are expected to pay for the services in a more piecemeal fashion.

Dr. Meagan Lewis, director of audiology at Wake Forest University Hospital, has managed to strike a balance in the way her clinic unbundles fees. She keeps it relatively simple for patients while simultaneously charging fees for services that stand-alone for the use of hearing devices. In her approach she has managed to strike this balance by accounting for the office culture of her clinic and focusing on the transactional aspects of a fee-for-service program that attempts to maintain a healthy profit margin for the business.

BT *Could you share with us why Wake Forest Audiology started to unbundle?*

ML There are many reasons-both external and internal factors. Some of the biggest drivers were external, including recent legislation officially introducing over-the-counter hearing aids and more and more PSAP type devices. There was discussion among our staff about why patients would seek our services versus other devices that could buy without seeing an audiologist. Our staff wrestled with the idea of what differentiates us from our competition. Our team agreed that we should be perceived as more than sellers of a device. To do that, we agreed that we needed to spend more time discussing the services that we provide and the benefit of those services to the patient. The collective "we" have spent years discussing the newest technology but not necessarily how the professional optimizes that technology to improve patient satisfaction.

BT *It sounds like you conducted some strategic planning into unbundling and you started by thinking about the office culture. How did you go about doing this?*

ML It may seem as though the change to itemization should be simple- you just break out your services, right? But it is actually a shift in mindset. As our staff discussed the driving factors behind change (change nationally as well as in our clinic) we wanted to be perceived as the professionals that individuals on our community seek to improve their hearing, not the place they can buy a device.

We started with a task force charged with providing a best practice protocol for fitting adult hearing aid patients. The group was comprised of seven of our audiologist, who mainly see adult patients. There was a round of healthy, sometimes lively discussion regarding what should comprise a hearing aid consult, a fitting, and a follow-up. Each person was then assigned a topic to research and report back to the group. We surveyed hearing aid literature in peer reviewed journals and clinical guidelines offered by AAA.

BT *Sounds like a relatively long and exhaustive process. How long did this take?*

ML Much discussion centered around our clinical protocol for adults. While everyone agreed, for example, that there was compelling evidence to perform Real Ear measures on the date of the fitting for every patient, there was concern about cognitive screening and less compelling evidence to perform the screen effectively and what to do with the data.

Also, our team felt that, based on best practice clinical guidelines there were some procedures that they would not feel ethically that they could omit- for example, verification procedures using Real Ear on the day of the fitting. As a result, our itemized model is somewhat hybridized. **The consultation, fitting and follow-up is priced, but procedures after that time are itemized.** We do share the itemized pricing with patients during the consult to discuss the importance of the care they are receiving as well as some of the science behind the procedures we are doing. Again, the emphasis is less on the product and more on the service.

BT *What best practices did the audiologists agree to do?*

ML Rather than talk about the procedures, let me share with you a docket of all the components of a hearing consultation. On the next page, in outline form (so it is easy to read), is a breakdown of professional services we agreed as a team provide at Wake Forest University Hospital.

I CONSULTATION FOR HEARING AIDS OR ASSISTIVE LISTENING DEVICES

A. SUBJECTIVE MEASURES

-Hearing Abilities Questionnaire (Appendix 1, page 54)

-Considerations for Choosing a Hearing Aid (Appendix 2, page 56)

-COSI (note if patient participated, or communication partner was involved)

B. OBJECTIVE MEASURES

-QuickSin (speech-in-noise testing)

-UCLs/-MCLs

-Co-occurring activity limitations and participation restrictions – i.e.., previous medical determination of cognitive challenges refer to medical record (patient or family report) and discuss/ potential usage of MOCA (cognitive assessment) developed for patients with hearing loss

C. TASKS TO BE COMPLETED DURING APPOINTMENT

-Selection of Hearing Aids

-Purchase Agreement Reviewed and Signed (complete model to be ordered and accessories)

-Ear Impressions, if indicated

-Cerumen Removal before ear impression, if needed

-ElectroAcoustic verification of Aid in the Test Box upon arrival

II. HEARING AID FITTING

A. HEARING AID/EAR MOLD

1. Otoscopy- Cerumen Removal if needed

2. ORIENTATION FOR PATIENT

-Hearing Aid Orientation Checklist (Appendix 3, page 58)

3. VERIFICATION (Electroacoustic Analysis for ANSI compliance)

-Probe Microphone Verification (Speech Mapping)

B. ACCESSORIES/SMART PHONES

1. PAIRING HEARING AIDS TO PHONE

III. HEARING AID FOLLOW-UP (fine-tuning and validating benefit)

A. ORIENTATION TO APP FEATURES

B. ORIENTATION TO ACCESSORIES

C. DISCUSS COSI-

1. Make adjustments as needed based on patient/family input

D. PHYSICAL COMFORT

1. Make adjustments/modifications as needed

E. PERCEPTION OF VOLUME/TELEPHONE ACCESS

1. Assess and adjust as needed

2. Add telecoil or phone program if needed and adjust

3. Discuss communication strategies and any recommended accessories or assistive devices

F. WARRANTY REVIEW

1. Discuss services available under warranty

2. Review cleaning of aid and changing wax guards

IV. LONG TERM FOLLOW UP

A. Every 6 months for check of ear mold tubing/mic filters/domes/earhook filters/retention locks/wax traps.

B. Annual Communication check with dispensing audiologist:

1. Ask about overall hearing status- is hearing evaluation needed?
2. Check ears for irritation or wax accumulation- remove wax if possible or recommended wax removal
3. Ask about benefit/comfort of hearing aids in patient's different listening situations
4. Ask about telephone ease or difficulty
5. Adjust hearing aids/create new programs/suggest assistive devices/discuss communication strategies
6. Clean hearing aids- biologic check and electroacoustic check
7. In warranty clean and check of aids

BT *Let's shift gears a little and examine the creation of a bill of services (aka super bill). What services and accompanying codes could be added to a super bill, if a clinic was interested in unbundling their hearing aid service fees?*

ML I would encourage anyone interested in unbundling to take a look at the CPT/HCPCS service codes that are the most commonly used to represent hearing aid services. For example, many of these procedures used during a hearing aid consultation are reimbursable, by either the patient or the third-party payer, when the following codes are used:

Hearing aid evaluation and selection = 92590/1 or V5010. This is typically covered if the patient has a hearing aid benefit; otherwise this can be bundled into the cost of the hearing aid and/or is the financial responsibility of the patient.

Earmold impression, each (if applicable) = V5275. This is typically covered if the patient has a hearing aid benefit; otherwise this can be bundled into the cost of the hearing aid and/or is the financial responsibility of the patient.

Communication needs assessment and other questionnaires or inventories that evaluate satisfaction, motivation and perceived hearing handicap (e.g., COSI, HHIE, IOI-HA and/or ECHO = 92626). This is the financial responsibility of the patient; if this took less than 30 minutes of testing, add the -52 modifier to indicate a reduced service.

Speech-in-Noise tests (e.g., Quick-SIN and/or HINT) included in 92626. This is paid privately by the patient; if testing took less than 30 minutes to conduct, add the -52 modifier to indicate a reduced service.

I probably don't have to remind audiologists that is very important to read and analyze each individual third-party payer contract and its associated fee schedule with the payer, specific codes or families of codes that are not mentioned or listed in the contract or fee schedule. Each third-party payer addresses the hearing aid process differently. There are several possible codes that can be used to bill for various tests and procedures that might be conducted during the hearing aid fitting appointment, such as:

Electroacoustic analysis = 92594/5. Directional microphone test included in 92594/5. This code is typically covered if the patient has a hearing aid benefit; otherwise it can be bundled into the cost of the hearing aid and/or is the financial responsibility of the patient.

Fitting and orientation = V5011. This code is typically covered if the patient has a hearing aid benefit; otherwise it can be bundled into the cost of the aid or is the financial responsibility of the patient.

Dispensing fee = V5190-. Aided loudness testing is included in V5020. This is often covered if the patient has a hearing aid benefit; otherwise it can be bundled into the cost of the hearing aid and/or is the financial responsibility of the patient.

Probe microphone verification = V5020. Aided loudness testing included is included in V5020. This is typically covered if the patient has a hearing aid benefit; otherwise it is bundled into the cost of the hearing aid and/or is the financial responsibility of the patient.

Earmold, custom, each (if applicable) = V5264. This is typically covered if the patient has a hearing aid benefit; otherwise it is bundled into the cost of the heairng aid and/or is the financial responsibility of the patient.

Mold/insert/dome, each (if applicable) = V5265. This is typically covered if the patient has a hearing aid benefit; otherwise it is bundled into the cost of the hearing aid and/or is the financial responsibility of the patient.

Battery, each = V5266. This is typically covered if the patient has a hearing aid benefit; otherwise it is bundled into the cost of the hearing aid or the financial responsibility of the patient.

Hearing aid supply or accessory, each = V5267. This is typically the financial responsibility of the patient unless specifically covered by the third-party payer.

Hearing aid check = 92592/3 or V5011. This is typically covered if the patient has a hearing aid benefit and the benefit has not been exhausted at the hearing aid fitting; otherwise it can be bundled into the cost of the hearing aid and/or is the financial responsibility of the patient.

BT *Could you provide some insights on calculating your revenue per hour, a critical number if you want to start changing a fee for specific services?*

ML We began with our overall cost of business per hour (audiologist salary, benefits, time off, overhead) and then the amount of time each procedure was estimated to take, for example, 15 minutes to clean a hearing aid. The average cost per hour was divided by the time per procedure. Each procedure is assigned a standard amount of time, 15 minutes, 30 minutes, 60 minutes or longer. (For more details on calculating revenue per hour values, see Taylor & Zelski in March 2018 issue of *Audiology Practices*).

Once we calculated a revenue per hour number, we looked at the average number of visits for returning patients (looked at all audiologists and averaged the number of follow-ups by patients) We then took our hourly rate and multiplied by that number of visits over the course of one year, 3 years, or 5 years.

BT *When you mention multiplying the number of visits over 3 to 5 years, are you referring to patients who purchase hearing aids?*

ML Yes, instead of one bundled fee, the idea is to estimate how much time they will come back for follow-up care and charge accordingly.

BT *One last question. I am curious. How do you talk about service packages with patients who might be conditioned to pay a bundled rate for unlimited service over a period of 2 to 3 years?*

ML For many patients, it is the discussion that after their initial 45 days they do not need as much service as they did immediately after fitting and that if they return once a year they will be charged for a clean/check and maybe a conformity/adjustment charge. However, if they anticipate that they will want to return more frequently for cleaning or program changes they would perhaps want a service package. It is interesting to note that over the past year we have only had three people purchase service packages.

BT *Any final words of advice on unbundling?*

ML In a changing healthcare environment, the delivery of service is changing. For our practice, that means adjusting to meet the needs of the patient at whatever stage of the process they find themselves. For example if a patient comes in with an OTC being able to appropriately and fairly charge to tell them what they are and are not receiving from the device. It also means improved portability of care for patients who may have moved to the area with existing devices. While there may be some patients who come back less often for follow-up, the itemized model also means that patients will not fill your schedule with unnecessary visits, maximizing your time with patients who may need evaluations or new devices. We want to touch base with our patients- when they need it- not to scheduled them for unnecessary follow-up. While it is a diversion from our traditional service model to charge for repairs and follow-up after the warranty period, it often saves the patient in the long run. ■

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Where Do Audiologists and Speech-Language Pathologists Work?

The ASHA Leader, May 2014, Vol. 19, 24. doi:10.1044/leader.AAG.19052014.24

Continued on page 54

AN INTRODUCTION TO COMORBID CHRONIC DISEASES ENCOUNTERED IN THE PRACTICE OF AUDIOLOGY

By Victor Bray, MSC, Ph.D., FNAP

I. INTRODUCTORY CONCEPTS

This article is an introduction to some of the chronic diseases that are comorbid with auditory-vestibular disorders (AVD) and includes a preview of the AuDACITY Symposium on Co-management of Comorbid Diseases. Chronic diseases are prevalent in audiology patients and are often associated with vascular diseases, neurological disorders, and metabolic syndrome. The presence of multiple chronic diseases is termed comorbidity and comorbid diseases may or may not be associated with each other, as reflected in an increased odds ratio representing disease risk factor(s). AVDs, including hearing loss and balance disorders, have increased odds ratios associated with many comorbid diseases, indicating a possible common pathophysiology for ear illness and whole-body illnesses. Awareness that these associations exist is an important consideration toward holistic management of the audiology patient's health and well-being. If the profession of audiology is to be successful as a point-of-entry to the healthcare system, audiologists must transition toward considerations of whole-body illnesses as part of the patient-management plan.

II. CHRONIC DISEASES

Chronic diseases are noncommunicable diseases of long duration and slow progression, result from a combination of genetic, physiological, environmental, and behavioral factors, result in significant activity limitations and participation restrictions and require ongoing medical attention. Although generally not curable, the impact of these chronic diseases can be lessened by drug therapy and/or personal lifestyle factor improvement (see alcohol, exercise, nutrition, tobacco). Chronic diseases are important as a public healthcare issue as they are the most common cause of death and disability in the US.

A composite listing of chronic diseases, sourced from the Centers for Disease Control and Prevention (CDC[1]), the Centers for Medicare and Medicaid Services (CMS[2]), and the World Health Organization (WHO[3]), includes Arthritis, Brain Disease and Neurological Disorders (Alzheimer's, Autism Spectrum Disorders, Dementia, Depression, Epilepsy, Schizophrenia, Stroke), Cancer (Breast, Cervical, Colorectal, Gynecological, Lung, Prostrate, Skin), Chronic Kidney Disease, Diabetes Mellitus (Prediabetes, DMT1 and DMT2), Heart Disease (Atrial Fibrillation, Heart Failure, Ischemic Heart Disease), Hypertension (High Blood Pressure), Hyperlipidemia (High Cholesterol), Lung Disease (Asthma, Chronic Obstructive Pulmonary Disease), Obesity, Osteoporosis, and Tooth Decay.

IIA. VASCULAR DISEASES

Vascular diseases are often chronic diseases. Macrovascular disease is a disease of the large blood vessels, such as the coronary arteries, the aorta, and the sizable arteries of the brain and limbs. Macrovascular disease often results from atherosclerosis, a hardening and narrowing of the arteries from deposits of plaques of fatty material on the inner walls of the vessels. Diseases that are associated with macrovascular disease include cerebrovascular disease in the brain, coronary disease in the heart, and peripheral artery disease in the limbs. With progression of macrovascular disease, ischemia can result, restricting blood flow and oxygen transport to vital structures. Ischemic heart disease can cause angina and death. Ischemic brain disease can cause stroke and dementia. With regard to the inner ear, ischemia of the supply arteries to the cochlea, such as the anterior inferior cerebellar artery, can result in significant vestibular and auditory system damage.

Microvascular disease is disease of the small blood vessels, the capillaries. Microvascular disease is associated with hypertension, hyperlipidemia, atrial fibrillation, and diabetes. Coronary microvascular disease can lead to damage to the heart and microvascular ischemic disease can result in numerous small strokes in the brain, is common in older persons, and can cause dementia, depression, mental decline, and walking and/or balance problems. This small vessel disease (SVD) has other complications and is thought to be a pathophysiology that links damage to the stria vascularis and compromise of cochlear function to the elevated risk that is associated with coronary disease and diabetes.

A Relationship between Cardiovascular Disease and Hearing Health

The relationship between heart health and cochlear health is well established. Gates et al in 1993[4] suggested that cardiovascular disease was a clinical marker for the development of low-frequency hearing loss, whereas Freidland, Cederberg and Tarima in 2009[5] suggested that low-frequency hearing loss was a clinical marker for cardiovascular disease. The conclusion from the Friedland article states "Patients with low–frequency hearing loss should be regarded as at risk for cardiovascular events, and appropriate referrals should be considered." The value of the audiogram measuring cochlear status and reflecting other risks associated with SVD is so strong that Bishop in 2012[6] writes that the ear can be considered a widow to the heart. Bishop states that otolaryngology and related disciplines (e.g. audiology) can no longer operate in silos, but must maintain collaborations with other healthcare professionals and engage patients in all aspects of their general health and wellness.

IIB. NEUROLOGICAL DISORDERS

Neurological disorders are diseases of the central nervous system (brain, spinal cord, cranial nerves) and the peripheral nervous system (peripheral nerves, nerve roots, autonomic nervous system, neuromuscular junction, muscles). Brain disorders can result from neurological injury associated with blood clots, cerebral edema, and strokes; from brain tumors; as neurodegenerative diseases such as Alzheimer's, dementia, and Parkinson's; and as mental disorders such as anxiety and depression. Other neurological disorders include epilepsy, migraine headaches, and multiple sclerosis. Of particular interest to the audiologist are diseases which may have a common pathophysiology with AVDs including demyelination of nerve fibers (multiple sclerosis), neurological disorders resulting from infectious organisms that can damage the hearing and balance system (bacterial meningitis and viral meningitis), and degenerative neurological disorders such as dementia accompanied by loss of sensory function in vision, hearing and/or balance.

A Relationship between Neurological Disease and Hearing Health

One of the most talked-about issues in audiology today is the relationship between hearing loss and the neurological disease of dementia. Work by Dr. Frank Lin and colleagues at Johns Hopkins University has shown that (a) hearing impairment is independently associated with an increased rate of cognitive decline, (b) neuroimaging studies have shown association between hearing loss and lateral temporal lobe and whole brain atrophy, and (c) the presence of hearing loss is associated with dementia, with persons with moderate losses having a threefold increased risk and severe losses having a fivefold increased risk[7]. Of prime importance to our profession will be the results of the current longitudinal trials to determine if treatment for hearing loss can slow, stop, or even reverse progressive dementia in our patients.

III. COMORBID CONDITIONS

Comorbidity is the coexistence of two or more chronic diseases or conditions in the same patient. While auditory and vestibular disorders are not generally placed on the list of significant chronic conditions, audiologists must begin to think of AVDs as representing chronic diseases which can

contribute to comorbidity effects in patients, especially when the auditory disorder is more than presbycusis, the vestibular disorder is more than presbystasis, and any concurrent visual disorder is more than presbyopia.

Sometimes patients have comorbid conditions that are isolated (non-linked) chronic diseases. However, and of importance to this discussion, comorbid conditions can occur because a common pathophysiology (the disordered physiological process associated with disease) can exist in multiple bodily organs and systems, implying a possible interaction between the illnesses that can affect the course and prognosis of both. An example is vascular disease. The vascular system is the body's circulatory system of blood vessels and the lymph vessels and nodes. Neurological disorders are another example, where the nervous system is responsible for signal transmissions throughout the body, serving as a centralized command and control function. Another example is the impact of neurological degeneration, which can degrade vision, hearing, balance, contributing to increased social isolation and depression.

...COMORBID CONDITIONS CAN OCCUR BECAUSE A COMMON PATHOPHYSIOLOGY (THE DISORDERED PHYSIOLOGICAL PROCESS ASSOCIATED WITH DISEASE) CAN EXIST IN MULTIPLE BODILY ORGANS AND SYSTEMS...

IIIA. ODDS RATIO

Data on chronic diseases and comorbid conditions are available through many information sources. A major source of our understanding comes from epidemiological data bases such as the US National Health and Nutrition Examination Survey (NHANES). These data sources are being mined for (a) the incidence of chronic diseases, which can be used to calculate (b) the presence of comorbid conditions. These data sets can be further mined to determine patterns of comorbidity, determining if some chronic diseases co-occur with other chronic diseases at a higher rate than random association.

Odds ratio are the statistical expression used to determine whether a particular condition is a risk factor for a particular outcome and to compare the magnitude of the risk between the condition and the outcome. If the odds ratio is one, the condition does not affect the outcome. If the odds ratio is less than one, the condition is associated with lower odds of the outcome. If the odds ratio is greater than one, the condition is associated with higher odds of the outcome. The presence of AVDs has been found to have elevated odds ratio associated with the following chronic diseases: Arthritis, Brain Disease and Neurological Disorders, Cancer, Chronic Kidney Disease, Diabetes Mellitus, Heart Disease, Hypertension, Hyperlipidemia, Lung Disease and Obesity.

The elevated odds ratios of AVD with many chronic diseases must be interpreted with caution. Most epidemiological data base studies are snapshots in time. These studies look for statistically significant correlations, from which adjusted odds ratios can be calculated, where the adjustment process removes the influence of covarying conditions. An odds ratio of two means having disease A is associated with a doubling of the risk of having disease B. It also says that having disease B is associated with a doubling of the risk of having disease A. Thus, there is correlation between A and B, but causation cannot be implied. To date, the elevated odds ratio association

between AVDs and many chronic diseases is known to be correlational and investigations are underway to determine potential causality.

Understanding comorbid disease processes is important to clinical audiologists for many reasons. In the case history, clinical complications in the diagnostic process can occur because patient complaints can be a mix of symptoms from multiple comorbid conditions. For example, a diabetic patient may present with a history of falls that are caused not only by a vestibular problem, but also by a lower limb neuropathy problem and a vision problem. In the treatment process, clinical complications can occur because some therapies for one disorder are contraindicated for another concomitant disorder in the patient. For example, utilization of ototoxic medications for the treatment of cancer can accelerate preexisting damage to the auditory system. In the treatment and follow-up process, some comorbid disorders can combine to exacerbate the disease handicap and adversely influence desired outcomes. For example, vision loss coupled with hearing loss creates a double barrier to the audiovisual processes needed to detecting cues for speech understanding, especially in difficult-to-listen situations. In addition, for a patient with this dual-sensory loss, a depressive disorder may be occurring that is driven more by the visual impairment that the hearing impairment.

The search to identify causation among chronic diseases is critical to healthcare management. Some clues for causation come from epidemiological studies that are repeatedly administered over time. These databases provide information both disease incidence (frequency of occurrence) and disease prevalence (occurrence in time). With this longitudinal information, some determination can be made as to when disease A and disease B occur in the population and whether one disease precedes another. However, the greatest value to determine causation comes from animal and human experiments, whereby controlling of variables can be utilized to determine if disease A might contribute to disease B, disease B contributes to disease A, or whether disease C might underlie both disease A and disease B. The results from these experiments may establish a future valuation of audiology that is higher than today, especially if it is determined that the presence of AVDs is a clinical marker (precursor) for future development of chronic diseases. If this is established, audiologists, assessing the function of the inner ear, may be in the position of having early information towards detection of several chronic diseases.

IIIB. METABOLIC SYNDROME,

Metabolic syndrome is a cluster of conditions — increased blood pressure, high blood sugar, excess body fat around the waist, and abnormal cholesterol or triglyceride levels — that occur together, increasing the risk of cardiovascular disease, ischemic brain disease, diabetes and other diseases related to hyperlipidemia. The underlying causes of metabolic syndrome include overweight and obesity, physical inactivity, genetic factors and getting older. Metabolic syndrome affects more than 20% adult Americans and is affecting more that 40% of elderly Americans. Of importance to audiology is that metabolic syndrome has elevated odds ratio of comorbidities of vascular diseases, neurological disorders, and AVDs, or conversely, AVDs have a higher odds ratio of vascular disorders and neurological disorders through metabolic syndrome.

A Relationship between Metablic Syndrome and Hearing Health

Diabetes Mellitus, a metabolic syndrome, is the one of the top ten leading causes of death in the US and is the leading cause of adult blindness (retinopathy), kidney failure (neuropathy) and lower limb amputation (neuropathy). It is also a major risk factor for cardiovascular disease, the number one cause of death in the US. In a joint CDC project, there are several professions that are involved with physicians in the care of diabetic patients and these include pharmacy for close monitoring of medications, podiatry for foot care; optometry for eye care, and dentistry for oral care[8]. With regard to the comorbidity of DM and AVDs, Bainbridge, Hoffman and Cowie (2008)[9], using NHANES data, established that elevated adjusted odds ratio of 1.82 to 2.16 exist and concluded that diabetes is associated with hearing impairment. If audiology were to be brought into the management team for diabetes, audiologists could contribute valuable information about hearing status, vestibular status, and falls risk. Regarding falls risk, it is important to know that falls are the most common form of traumatic brain injury and are the leading cause of accidental injury and death in the elderly in the US.

IV. CO-MANAGEMENT OF CHRONIC COMORBID CONDITIONS

For the purposes of this discussion, co-management is the proactive sharing of patient information among healthcare professionals in order to improve patient treatment and patient outcomes (see article sidebar on The Audiology Oath).

THE AUDIOLOGY OATH

"As a Doctor of Audiology, I pledge to practice the art and science of my profession to the best of my ability and be ethical in conduct. I will respect and honor my teachers, and also those how have forged the path I freely follow. According to their example, I will continue to expand my knowledge and improve my skills. **I will collaborate with my fellow audiologists and other professionals for the benefit of our patients.** I will, to the best of my ability and judgement, evaluate, manage, and treat my patients. I will willingly do no harm, but rather always strive to provide care according to the standards of the profession. I will act to the benefit of those needing care, striving to see that none go untreated. **I will practice when competent to do so, and refer all others to practitioners capable of providing care in keeping with this Oath.** I will aspire to personal and professional conduct free of corruption. I will keep in confidence all information made known to me about my patients. **As a Doctor of Audiology, I agree to be held accountable for any violation of this Oath and the ethics of the profession.** While I keep this oath unviolated, may it be granted to me to enjoy life and the practice of the art and science of audiology, respected be all persons, in all times."

Reference: Steiger, J., Saccone, P. & Freeman, B. (2002). A Proposed Oath for Audiologists. Audiology Today 14(5):12-14.

In applications, there are many aspects of co-management of patients which the audiologist should consider incorporating in the audiology practice. For example, there is the identification, through the case history, of patient diseases with elevated odds ratio of comorbidity with AVDs. This can be followed by communications with other health care professionals who are managing the comorbid diseases. This is often the primary care physician but may include physician specialists. In the communications, the audiologist can contribute valuable information to physician that may/will help them in management of the patient. This information can include (1) the status of audio-vestibular system, especially if there progressive and significant changes, (2) the status of communication ability, with the objective of helping the physician be aware of the existing speech-understanding problems in order to reduce medical errors from miscommunications, and (3) the status of the vestibular system, with the objective of identifying patients at risk for falls.

In summary, audiologists, as part of the medical-management team, must be able to identify chronic conditions, understand the comorbid impact on the audiology patient, and appropriately refer these patients for co-management of the comorbid conditions in which there are elevated odds ratios. In doing so, the profession can improve the care provided to our patients and can demonstrate to physicians that we are capable of safely holding a point-of-entry position to health care.

V. SYPOSIUM

ADA will be conducting a full-say Symposium at 2019 AuDACITY in Orlando. The day will include presentations on chronic disease, comorbid conditions with an emphasis on comorbidities with AVDs, and specific guidance on how to communicate with physicians regard the AVDs and comorbidities. In a Grand Rounds format, invited speakers will specifically address AVD comorbidities with Brain Disease, Cancers and Ototoxic Medications, Diabetes Mellitus, Heart Disease, and Kidney Disease. (For more information see next page.) ■

Victor Bray, MSC, Ph.D., FNAP *is an Associate Professor and former dean (2009- 2016) of the Osborne College of Audiology. Dr. Bray was previously the Director of Audiology for the Austin (Texas) Ear Clinic, the Director of Clinical Research for ReSound Corporation, the VP and Chief Audiology Officer for Sonic Innovations, and VP and Chief Audiology Officer of OtoKinetics. Dr. Bray holds a bachelors degree in Biochemistry, a masters degree in Audiology, and a doctorate in Speech and Hearing Science. He has presented nationally and internationally at numerous workshops, seminars and conferences on the clinical applications of audiology..*

For ADA members who would like to preview information on comorbidities in the audiology patient and audiology practice, here are three resources that can be accessed prior to the symposium:

- ***ADA Presentation: Co-managing Comorbidities in the Audiology*** Private Practice. https://www.audiologist.org/_resources/documents/conference/2017-audacity/Wednesday-0800-0900-Comanaging-Comorbidities.pdf
- ***Hearing Review Webinar: Hearing Loss and Associated Comorbidities: What Do We Know?*** http://www.hearingreview.com/2017/05/new-webinar-hearing-loss-associated-comorbidities-know/
- ***Hearing Review Webinar: Depression, Hearing Loss, and Treatment with Hearing Aids*** http://www.hearingreview.com/2018/07/new-webinar-depression-hearing-loss-treatment-hearing-aids/?ref=cl-title

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3. World Health Organization (WHO) Factsheet on Noncommunicable Diseases http://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases
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8. Working Together to Manage Diabetes: A Toolkit for Pharmacy, Podiatry, Optometry, and Dentistry (PPOD). https://www.cdc.gov/diabetes/ndep/toolkits/ppod.html
9. Bainbridge, K.E., Hoffman, H.J. and Cowie, C.C. (2008). "Hearing Impairment: Another Microvascular Complication of Diabetes?" Annals of Internal Medicine, 149, 1-10.

SYMPOSIUM TOPICS & SPEAKERS

Symposium Introduction, Biomedical Systems Overview & Symposium Summary
Victor Bray, Ph.D.
Associate Professor
Salus University Osborne College of Audiology

Documentation & Communicating with Physicians, Audiovestibular Comorbidities
David A. Zapala, Ph.D.
Associate Professor of Audiology
Mayo Clinic Department of Otolaryngology
Head & Neck Surgery / Audiology

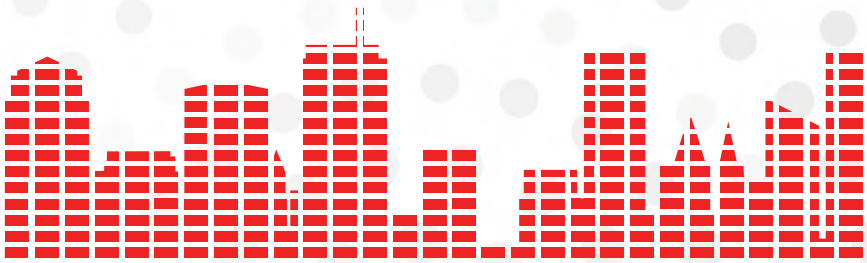
The Brain & Neurological Disorders
Nicholas S. Reed, Au.D.
Assistant Professor
Johns Hopkins University School of Medicine
Department of Otolaryngology – Head and Neck Surgery

Cancer & Ototoxic Therapies
Michelle McElhannon, Pharm.D
Public Service Assistant, Division of Experience Programs
University of Georgia College of Pharmacy

The Heart & Cardiovascular Disease
Carol A. Knightly, Au.D.
Senior Director, Center for Childhood Communication and Center for Rehabilitation
Children's Hospital of Philadelphia

The Kidney & Chronic Kidney Disease
Richard E. Gans, Ph.D.
Founder and Executive Director
The American Institute of Balance

The Pancreas & Diabetes
Christopher Spankovich, Au.D., Ph.D., M.P.H.
Associate Professor
The University of Mississippi School of Medicine
Department of Otolaryngology
and Communicative Sciences



AuDACITY

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AuDacity 2018 is bolder than ever! Join us for three days packed with more than 18 hours of available CE courses distinctly designed to deliver relevant information and resources to audiologists in autonomous practice. Network boldly—AuDacity offers plenty of opportunities to eat, drink, and be amazed by the more than 50 exhibiting companies dedicated to helping practices and their patients succeed.

On Monday, Dr. Victor Bray will lead a day-long symposium on *Co-management of Cormorbid Diseases*. Interest sessions on practice accreditation and IP captioned telephone services will follow. Monday evening, enjoy food and fun with friends at the opening reception in the AuDacity Marketplace! Participate in the Tuning Fork Challenge and bid on one of the many customized, artisanal tuning forks – all proceeds benefit the Audiology Patient Choice Act.

On Tuesday morning, Lt. Gen. Mark P. Hertling will discuss "Growing Healthcare Leaders – Empowerment to Improve Healthcare" During this keynote presentation, attendees will be introduced to the attributes and competencies required of all leaders, and how this model contributes to building teams and organizational effectiveness in healthcare. Our Tuesday afternoon keynote, Dan Price, CEO of Gravity Payments, will talk about such topics as intrinsic motivation, employee disengagement, and why he decided to institute a $70k minimum wage.

Featured general sessions on Tuesday include "Insights from the Outside: Creating an Exceptional Patient Journey" and an interactive session on "Building the Audiology Brand". The day will end with a reception in the AuDacity Marketplace.

On Wednesday, start your day by attending the Annual ADA Member Breakfast. You will be updated on the APCA advocacy progress and the other endeavors of the organization including practice accreditation and the Master Mind groups. After breakfast, choose your own path from a multitude of thought-provoking concurrent sessions. Lunch will feature the ADA Student Business Plan Competition, where the next generation of private practitioners will face off to win the judges' votes! The grand prize winner/team will walk off with a $5,000 cash grant. This is a great time to hear some great ideas and earn some additional continuing education credit!

AuDacity 2018 Schedule

MONDAY, OCTOBER 22, 2018				
CO-MORBIDITIES SYMPOSIUM: Co-Morbidities Overview - 8:00 AM - 9:30 AM - Victor Bray, Ph.D.				
CO-MORBIDITIES SYMPOSIUM: Documenting and Communicating with Physicians Audiovestibular Co-Morbidities - 10:00 AM - 11:30 AM - David Zapala, Ph.D.				
CO-MORBIDITIES SYMPOSIUM: Healthcare Provider Collaboration on Co-Morbidities - 12:30 PM - 2:00 PM - Nicholas Reed, Au.D., Michelle Mcelhannon, Pharm.D., Victor Bray, Ph.D.				
CO-MORBIDITIES SYMPOSIUM: Healthcare Provider Collaboration on Co-Morbidities - 2:30 PM - 4:15 PM - Richard Gans, Ph.D., Christopher Spankovich, Au.D., Ph.D., M.P.H., Carol Knightley, Au.D., Victor Bray, Ph.D., Moderator				
CO-MORBIDITIES SYMPOSIUM: Symposium Findings - 4:15 PM - 4:30 PM - Victor Bray, Ph.D.				
Standards and Accreditation for the Audiology Practice - 4:30 PM - 5:30 PM - Angela Morris, Au.D., John Coverstone, Au.D., Patricia Gaffney, Au.D.				
IP Captioned Telephone Services and the Federal Communications Commission - 4:30 PM - 5:30 PM - Jim Skjeveland				
OPENING EVENT IN EXHIBIT HALL - 5:30 PM - 8:00 PM				
TUESDAY, OCTOBER 23, 2018				
BREAKFAST IN THE EXHIBIT HALL - 7:00 AM - 8:00 AM				
Welcome & President's Address - 8:00 AM - 8:30 AM - Alicia Spoor, Au.D.				
KEYNOTE PRESENTATION: Growing Healthcare Leaders – Empowerment to Improve Healthcare - 8:30 AM - 9:30 AM - Lt. General Mark P. Hertling, U.S. Army (Retired)				
BREAK in the EXHIBIT HALL - 9:30 AM - 10:00 AM				
GENERAL SESSION: Insights from the Outside: Creating an Exceptional Patient Journey - 10:00 AM - 11:30 AM - Randy Baldwin				
LUNCH in the EXHIBIT HALL - 11:30 AM - 1:00 PM				
INTERACTIVE SESSION: Building the Audiology Brand - 1:00 PM - 2:30 PM - Lia James				
BREAK in the EXHIBIT HALL - 2:30 PM - 3:00 PM				
KEYNOTE PRESENTATION: What I Learned From Setting a $70,000 Minimum Wage - 3:00 PM - 4:30 PM - Dan Price, CEO Gravity Payments				
FINAL RECEPTION IN EXHIBIT HALL - 5:00 PM - 6:30 PM				
WEDNESDAY, OCTOBER 24, 2018				
MEMBER BREAKFAST - 7:00 AM - 8:00 AM				
8:00 AM - 9:30 AM	**Relationships, Referrals and Resources: Best Practices in Physician Engagement** Tom Tedeschi, Au.D., Moderator Robert Tysoe, BSc. Maryann Nikander, Au.D. Stacy O'Brien, Au.D. Nicole Pavol Physician Panelists	**The End of Business as Usual: Three Tangible Skills for Long-term Success in Audiology** Brian Taylor, Au.D.	**Marketing Tinnitus Specialty Care to Grow Your Practice** LaGuinn Sherlock, Au.D. Torryn Brazell, MS, CAE	**EARLY CAREER PROFESSIONALS TRACK: Rapid Fire Sessions** *Communication Needs Assessment* - Alicia Spoor, Au.D. *Tinnitus* – Jason Leyendecker, Au.D. *Cochlear Implant Candidacy/Referral* – Elizabeth Rogers, Au.D. *Benign Paroxysmal Positional Vertigo* – Danielle Dorner, Au.D. *Aural Rehabilitation* – Dusty Jessen, Au.D.
9:45 AM - 11:15 AM	**The Good, the Bad and the Ugly: Externs and Private Practice** Patricia Gaffney, Au.D. Alyssa Needleman, Au.D.	**Positioning Professional Care Value Through Innovative Practice Strategies** David Smriga, M.A. Gregory Frazer, Au.D. Dale Thorstad	**Streamline Tinnitus Treatment in Your Busy Practice** Natan Bauman, Ed.D.	**EARLY CAREER PROFESSIONALS TRACK: Creating a Remarkable Workplace Culture**
LUNCH AND BUSINESS PLAN COMPETITION - 11:15 AM - 1:00 PM				
1:00 PM - 2:00 PM	**Expanding the Patient Journey (and the Practice) with Hearables** H. Christopher Schweitzer, Ph.D. Mark Kaal	**Threat Hunting OTCs (Part 1)** Jacqueline Scholl, Au.D.	**Optimizing Third-Party Reimbursements** Deb Abel, Au.D.	**EARLY CAREER PROFESSIONALS TRACK: Why and How to Acquire Your Own Audiology Practice** Scott Myatt
2:15 PM - 3:15 PM	**Telehealth: Shifting the Paradigm to Improve Access to Care** Dan Quall, Au.D.	**Threat Hunting OTCs (Part 2)** Jacqueline Scholl, Au.D.	**What the Future Holds for Practice Ownership** Craig Castelli and Panel	**EARLY CAREER PROFESSIONALS TRACK: Negotiating Skills** Lia James
3:30 PM - 4:30 PM	**Practice Trends: Hearing Health Care or Consumer Electronics?** Amyn Amlani, Ph.D.	**Threat Hunting OTCs (Part 3)** Jacqueline Scholl, Au.D.	**The Future of Digital Marketing & Local Search to Generate Quality Leads** Gaetano Pizzi	**EARLY CAREER PROFESSIONALS TRACK: Billing and Coding** Deb Abel, Au.D.

AuDacity 2018 Exhibitors

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The Academy of Doctors of Audiology (ADA) is dedicated to the advancement of practitioner excellence, high ethical standards, professional autonomy and sound business practices in the provision of quality audiologic care.

Alpaca Audiology
Booth # 108

American Hearing Aid Associates
Booth # 212/215
American Hearing Aid Associates (AHAA) is the nation's largest network of audiology and hearing healthcare professionals. We supply independent practice owners with the devices and products their patients need while also helping them create resilient, sustainable, and successful businesses in an ever-changing and competitive marketplace. Our tools and solutions strengthen practices and allow hearing professionals to focus on helping individuals hear well again.

Amplifon/Elite Hearing Network
Booth # 124/125
The Amplifon group was founded over 65 years ago and it has grown to become one of the most important multinationals and a world leader in the field of hearing loss. At Amplifon our mission is to deliver a surprising experience that goes above and beyond customer expectations. We can only do this with an unrivaled network of audiologists and professionals who make a difference through their relationships. These connections bond with individuals, pioneer groundbreaking solutions, and create new ways of connecting humanity to technology. The Elite Hearing Network (EHN) is an intricate part of the Amplifon family. The Elite Hearing Network is the largest hearing aid buying group for independent audiologists in the U.S. Partnering for the health of your practice the Elite Hearing Network allows the audiologist to focus on treating patients while they focus on the growth of your business. EHN bring's you personalized support from a team of advisors working with you to build your practice and improve your operations. Amplifon Hearing Health Care (AHHC) is another member of the Amplifon family. With hundreds of organizations across the nation with access to AHHC's hearing program, audiologists receive additional patient referrals without incurring any costs – no cost to join, no marketing fees, no cost of goods. AHHC provides clinics nationwide with thousands of high quality referrals to boost revenue and your patient base. The AHHC network provides more than 175 million people with professional hearing healthcare coverage.

APSO
Booth # 209
Audiology Practice Standards Organization was created by audiologists to develop and maintain standards of practice for the profession of audiology. APSO is currently beginning work on our first practice standard and prioritizing potential subject areas for development of the standards to follow. We welcome your questions and your input at our exhibit.

AuDBling
Booth # 321
Cochlear shaped Jewelry and accessories that help promote hearing loss awareness by wearing them and starting a conversation. AuDBling products are beautiful and a natural "conversation starter," which can lead to an open discussion about hearing loss and the benefits of treatment…a discussion that is important not only to audiologists and their current patients, but to those who are living with hearing loss. Our hope is that "cochlea jewelry" will become a symbol of the importance of receiving treatment for hearing loss. http://www.AuDBling.com

Audigy
Booth # 224
Because there are crucial distinctions in a practice's goals, size, needs, and culture, we tailor our recommendations to achieve your specific goals. Our results-focused, data-driven business methodology provides you a comprehensive snapshot of your business's current health and its potential for increased efficiency, as well as a proven plan to achieve maximum profitability.

Audiology Awareness Campaign
Booth# 105/106
The Audiology Awareness Campaign (AAC) was organized to coordinate marketing and consumer awareness efforts; audiology organizations have contributed time, talent, and major financial contributions to support its goal to make audiology a household word. AAC has successfully raised funds supporting a consumer website, booklet, PSAs, and a free telephone information hot-line.

AudiologyDesign
Booth# 115

Audioscan
Booth# 208
Audioscan is the leading manufacturer of hearing instrument verification systems in North America. The company's Verifit2® and Axiom® ensure patients with hearing loss receive the best possible hearing experience. Visit our booth to learn how Audioscan products support client satisfaction and can help grow your practice with an array of unique features including: the only fully binaural test system, extended bandwidth measurement capability and exclusive noise management verification tests. Time-conscious workflow features integrate seamlessly within your office so you can spend less time on verification and more time on client care.

AuDStuff, LLC
Booth# 322
AuDStuff, LLC: Outside the Box Revenue. This booth is sponsored by Noël Crosby and Al Turi. We will present some options for outside the box revenue streams including adding Full spectrum CBD Hemp Oil to a practice, as well as Bemer Therapy.

Black & Black ENT & Audiology | Vorotek USA
Booth# 112
Black & Black ENT and Audiology, together with Vorotek, is bringing precision optical instruments to the USA. The best-selling O Scope™ is the only head-worn microscope with an LED light on the market. Designed by the same ENT surgeon who developed the Welch Allyn Lumiview, the O Scope™ is the next generation in head-worn microscopes. Its unique design allows for binocular vision in the narrow ear canal, providing depth perception unlike traditional loupes. The O Scope™ is ideal for Audiologists who perform cerumen management, Lyric fittings, ear mold impressions, and dome removal.

Bloom Hearing Specialists
Booth# 218
The bloom hearing specialists network is a national network of hearing clinics. Bloom™ hearing centers are staffed by licensed, qualified hearing specialists and dedicated customer service staff. At bloom™, we deliver the best way to better hearing because we believe better hearing enables you to live life to the fullest. Our hearing care professionals are passionate about delivering the best way to better hearing.

Blue Ocean Media House
Booth# 103

Bose Corporation
Booth# 206/207/220/221
For years, Bose has been dedicated to helping you hear every note of your music. Now, we want to help your patients hear every word of their conversations. Bose Hearphones™ are conversation-enhancing headphones that are specially designed to help your patients hear in louder environments. Acoustic Noise Cancellation makes any conversation in a noisy place easier and more comfortable. Your patients can focus on the voices they want to hear – and filter out the noises they don't – so they can comfortably hear every word.

CaptionCall
Booth# 317
Thousands of hearing-care professionals are sharing the CaptionCall phone and service with their patients at no-cost. Join us in Booth #317 to quickly see that we are obsessed with giving your patients the very best!

CareCredit
Booth# 213/214
CareCredit, a part of GE Capital, has helped over 125,000 patients get the hearing aids they needed to stay connected to family and friends. CareCredit provides special financing offers to help patients purchase optimal instruments. Your practice receives payment in two business days. CareCredit is easy to use and has fast approvals. For more information on offering CareCredit, or to enroll, go to www.carecredit.com.

Clear Digital Media
Booth# 314
REACH with Clear Digital Media in 3-ways (1.) REACH and interact with your patients using Hearing News Network (HNN) on a TV in your waiting room. (2.) REACH Physicians in your medical community – MDEmails™ is a unique digital marketing platform used to access 900,000+ American Medical Association licensed physicians via email (3.) REACH your goals – PatientPoll™ is an anonymous, tablet based patient satisfaction survey delivered at the point-of-care to capture the experience of all your patients in real-time.

Cochlear Americas
Booth# 319
The Cochlear Provider Network (CPN) connects independent dispensing audiology/audiology-ENT practices dedicated to treating hearing loss with surgeons who are interested in raising hearing implant awareness. Do you desire to offer all hearing solutions - beyond traditional amplification? Do you have an inherent drive to be the hearing health care expert in the community? Are you comfortable with a medical model and partnering with a surgeon? If you answered yes to these questions, stop by our Cochlear booth to learn more about the Cochlear Provider Network.

CounselEAR
Booth# 203
We believe that managing your clinic should be simple and stress free. Our innovative systems enable you to integrate your entire office workflow online. Please visit us at AuDacity to learn more about:
- CounselEAR Complete OMS: A comprehensive suite of tools that has you covered from scheduling to claims and business reporting to integrated task management.
- CounselEAR Connect: Rapidly create customized counseling summaries and professional audiologic reports then send them via fax or email – all online (Noah compatible).

CVS Health
Booth# 119

earVenture
Booth# 109
earVenture brings affordability, accessibility, and technology together to offer audiologists and their patients a quality choice hearing solution. Our products offer better outcomes for individuals because we combine a full featured line of programmable technology with the professional fitting expertise that can only be obtained by an audiologist. Why should anyone buy online or through a chain store retailer when, for about the same cost, they can get the results that they're looking for with a quality hearing solution, fit by an audiologist. Be sure to stop by the earVenture booth to learn more about our company and our exceptional products.

Fuel Medical Group
Booth# 315
Fuel Medical Group is the leading member-focused advisory company serving ENTs, otologists, audiologists, universities and hospitals. We create and implement custom business solutions for patient focused, growth minded medical practices with the goal of improving every patient's experience and achieving every clinic's potential.

Grason-Stadler
Booth# 320
Grason-Stadler (GSI) is a world leader in audiometric assessment instrumentation and carries a full line of audiometers, tympanometers, otoacoustic emissions, and auditory evoked potential instruments.

Gravity Payments
Booth# 225
Gravity Payments and ChargeIt Pro CEO Dan Price founded Gravity at just 19 after seeing a friend who owned a local business get taken advantage of by her credit card processor. He knew he could create something better. Today, Gravity's mission remains as steadfast as ever: to reduce the costs and headaches associated with accepting payments and to stand up for the little gal or guy who believes in the American dream. Over 18,000 independent businesses across all 50 states trust Gravity to save them millions in fees and hours in frustration by making it easy for them to accept payments. Gravity's simple values of honesty, transparency, and doing business with integrity has set it apart from many other processors, making it the most trusted name in the payments industry. For more information, visit Gravitypayments.com/ada.

Hamilton CapTel
Booth# 313
Connect with Hamilton® CapTel® and connect your patients with life-changing solutions through the Hamilton CapTel Hearing Healthcare Program. Hearing loss can create a silent barrier that often leads to isolation and a complete disconnect from family and friends. Regaining the confidence to make a simple phone call can make a big difference. Hamilton CapTel offers no-cost solutions for home (Hamilton CapTel phones) or while on-the-go (Hamilton CapTel for Web/iOS/Android™) that enable healthy, meaningful connections by listening while reading word-for-word captions of what's said over the phone. It's a simple, no-cost solution for you and your patients. Learn more at HamiltonCapTel.com/hhc.

Jed Med Instrument Company
Booth# 219
JEDMED is an employee-owned company that has been serving the industry for over 30 years. We have instruments at various price points that are sure to mesh with your practice. We provide video otoscopes that are wireless, HD or economical.

MG Development
Booth# 309
MG Development, established in 2003, is based on years of experience gained in the production of cosmetics designed for Pharmacy. We specialize in the production and distribution of hygiene and maintenance products for Hearing Aids and Ear Care in over 50+ countries. These products include our electronic devices such as the PerfectDry Lux UV-C Dryer, the PerfectDry Q.R., and the world's first washing system for hearing aids, the PerfectClean. We focus on private label products with custom designing personalized branding on all products. Today we rank among the world's leading hearing aids care companies. MG Development is the only company whose activity is entirely dedicated to the development and manufacture of medical devices for hearing aid maintenance and care of the ear canal. MG Development is based on an organization certified with ISO 9001 and ISO 13485 (designer and manufacturer of medical devices).

MiraCell
Booth# 307
ProEar by MiraCell - for dry, irritated, itchy ears. MiraCell, Inc has specialized in plant-based skin care for over 17 years and supplies ProEar to the hearing industry. Thousands of hearing professionals use and recommend ProEar. Your customers will love ProEar to help with their dry, irritated, itchy ears. You will love ProEar for the benefits to your business. A study of 960 patients found that consistent use of ProEar reduced returns and remakes up to 80%. Increase patient satisfaction with a natural product they will love and that increases patient satisfaction.

Nuheara
Booth# 107
Nuheara is an innovative audio wearables company that has developed proprietary and multi-functional intelligent hearing technology that augments a person's hearing and facilitates cable free connection to smart devices. We are based in Perth, Australia and have offices in San Francisco and New York, USA. Nuheara was the first wearables technology company to be listed on the ASX (Australian Stock Exchange).

In 2016, we released our revolutionary wireless earbuds, IQbuds™, which allows customers to augment their hearing according to their personal hearing preferences and connect hands free with their voice-enabled smart devices. Our mission is to improve people's lives by allowing them to seamlessly listen, communicate, and connect to their physical and digital world.

Nupur Technologies
Booth# 310
Nupur Technologies is a medical device company whose mission is to design, develop and market new, patented, cost effective technologies. Its expertise includes assembly, testing, automation, US and international standards compliance, and outstanding customer support to ensure every product exceeds customer's expectations. State-of-the-art facilities, equipment and administrative sophistication ensure its products provide superior value. Its main product, EARIGATOR, is an ear cleansing instrument that draws water from a reservoir through a hand piece and nozzle at a controlled temperature (37 Deg C), pressure (12psi) and flow rate (/3 gpm).

Oaktree Products
Booth# 308
Oaktree Products is the resource for hearing health care professionals. We are a multi-line distributor to hearing healthcare professionals and family owned and operated since 1992.

Otometrics/Audiology Systems
Booth# 117
Otometrics, a division of Natus Medical Incorporated, (www.otometrics.us) is your source for Madsen®, Aurical®, ICS®, and Bio-logic® branded hearing and balance equipment, as well as a range of Otometrics Genie® sound rooms. Our highly-trained staff bring a consultative and professional approach to hearing and balance education, sales, service and calibrations. Our software integration group can assist with data back-up and security, Noah Networking and EMR integration.

Phonak
Booth# 210/217
Life is on. We are sensitive to the needs of everyone who depends on our knowledge, ideas and care. And by creatively challenging the limits of technology, we develop innovations that help people hear, understand and experience more of life's rich soundscapes. Interact freely. Communicate with confidence. Live without limit. Life is on.

Rayovac
Booth# 318
Rayovac has a long history of innovation in the hearing industry. Nearly 80 years ago we invented the first wearable vacuum tube hearing aid, and today we are one of the world's leading manufacturers of hearing aid batteries. Rayovac's innovation and technology advancements happen right here in the United States, where our history goes back even further. Since 1906, American manufacturing has helped Rayovac deliver on our commitment to quality and progress. This momentum continues today as our technology-driven products connect individuals to the world around them.

Review Wave
Booth# 112
Your patients can now schedule their own appointments, based on your availability, on your website. After the appointment, we send a feedback request; if your patient is satisfied, Review Wave directs them to leave you a review. If the patient is not happy, we find out why, and alert you. We monitor all of your online reviews and promote them. Lastly, Review Wave syncs all your online listings so potential patients find you first. Review Wave is the Ultimate Audiology Marketing Add-on. Try Review Wave for Free Today.

SHOEBOX Audiometry a Division of Clearwater Clinical
Booth# 202
SHOEBOX Audiometry is an automated, iPad-based audiometer. CE marked in Europe, and listed as a Class II medical device with the FDA and Health Canada, SHOEBOX has been clinically validated to produce accurate results even when used outside of a traditional sound booth. Offering automated, assisted, and manual testing modes, SHOEBOX is changing the way hearing testing is being performed in more than 50 countries worldwide.

Sivantos
Booth# 312
Signia is the most innovative brand in the hearing aid industry and the premium brand of Sivantos, Inc. Launched globally in 2016, Signia has already advanced to one of the top 3 hearing aid brands worldwide. We strive to reshape the industry by introducing innovative products that are world-firsts – like the new Styletto, and innovative services like TeleCare, for remote hearing aid adjustments. Our goal is to provide the best hearing aids and to be the best partner for our customers.

Special Olympics Florida
Booth# 302
Special Olympics Healthy Hearing is the audiological exam conducted by volunteers designed to assess the prevalence of possible hearing loss among Special Olympics athletes and to identify specific athletes who need audiological evaluations to determine if a hearing loss exists and requires treatment.

Sprint CapTel
Booth# 114
With Sprint CapTel, you can resolve your patients' hearing problems on the phone for free. The FCC requires a medical professional to qualify a patient to receive a free CapTel phone. As your patients' hearing healthcare professional, simply have a Sprint CapTel kit installed at your practice with all the necessary forms. Sprint will work with your patient to identify the best delivery method, set it up, and get them started with the service. It's easy! Contact us at professionals.SprintCaptel.com.

Think Hearing, Inc
Booth# 201
Thinkhearing.org is a long-term, nationwide, hearing health initiative focused on hearing education, prevention and awareness *targeting a demographic that has not been focused on in the past (20-60 yr old's).* This group of people is so often overlooked yet, in this age of social media, they should be our main target. Not only should they be seeing us for routine hearing health checks, but they are the current caretakers and decision makers to the populations we already know and serve-the pediatric and the geriatric!
Using digital technology and short engaging educational videos, that all end with a call to action to be proactive and get a hearing health check, let's get people to finally start thinking about their hearing *before* it becomes a problem! Join the thinkhearing.org initiative and let's get the population to 'think hearing'.

TIMS for Audiology
Booth# 110
Manage, market and grow your audiology and SLP practice with TIMS Audiology Software, the leading practice management system designed specifically for the hearing, and speech/language industry. TIMS integrates all of your business operations into one manageable system. Whether you are a small or multi-site practice, an ENT group or hospital, features like Web Scheduling, Imaging, Electronic Superbill and HL7, deliver greater functionality with superior flexibility for a more efficient way to run your hearing and SLP practice. Other TIMS features include: Appointment Notifications, Patient Management, Point Of Sale, Accounts Receivable, Charting, Electronic Claims, Hearing Aid Tracking, Questionnaires and Marketing in one unified system.

Unitron
Booth# 120/121
Unitron is a global company that understands the hearing healthcare business is built on strong, personal relationships. We work closely with hearing healthcare professionals to improve the lives of people with hearing loss. A member of the Sonova Group, Unitron has a proven track record of developing hearing innovations that provide natural sound with exceptional speech understanding. Headquartered in Canada, Unitron distributes its full line of hearing instruments to customers in more than 60 countries. For more information, please visit unitron.com.

Widex USA, Inc.
Booth# 305, 306

Wolters Kluwer
Booth# 118
Wolters Kluwer Health is a leading global provider of information and point of care solutions for the healthcare industry. Our solutions are designed to help professionals build clinical competency and improve practice so they can make important decisions on patient care. Our leading product brands include Audio-Digest, Lippincott, Ovid®, UpToDate®, and others.

Zpower
Booth # 113

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The Changing Rules of Insurance and Hearing Aids

BY KIM CAVITT, Au.D.

Reimbursement experts are seeing significant changes in the provision of hearing aids through third-party payers. More and more third-party benefits are being processed by and through provider and third-party networks. More payers and plans are clearly defining their regulations and requirements for payment.

I define "successful reimbursement" as this:

- The provider understands the terms of their provider agreement and is knowledgeable of the payer guidelines, policies, or regulations.
- The provider verifies eligibility, deductibles, co-insurance and coverage.
- The provider collects, on the date of service, the costs associated with non-covered services (after the patient completes all required notices of non-coverage), deductibles and co-insurance.
- The provider bills the payer for the hearing aid and services rendered (if the benefit is not inclusive), using appropriate modifiers when needed, on the date the hearing aids are dispensed.
- The payer processes the payment in accordance to the patient benefit and the payer specific guidelines, policies, or regulations and the terms of provider agreement.

Providers have a significant role in successful reimbursement. First, read your provider agreements and review your fee schedules. Also, you need to be aware of the policies, guidelines, and requirements available from the payers. Many of these guidelines are available on their websites and are released in their monthly provider bulletins. THIS is how they inform you of the policies your practice is now obligated to if you are a participating provider. Here are some examples:

- **United Healthcare**: https://www.uhcprovider.com/content/dam/provider/docs/public/policies/medadv-coverage-sum/hearing-screening-audiologist-services.pdf and https://www.uhcprovider.com/content/dam/provider/docs/public/policies/comm-medical-drug/hearing-aids-devices-including-wearable-bone-anchored-semi-implantable.pdf.
- **BlueCross Blue Shield Association** (specific state examples): https://www.bcbsm.com/content/dam/public/Providers/Documents/help/enhanced-benefits-hearing-services-ppo.pdf and https://www.bluecrossmn.com/healthy/public/portalcomponents/PublicContentServlet?contentId=P11GA_15088466.

- **Aetna**:http://www.aetna.com/cpb/medical/data/600_699/0612.html
- **Medicaid**: Each state and managed Medicaid payer has its own policy.

Some things you need to be aware of as now common in new guidance:

- An unbundled practice can often do better (as long term care becomes the responsibility of the patient) in managed care situations.
- Requirement for a signed medical clearance from a physician, possibly even an otolaryngologist
  - May also need evidence that the patient was actually physically seen by the physician.
- Requirement for a manufacturer's invoice.
  - This ensures, to the payer, that the patient was fit and was fit with actual Class I or II hearing aids.
  - It ensures that the payer is providing coverage for hearing aids which were actually paid for by the provider, and not free.
    - Please note that, in the past, I have advised against supplying manufacturer's invoices. My opinion has changed. Payers need to ensure that the items and services were provided prior to payment.
    - Please be careful of submitting inflated manufacturer suggested retail price (MSRP) or "faux" invoices. Remember that these third-party payers all now have strong relationships with provider and third-party networks and are aware of the wholesale cost of hearing aids. Never submit MSRP unless specifically allowed to do so, in writing, in your provider agreement or payer guidance.

A final note, you and your practice are voluntary participants in the large majority of managed care. Except for Medicare, you have the ability to be out of network and to charge most patients privately for the items and services provided. When you agreed to participate in managed care, you agreed to accept discounted rates. There are solutions and alternatives to many managed care situations. It just takes being open to change, patience, and a bit of elbow grease.

Kim Cavitt, AuD is available to assist ADA members with their managed care issues and help you create solutions for your specific situation. You can reach her at kim.cavitt@audiologyresources.com. This is a no charge, value added benefit of ADA membership. ■

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.*

HAVE YOU HEARD?

Hearing Associations Release Consensus Recommendations for New Over-the-Counter Hearing Aid Classification

Recommendations Outline Five Evidence-Based Safety and Effectiveness Priorities for FDA Consideration

On August 14th, ADA and other major U.S. hearing healthcare professional associations (Associations) announced the release of a consensus paper, "Regulatory Recommendations for OTC Hearing Aids: Safety and Effectiveness." The consensus paper was developed by a working group representing all associations to provide guidance to the U.S. Food and Drug Administration (FDA) as it develops an over-the-counter (OTC) hearing device classification as mandated by the FDA Reauthorization Act of 2017 (FDARA). The consensus paper, which outlines five evidence-based recommendations related to the safety and effectiveness of this new class of devices, was jointly developed and endorsed by the Academy of Doctors of Audiology (ADA), American Academy of Audiology (AAA), American Speech-Language-Hearing Association (ASHA), and International Hearing Society (IHS).

The associations appreciate FDA's recent statement that Section 709 (of FDARA) reflects a careful balance between consumer affordability and access to new technologies, while providing consumer protections to assure safety and effectiveness of OTC hearing aids. The consensus paper introduction, in part, states, "[The Working Group] strongly advocates that any solutions presented to the consumer rely on safe and effective medical devices and include safeguards that optimize consumers' awareness and use of appropriate hearing care treatment."

The consensus recommendations address: 1) the product requirements appropriate for OTC hearing devices targeting mild-to-moderate hearing impairment; 2) outside-of-the-box labeling appropriate for medical devices sold over-the-counter; 3) comprehensive inside-the-box labeling; 4) naming the products Self-Fit Over-the-Counter Hearing Devices, adopting risk classifications consistent with air conduction hearing aids, and limiting 510(k) exemptions; and 5) establishing strong consumer protection laws.

The Associations are committed to engaging with the FDA and other stakeholders in the coming months and years, during the continued development of the new OTC hearing device classification.

Visit www.audiologist.org for more information and to download the consensus paper.

Student Business Plan Contestants Advance to Finals at AuDacity 2018

The Academy of Doctors of Audiology (ADA) Student Business Plan Competition at AuDacity, is designed to showcase the next generation of audiology leaders. The winners of the competition will receive a $5,000 grant to help pursue their dreams of a starting an audiology practice. For our 2018 competition, ADA partnered with Audigy, a preeminent, data-driven practice development company, representing 275 practices with 750 locations across North America.

This year's competition included a unique scenario-based prompt that required entrants to consider how they would transition into ownership of, and help to grow, an existing practice. ADA had a fantastic group of students enter our competition and after several rounds of review and feedback from volunteer judges the following teams will advance to the finals:

- ***Hearing For Life:*** Chelsea Montgomery, Rachael Pennock, Scheyere Ann Moir, University of South Florida
- ***Low Vibrations Audiologic Services:*** Holly Botzum, University of Memphis
- ***Sincear Hearing:*** Madison Graham, Ashley Malley, University of Colorado Boulder

"There has been tremendous interest in the ADA Student Business Plan competition this year," said ADA Executive Director, Stephanie Czuhajewski. "We are especially grateful for the generous commitment of Audigy to support the next generation of autonomous audiologists through sponsorship of the business plan competition."

The final round of the business plan competition will take place on Wednesday, October 24, during the Business Plan Luncheon at AuDacity 2018 in Orlando, Florida. In the meantime, contestants will have the opportunity to work with volunteer judges to further refine their plans and prepare presentations. During the luncheon, AuDacity attendees will have the opportunity to ask questions and provide feedback to the teams.

▶ Please contact Stephanie Czuhajewski at sczuhajewski@audiologist.org for more information about ADA, ADA membership, and opportunities for advancing your audiology career through involvement with ADA.

CMS Proposed Physician Fee Schedule Excludes Audiology from QPP

The Centers for Medicare and Medicaid Services (CMS) released their proposed rule for the 2019 Payment Year Quality Payment Program (QPP) and Medicare Physician Fee Schedule (MPFS) July 12, 2018. Unfortunately, under the draft rule, audiologists are not eligible clinicians in the 2019 QPP program. As a result, we are not eligible to participate in the QPP program in 2019. The goal is that audiologists will be eligible by 2021, when full participation by all Medicare providers is required. The only Medicare eligible professions not included in the QPP in 2019 are qualified speech-language pathologists, qualified audiologists, certified nurse-midwives, and registered dietitians or nutrition professionals. Audiologists are now the only doctoring profession not to be included in the QPP program, as occupational therapists, physical therapists, clinical social workers and clinical psychologists are poised to join the program in 2019.

The only significant proposal to affect audiologists in the MPFS is the 0.25% payment increase. The proposed Medicare conversion factor for 2019 is $36.05, which is a very small increase over the 2018 conversion factor of $35.99. Also, as the Physician Quality Reporting System (PQRS) was retired on December 31, 2016 and, as a result, there was no reporting requirements for 2017, there will be no payment deductions applied to audiologists in 2019.

Many changes were proposed to both the QPP and MPFS. Unfortunately, again given audiology's current status within the Medicare system, none of these changes apply to audiology or audiologists. These include:

- Expansion of the low volume threshold for Merit Based Incentive Payment System (MIPS) and an opt-in provision for those providers

Continued on page 59

INSIGHTS FROM THE OUTSIDE

Overcoming Patients' Barriers to Care

Insights from the Outside is a group of practicing clinician - owners. This is a diverse group from many medical specialties, including dentistry, veterinary medicine, cosmetic surgery, ophthalmology, audiology and optometry. This group was uniquely created by CareCredit for the purpose of capturing and sharing "best practices" to some of the common challenges all healthcare business owners face, such as attracting new patients, patient barriers to care, care acceptance, patient retention, social media, team training and empowerment and much more.

This column features dentist Dr. Howard Ong, owner of Seal Beach Dentistry, veterinarian Dr. Kathy Wentworth, owner of PetPoint Medical Center and Resort, Nola Aronson M.A., CCC-A, owner of Advanced Audiology and Dr. Ethan Sadri, owner of Atlantis Eyecare.

What are your patients' top barriers to care or the reason they hesitate to accept or decline recommended care?

DR. ONG In dentistry, the top barriers to care have not changed. Consistently patients choose to avoid going to the dentist or they choose not to accept recommended, needed care because of fear of pain, cost, time and unknown outcomes.

DR. SADRI The barriers for patients who come in for ophthalmology or eyecare are the same you'd find in other "fee for service" or patient share healthcare practices, including dentistry. Similar to what Dr. Ong said, the number one barrier is fear of pain or loss of vision, second is cost and third is integrity and trust of the practice. People are just scared of being in the operating room, being under sedation and having their eye worked on. That's a natural fear. To accept care, patients have to feel they can trust you as a physician, have to feel there's a problem to be solved, that they need the care and that there's a way, clinically and financially, to make that happen.

DR. WENTWORTH For clients seeking care for their pet, we have some similar barriers. The first is financial. People are concerned about expenses and afraid they will not be able to pay for appropriate care and treatment necessary to help their pets. And just as people are afraid to go to the dentist or get surgery on their eyes, pets are afraid to go to the vet. If pets have experienced pain or stress during previous visits, they and their owners are reluctant to have another visit. And finally, time.

Most veterinarians are not open at night or on weekends. We live in such a busy society now, yet traditional practices have banking hours. Oftentimes clients are only available to bring in their pets on weekends or evenings.

MS. ARONSON Audiology has some similar barriers and a few that are unique. The biggest is the notion that hearing loss is only for old people and has nothing to do with people under the age of 80. Truth is, hearing loss can happen for a variety of reasons at any age. They may have a medical problem, such as wax and fluid. The brain is what hears and with a hearing loss, the brain can be missing information. If left untreated with a hearing device, hearing loss may lead to an increase in the prevalence of dementia or Alzheimer's. Part of this barrier is the social perception that hearing loss is a disability. When people experience vision loss they will get glasses without hesitation because glasses are socially acceptable, even fashionable. Yet, hearing is the most important sense. And finally, like the other doctors, people have the perception that hearing aids are too expensive, often when they don't even know what they cost.

How do they get these perceptions prior to even seeking treatment?

DR. ONG There is healthy pre-conditioning to resist treatment. The obvious barriers do exist. Most patients come into the practice with previous experiences, both negative and positive. Or they have friends who have shared their experiences with a dentist. And, as we know, a negative experience is shared more often than a positive one. And, of course, there's the historical generalization that healthcare providers are highly compensated.

MS. ARONSON I agree. People's perceptions, especially of cost, generally come from "low cost" advertising and from word-of-mouth. Many people think that if they come in to get their hearing tested, they are going to be "sold" a hearing aid. And, because they don't truly know the differences between hearing solutions but do know there are low-cost, low quality options, they believe that the price is too high.

DR. SADRI Patients do have natural learned biases or barriers to any care. In eye care, specifically laser vision correction surgery, we are challenged by third-party influence. People go to a dinner party and inevitably they hear, like Dr. Ong said, negative stories from people about a friend who had surgery and it "wore off" and they now are back in glasses. A lot of unlearning of these notions must be done.

DR. WENTWORTH The idea of being "sold" that Ms. Aronson mentioned also comes from previous experiences. Some clients have been to other practices and walked away because they felt that they were being "sold" possibly unnecessary treatments. When we don't have an understanding of what treatment is needed and what is involved, there's natural skepticism. Many people feel that way when they take their cars in for service, for example. Because we don't understand and don't feel we have any control, we are cautious when the mechanic recommends repairs. That's why education is so very important and should start even before the client gets to the practice.

DR. SADRI I agree with Dr. Wentworth. Educating the patient before they come into the practice is critical. I'm working with a group that does just that – they send videos over from our practice about the procedure they are considering. It's quality, easy to understand information. Controlling the content that patients see helps enormously. And helps build a connection with the practice. An informed physician should get a list of their patients who are coming in and have one of the team call them, welcome them and ask if they would like to receive some information prior to their visit. It can be online or mailed. It's much better to have patients come in educated with content you control rather than them coming in with information they found online.

MS. ARONSON We also believe education is the key to helping patients get the care they need. I have a wonderful team who has been trained to ask the right questions, listen to the caller and figure out what issue they may have so we can become the patient's solution center. This includes listening for gaps in patients' information and understanding. Because cost is a big barrier, we also let patients know we will check to see if insurance contributes to the cost of the hearing aids, should the patient need them, to help put their minds at rest. When patients call and they don't think they have a hearing issue, that it's their "wife's fault for mumbling," we know that there is a big barrier – lack of perceived need. We know that hearing loss is a family issue and if the

third party is at the appointment, as a team we can work together to a solution.

DR. ONG Similarly, our team is trained to ask secondary and tertiary questions to gather information, identify barriers and, most importantly, establish a relationship with patient. The patient is asked to specifically look for the team member they spoke with, so the relationship can continue. This is a trained protocol.

When the patient arrives at the practice, what are some of the successful ways you and your team overcome barriers so the patient or pet can get the care needed?

DR. WENTWORTH Because we know it's hard for clients to make great decisions if they are fearful and stressed, we have embraced a fear free philosophy. We have implemented many specifics in our practice to make the client and their pet feel less stressed during a visit. In the reception area we have refreshments for the clients, music, a waterwall, relaxing Zen colors and a spacious area to wait. We also have a nutrition center and a resort, so many pets associate the practice with food or play areas. The examination rooms are spacious and we have a dedicated CatCove to make our feline patients more relaxed. We are open until 8pm during the week so clients who work can bring their pets in the evening (without having to visit the emergency room!). Our practice is also open all day Saturday and Sunday because we want clients to feel like the team is always available to help them. For financial barriers, we have several payment options, including credit cards and CareCredit. Most clients truly want the best care for their pets, and offering a financial solution allows them to provide help immediately. We also have alternative treatment plans to offer if clients truly can't afford our recommendations. We do not want them to feel guilty about not having substantial resources available because we are truly in business to help them and their pets.

DR. ONG Lowering barriers requires a system to move the patient along in care by a physical "hand-off" between departments. For example: don't you feel special when you arrive at a world class spa and are greeted warmly like you've been there before, informed about the next step in their experience, then introduced and walked and "handed-off" to the person who will perform a potentially invasive procedure? These are all purposeful systems or trained protocols. So we start with name recognition upon arrival. It's easy for healthcare teams to greet each patient by name because the patient is on the schedule; it's not a surprise. We also work hard on customizing information and education. We want it to be appropriate for the patient, meaning different patients want to know different levels of detail when it comes to treatment.

DR. SADRI I think the information and education should be custom to the client but also very unbiased, almost university type information. We use videos to explain what's happening with their eyes, what is involved with treatment and what will happen without treatment. We want patients to understand they are not alone and that it's a common procedure, like cataract surgery, with a common solution that is gentle. People come in and they don't know what they want or need. Even with cataracts there are surgical options. So we ask about their lifestyle and what they like to do. And then we provide recommendations that will enable them to maintain that lifestyle. We let them know that the procedure is available when they are ready. There's no pressure to make an immediate decision. I'm not there to sell them anything, just guide and advise them. We don't immediately discuss cost. First we want to ensure the patient understands what you're offering them clinically and let that marinate. This may take weeks, which is fine. There is no clinical urgency. Once they understand what the surgery is and the benefits, the barrier of cost almost goes away. Because at the end of the day, it's their eyes – their vision and ability to see. My team doesn't talk about cost until the patient is clinically ready. Barriers are natural and you can overcome them through education and making the process clean and unbiased. When patients are clinically ready, we tell them the cost range and tell them about CareCredit. We're trained to give patients the whole number or total cost, which can be intimidating. Instead, I tell my team to make that number manageable, so we always present the patient portion as a total cost and immediately in terms of a monthly payment.

MS. ARONSON Many people can be educated and told what is happening and what can help. But for others, especially if they are in denial, you have to show them. While I'm doing testing and speech discrimination, I let patients know the words they've missed. Then I show them what normal conversation sounds like, where they are and the difference. It's important to educate them and show them. Also, one way for my team to uncover potential preconceptions and barriers is to ask all patients, before the testing, "If the solution for

you is a hearing aid, how do you feel about that?" This gives me insight into their barriers and mindset. If they do accept the fact that they need an aid and aesthetics is the problem, I bring them in front of a mirror and let them try a pair on. They are often surprised how little of the hearing aid shows. Often, the last hurdle is the price. I try to put value into my pricing. I want patients to have the best, so I lower the price of the top-of-the-line and put in $2,500 worth of services so the best is the most valuable, obvious choice. I know they will have a better experience when they get what they truly need and am happy to invest in them. We let patients know about CareCredit, and like Dr. Sadri, we break down the cost into monthly payments.

When a patient walks out without accepting care, do you continue the conversation?

DR. SADRI In ophthalmology, practices can do a much, much better job about continuing the dialogue when a patient walks out without scheduling a procedure because they're not ready. We're so busy fixing what's in front of us that we're not looking at the bigger picture and the bigger opportunity. As a consumer I get reminders and a constant dialogue from retailers I've interacted with. Healthcare providers need to approach our communications the same way. Of course, not in an annoying way, but provide value - give patients information, suggestions and remind them to come back when they're ready.

DR. ONG Dentistry has the unique "recall" ability to touch the patient every few months. Ask the patient before they leave if it's okay to call or email them in the near future. "No" today does not mean "no" forever. Healthcare professionals take "no" personally sometimes so a shutdown occurs to even continue a conversation. Overcoming that block will allow the conversation to continue.

DR. WENTWORTH I agree. When the doctor or staff calls the client soon after the visit to check on the status of the patient, it is usually much appreciated. Often the clients will come back at a later time for continued treatment and care.

MS. ARONSON If a patient who needs hearing aids leaves, it's our commitment to help them hear, if not now, then when they're ready. We tell patients it's our policy to follow up with them should they have additional questions. We ask permission and what time would be best to talk within the next 48 hours. This way they are expecting our call and will be thinking about additional questions they may have.

DR. ONG What we are striving for is case acceptance by lowering barriers to care, meaning, we are only asking patients to get the care they need or are requesting; it our job to get them there. There are multiple ways before, during and after patient visits. At the end of the day it is the various forms of communication that healthcare providers have, like education or CareCredit, to allow the patient to say "yes" to the treatment you recommend.

DR. WENTWORTH Client communication is key and it's important to treat everyone like a "guest" in your house! Education is important. But so are relationships. People need to trust you.

DR. SADRI I agree. Education is powerful because they know who you are, what the problem is, what treatment is and how to make it happen. And when you provide clean, unbiased education and treat patients as you'd treat friends and family, even if the patient doesn't choose to get the treatment, they will have a positive perception of you and your team, which could lead to referrals and recommendations. ■

Continued from page 33

APPENDIX 1

Hearing Abilities Questionnaire

1. Please check all of the following that apply to your hearing aid experience:

   _____ I have never used a hearing device.

   _____ I have a hearing device and use it regularly on the __right ear__left ear.

   _____ I have a hearing device, but don't use it, or use it occasionally.

   _____ I tried a hearing device, but returned it for credit.

   _____ I have inquired about hearing devices, but did not purchase.

   _____ I use an over the counter Personal sound amplifying device.

2. Please rank the following from 1 to 4 in terms of their importance to you when purchasing a hearing device. (1 = most important and 4 = least important)

   ___Sound Quality & Clarity ___Cost

   ___Durability/Reliability ___Appearance

3. What motivated you to come in to discuss hearing aids? _____

   _____

4. On a scale of 1-10, where do you feel that you are (psychologically, emotionally, financially, etc.) regarding doing something about your hearing loss?

   (Please circle one)

   1 2 3 4 5 6 7 8 9 10

   (not motivated) (very motivated)

Please complete both sides of this form

5. Please check the box which corresponds to your ability to hear in the situations listed and check how often you are in that situation.

Listening situation	How well do you hear in this situation?			How often are you in this situation?		
	poor	fair	good	rarely	sometimes	often
Quiet Room (1-2 people)						
Television						
Radio						
Music						
Restaurants/Dining Hall						
Church						
Meetings/lectures						
Work Place						
Home telephone						
Cell phone						
Car						
Meal times at home						
Groups (4-6 people)						
Large social gathering						
Shopping						

Please complete both sides of this form

Adapted from Pickert in Counseling for Hearing Aid Fittings (edited by Sweetow, Singular Press, 1999).

APPENDIX 2

Question or Issue		Consider…	Recommend
Previous User?	Consider case history. Ask about likes and dislikes of current aids.		
Wax Problems?	Otoscopy Wax issues? Previous wax removal?	Wax prevention chosen:	
Ear Drainage?	Otoscopy History of chronic ear infections? Tubes currently in place?	BAHA candidate?	
Dexterity Problems? Physical Restrictions? Vision Issues?	Fine motor tasks? Open/close battery door? Rechargeable aid? Visual acuity? Difficulty seeing small objects?	Raised VC ITE vs. BTE Alternatives to waxtrap Remote control Magnet for battery change Rechargeable BTE/RIC	
Preference for one or two hearing aids?	Review audiometrics Discrimination asymmetry? Binaural discrimination scores? Ear anomalies or infections?	Consider demo Counsel on benefits of binaural hearing if appropriate	
Preference regarding HA style?	Style preference? Cosmetic concerns?		
Activities?	How does patient spend their day? Household size?	Different environmental needs	

Noisy Listening Environments?	Difficult listening situations? How often in background noise?	Directional microphones (automatic, adaptive) BTE vs. ITE Noise management capabilities Binaural capabilities	
Outdoor Activities?	Amount of time spent outdoors? What outdoor activities do you do?	Noise/wind management Perspiration issues Drying system?	
Need/Desire for Automatic Functioning	Manual dexterity issues? Rechargeable aid? Prefers automatic vs. manual?	Remote control needed? Need for VC? Push button control?	
Need/Desire for Looped Signal	Encounter looped facilities? Primary phone (landline or cell)? Frequency of telephone use? Trouble hearing on phone? Current use HA on the phone?	Discuss pros/cons of telecoil Telecoil or acoustic phone?	
ALD or Device Compatibility Needed?	Current ALDs? Trouble hearing TV? Difficulty in large rooms? Interested in streaming?	Alerting devices Telecoil or direct audio input TV streamer/TV ears	
Hearing Aid Brand/ Model:			
Coupling: **RE:** **LE:**		**Receiver/Slimtube Length:**	**Accessories/ Miscellaneous:**

APPENDIX 3

Hearing Aid Orientation Checklist

Hearing Aid

□ Parts of aid and/or mold identified
□ Insertion and removal of aid/mold demonstrated and explained
□ Patient attempted/performed insertion and removal
□ Attachment of mold to aid discussed/demonstrated if BTE
□ Volume control/ remote control manipulation was discussed/demonstrated
□ Patient attempted/performed V.C. or R.C. adjustment

Battery

□ Insertion/removal of battery discussed/demonstrated
□ Patient attempted/performed insertion/removal of battery
□ Purchase options for batteries discussed
□ Type and expected life of batteries discussed
□ Opening battery door when not in use discussed
□ Wait at least two minutes after removing battery tab before inserting battery
□ Warned of danger of swallowing batteries

Care and Maintenance

□ Moisture and temperature problems discussed, how to avoid and how to remedy (perspiration, humidity, rain – Dry-Aid kit)
□ (OPTIONAL) Instructions for use of Dry-Aid kit
□ How to avoid trauma to aid (dropping, heat/cold) and other dangers discussed
□ Other things that can damage aid (hair spray, dirty/greasy hands) discussed
□ Cleaning aid/mold discussed/demonstrated (tissue, tools, air blower)

Adjustment/Listening Tips

□ Programs described
□ Binaural hearing and balance, if applicable, described
□ How to manage different listening situations
□ Instructional brochures for individual hearing aid reviewed
□ Telephone usage tips given
□ Feedback causes, remedies discussed

Follow-Up

□ 30-Day Trial agreement explained
□ Warranty coverage and length explained (extension purchase options if needed)
□ Life expectancy of an aid explained
□ Appointment assigned for next visit
□ Patient counseled about realistic expectations for hearing aid performance. Tell the patient that they can realistically expect: some degree of visibility (from any style of hearing aid); physical comfort; improved, but not perfect, communication; and more benefit in quiet than in noise.
□ Inform patient that all new hearing aid wearers attend ―Managing Hearing and Listening Skills‖ classes. Tell them the dates of upcoming classes.

Patient Signature _____ Date/Time_____

PRESIDENT'S MESSAGE

Continued from page 5

We understand that not every ADA member can attend AuDacity in-person. Dr. Brian Taylor, ADA member and Audiology Practice's editor has the answer: He has agreed to dedicate the 4th quarter issue of Audiology Practices to managing co-morbidities. Highlights from the AuDacity Symposium will be intertwined with additional articles from additional authors. Look for the magazine to be delivered in December.

As the days of summer come to an end, I look forward to an eventful fall: the start of a new school year, joining a Mastermind Group of like-minded individuals, and seeing colleagues-turned-friends at AuDacity in October. ■

HAVE YOU HEARD

Continued from page 51

who want to participate but do not meet the requirements due to low volume thresholds.

- Allowing eligible providers to use time and medical decision making as a governing factor in selection of an Evaluation and Management code.
- Addition of a communication technology based service code. This would provide coverage when the provider checks in with the patient via telephone or telepractice to determine if an office visit or other service is needed.

ADA submitted formal comments to CMS requesting that CMS consider including audiologists as eligible MIPS providers in the final Medicare Physician Fee Schedule. We will keep members informed as more information becomes available. Please visit www.audiologist.org to read ADA's comments to CMS.

EDITOR'S MESSAGE

Continued from page 7

4. **Break the Hearing Aid Check and other similar appointments into "knowing how" and "knowing when" buckets**. "Knowing how" refers to hands-on skills patients must acquire to be successful hearing aid users. These skills can be learned by patients with the help of a website or adept audiology assistant. On the other hand, "knowing when" skills are more abstract and require audiologists to teach patients more complex tasks that require a higher level of cognitive awareness and skill, such as knowing when to use a remote microphone or knowing how to be a more assertive, proactive listener.

Using new technology, like automated hearing testing, artificial intelligence hearing aid algorithms, and web-based educational videos, not only has the potential to free up time in the clinic to see more patients. These technologies have the potential to broaden the demand for audiology services. By embracing these tools and charging for these services, audiologists are poised to better meet the needs of a growing aging population.■

HEAR AND NOW

Early Career AuD Resources

The Academy of Doctors of Audiology offers a variety of resources for early career professionals.

Early Career Listserv: Subscribers can network and discuss issues facing new audiologists through this email-based discussion forum.

Young Professionals Resources: A collection of resources that will help you in your transition from student to professional.

Mentorship Program: What did you do right? What was harder than you expected? What do you wish you could change? As a recent graduate, you are a perfect candidate to help shape the future of audiology by becoming a mentor! Mentee opportunities are also available.

Visit **audiologist.org/early** for access to these resources and more!

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Where: **AuDacity 2018 Conference - Orlando, FL**

If you have a specific question or concern you'd like them to address during their discussion at AuDacity, email us at **www.hearinghealth@carecredit.com.**

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