

MAR/APR
2019

American Academy of Audiology
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AUDIOLOGY

TODAY

The magazine of, by, and for audiologists

Medicare, Hearing Care, and Audiology Data-Driven Perspectives

FITNESS FOR DUTY ASSESSMENTS

Changing the
Audiology Mindset

STRATEGIES FOR AUDIOLOGY AWARENESS

In the Medical Community

HEARING AIDS IN REVIEW

Spotlighting Clinical
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INFORMED DECISION-MAKING

One Size Does Not Fit All

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Efficiency May Be the Key



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EDITORIAL MISSION

The American Academy of Audiology publishes *Audiology Today* (AT) as a means of communicating information among its members about all aspects of audiology and related topics.

AT provides comprehensive reporting on topics relevant to audiology, including clinical activities and hearing research, current events, news items, professional issues, individual-institutional-organizational announcements, and other areas within the scope of practice of audiology.

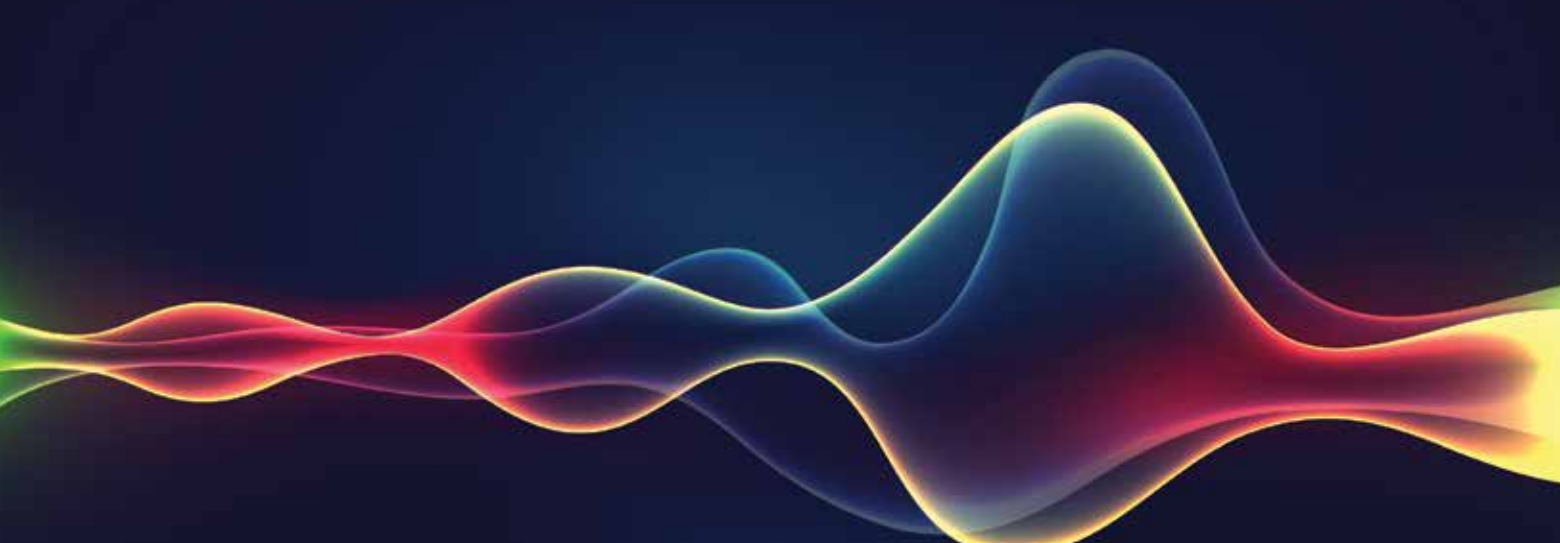
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Audiology Today (ISSN 1535-2609) is published bimonthly by the American Academy of Audiology, 11480 Commerce Park Drive, Suite 220, Reston, VA 20191; Phone: 703-790-8466. Periodicals postage paid at Herndon, VA, and additional mailing offices.

Postmaster: Please send postal address changes to *Audiology Today*, c/o Membership Department, American Academy of Audiology, 11480 Commerce Park Drive, Suite 220, Reston, VA 20191.

Members and Subscribers: Please send address changes to membership@audiology.org.

The annual print subscription price is \$126 for US institutions (\$151 outside the US) and \$61 for US individuals (\$114 outside the US). Single copies are \$15 for US individuals (\$20 outside the US) and \$25 for US institutions (\$30 outside the US). For subscription inquiries, telephone 703-790-8466 or 800-AAA-2336. Claims for undelivered copies must be made within four (4) months of publication.

Full text of *Audiology Today* is available on the following access platforms: EBSCO and Ovid.

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Find Your Level of Involvement

As we are in the midst of the best Academy annual meeting ever, I am reminded how much member involvement occurs throughout the year but especially during our yearly conference. Involvement occurs on many different levels. I have heard Louisiana audiologist Steve Madix as he describes levels of professional involvement to audiology students on several occasions. Dr. Madix describes three levels of involvement: observer, participant, and protector.

He describes the observers as members of an organization who observe but they do not perform a lot of action at this level of involvement. These individuals are most likely the largest portion of membership in most large organizations similar to our Academy. I like to think of these individuals as our 9-to-5 participants. They show up on time to work and promptly leave at quitting time. They are typically dependable and do their job fully.

The second level of involvement is the participant. These are our members who volunteer. They are above the average level of the observer and are more involved in an organization. These are our members who volunteer to be on a task force and/or serve on various committees within the Academy. I believe these

individuals are the heart and soul of the Academy. They are dependable, knowledgeable, full of energy, and have lots of fresh ideas.

The last level of involvement is the protector. These are our members who serve as committee chairs and serve on our boards. These members are engaged at the highest levels volunteering the most amount of their time and protecting our organization. You'll know these members by the way some of them, myself included, cannot answer the question "what do you do for fun" without using the word audiology.

It is important to understand that in any organization all levels of involvement are necessary and important. We need observers as much as we need protectors.

Everyone has a role and a job to fulfill. Sometimes those roles change. Many times, changes in our profession stir our passions, which lead us toward more involvement. Change can be uncomfortable for some, but let those changes be the fuel to get you where you need to be in our profession. When a change occurs, find where you can help make the change easier for your profession and your colleagues.

My hope for all of you is that you realize your level of involvement. If you're not sure what level you want



to achieve, ask some protectors. There are lots of us here willing to help you find your best level of involvement. [AV](#)

*Lisa Christensen, AuD
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Use of Social Media Is Beyond Just Facebook!

By Devangi Dalal

It is a noisy health-care world, and there is an utmost need for marketing from audiologists who live in a world where they often struggle to be heard. According to the Hearing Loss Association of America (HLAA), on average, it takes seven years for someone with hearing loss to schedule an appointment with an audiologist (HLAA, 2018). This can be due to a number of hurdles. The primary one being that people suffering from hearing loss simply do not want to admit their condition. Second, their awareness of audiology is limited when compared to other health-care professions. The audiologist, thus, is in a competitive and distracting marketplace where

creating a distinct brand is not an easy task.

There can be numerous ways to overcome this issue. Converting people who need hearing aids but do not purchase them into people who need hearing aids and actually get them is a strenuous task. Audiologists need to know more than just how to diagnose and treat hearing loss. They need to gain the trust and loyalty of the millions of people resistant to seeking help due to the societal and cultural stigmas associated with wearing hearing aids.

Don't Be Shy

Audiologists should not feel shy about selling. The goal should be

to instill trust, loyalty, and longevity. It is imperative to establish a brand identity to help reach this goal. Health-care professionals are in a distinctive spot when it comes to their digital existence. Ultimately, you're promoting an aid or a facility that represents a requisite rather than a prospective impulsive buy.

Use Brand Strategy

Branding is the "why." Promotion, however, is the "what" and the "how." Branding is your expression of the value of the organization, product, or service—the vehicle for taking your message out to the world, creating a dialogue between you and your audience. Audiologists need to be aware

of their mission, the benefits of the products or services provided, and family members' perception about their practice.

Remember, word-of-mouth marketing is relatively inexpensive, yet can be priceless. There are traditional marketing practices that include print, direct mail, telemarketing, directories or yellow pages, radio/television broadcasts, and outdoor advertising, among others.

Online Presence

With the advent of the digital age, online marketing is now a crucial component in the success of a modern health-care practice. It is critical to be online with a clear and concise targeted strategy. The extensive purpose of social media in the health-care industry is to revamp the patient's experience and form a "customer-centric relationship" with followers.

Patients and their influencers research and vet you based on the content and information they find about you and your practice online. A website is a bare necessity for the health professional's online presence. Hire a professional website developer to continue the branding of your office online. Adding social-sharing buttons to e-mail may increase the click-through rate by 150 percent (Virgillito, 2014).

Testimonials

You may also incorporate digital testimonial videos of satisfied patients with their permission. There goes a saying, "A picture is worth a thousand words." Video testimonials that are direct words of satisfied patients on your website or other platforms, such as YouTube or Vimeo, make a vital difference. According to Lane, you also can look at e-mail marketing

campaigns because they are reported to statistically outperform every other digital marketing tactic in terms of return on investment.

Blogs

Blogs also can prove to be a viable option, as 329 million people read blogs every month. Blogs are a credible way to increase visibility and establish trust. However, you should keep subject matter focused on audiology or patient-focused topics.

Search Engine Optimization

Search engine optimization (SEO) is an organic search effort-ranking created when someone searches for information on your topic categories. The point is: Are you findable?

Internet users are searching for doctors through social media exactly the same way they search for products and amenities. In today's day and age, 81 percent of purchases of products and services start with a simple web search (Ahern, 2017).

Today, search engines are smart to extrapolate people interaction with websites. You need to satisfy end-users' search intent. Quality content increases organic SEO results. Optimizing content for mobile use helps as well.

Another targeted approach can be search engine marketing (SEM). This is much more than paid online ad campaigns. SEM includes anything with search engine providers (e.g., Google, Yahoo) including SEO, pay-per-click (PPC) advertising, or buying advertising within a search engine. An SEO-SEM blend works. It is a tried-and-tested concept that many people have found successful, according to WordStream.

Additional marketing ideas include adding videos to increase clicks, outlining the activities in your practice, and defining your target audience including a psychographic profile that includes potential patient interests (e.g., common patient activities, values, lifestyle, social situations).

Define the unique selling proposition (USP) or the answer to "why the community should seek hearing loss rehabilitation," including action you want for the people to take in reaction to your marketing efforts. Determine your budget expense breakdown, either annual or biennially, and also include the costs for creating and distributing your message.

Review your plan on a monthly basis purely to ascertain the cost-benefit ratio. You can use the data acquired to review your marketing goals. Also, cushion for unexpected opportunities. These strategies will give you a roadmap to spending your hard-earned money better and with more efficiency. These steps collectively will boost your return on investment.

Social Media

Finally, bridging the gap, we can come up to these conclusions. We now have to become health-care, sales, and marketing experts. We are on the verge of transforming how the world views our professional value. Cut through the noise and drive this conversation. Start with one new marketing activity and commit to teaching and evaluating its effectiveness. Your social marketing plan is an instrument to bridge the gap among patients, loved ones, physicians, and

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Conclusion

Mastering social media undoubtedly will be a boon to your practice. Through easily available information at the prospective patient's fingertips, you will be able educate them on when to check their hearing with an audiologist, which studies have found may take years to accomplish. Also, learning what the different types of social media are and how they are used can help you formulate an effective outreach and information campaign. Lastly, digital media is how most people now get their information, and you need social media to direct consumers to your practice. Don't hesitate, start implementing your social media campaign today to get your message heard above everyone else! 

Devangi Dalal is an audiologist who practices in Mumbai, India. She is the 2012 recipient of the Academy's Humanitarian Award.

References

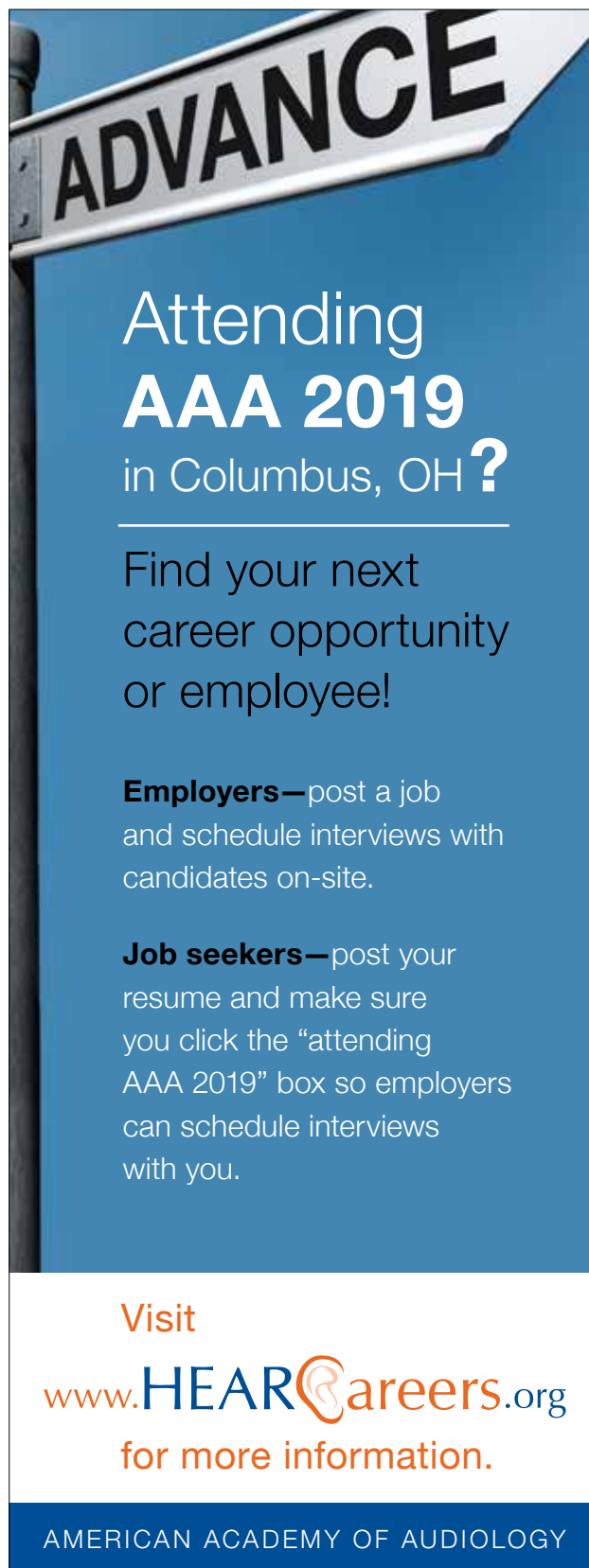
Ahern P. (2017) 25 bind-bottling SEO stats for 2017 and 2018. juncto.digital/blog/seo-stats-2017. Accessed November 15, 2018.

Hearing Loss Association of America (HLAA). (2018) Do you think you have hearing loss? www.hearingloss.org/wp-content/uploads/HLAADoYouThinkYouHaveHearing-Loss.pdf?pdf=DoYouThink. Accessed November 2018.

Lane R. How does email marketing ROI stack up against other digital channels? rare.io/how-does-email-marketing-roi-compare-to-other-digital-channels. Accessed November 27, 2018.

Virgillito D. (2014) How to use social sharing buttons to increase email marketing results. www.socialfresh.com/how-to-use-social-sharing-buttons-to-increase-email-marketing-results. Accessed November 27, 2018.

Word Stream. (no date) Search engine marketing (SEM): What it is & how to do it right. www.wordstream.com/search-engine-marketing.



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MAKING CONNECTIONS

What's Trending!

f 10.2K



Hearing loss may help identify individuals at greater risk of cognitive decline and could provide insights for earlier intervention and prevention.

Published on February 5.

www.facebook.com/audiology

11.6K



Have you ever wondered if there may be a way to identify noise-induced damage before hearing loss occurs?

Published on January 11.

www.twitter.com/academyofaud

in 3,659



A prototype created by Cornell Tech students provides captioning in augmented reality headsets to help people who are hard of hearing navigate one-on-one conversations. **#audpeeps**

Published on January 28.

www.linkedin.com

1,136



The Academy's new Peer-2-Peer Mentoring CEU Program is a self-directed opportunity that allows members to earn Academy CEUs through a peer mentorship experience.

Published on January 30.

www.instagram.com/academyofaud

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Medicare, Hearing Care, and Audiology

Data-Driven Perspectives

BY IAN M. WINDMILL AND BARRY A. FREEMAN



At AAA 2019 in Columbus, Ohio, we look forward to providing attendees with an in-depth overview of the opportunities and challenges of serving Medicare beneficiaries. As a preview to our presentation, this article provides a general description of Medicare, a discussion on audiologic billing and reimbursement, and considerations regarding the broader role of audiology in health care.

For the public at large, Medicare evokes the concept of a health insurance plan for the aged or retired population. Created in 1965 to provide a safety net for older individuals who faced substantial medical problems, the benefits available to Medicare beneficiaries are generally more limited than those available through private health insurance plans. Medicare has four parts (Medicare.com, 2018) as summarized in TABLE 1.

In 2017, there were approximately 58 million persons enrolled in Medicare, of which about 50 million were age 65 or older and 9 million were disabled (CMS.gov, 2019). Enrollment in Traditional Medicare was about 39 million (67 percent), while enrollment in Medicare Advantage programs was about 20 million (Kaiser Foundation, 2018a). Over the next 30 years,

the number of Medicare beneficiaries is expected to increase to 92 million people (Kaiser Foundation, 2018b).

THE ECONOMICS OF MEDICARE AND HEARING CARE

CMS Tracking

CMS accumulates and tracks data about services provided to Medicare beneficiaries by health-care providers, including audiologists. In the context of economic data, Medicare tracks data such as the number of times a current procedural terminology (CPT) code, which is developed and owned by the American Medical Association

(AMA), is billed (utilization) by an individual provider, the total allowed charges for each submitted code, and the total payments to the audiologist for procedures. In addition, CMS tracks the co-morbidities associated with each beneficiary receiving services from an audiologist, the number of beneficiaries served, the number of different (CPT) codes submitted, and the total numbers of procedures billed. As might be expected, CMS also collects data on the beneficiaries, and relates this data to the services provided by audiologists.

Medicare Beneficiaries Served by Audiologists

Determining the exact number of Medicare beneficiaries served by audiologists is confounded by several

TABLE 1. Description of Medicare Parts

PART	YEAR CREATED	DESCRIPTION
A	1965	▪ Free for those who qualify. ▪ Covers inpatient hospital stays, care in a skilled nursing facility, hospice care, and some home health services. ▪ Audiologists may be paid to work in these settings. ▪ In 2017, \$293 billion in payments.
B	1965	▪ Beneficiaries pay a monthly premium. ▪ Covers physician and other providers services (e.g., audiologists), outpatient care, medical equipment, and preventative services. ▪ Reimbursement for audiologists in private or ear, nose, and throat (ENT) practices. ▪ In 2017, \$309 billion in payments.
C	1997	▪ Medicare Advantage—administered by third parties under contract from the Centers for Medicare and Medicaid Services (CMS). ▪ Enrollees choose traditional Medicare or a Medicare Advantage. ▪ Must provide services covered by Parts A and B; also may provide extra benefits (e.g., hearing, vision, dental, etc.). ▪ In 2017, approximately \$200 billion in payments.
D	2003	▪ Beneficiaries pay a monthly premium. ▪ Covers prescription drugs. ▪ In 2017, \$100 billion in payments.

YEAR	TRADITIONAL MEDICARE ENROLLMENT	REFERRALS TO AUDIOLOGY	% REFERRALS TO AUDIOLOGY
2007	35,900,000	1,178,283	3.28%
2008	36,000,000	1,183,039	3.29%
2009	35,400,000	1,215,311	3.43%
2010	36,600,000	1,228,539	3.36%
2011	36,539,482	1,249,538	3.42%
2012	37,213,622	1,255,326	3.37%
2013	37,613,096	1,292,282	3.44%
2014	37,790,373	1,261,601	3.34%
2015	38,025,274	1,283,337	3.37%
2016	38,610,384	1,319,639	3.42%
2017	39,007,214	1,331,888	3.41%
% Change	8.66%	13.04%	

variables. First, many procedures are billed under the names of physicians, practices, or hospitals. For example, in 2017, the following specialties and providers submitted charges and were paid for comprehensive audiometry: audiology, otolaryngology, nurse practitioners, internal medicine specialists, allergists, and family medicine physicians.

Audiologists may have performed these procedures, but their names or national provider identifier (NPI) numbers do not appear on the submitted bill.

Second, there are those services provided to Medicare beneficiaries but are denied payment due to reasons such as lack of medical necessity, not having a physician referral, not a covered benefit, etc. The number of patients where charges were submitted for audiologic services, but payment was denied, cannot be ascertained.

Finally, there are Medicare beneficiaries who may be evaluated by an audiologist who does not bill Medicare because their services are associated with amplification devices that are not covered by Medicare.

For the purposes of this article, the total number of referrals to audiology, exclusive of referrals for vestibular tests, is based on the sum

of the number of patients receiving air conduction (CPT* 92552), air and bone conduction (CPT 92553), and comprehensive audiometry (CPT 92557). Therefore, every referral must receive a minimum of air-conduction testing and will get one of these three codes, but no referral gets more than one of these three codes at any one visit. Using this assumption, the total number of referrals to audiology in 2017 was 1,331,888 (TABLE 2).

As shown in TABLE 2, the number of persons enrolled in traditional Medicare and the number of referrals to audiology have increased steadily over the same time. The percentage of Medicare beneficiaries referred for audiologic testing has remained fairly steady at about 3.4 percent over the past 10 years, which is disappointing considering physician marketing efforts and Medicare's "Welcome to Medicare" Preventative Office Visit Program.

Audiologic and Vestibular Billing and Payments Across Professions

In 2017, Traditional Medicare paid nearly \$82 million for audiologic diagnostic tests (CMS.gov, 2018b) to audiologists and any other provider who might use these codes. Diagnostic

TABLE 2. Number and Percent of Referrals to Audiology Over Past 10 Years

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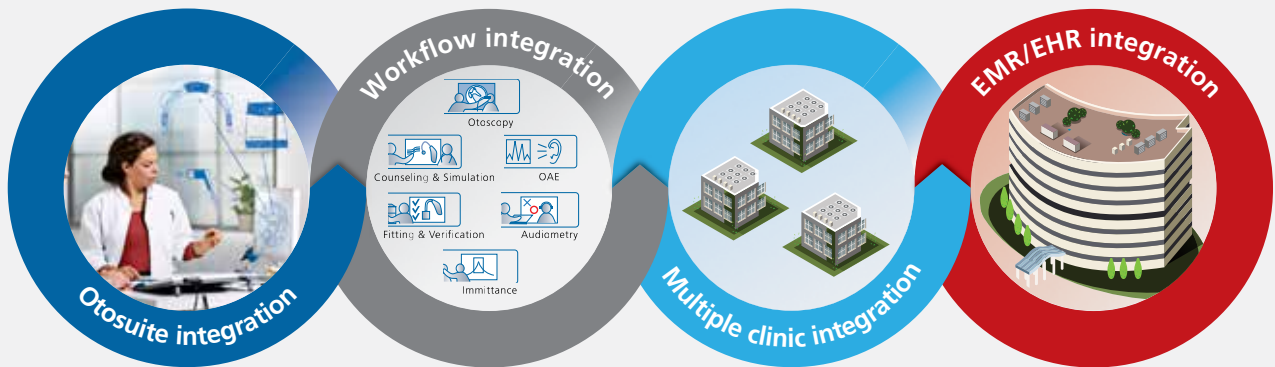
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PROCEDURE	CPT CODE*	ALLOWED	PERCENT OF TOTAL
Tympanogram and Acoustic Reflexes	92550	246,667	18.52%
Air Conduction	92552	97,700	7.34%
Air and Bone Conduction	92553	39,965	3.00%
Speech Reception Threshold	92555	13,680	1.03%
Speech Audiometry Complete	92556	39,513	2.97%
Comprehensive Audiometry	92557	1,194,223	89.66%
Bekeasy	92561	547	0.04%
ABLB	92562	2705	0.20%
Tone Decay	92563	17923	1.35%
SISI	92564	509	0.04%
Stenger: Pure Tone	92565	1628	0.12%
Tympanometry**	92567/92550	1,076,206	80.80%
Filtered Speech	92571	3706	0.28%
SSW	92572	174	0.01%
SSI	92576	399	0.03%
Stenger: Speech	92577	644	0.05%
ECoG	92584	11076	0.83%
ABR	92585	37855	2.84%
Otoacoustic Emissions—Limited	92587	68,080	5.11%
Otoacoustic Emissions—Comprehensive	92588	87,138	6.54%
Tinnitus Evaluation	92625	9117	0.68%

*CPT is a registered trademark of the AMA, 1995–2017

**Tympanograms are conducted independently (92567) and in combination with acoustic reflexes (92550); the total number of tympanograms is the sum of these two codes.

TABLE 3. Number and Percent of 2017 Procedures as a Proportion of Total Audiology Referrals (1,331,888)

tests include typical hearing assessment procedures (e.g., air conduction, bone conduction, speech measures, immittance, otoacoustic emissions, etc.), historical tests (e.g., Bekeasy, tone decay, short increment sensitivity index [SISI], etc.), and specialized assessments (e.g., auditory brainstem response [ABR], electrocochleography [ECoG], tinnitus evaluations, etc.). The \$82 million paid for audiology tests represents about 0.02 percent of the Medicare budget for Part B services.

In 2017, Medicare paid slightly more than \$24 million for vestibular tests (e.g., electro/videonystagmography

[ENG/VNG, both bundled and unbundled codes], posturography, rotational testing). This total does not include any payments for vestibular-evoked myogenic potentials (VEMPs) that might be billed using the auditory-evoked response procedure code, which would be included in the total for audiology diagnostic codes listed earlier.

TABLE 3 shows a breakdown of the number of audiology and vestibular procedures allowed for 2017 that were performed by audiologists, otolaryngologists, nurse practitioners, etc. Medicare rules specify that physicians should not submit charges to Medicare under their names for procedures conducted by audiologists. They can, however, submit charges for procedures performed by technicians, or for those they personally performed. In 2017, “comprehensive audiometry” was submitted under physician names approximately 25 percent of the time, with the majority of bills being submitted by otolaryngologists (CMS.gov, 2018b).

As shown in TABLE 3, nearly 90 percent of Medicare beneficiaries referred to audiology received comprehensive audiometry, and approximately 80 percent of beneficiaries were charged for a tympanogram (either combined with acoustic reflexes or alone). Beyond these two codes, the percentage of individuals receiving other diagnostic tests dropped significantly. The next highest number of diagnostic tests billed were comprehensive otoacoustic emissions at 6.54 percent and limited otoacoustic emissions at 5.11 percent. Interestingly, more patients received tone decay testing than tinnitus evaluations.

Estimates of Audiology Procedures Billed Only by Audiologists

In the traditional Medicare databases, payments to audiologists can be separated and analyzed. In total, the CMS database reveals 6,223 different

audiologists submitted charges for 1,940,780 services to 932,408 Medicare beneficiaries in 2016 (CMS.gov, 2018a). However, these figures likely underestimate the total audiologic services due to services submitted under physician names. In addition, charges for audiology services provided as a hospital outpatient are not included on this list if the charges are submitted under the name of the hospital rather than an individual provider.

The CMS database on audiologists was reviewed and descriptive statistics (TABLE 4) were developed to provide a broad perspective on the services provided, patients served, and co-existing factors present in the patients seeking hearing care services from audiologists in 2017.

The mean number of beneficiaries served in an audiology practice is about three per week (149.85/year), with a median of about two per week, suggesting that the majority of audiologists are seeing two or less Medicare patients per week. On the other end of the range, there are practices that are billing Traditional Medicare for nearly 40 Medicare patients per week.

A wide range (1–25) of Healthcare Common Procedure Coding System (HCPCS) codes are used by audiologists, with an average of 6–7 codes used by each audiologist (CMS uses “HCPCS” in reference to all services including CPT

and HCPCS codes billed by audiologists to Medicare). The low side of the range indicates some audiologists only use a single code for every Medicare patient (e.g. only comprehensive audiometry on every patient), whereas other audiologists use many codes within their practice. This likely reflects the type of services offered or following best practice protocols within the practice.

With respect to charges submitted, audiologists submit charges ranging from a few hundred dollars to more than one-half million dollars (average \$25,000–\$30,000). Payments are about one-third of billed charges, with audiologists collecting from \$200 to \$180,000 per year.

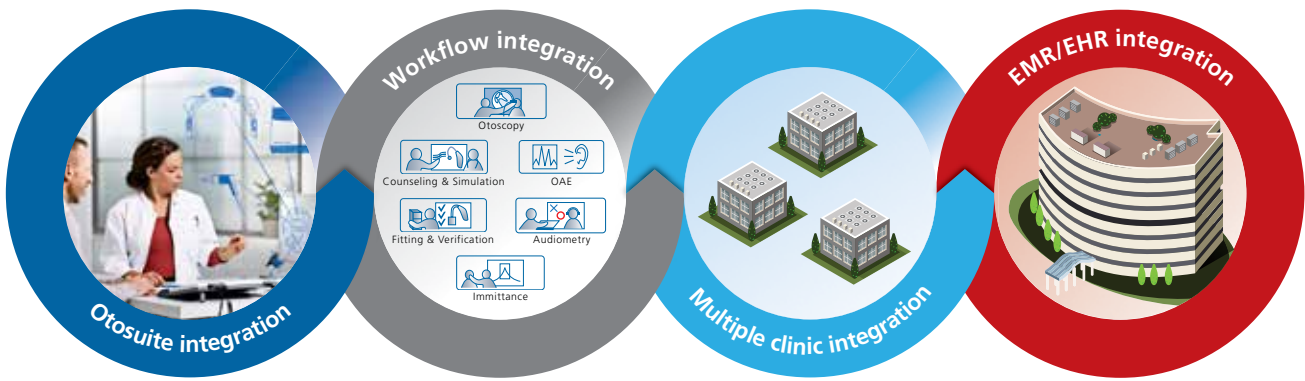
At the provider level, Medicare databases show the number of beneficiaries served, number of procedures, and link patient demographic data and existing medical conditions to the audiologist providing hearing care services. TABLE 5 shows examples of data from five audiologists with very different Medicare characteristics.

Audiologist A evaluated 92 Medicare beneficiaries in 2017, but only billed a single CPT code (i.e., same single procedure). The total allowed amount for these 92 patients was \$3,585, an average of about \$39 per patient. Conversely, Audiologist E saw more than 1,000 Medicare beneficiaries and used 17 different codes. The total allowed for

TABLE 4. Services Provided by Audiologists to Traditional Medicare Beneficiaries in 2017

	MEAN	MEDIAN	RANGE
Number of Beneficiaries Served	149.85	106	11–1,942
Number of HCPCS Codes	6.9	6	43,490
Number of Services Provided	311.97	212	11–3,954
Number of Services Per Beneficiary	2.03	2	1–9.78
Charges Submitted	\$28,850.91	\$17,699.00	\$440.00–\$518,756.00
Average Charge per Service	\$93.30	\$83.66	\$20.82–\$831.32
Average Charge per Beneficiary	\$192.93	\$159.58	\$30.00–\$4,977.88
Total Allowed Payments	\$10,202.00	\$6,629.00	\$202.00–\$184,516.00
Total Allowed Payment per Service	\$32.91	\$31.00	\$13.00–\$148.00

Number of services refers to number of CPT or HCPCS codes submitted for each beneficiary. The average charge is the bill submitted by the audiologist for the services, while the allowed payments is the amount authorized by CMS to the audiologist for the service. Medicare pays 80 percent of the allowed charge while beneficiaries have a 20 percent co-pay.



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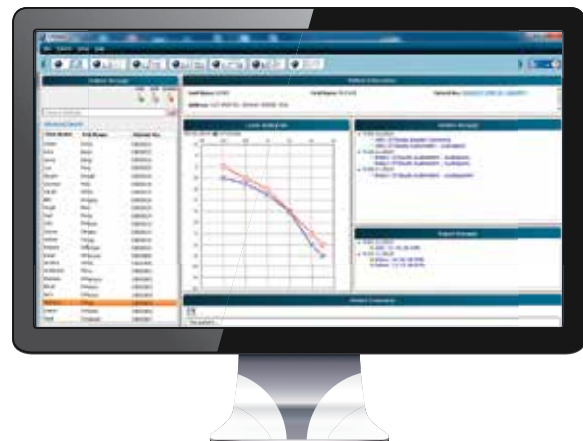
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	AUDIOLOGIST A	AUDIOLOGIST B	AUDIOLOGIST C	AUDIOLOGIST D	AUDIOLOGIST E
Number of HCPCS	1	12	10	16	17
Number of Services	92	404	959	1,130	3,857
Number of Beneficiaries	92	62	233	531	1,113
Total Submitted Charge Amount	\$7,820.00	\$47,360.00	\$82,855.88	\$45,999.00	\$344,470.00
Total Medicare Allowed Amount	\$3,585.24	\$25,212.65	\$41,807.53	\$39,043.41	\$123,368.27
Total Medicare Payment Amount	\$2,408.62	\$19,485.97	\$31,092.53	\$28,355.29	\$91,700.18
Average Age of Beneficiaries	81	75	79	75	74
Number of Female Beneficiaries	45	23	127	304	613
Number of Male Beneficiaries	47	39	106	227	500
% with Alzheimer's Disease or Dementia	21	47	10	9	9
% with Cancer	12	*	10	9	9
% with Heart Failure	24	*	18	16	15
% with Chronic Kidney Disease	27	26	24	24	22
% with Chronic Obstructive Pulmonary Disease	*	*	13	12	12
% with Depression	27	*	14	14	17
% with Diabetes	22	29	35	28	28
% with Hyperlipidemia	60	42	71	60	55
% with Hypertension	72	50	75	74	69
% with Ischemic Heart Disease	32	35	39	41	35
% with Osteoporosis	12	*	12	8	6
% with Rheumatoid Arthritis / Osteoarthritis	49	42	52	43	44
Average HHC Risk Score	1.1509	0.9845	1.2697	1.1189	0.9966
* Indicate insufficient numbers on which to calculate a result.					

TABLE 5. Examples of Data Collected by Medicare from Five Audiologists

Audiologist E was nearly \$125,000, an average of \$110 per patient. Of course, these numbers do not reflect the reason for referral, the types of procedures performed, or the number of patient visits.

TABLE 5 includes several of the co-existing medical conditions for the patients seen by these five audiologists, which are fairly representative of the populations served by audiology (i.e., diabetes, cardiovascular concerns, dementia, and arthritis). To a lesser degree, patients served by audiology have cancer, kidney disease and

osteoporosis. Audiologists may consider tracking these same co-existing conditions to ensure appropriate identification, management, and referrals for patients.

CMS tracks the co-morbidities of their beneficiaries and “scores” risk factors that they call Hierarchal Condition Categories (HCC) risk factors. They, then, correlate various risk factors to determine reimbursement for certain procedures and providers and to assess patient outcomes and manage costs. As shown in TABLE 5, the HCC scores for these five audiologists range from 0.9845

to 1.2697. However, based on the 2017 data, the risk scores for beneficiaries seen by audiologists range from 0.5134 to 4.4379, with a mean of 1.1950.

The fact that Medicare tracks the relationship between audiologists and these co-existing conditions should prompt continued discussion around best practices and the role of audiology in the broader health-care arena. What is the role of audiologists in the identification of risk factors for these conditions and the subsequent referrals to specialists? Are the historical or assessment paradigms employed within any given practice sufficient to make these decisions? For example, was the single procedure used by Audiologist A in TABLE 5 sufficient to properly counsel and/or manage the 21 percent of their 92 Medicare patients with Alzheimer's or the 27 percent of their patients with renal disease?

The audiologic view of Medicare is often focused on assuring compliance with billing and documentation rules. Perhaps it is time to elevate that view to include the broader role of audiology in health care, particularly as related to correlated conditions such as dementia, the risk of falls, or cardiovascular disease. This could be especially meaningful if audiologic processes can help prevent, reduce or identify sooner more costly conditions. Beyond the potential of direct access, and reducing Medicare costs through elimination of the physician referral requirement, the role of audiology in cost containment for Medicare for these co-existing or related conditions could prove to be powerful moving forward.

CONCLUSIONS

Medicare may be one of the great conundrums for audiology. For many practices, the Medicare population may constitute a high percentage of the payer mix, and for those practices with a focus on dispensing, it can be a primary target market. Conversely, the current payment framework that only recognizes diagnostic evaluations, based on CPT procedure codes rather than medical decision-making, is a significant challenge when attempting to deliver services. Throw in the requirements for a physician referral and a determination of medical necessity with the inability to opt-out of the Medicare program, and audiologists are often confused, if not irritated, with Medicare.

Despite these confusions and irritations, Medicare is a dominant force in the health-care market, representing more than 17 percent of all people in the United States with health insurance, and a model for most of the other health insurance programs. Thus, Medicare requires attention, both for the program in general, and with the intersection with audiology specifically. As a

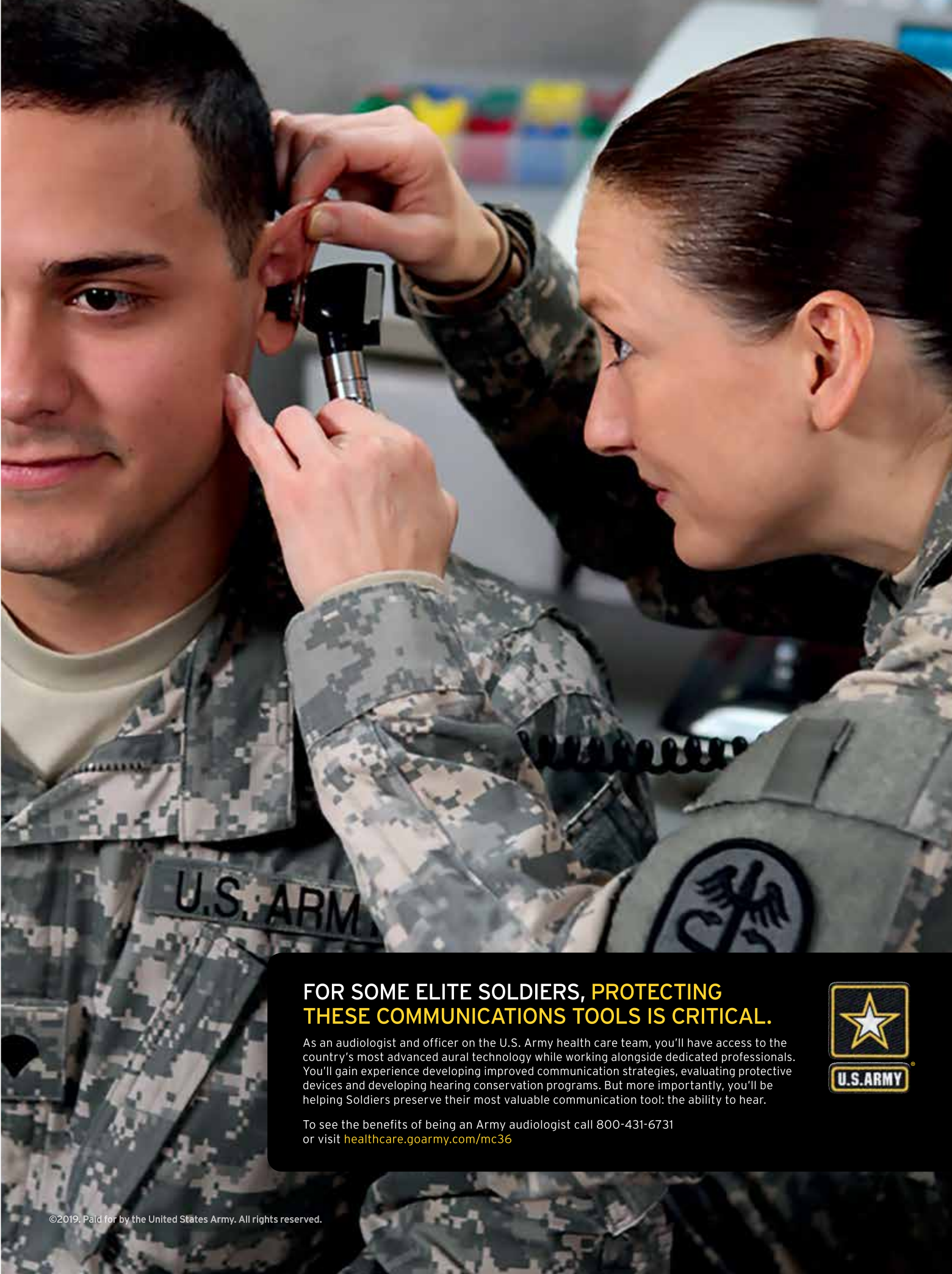
profession, understanding both the opportunities and challenges with serving Medicare beneficiaries is necessary for advancing the status of audiology in health care. Connecting hearing care services to other health-care concerns, much in the thinking of the emerging relationship between dementia and hearing loss, will require attention to best practices and a more global perspective within the patient care arena. ⁴⁵

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References

- CMS.gov. (2018a) Medicare Provider Utilization and Payment Data: Physician and Other Supplier PUF CY2016. <https://data.cms.gov/medicare-physician-supplier/medicare-provider-utilization-and-payment-data-phy/utc4-f9xp>. Accessed on November 12, 2018.
- CMS.gov. (2018b) Centers for Medicare and Medicaid (CMS) Part B National Summary Data File. www.cms.gov/research-statistics-data-and-systems/downloadable-public-use-files/part-b-national-summary-data-file/overview.html. Accessed February 20, 2018.
- CMS.gov. (2019) CMS Fast Facts. CMS/Office of Enterprise Data and Analytics/Office of the Actuary. www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/cms-fast-facts/index.html. Accessed on January 3, 2019.
- Henry J. Kaiser Family Foundation. (2018a) Facts on Medicare Spending and Financing. www.kff.org/medicare/issue-brief/the-facts-on-medicare-spending-and-financing. Accessed on December 20, 2018.
- Henry J. Kaiser Family Foundation. (2018b) Projected change in Medicare enrollment. www.kff.org/medicare/slide/projected-change-in-medicare-enrollment-2000-2050. Accessed on December 20, 2018.
- Medicare.com. (2018) Medicare Coverage and Basics Overview. <https://medicare.com/about-medicare/medicare-coverage-basics>. Accessed on December 10, 2018.



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► In addition, primary research with consumers helps us understand what they need and is integral to our product development program. From ongoing consumer panels to test concepts and finished products to ethnographies to better understand how hearing aid wearers are using our products,

these insights are pure gold. This is where we discover things like how dexterity challenges, poor eyesight or other health issues come into play when consumers interact with our batteries and packaging.

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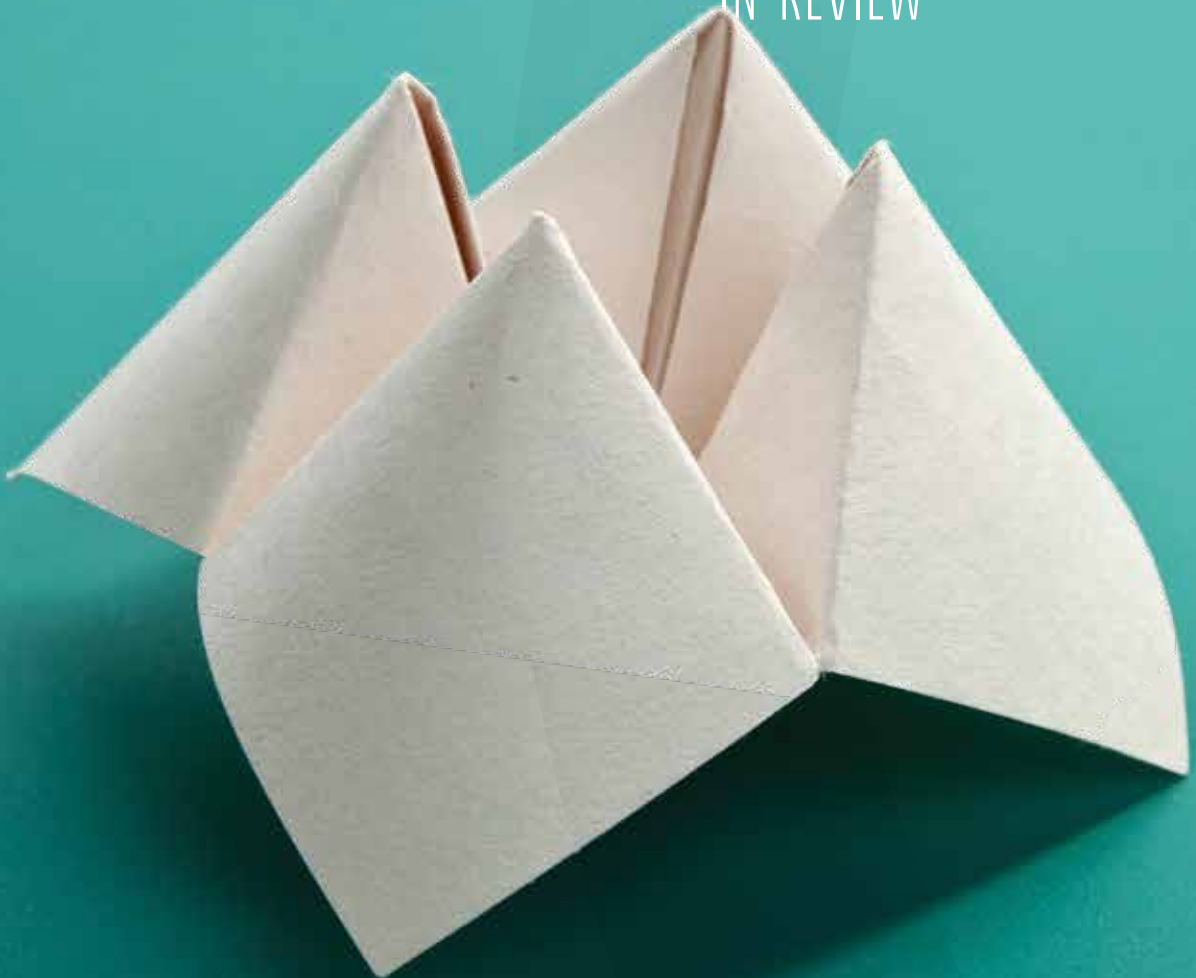


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SPOTLIGHTING

Clinical Nuggets in the Upcoming Hearing Aids

IN REVIEW



FOR THE PAST SEVERAL YEARS,
we have reviewed what we believe
to be the top articles from the
past year. We select well-designed
articles where the findings might have
a direct impact for audiologists
fitting hearing aids.

BY H. GUSTAV MUELLER, CATHERINE PALMER, AND ROBERT TURNER

“

Patients likely will have to decide if a product is “too hot,” “too cold,” or “just right.”

”

Did you know that there are nearly 20 journals that publish articles related to hearing aid technology, signal processing, and fitting?

And that each year, more than 200 articles are published related to hearing aids? In the words of the great philosopher Frank Zappa, “So much to read, so little time.” Well, we’re here to help!

For the past 16 years (or so), at each AAA annual conference, we have reviewed what we believe to be the top hearing aid articles from the past year. Our definition of top articles has a clinically practical slant—that is, we select well-designed articles where the findings might have a direct impact for audiologists fitting hearing aids. We typically choose representative articles from the different areas of the overall fitting process: prefitting testing, selection of signal processing, verification, and outcome measures. And, of course, there always are a few key articles specifically focused on the pediatric population.

As usual, there were several excellent articles published in 2018,

and many of these had direct clinical relevance. For example, have you ever wondered if entry-level hearing aids perform just as well as premier models? You might recall that we talked about this a few years back when Robyn Cox and colleagues published their series of articles. Well, that topic is coming back in 2019, as Wu and co-workers at the University of Iowa conducted a similar comparison, which included both laboratory and real-world outcomes. Their design for data collection was a little different, however, as they used ecological momentary assessment (EMA) as part of the real-world portion. And, of course, there have been advances in the premier hearing aids, such as bilateral beamforming, since the Cox research.

So what model of hearing aid was the winner? Different from the Cox research? Are differences more likely to show up when EMA is used? We’ll give you the low-down at AAA 2019 in Columbus!

Self-Adjustments

What does Goldilocks have to do with fitting hearing aids? In the near future, when over-the-counter (OTC) products are rolled out, the relationship might be quite significant. Patients likely will have to decide on their own if their product is “too hot,” “too cold,” or “just right.” It’s not surprising then, that an *Ear and Hearing* article from last year was titled “A Goldilocks Approach to Hearing Aid Self-Fitting.”

The primary goal of this study was to determine the feasibility and outcome of an alternative self-adjustment approach that includes a generic starting response designed for a mild-to-moderate hearing loss, similar to that of current hearing aids.

Boothroyd and Mackersie asked (and answered) research questions such as: How do the self-adjusted level, spectrum, and speech intelligibility index (SII) compare with those provided by

a generic starting response? How does the self-adjusted level, spectrum, and SII compare with those provided by the NAL-NL2? Does hearing aid experience affect the outcome? Does the inclusion of a speech-perception test affect outcome? And, how do self-adjustments made by hearing aid users compare to their existing hearing aids? All good things to know when the OTC world arrives.

A related article from last year was from Peggy Nelson and colleagues. This group also used self-adjustment to determine listener preference and performance, specifically for listening to speech in quiet and in noise. A primary research question was to determine if most listeners set their gain to a lower (or higher) level in the presence of noise. If so, then automatic gain changes might be satisfactory and preset noise-reduction algorithms would satisfy most users. However, the authors point out that, if different listeners set their gain differently for a given listening condition, this would suggest that preset noise-reduction programs are not ideal, and that self-adjustment is a valuable tool with which to

quickly and accurately determine the optimum setting. We'll tell you how this all played out.

Verification

In the area of hearing aid verification, a topic that was popular in 2018 was autoREMfit (fitting using automatic real-ear measures). This has been around for nearly 20 years, but there is renewed interest as it is now available from most major hearing aid manufacturers and most probe-microphone systems. The "auto" part of this procedure is that the probe-mic equipment and the hearing aid fitting software talk to each other. The software collects on-going real-ear information from the probe-mic system, and, then, makes changes in the hearing aid output, based on some preliminary measures, and measured ear canal SPL at the moment. The notion is that these automatic adjustments will make the fitting closer to a preselected prescribed target output, such as that of the NAL-NL2 or the DSLv5.0 (Desired Sensation Level, Version 5.0). In theory, the resulting fit-to-target should be



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about as good as that which could be obtained manually by an experienced audiologist using the programming software. The assumed advantage is that you would get the job done faster, especially when conducting simultaneous bilateral fittings. We'll be reporting on some early research with this procedure, and also talking about some potential pitfalls.

Pediatrics

The past year also resulted in some important publications in the area of pediatric hearing aid fittings. We reported on the longitudinal outcomes of children with hearing impairment (LOCHI) study three years into data collection, and now the research team published a series of papers reporting on their five-year findings. We'll focus on the implications for clinical practice.

Not surprising, the data support that early fitting of hearing devices is key to achieving better speech, language, and functional performance outcomes for children. We'll discuss the relationship between speech perception and cognitive abilities, the impact of maternal education, and the impact of language on hearing in noise. We also will answer question everyone is asking: Which

prescriptive targets (if met) provide a better pediatric hearing aid fitting—NAL-NL2 or DSL v.5? We'll look at the results according to audiometric measures, speech and language abilities, and a first look at parent report.

Conclusion

So, there you have it. A brief glimpse into a few of the topics and articles that we'll be reviewing at our annual get-together. We hope to see you there, and will try our best to convince you that talking about hearing aid research actually can be fun. 

H. Gustav Mueller, PhD, is a professor at Vanderbilt University in Nashville, Tennessee.

Catherine Palmer, PhD, is an associate professor at the University of Pittsburgh in Pennsylvania. She is the Academy's president-elect.

Robert Turner, PhD, is a consultant with General Hearing Instruments in Louisiana.

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Informed Decision-Making

WHEN ONE SIZE DOESN'T FIT ALL

BY KATIE OESTREICH





THIS ARTICLE OFFERS INSIGHT INTO

the change from provider-centered care to patient-centered care. It provides rationale for the combination of shared decision-making with empirical evidence in the hearing health-care field and supplies the reader with practical suggestions for using these combined methods with patients.



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Throughout the years, health-care service delivery models progressed from a provider-centered method of care toward a greater focus on the patient. In addition, increased prominence has been placed on the use of empirical evidence in the decision-making process to promote clinical accountability. But how can audiologists best provide patient-centered care when each patient is so unique?

Decision-Making: A Shared Approach

A paternalistic approach, in which the clinician makes decisions for the patient, has historically dominated the health-care scene. However, rehabilitative audiology decision-making has been described as “a vital stage in the rehabilitative process in that key decisions are made jointly between the professionals and the hearing impaired” (Stephens, 1996). In its most basic sense, patient-centered care refers to patient-clinician interactions and it emphasizes the importance of relationship building, as well as sharing of input and control in information exchange and decision-making (Boisvert et al, 2017).

A relationship that has patient-centered care, communication, and

shared decision-making at its center leads to better adherence by the patient, greater overall satisfaction, and a stronger sense of trust between the patient and clinician (FIGURE 1). Communication between the clinician and patient can enhance adherence through several mechanisms. For example, communication contributes to patients' understanding of their hearing loss, as well as their treatment options. A clinician's skill at communicating during the appointment is a central factor in achieving patient adherence as it improves the transmission and retrieval of important information; facilitates patient involvement in decision-making; and allows an open discussion of benefits, risks, and barriers to adherence. In addition, it builds rapport and trust and offers patients verbal and nonverbal support and encouragement (Zolnieriek and DiMatteo, 2009).

A patient's journey from the initial hearing evaluation, to hearing aid selection and follow-up care, involves numerous occasions during which decisions must be made. Patients must determine the extent to which they are affected by their hearing loss and if amplification or other treatment options are right for them. They must also consider the amount of time, expense, and follow-up care to which they are willing to commit, as well as make decisions involving counseling, communication strategies, individualized auditory training, amplification,

FIGURE 1. Patient-centered care, communication, and shared decision-making often leads to adherence, greater satisfaction, and a stronger sense of trust by the patient.



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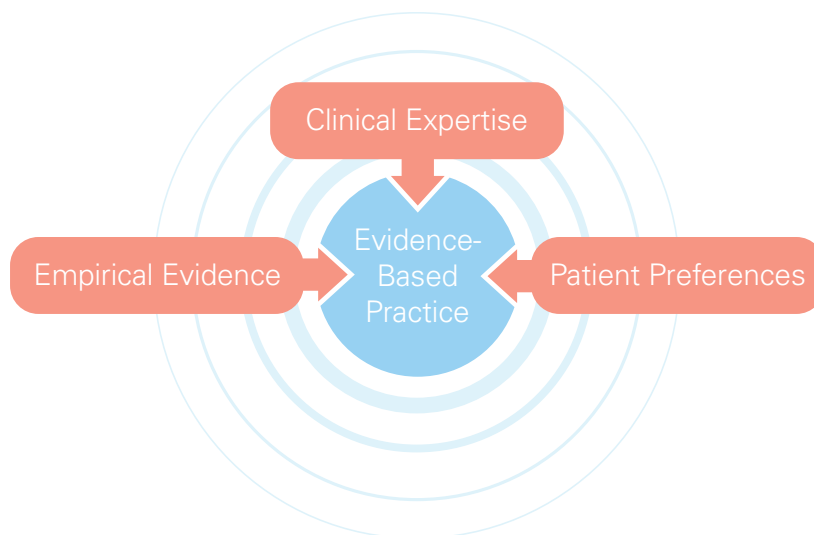
and aural rehabilitation. With all the options and various paths to take in a hearing health-care plan, patients are bound to feel overwhelmed. Therefore, it is important for the clinician to provide patient-centered care with an emphasis on empirical evidence to make joint, informed decisions, tailored specifically to each patient.

Including Empirical Evidence

It is the audiologist's role to facilitate informed decision-making throughout clinical care. Though decision-making is a joint endeavor between the patient and clinician, patients typically rely on the clinician to narrow down the options that will work best for them. Therefore, it is imperative to establish a rapport with the patient from the beginning to create a trusting relationship with an open dialogue.

The American Academy of Audiology (Academy) includes the implementation of evidence-based practice as part of its "core values." The Academy defines evidence-based practice as "to practice according to best clinical practices for making decisions about the diagnosis, treatment, and management of persons with hearing and balance disorders, based on the integration of individual clinical expertise and best available research evidence" (Academy, n.d).

Combining patient-centered care with empirical evidence may help to build rapport with the patient, which may lead to greater overall patient satisfaction. However, despite efforts to implement empirical evidence into audiology practice, gaps continue to exist between the best evidence-based research and what is being done in clinical practice (Moodie et al, 2011). For example, one survey found that only 52 percent of the 420 participating clinicians routinely used real-ear



measurements for hearing aid verification (Mueller and Picou, 2010), though the use of real-ear measurements during the hearing aid fitting is considered a widely evidenced process for verifying amplification settings and improving patient satisfaction (Aazh and Moore, 2007).

A study conducted by Boisvert and colleagues (2017) aimed to investigate the sources of information audiologists commonly use when discussing rehabilitation choices with patients. Results of the study indicated that patient factors and test results are considered the most important by audiologists for their clinical decision-making as compared to information from peer-reviewed literature and textbooks. This study suggested that many audiologists value patient preferences when making rehabilitative clinical decisions. Though empirical evidence was reported to be used less often than expert opinion in complex decision cases, the use of empirical research has increased over the years.

However, evidence-based practice is the integration of clinical expertise, patient preferences, and empirical evidence into the decision-making process (FIGURE 2). In patient-centered care, the clinician can bring professional experience and skills, while the patient brings

FIGURE 2. Empirical evidence, clinical expertise, and patient preferences together make up evidence-based practice.

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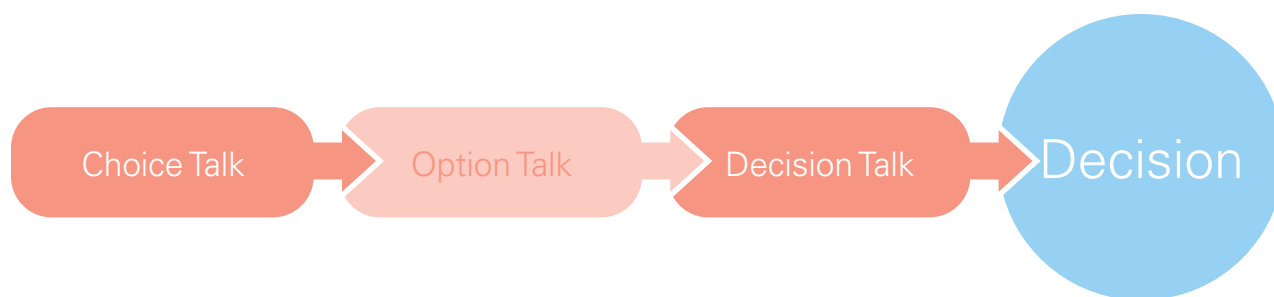
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his or her own personal preferences, concerns, values, and expectations (Sackett et al, 1996). By including empirical evidence in patient-centered care, the clinician can facilitate care with greater confidence and support the decision-making process.

Clinical Implications for Shared Decision-Making

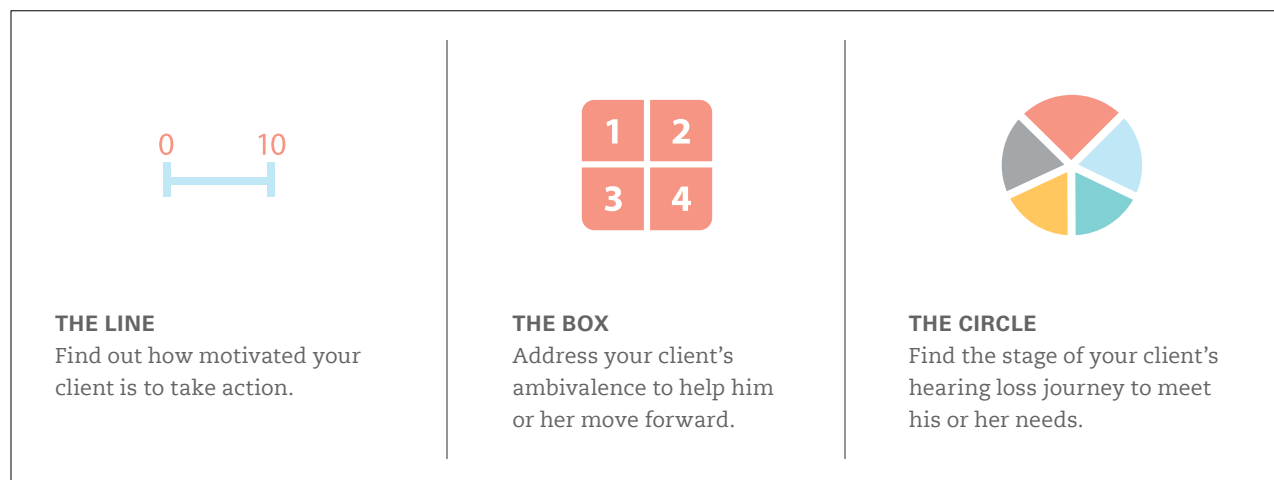
By providing empirical evidence, the clinician provides the patient with the necessary information to make an informed decision. However, service does not stop there. The clinician then provides clinical expertise while the patient expresses his or her preferences, and together they make a shared decision for individualized care.

Shared decision-making is supported by evidence from numerous randomized trials showing knowledge gain by patients, more confidence in decisions, and more active patient involvement (Stacey et al, 2011). When offered a role in the decision-making process, patients may have feelings of uncertainty about what option might be best. If all responsibility for decision-making is transferred to the patient, he or she may feel overwhelmed or abandoned in the process. To avoid these pitfalls, Elwyn and colleagues (2012) developed a three-step model, for shared decision-making in clinical practice. This model includes steps for *choice talk*, *option talk*, and *decision talk* (see FIGURE 3).

Choice talk is a planning step in which clinicians have an opportunity to summarize findings, offer a choice with justification, check the patient's reaction, and defer closure for the

FIGURE 3. The three-step model developed by Elwyn et al (2012) includes steps taken by the provider and the patient to reach a final decision.

FIGURE 4. Motivation tools that enable health-care professionals to guide patients into taking responsibility and making appropriate behavioral changes. (Adapted with permission from the Ida Institute.)



choices when necessary. During the *option talk* step, the clinician can check the patient's knowledge, list options in more detail (including pros and cons of each option), and provide the patient with decision support.

Finally, during the *decision talk* step, the clinician focuses on the patient's preferences, moves toward a decision, and reminds the patient that decisions may be reviewed in a positive way to arrive at closure.

Another useful tool to promote shared decision-making is the *Decision Aid*. The *Decision Aid* is a visual tool used with patients that helps to organize a set of hearing treatment options. Audiologists can utilize this tool in a shared decision-making context in order to facilitate a conversation with the patient and help them to decide on

a treatment plan. This aid can be modified to reflect the treatment options that are available to the patient.

The first page of the *Decision Aid* shows all the possible options for each patient to consider (TABLE 1A), while the following pages contain additional information about each of those options (TABLE 1B), (Hickson et al, 2016). The audiologist and patient discuss these options together in order to reach a shared decision.

Additional tools that enable health-care professionals to support and guide patients through various stages are the "Line, Box, and Circle" (FIGURE 4). According to the Ida Institute, the "Line, Box, and Circle" describes easy-to-use but highly effective tools that enable health-care professionals to guide patients through various stages

TABLE 1A. Example of the first page in a *Decision Aid* for adults with hearing loss and their families (based on Laplante-Lévesque et al). Each option has its own page, with the option of hearing aids shown in TABLE 1B.

PAGE 1: MY HEARING OPTIONS				
What Is It?	Hearing Aids	Communication Education	Assistive Listening Devices	No Treatment
What Is Involved for You?	▪ Being fitted with hearing aids. ▪ Wearing the hearing aids in my everyday life to help with my hearing problems.	▪ Participating in group session to learn strategies to manage my hearing problems. ▪ Using the strategies to help in my everyday life.	▪ Buying some devices to help me hear in certain situations. ▪ Wearing the devices in everyday life.	▪ Keep on going the way I am at the moment.
What Is Involved for Your Family?	▪ Attending when the hearing aids are fitted. ▪ Helping you to wear the hearing aids.	▪ Participating in the group sessions to learn strategies to help you. ▪ Using the strategies to help in everyday life.	▪ Learning about the devices. ▪ Helping you wear the devices.	
Options I Want to Know More About				
Options I Will Think About				

necessary to achieve needed behavior changes (Ida Institute, n.d.).

The Line helps to clarify where patients see themselves in the process of change. When using the Line, patients are asked to identify a goal and a process. Patients are asked to rank their response to each question on a visual scale of 0 to 10 or from lowest to highest importance. In addition to ranking a response, it is important for the professional to create a dialogue with the patient regarding his or her answers. For example, an audiologist could ask the patient to elaborate on his answers by stating, "Why did you respond to this question with a score of 4 and not higher?" This allows the patient time for reflection, which is important for the change and decision-making process.

The Box is used in combination with *the Line* to make patients aware of their own positive or negative ideas surrounding hearing loss and to provide a better picture of what motivates the patient to make a change. *The Box* is designed to open a dialogue between the professional and the patient. After the patient has completed filling out the Box, the professional may encourage the patient to elaborate on the information provided.

The Circle is a tool that helps the health-care professional to get a sense of how ready the patient is to make a change. It outlines seven different stages that a person goes through when they are in the process of making a change. By using this framework, the professional can adjust his or her recommendations and counseling techniques for each patient.

Conclusion

Clinical methods that encourage patient-centered care, communication, and shared decision-making constitute a holistic approach that leads to adherence, greater overall satisfaction,

HEARING AIDS	
What Is Involved?	▪ Being fitted with hearing aids. ▪ Wearing the hearing aids in my everyday life to help with my hearing problems.
What Is Expected from You and Your Family?	▪ Attending three or four appointments at a hearing clinic. ▪ Returning to the clinic if you have problems with the hearing aids.
What Are the Positives?	▪ You will be able to hear soft sounds better. ▪ You will hear better in one-to-one conversations, in small groups, and when listening to TV or radio.
What Are the Negatives?	▪ Hearing aids will not sound natural in noise or in large groups. ▪ You will need to persevere to get used to hearing aids. ▪ Most hearing aids can be seen by others.

and a stronger sense of trust between the patient and clinician. Research has suggested that the most successful patient-clinician interactions result from a collaborative effort from both parties. Therefore, it is the audiologist's role to combine evidence-based practice with shared decision-making when guiding patients through their hearing health-care journey. 

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References

American Academy of Audiology (n.d.). The American Academy of Audiology core values. www.audiology.org/sites/default/files/about/aaaLeadership/documents/corevaluesmodel.pdf.

Aazh H, Moore BC. (2007) The value of routine real ear measurement of the gain of digital hearing aids. *J Amer Acad Audiol* (8):653–664.

TABLE 1B. Example page from a Decision Aid on the option of hearing aids.

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Boisvert I, Clemesha J, Lundmark E, Crome E, Barr C, McMahon C. (2017) Decision-making in audiology: Balancing evidence-based practice and patient-centered care. *Trends Hear*. Published online July 28, 2017. Accessed October 2, 2018.

Elwyn GI, Frosch D, Thomson R, Joseph-Williams N, Lloyd A, Kinnersley P, Cording E, Tomson D, Dodd C, Rollnick S, Edwards A, Barry M. (2012) Shared decision making: A model for clinical practice. *J Gen Intern Med* 27(10):1361–1367.

Hickson L, Lind C, Preminger J, Brose B, Hauff R, Montano J. (2016) Family-centered audiology care: Making decisions and setting goals together. *Hear Rev* 23(11):14.

Ida Institute (n.d.). Motivate clients with a line, box, and circle. Retrieved from https://idainstitute.com/public_awareness/ida_in_the_media/motivate_clients_with_ida_tools.

Laplante-Lévesque A, Hickson L, Worrall L. (2010) A qualitative study of shared decision making in rehabilitative audiology. *J Acad Rehab Audiol* 43:27–43.

Moodie ST, Kothari A, Bagatto MP, Seewald R, Miller LT, Scollie SD. (2011) Knowledge translation in audiology promoting the clinical application of best evidence. *Trends Amp* 15(1):5–22.

Mueller HG, Picou EM. (2010) Survey examines popularity of real-ear probe-microphone measures. *Hear J* 63(5):27–28.

Sackett D, Rosenberg W, Muir Gray J, Haynes, RB, Richardson WS. (1996) Evidence-based medicine: what it is and what it isn't. *BMJ*. Published January 13; 312:71.

Stacey D, Bennett CL, Barry MJ, Col NF, Eden KB, Holmes-Rovner M, Llewellyn-Thomas H, Lyddiatt A, Légaré F, Thomson R. (2011) Decision aids for people facing health treatment or screening decisions. *Coch Database Syst Rev*. Published online January 28, 2014. Accessed October 2, 2018.

Stephens D. (1996) Hearing rehabilitation in a psychosocial framework. *Scan Audiol* 43: 57–66.

Zolnieriek K, DiMatteo M. (2009) Physician communication and patient adherence to treatment: A meta-analysis. *Med Care* 47(8):826–834.

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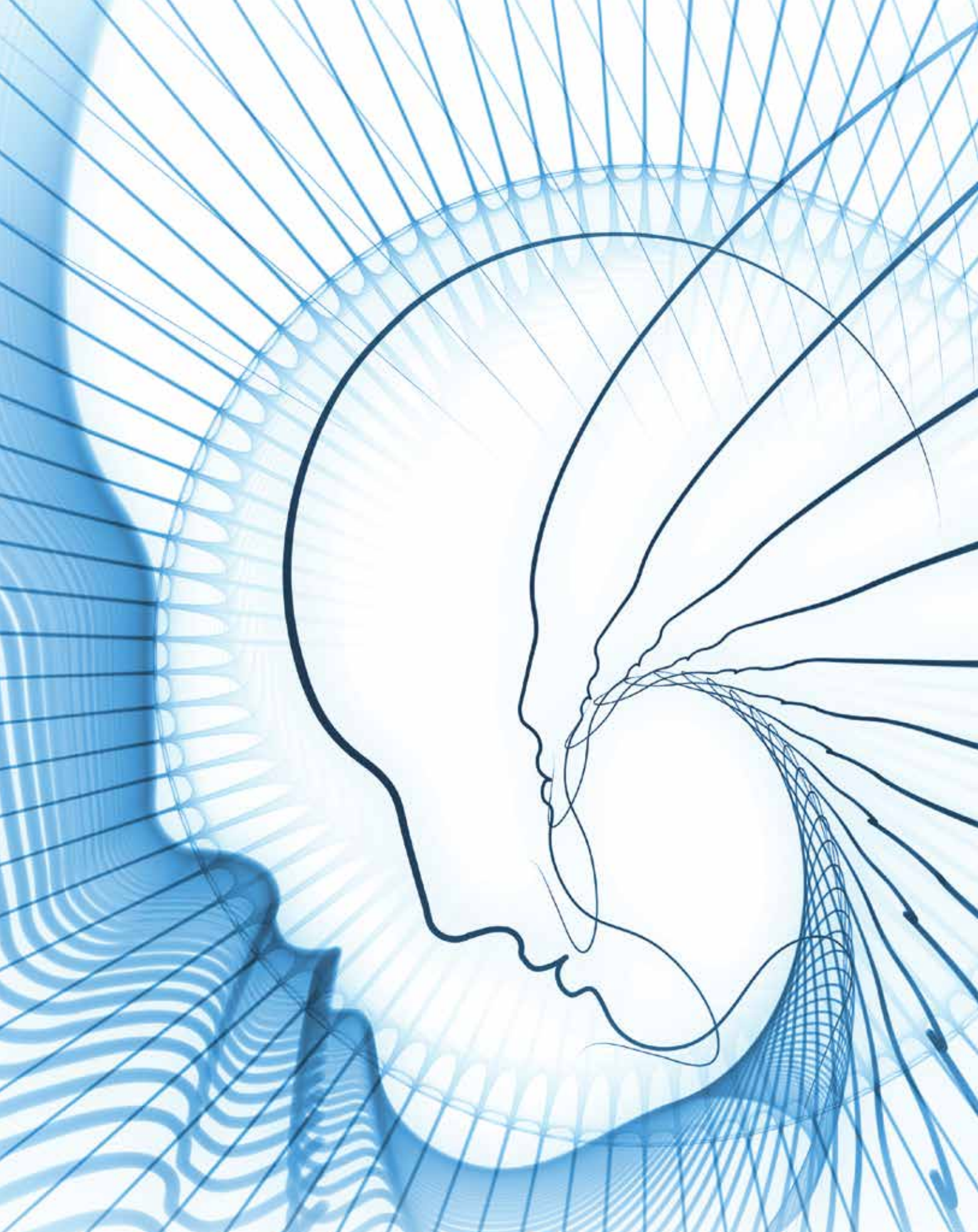
For more information regarding decision making, motivation tools, and the patient journey, please refer to the following links:

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CHANGING THE
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HEARING-CRITICAL TASKS

PART 1 OF 2

Defining the objective relationship between speech recognition measures of functional hearing taken in the clinic or lab and the ability to perform essential hearing-critical job tasks safely and effectively in real-world noise environments.

BY SIGFRID D. SOLI, ROSS ROESER, AND VERONIQUE VAILLANCOURT

Background

For many years, audiological hearing assessment has been an important part of medical screening for individuals seeking public safety and law enforcement jobs. Obviously, hearing impairment that interferes with the ability of individuals in such positions to perform essential hearing-critical (HC) job tasks can affect their safety as well as the safety of the public. There are several audiological challenges in identifying the presence of hearing impairment that may cause such risks. Two recently published papers (Soli et al, 2018a, 2018b) have made significant advances toward addressing these challenges that are important for audiologists to understand. These challenges can be summarized as follows.

First, most audiological measures and procedures are diagnostic and are intended to determine the etiology and severity of impairment. The questions for occupational hearing screening, however, have to do with functional hearing ability and whether the auditory system is impaired to an extent that performance of essential HC job tasks is affected. Unfortunately, diagnostic measures such as pure-tone thresholds, which are often used as the

“gold standard” criteria for determining fitness for duty (e.g., U.S. Department of Homeland Security, 2008), are known to be poor predictors of functional hearing ability (e.g., Tufts et al, 2009).

Second, while it is true that results obtained with audiometric speech tests can be interpreted as measures of functional hearing ability, the relationship between performance on such tests and the ability to perform essential HC job tasks has not been fully determined objectively. This challenge is perhaps the most difficult to address because it requires audiological knowledge in the selection, administration, scoring, and interpretation of the audiological tests, as well as knowledge of the locations and noise environments where essential HC job tasks are performed. Once these two sources of knowledge are linked, the opportunity to define and validate this relationship objectively exists. After validation, those audiologists involved in determining fitness for duty will have objective, evidence-based methods to determine whether an individual’s functional hearing ability will or will not enable him or her to perform essential HC tasks.

The ability to perform this type of audiological assessment is very important not only because of its potential



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impact on public safety but also for legal considerations. Both the United States and Canada have legal requirements (e.g., EEOC, 1992; Laroche et al, 2003) that require medical screening and inclusion/exclusion criteria to be job-related and meet bona fide occupational requirements. A validated relationship between audiological screening criteria and specific essential HC job tasks is mandatory to satisfy these legal requirements.

Our two-part article discusses the importance to audiology of a body of research—five large studies—conducted over the past 17 years. This series focuses on defining the objective relationship between speech recognition measures of functional hearing taken in the clinic or lab, and the ability to perform essential HC job tasks safely and effectively in real-world noise environments.

The current articles are a summary of the two earlier cited publications (Soli et al, 2018a; Soli et al, 2018b), each with an emphasis on their practical significance for audiologists. Of note, is that our two articles are being published simultaneously in *Audiology Today* and *Canadian Audiologist* because of their significance to audiologists in both countries.

Objectives

The threefold objectives of the five studies were the same:

1. Determine appropriate and practical measures of functional hearing that are predictive of the ability to perform essential HC job tasks in real-world noise environments.
2. Identify and characterize these real-world noise environments.
3. Develop and validate a model to predict performance of

essential HC job tasks based on the selected measures of functional hearing ability.

A further goal was to identify a single measure that could be used to screen individuals for a wide range of public safety and law enforcement jobs, thus simplifying the training and instrumentation for audiologists who administer the screening protocol.

Ideally, the predictive model will be able to use the screening results together with relevant characteristics of the noise environment(s) to predict whether the individual can adequately perform the essential HC job tasks. This approach enables the model predictions to be tailored uniquely to each individual's audiological findings, together with the information about the specific real-world noise environment(s) where the individual would work.

Effective speech communication was identified as the most important functional hearing ability in the vast majority of tasks.

Procedures and Findings

The five studies were commissioned by public safety and law enforcement agencies in the United States and Canada. Two were performed in California for the Peace Officers Standards and Training Commission

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(Goldberg et al, 2001) and the Corrections Standards Authority (Montgomery et al, 2011). Two were performed in Canada, one for the Canadian Coast Guard and the Department of Fisheries and Oceans (Laroche et al, 2005) and the other for the Ontario Ministry of Community Safety and Correctional Services (Laroche et al, 2014). One was performed in a number of cities throughout the United States for the Federal Bureau of Investigation (Harkins et al, 2017).

JOB TASKS AND REQUIRED FUNCTIONAL HEARING ABILITIES

In each study, the first step was to identify essential HC job tasks and the functional hearing abilities required for these tasks. Not surprisingly, effective speech communication was identified as the most important functional hearing ability in the vast majority of tasks for all five studies. Next, factors were identified that interfered with effective speech communication and made it more complicated. Again, not surprisingly, uncontrolled, real-world noise was identified as the most significant factor; although, other factors such as multitasking and absence of redundant sensory information also were noted. Of the noise environments where HC tasks occur, 80 percent had average noise levels more than 70 dB(A), as measured in three of the studies. FIGURE 1 displays the distribution of noise levels from these recordings.

MEASUREMENT OF FUNCTIONAL HEARING ABILITY

The consistent finding that speech communication was the most important functional hearing ability and that noise interference was the most significant complicating factor simplified the selection of a single measure of functional hearing ability that could be

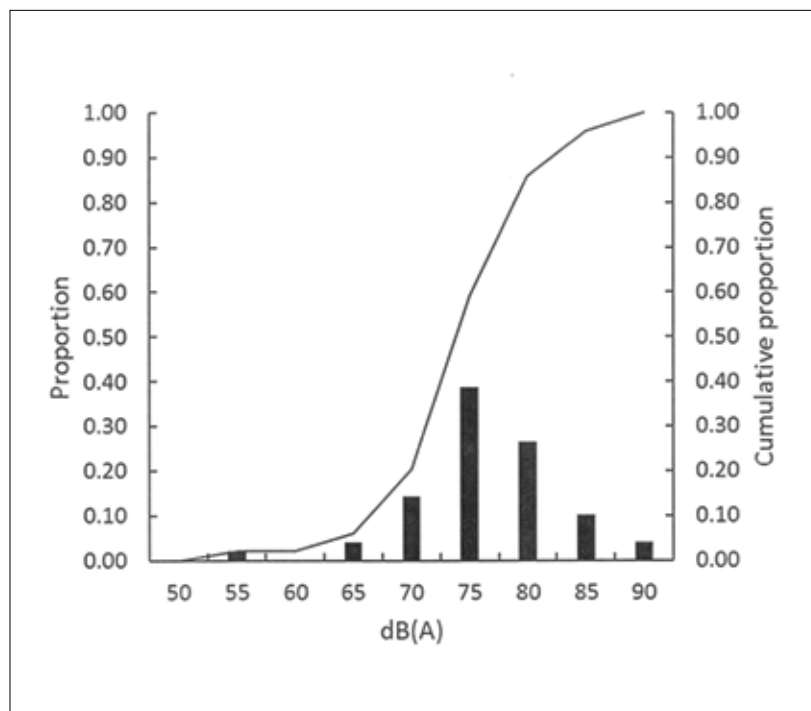


FIGURE 1. Discrete and cumulative distributions of average dB(A) values measured in 49 noise environments where essential hearing-critical tasks are performed. The values on the left ordinate display the discrete proportions for the bar chart, and the values on the right ordinate display the cumulative proportions (Soli et al, 2018a). Reprinted with permission from Wolters Kluwer Health, Inc.

used in occupational screening specifically for a wide variety of public safety and law enforcement jobs, namely recognition of speech in noise. Yet, there are other important functional hearing abilities as well, including detection, recognition, and spatial hearing.

An appropriate measure of speech recognition in noise has several potential advantages over measures of other functional hearing abilities. It has high-face validity and robust methods for analysis and characterization of factors affecting speech recognition in noise are standardized (ANSI, 2017). In addition, binaural measures of speech recognition in noise that include conditions with spatial separation of the speech and noise sources tap into several of the other functional hearing abilities, plus such measures assess the ability to process spoken language.

The Hearing in Noise Test (HINT) (Nilsson et al, 1994) was selected as an appropriate measure for occupational hearing screening for several reasons. (For information to purchase HINT, go to hearingtest.pro/home.html.) The

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HINT published norms for speech reception thresholds (SRTs) measured both with and without spatial separation of the speech and noise sources. The spatial separation test conditions can be administered with loudspeakers or under headphones by using validated head-related transfer functions (HRTFs). The HINT exists in several languages other than English, including Canadian French, which was a requirement for one of the Canadian studies. Finally, the linguistic properties of the HINT sentence materials are consistent with the requirements in the standard for analysis and characterization of speech recognition in noise (ANSI, 2017).

PREDICTION OF ESSENTIAL HEARING-CRITICAL JOB TASK PERFORMANCE

The Speech Intelligibility Index

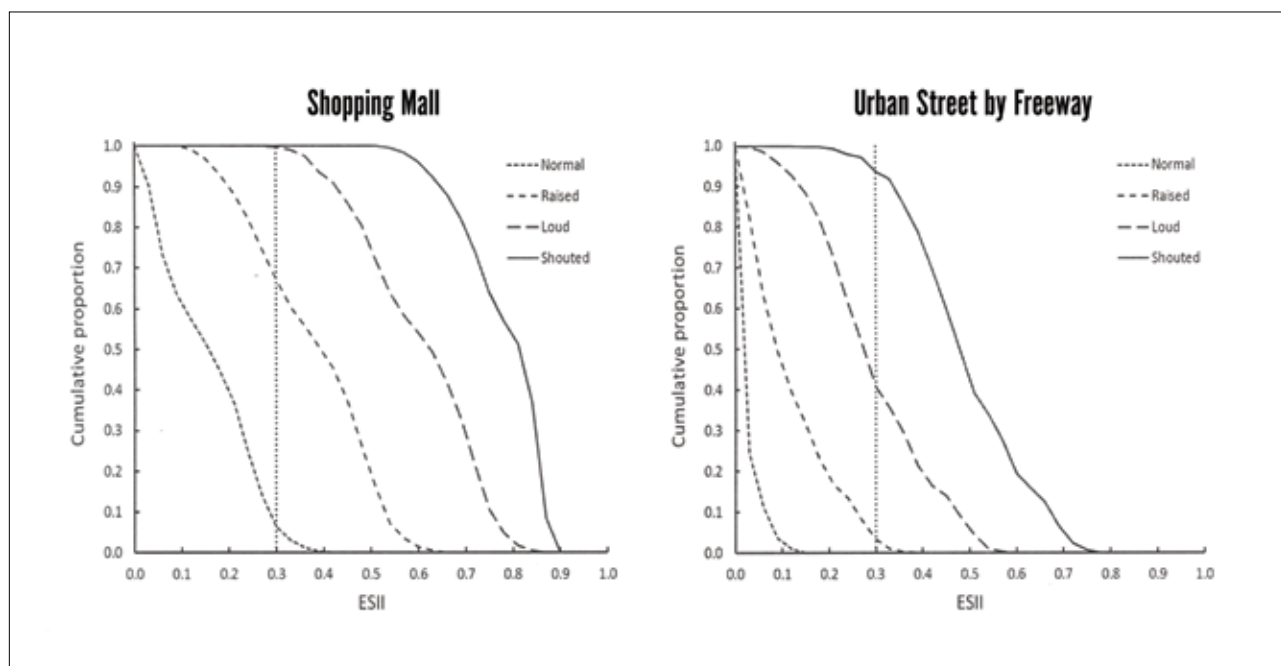
The model used to predict effective performance of essential HC job tasks was based on the standardized Speech Intelligibility Index (SII) (ANSI, 2017). Basically, the value of the SII is determined by the amount of speech that

is audible in a number of frequency bands, and by the importance of the speech information in each band to the overall intelligibility of the speech. The amount of audible speech in each band is multiplied by the importance of the band, and these values are summed to produce the value of the SII.

The amount of audible speech in a band is determined by either the individual's audibility threshold for the band or by the level of noise in the band, whichever is higher. SII values range from 0.00–1.00. The SII at the SRT for meaningful sentences in stationary noise is typically about 0.34 for individuals with normal hearing (e.g., Houtgast, Festen, 2008; Soli et al, 2018a), and the minimum SII for acceptable intelligibility for such sentences in stationary noise is 0.45 (ANSI, 2017).

SII calculations have two important aspects that limit their ability to predict accurately whether an individual's speech recognition ability is adequate to perform essential HC job tasks that require speech communication in real-world noise environments. The SII model assumes that the noise

FIGURE 2. Cumulative distributions of ESII values for four-sec intervals (average=79.5 dB(A)) in a specific real-world noise environment. The distributions display the proportion of intervals with ESII values exceeding the values on the abscissa. The vertical dotted line at an ESII value of 0.3 represents the adjusted minimum ESII criterion for effective speech communication (Soli et al, 2018a). Reprinted with permission from Wolters Kluwer Health, Inc.



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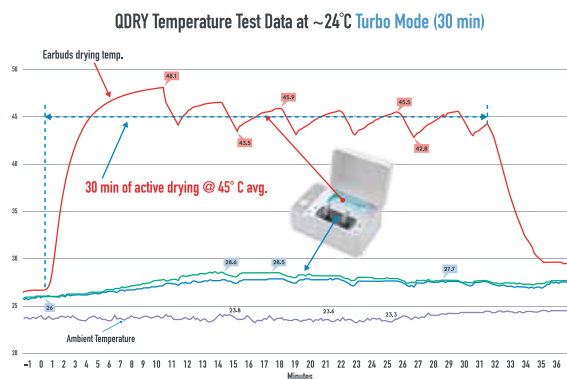
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is stationary, which is not true of most real-world noise environments. The model also assumes that speech intelligibility is based entirely on the audibility of speech in each frequency band. In other words, it does not take into consideration impairment of one's ability to process audible speech information, commonly referred to as the distortion component of hearing loss (e.g., Plomp, 1986).

There is an ample body of audiological research documenting the effects of distortion loss on speech intelligibility, even in individuals with normal pure-tone thresholds (e.g., Houtgast and Festen, 2008). A means of addressing the first limitation is described in this article, while the means of addressing the second limitation are described in our forthcoming second article.

The Extended Speech Intelligibility Index

Rhebergen and colleagues developed and validated the Extended Speech Intelligibility Index (ESII), which enables accurate SII calculations to be made with nonstationary real-world noise (Rhebergen et al, 2006, 2008). Briefly, multiple SII calculations are made for sequential "snapshots" of the nonstationary noise and averaged over the time period of interest. The period of time used in the model to predict an individual's ability to perform essential HC job tasks is four second the time over which a brief two-way communication might occur during performance of the job task.

The distribution of ESII values for all four-sec intervals in a recording of the real-world noise environment reveals how often these values are large enough for an individual with normal functional hearing ability to achieve acceptable intelligibility and communicate effectively. The criterion ESII value suggested in the standard (ANSI, 2017), 0.45, can be adjusted to account for the benefits of spatial release from masking and the opportunity for repetition that can occur in the performance of HC job tasks. The adjusted criterion value is 0.30. [See Soli et al (2018a) for details on the rationale for this adjusted value.]

FIGURE 2 displays the cumulative distribution of ESII values for the four-second intervals from one of the real-world noise environments, an urban street near a highway, where essential HC job tasks are performed. These values have been calculated for a communication distance of one meter using speech levels from the standard for normal, raised, loud, and shouted vocal effort (ANSI, 2017). ESII values larger than the criterion value of 0.30 characterize four-second intervals during which effective speech communication can occur. Note that normal vocal effort is never effective, and raised vocal effort is effective less than 5 percent of the time. Loud vocal effort is effective about 40 percent of the time, while shouted vocal effort is effective over 95 percent of

the time. In other words, in this particular noise environment individuals with normal functional hearing ability can communicate effectively less than half the time at a distance of 1 m with loud vocal effort, although shouting can be effective most of the time.

This characterization of real-world noise environments in terms of their potential impact on effective speech communication for individuals with normal functional hearing is an important step in establishing a valid and evidence-based means of assessing an individual's ability to perform essential HC job tasks in challenging real-world noise environments. More than 260 sound recordings from 24 real-world noise environments where essential HC job tasks are performed have been obtained and analyzed in this manner. The resulting ESII distributions provide a quantitative and objective description of the ability of individuals with normal functional hearing to communicate effectively while performing essential HC job tasks in these environments. These ESII distributions have been posted on the internet (links.lww.com/EANDH/A405) and are freely available to use for screening or for other purposes by audiologists and hearing researchers (Soli et al, 2018a).

Our second article will explain how functional hearing screening results for an individual, together with the ESII distributions for the relevant, real-world noise environments, can be used to predict whether the individual's functional hearing ability may cause safety risks for the individual and for the public. These predictions, unlike previous methods of occupational hearing screening based on diagnostic measures of hearing, are evidence-based and objectively link the screening measures to the essential HC job tasks, providing a stronger audiological foundation for important employment decisions. 

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References

- American National Standards Institute (ANSI). (2017) *Methods for calculation of the Speech Intelligibility Index*. ANSI/ASA S3.5-1997 (R2017). New York: American National Standards Institute.
- Equal Employment Opportunity Commission (EEOC). (1992) *A Technical Assistance Manual on the Employment Provisions (Title 1) of the Americans with Disabilities Act* (Report no. EEOC-M-1A). Washington, DC: US Government Printing Office.
- Goldberg RL, Dirks D, Kramer M, et al. (2001) *Hearing Guidelines*. Report prepared for the California Peace Officers' Standards and Training Commission.
- Harkins K, Ruckstuhl M, Soli SD, et al. (2017) *Analysis of job tasks, critical abilities, and work-place environments for a Federal law enforcement agency*. McLean, VA: Harkcon, Inc.
- Houtgast T, Festen JM. (2008) On the auditory and cognitive functions that may explain an individual's elevation of the speech reception threshold in noise. *Int J Aud* 47:287–295.
- Laroche C, Soli SD, Giguère C, Lagace J, Vaillancourt V, et al. (2003) An approach to the development of hearing standards for hearing-critical jobs. *Noise Health* 6:17–37.
- Laroche C, Giguère C, Vaillancourt V, et al. (2005) Development and validation of hearing standards for Canadian Coast Guard Seagoing Personnel and C&P and land-based personnel. Phase II. Final report to the Department of Fisheries and Oceans under Contract No. F7053-000009.
- Laroche C, Giguère C, Vaillancourt V, et al. (2014) *Review and update of constable selection system hearing standards* (Reference number OSS_00219841). Final report to the Ontario Ministry of Community Safety and Correctional Services.
- Montgomery S, Soli SD, Meyers LS, et al. (2011) *Hearing Standard for Selection of Entry-Level Correctional Officers*. State of California Corrections Standards Authority, California Department of Corrections and Rehabilitation.
- Nilsson M, Soli SD, Sullivan JA. (1994) Development of the Hearing in Noise Test for the measurement of speech reception thresholds in quiet and in noise. *J Acoust Soc Am* 95:1085–1099.
- Plomp R. (1986) A signal-to-noise ratio model for the speech-reception threshold of the hearing impaired. *J Speech Hear Res* 29:146–154.
- Rhebergen KS, Versfeld NJ, Dreschler WA. (2006) Extended speech intelligibility index for the prediction of the speech reception thresholds in fluctuating noise. *J Acoust Soc Am* 120:3988–3997.
- Rhebergen KS, Versfeld NJ, Dreschler WA. (2008) Prediction of the intelligibility for speech in real-life background noises for subjects with normal hearing. *Ear Hear* 29:169–172.
- Soli SD, Giguere C, Laroche C, Vaillancourt V, Dreschler WA, et al. (2018a) Evidence-based occupational hearing screening I: Modeling the effects of real-world noise environments on the likelihood of effective speech communication. *Ear Hear* 39:436–448.
- Soli SD, Amano-Kusumoto A, Clavier O, Wilbur J, Casto K, et al. (2018b) Evidence-based occupational hearing screening: Validation of a screening methodology using measures of functional hearing ability. *Int J Aud* 57(5):323–334.
- Tufts JB, Vasil KA, Briggs S. (2009) Auditory fitness for duty, A review. *J Am Acad Aud* 20:539–557.
- U.S. Department of Homeland Security (2008). Basic Qualifications and Medical Requirements for Border Patrol Agents. www.cbp.gov/xp/cgov/careers/customs_careers/border_careers/application_process/basic_requirements_for_bp.xml#MedicalQualificationRequirements. Accessed May 22, 2017.

Strategies *for* Increasing Medical Community Awareness *of* Audiology

A Call to Action!



BY DON NIELSEN AND DAVID FABRY



Audiologists must educate physicians at every level and specialty, raise awareness of audiology and the importance of hearing health, and become an integral, if not interdependent, team member of PCPs and others who treat seniors. It is your professional responsibility.



With increased competition in the marketplace and changes in regulations allowing for over-the-counter (OTC) direct hearing aid sales to consumers, audiologists are becoming more dependent on hearing aid revenue as their main source of income. Thus, we quickly are realizing the urgency and need for increasing public and medical awareness of audiology.

Typically, audiologists receive little to no training in how to market their profession and differentiate themselves from the competition. Many audiologists expect their professional organizations to assume this responsibility and badger professional organizations to increase awareness of the profession. Professional organizations respond with public relations (media) and public awareness (consumers/public) toolkits, campaigns, and materials. Their well-intentioned efforts are an appreciated necessity, but not a sufficient cure for lack of awareness of audiology. What is missing is a dedicated and persistent effort by the individual audiologists acting locally to raise awareness.

We argue that it is the professional responsibility of individual audiologists to raise awareness of audiology and the importance of hearing health. Don't know how to do that? This article can help give you ideas and plans to start meeting this professional obligation.

Our contention is—increasing public awareness for audiology first requires increased awareness of the importance of hearing health. Increasing the awareness of hearing health requires the understanding and support of the medical community. Audiologists educating the local medical community is crucial to success. Enlightening the medical community about the necessity and superiority of audiological services is also a cost-effective and efficient approach to raising public awareness.

Focus on the Medical Community

People, time, money, and other resources for raising public awareness are limited. Most audiologists try to educate the public or potential patients, not physicians directly. We advocate educating the medical community as the



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more efficient and effective path to raising awareness. Here is why.

People: As shown in TABLE 1, there are 30–48 million people with hearing loss, they are widely distributed geographically, and have no natural gathering or organization. That makes them difficult to reach. Patients often do what their physician recommends.

Physicians: Reaching out to educate physicians is a more efficient task than contacting potential patients. There are 926,119 physicians in the United States, which is less than one-thirtieth the number of potential patients, making the task less daunting. There are 441,735 primary-care physicians (PCPs) in the United States and about 12,000 audiologists seeing patients, or about 37 PCPs per audiologist.

Only 16.8 percent of physicians practice solo, and another 21.4 percent practice in a group of two to five physicians—the remaining 60.8 percent practice in groups of six or more. If we assume an average group size of six for PCPs, that results in about six PCP groups per audiologist. If each audiologist educates six such PCP groups, 97 percent (432,000) of PCPs would know the importance of hearing health and audiologists' role as the primary provider for hearing health.

Because physicians influence where patients receive diagnosis and treatment for hearing loss (Abrams Market Trac IX), educating PCPs will cause a tremendous increase in physician referrals and a significant increase in the number of patients with hearing loss diagnosed and treated by audiologists. Plus, audiologists would be fulfilling their professional responsibility.

There is another productive way to educate physicians and other relevant medical personnel. Auspiciously, they gather at professional meetings and in medical centers where education and continuing education courses are part of the routine. Audiologists must take

POTENTIAL PATIENTS	30–48 MILLION
PHYSICIANS	926,119
PCPs	441,735
AUDIOLOGISTS	12,000

an active role in educating physicians in these environments. This obligation is clearest for audiologists working in medical practices and in medical centers where the opportunities for educating physician and other relevant medical personnel are highest.

TABLE 1. There are far fewer primary-care physicians (PCPs) than potential patients for audiologists to educate.

Education and Interdependency

Comparing adult and pediatric audiology, we see educating physicians and establishing interdependencies works well.

Integration with the Medical Community

The medical community serving adults is undereducated about the importance of early identification and consequences of adult hearing loss. Audiologists have failed to make themselves an integral part of the PCP team despite the growing number of senior patients. Pediatric physicians understand the importance of early identification and treatment of pediatric hearing loss. Audiologists work with pediatricians as an integral part of their team.

Mandatory Screening

Two to three of every 1,000 children (0.2–0.3 percent) are born with detectable hearing loss, and yet newborn hearing screening is required because physicians understand the link between hearing loss and language development in children. Strikingly, 15 percent of adults report some trouble

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hearing, and age is the strongest predictor of hearing loss. However, the only required screening for hearing loss and balance for seniors is for Medicare Part B beneficiaries in their initial “Welcome to Medicare” exam.

We question if that requirement is commonly practiced or enforced. Physicians do not understand problems caused by adult-onset hearing loss and benefits for early diagnosis. As with children, routinely required hearing screening for senior adults could provide a vehicle for physician and patient education and earlier diagnosis and treatment.

Screening Follow-Ups

We send neonatal hearing screening failures to an audiologist for sophisticated diagnostic testing. Adult patients with hearing problems may choose where to receive treatment: physician, audiologists, dispenser, direct access, or snake oil salesman.

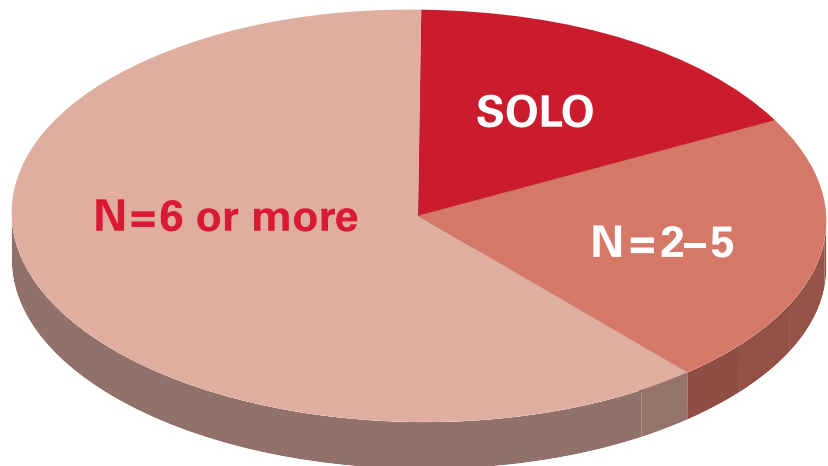
Audiologists guide, monitor, and provide pediatric hearing services until adulthood. Long-term adult care is arbitrary, often depending on how the patient enters the system.

Cochlear Implants

Adult cochlear implant (CI) audiology shows educating physicians and establishing interdependencies work just as well for adults as for children. CI surgeons work hand in hand with CI audiologists for diagnostics, follow-up programming, and rehabilitation. Audiologists are an important part of the CI team because CI surgeons learn the importance of audiologists during fellowship training to qualify as implant surgeons.

To Summarize

A higher percentage of patients with hearing loss are identified and treated in systems that have audiology as the primary-care provider such as pediatrics. For audiologists to become the



primary-care provider for hearing loss, it is crucial that:

- Physicians understand the importance of early identification and treatments for hearing loss for seniors as they do for children.
- Audiologists achieve hearing health gatekeeper status in the medical community controlling the diagnostic, referral and follow-up processes in senior adults as they do for children and CI patients of all ages.
- To employ audiologist-qualified, evidence-based, sophisticated diagnostic testing and rehabilitation for senior adults, as is done in pediatric audiology and CI audiology.

Audiologists must educate physicians at every level, raise awareness of audiology and the importance of hearing health, and become an integral team member of PCPs and others who treat seniors. It is your professional responsibility.

FIGURE 1. Because physicians most often practice in groups of six or more, if each audiologist educated six physician groups, 97 percent of PCPs would know the importance of hearing health and audiologists' role as primary provider for hearing health.

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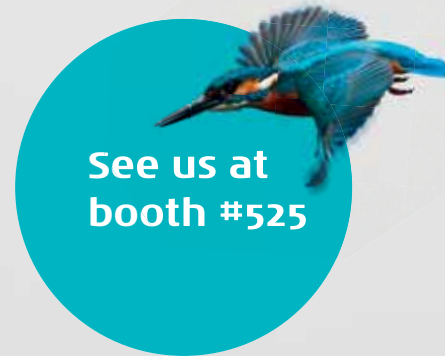
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Different Approaches

Audiologists do well when integrated with physicians and have a solid physician referral source as in pediatric audiology, audiology in medical center ENT departments, and audiology with ENT in private practices. When establishing this integration and education, we must realize different environments lend themselves to different approaches. Below are examples of what to do in diverse settings.

Medical Center Audiologists

Audiology is already an integral part of ENT in many hospitals. In progressive hospitals like Henry Ford Hospital and the Mayo Clinics, audiologists are now the hospital-wide primary-care providers for adult hearing health care. How do we spread this concept throughout other medical centers?

1. Establish audiology as an integrated and crucial component to the success in the ENT department. Audiology and otology have an interdependent relationship. They rely on each other for success.
2. Present regularly at grand rounds and in other departments in the medical center to raise awareness.
3. Work determinedly to get hearing health an increased role in medical education, based on hearing health's

growing prevalence and newly recognized importance to overall health and quality of life.

4. Constantly lecture in medical student courses, and in non-ENT resident training programs to raise awareness of audiology and importance of hearing health, early diagnosis and routine hearing health checks for Medicare annual wellness exams.
5. Increase efforts to get the importance of hearing and balance health a more meaningful place in an increased number of medical textbooks. Volunteer to co-author textbook chapters.

University medical center audiologists are best positioned to educate the medical community at all levels and specialties. Because they have the best opportunity to educate the medical community, they have a special professional responsibility to do so.

Private Practice and University Audiology Clinics

Standalone private practices and audiology clinics on nonmedical campuses have strong external competition, yet they depend mainly on friends and family referrals and marketing. They would gain a competitive advantage from physician education and regular physician referrals. They have the most to gain and should accept educating physicians as a routine professional responsibility. Here is how to accomplish that.

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7 Key Comorbidities of Hearing Loss

Many studies have linked hearing loss to serious conditions, such as Alzheimer's disease, clinical depression, heart disease and more. These linkages are often referred to as comorbidities – the simultaneous presence of two or more chronic conditions in an individual¹.

1 Social Isolation and Loneliness

4 to 6 weeks²: Time passed before study participants reported feeling less social isolation once they started using hearing aids.



2 Depression

1.63 per 25 dB of hearing loss³:

The odds of an individual with hearing loss self-reporting any type of depressive symptom.



3 Falls

1.4 per 10 dB of hearing loss⁴:

For every 10 dB of hearing loss, odds of reporting a significant fall increase 1.4 fold in individuals age 40-69.



4 Cardiovascular Disease **85%** of diagnosed strokes...⁵

are associated with people who had flat or low-frequency sloping losses on an audiogram, reflecting either a vascular pathology in the cerebrovascular system or a generalized vascular compromise affecting both hearing and cardiovascular structures.



5 Diabetes

1.4 the hazard ratio...⁶

for developing hearing loss among those with diabetes and 1.04 for those with pre-diabetes.



6 Cognitive Impairment and Dementia **1.2 per 10 dB of hearing loss⁷:**

The risk ratio increase for all-cause dementia among those with hearing loss.



7 Mortality

67 years or older...⁸ is the age of

participants in a landmark study that found an increased prevalence of mortality among those with hearing loss.

Ultimately, hearing loss can provide an important indicator for additional chronic conditions and it's imperative that individuals seek treatment from professionals earlier than later to avoid becoming part of a statistic. Download this infographic and start the conversation with your patients: HamiltonCapTel.com/StayConnected

¹ Abrams, H. hearingreview.com/2017/05/new-webinar-hearing-loss-associated-comorbidities-know/

² nursingtimes.net/hearing-loss-leads-to-social-isolation/5001036.article.

³ Mener DJ, Betz J, Genther DJ, Chen D, Lin FR. Hearing loss and depression in older adults. J Am Geriatr Soc. September 2013; 61(9):1627-1629. Available at: ncbi.nlm.nih.gov/pmc/articles/PMC3773611.

⁴ Lin FR, Ferrucci L. Hearing loss and falls among older adults in the United States. Arch Intern Med. February 2012;172(4):369-371. Available at: ncbi.nlm.nih.gov/pmc/articles/PMC3518403/.

⁵ Friedland DR, Cederberg C, Tarima S. Audiometric pattern as a predictor of cardiovascular status: Development of a model for assessment of risk. Laryngoscope. March 2009;119(3):473-486.

⁶ Kim M-B, Zhang Y, Chang Y, et al. Diabetes mellitus and the incidence of hearing loss: A cohort study. Int J Epidemiol. April 2017; 46(2): 717-726. Available at: academic.oup.com/ije/article-abstract/46/2/717/2452364?redirectedFrom=fulltext.

⁷ Lin FR, Metter EJ, O'Brien RJ, Resnick SM, Zonderman AB, Ferrucci L. Hearing loss and incident dementia. Arch Neurol. Feb. 2011; 68(2):214-220. Available at: jamanetwork.com/journals/jamaneurology/fullarticle/802291

⁸ Fisher D, Li C-M, Chiu MS, et al. Impairments in hearing and vision impact on mortality in older people: The AGES-Reykjavik Study. Age Ageing. Jan. 2014;43(1):69-76.

Primary-Care Physician Clinics

Visit local PCP clinics to educate them at least two to four hours per week. Great for the profession, beneficial for the practice.

We acknowledge that the audiologist in private practice or in the university setting may not have the bandwidth to commit precious hours to accomplish this. Universities may have a communications department wherein someone might already be in charge of community outreach and could distribute information regarding audiology targeting area physician practices.

An alternative solution, particularly for private practice audiologists, could be to hire someone part time with the skills and desire to interact in this manner. In addition, targeting certain practices instead of trying to reach all potential providers may be a more productive use of time. It is a fine line as the goal for private practice is to differentiate your practice from other competition. However, extolling your practice's virtues should not be coupled with negative comments of others, which could create negative associations and feelings of distrust about the profession.

Primary-Care Groups

Educate local PCP groups' front-desk staff and physicians with newsletters, articles, fact sheets, and lunch and learns.

A caveat regarding lunch and learns: the last thing we want is for you to feel as though you are wasting time, money, and effort to essentially feed an overworked staff for maybe a few minutes of face-to-face time with the office manager, physician, or physician assistants. It is important to assess the overall receptiveness of the office before blindly committing time and money to such an endeavor.

Audiology Students

Educate AuD students on the importance and responsibility of educating

the medical community. Give them experience doing so.

Track your progress. How will you know if your hard work is paying off if you are not asking your patients why they decided to come in?

Nurture these relationships. To achieve long-term goals, consistency is required.



Audiology professional organizations will accomplish more for the profession and patients if they pool their resources and work together on raising awareness.

All Audiologists

Assume educating the local medical community as a high priority professional responsibility.

- Publish in medical journals to increase visibility and stature of audiology.
- Jointly present at local, state, and national medical meetings with a physician.
- Widely distribute one-page summaries of peer-review articles to physicians, especially articles published in peer-reviewed medical journals.

Pair with pediatricians, CI physicians, and ENTs who already work with audiologists as primary hearing health-care providers to convince other physicians it is the best model.

Audiology Professional Organizations

Audiology professional organization will accomplish more for the profession and patients if they pool their resources and work together on raising awareness. We recommend they jointly create and fund an independent nonprofit organization, the mission of which would be to raise awareness of audiology, the importance of hearing health, and to make audiologists hearing health gatekeepers and hearing health primary-care providers. As part of this mission, the organization would facilitate audiologists becoming interdependent team members of PCPs and others treating seniors. Here are a few projects such an organization could do to raise physician awareness:

- Work with audiologists across the United States to staff booths and presentations at local, state, and

national medical professional meetings to raise awareness of audiology and importance of hearing health, early diagnosis, and routine hearing health checks for Medicare annual wellness exams.

- Constantly push education of the medical community about senior hearing health as a high priority and an urgent responsibility for the audiology profession.
- Without waiting for audiologists to ask for them, regularly provide materials and content to audiologists and their business managers to educate the physician community and urge them to use the materials.
- Make physician education and collaboration an integral and vital part of the AuD education program.

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Suggested Topics

Medical, educational materials must be specific, free of jargon, grounded in evidence-based research and translated into quality patient care. Explain how the physician will benefit and deliver materials in a familiar format. Below are topics to try.

- Why screening patients at an earlier age and intervening quicker in remediation and management of hearing loss will save an accountable care organization (ACO) money—right care, right provider, right place, right time.
- Audiologists as an integral part of the physician's team of trusted advisors
- The urgency for physicians and other health-care professionals to shore up their ability to communicate with older adults
- Hearing loss as a triple threat to patients: (1) communication problems, (2) interference with a patient's ability to be treated for medical conditions, and (3) acceleration of some disabilities
- The importance of providing low-cost, noncustom amplification in your clinic serving older adults
- The consequences of untreated hearing loss and untreated balance problems
- The linkage between hearing impairment and numerous medical conditions
- Why an audiologist is the first person your patient should see if his or her hearing changes
- The wide range of evidence-based services provided by doctors of audiology
- Why it requires a battery of tests to diagnose hearing loss and what each component adds
- Why hearing aid fitting is complex and the benefits of doing it correctly
- Why hearing aids are not like reading glasses
- The role of the brain in hearing and hearing loss
- The benefits of two ears versus one

Conclusion

Audiologists are quickly realizing the urgent need for increasing public and medical awareness of audiology. We propose that it is the professional responsibility of individual audiologists to raise awareness of audiology and the importance of hearing health, and that action by individuals at the local level will be most effective.

People, time, money, and other resources for raising public awareness are limited. Most audiologists try to educate the public or potential patients, not physicians. Increasing public awareness for audiology first requires an increased awareness of the importance of hearing health. Increasing the awareness of hearing health requires the understanding and support of the medical community. We advocate educating the medical community as the more efficient and effective path to raising awareness. To increase the number of people receiving needed diagnosis and therapy, it is a necessity.

Audiologists do well when integrated with physicians and have a solid physician referral source as in CIs, pediatric audiology, audiology in medical center ENT departments, and audiology with ENT in private practices. By observing CI processes and comparing adult and pediatric audiology, we know educating physicians and establishing interdependencies between audiologists and the medical community works to make audiologists the primary-care provider for hearing health and increases well-qualified referrals.

Audiologists must educate physicians at every level and specialty, raise awareness of audiology and the importance of hearing health, and become an integral, if not interdependent, team member of PCPs and others who treat seniors.

It is your professional responsibility. Without this effort, audiologists may find their profession outmaneuvered by the competition, and their patients turning to less-qualified, product, price, and profit-driven providers. 

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HAT Awareness

• Efficiency May Be the Key to Increased Use •

Most patients with hearing loss do not learn about hearing assistance technologies (HATs) from their audiologist. A routine use of a HAT needs checklist can provide an efficient means to introduce beneficial products to patients and help ensure greater audibility.



As audiologists are well aware, even the highest levels of hearing aid technology fit to best practice standards (Academy, 2006; ASHA, 2006) fail to meet the daily listening demands of many patients with hearing loss (Lesner, 2003; Laplante-Levesque et al, 2013). Indeed, as TABLE 1 reveals, the degree of hearing deficit remaining post-hearing aid fitting can be substantial.

Hearing assistance technologies (HATs)—also known as assistive listening devices (ALDs), designed to improve speech understanding, enhance the reception of auditory media, or heighten the awareness of environmental sounds or warning signals—have been around for many years, and their value in addressing specific listening needs can be substantial. A full review of these device types and their uses can be found in a variety of audiology texts (e.g., Atcherson et al, 2015; Montano and Spitzer, 2014; Tye-Murray, 2014).

Most patients unfortunately do not hear of HATs from their audiologists (Clark et al, 2017; Stika et al, 2002), and their use among adults frequently remains low (Aberdeen and Fereiro, 2014; Hartley et al, 2010). As Atcherson and his colleagues (2015) note, it is indeed unfortunate when hearing loss remediation ends in the fitting of hearing aids or cochlear implantation without further consideration of the limitations of these devices and the further assistance available.

HATs also have been shown to be beneficial to those whose hearing loss has not progressed to a degree warranting amplification. In addition, some form of hearing assistance may be beneficial for the estimated 26 million U.S. adults who have normal hearing thresholds on routine audiometrics in the presence of expressed hearing difficulties (Beck et al, 2018).

BY JOHN GREER CLARK AND BRITTANY GILB

HEARING LOSS LEVEL †	TYPICAL PRESCRIBED GAIN ‡	RESIDUAL HEARING DEFICIT IN dB HL
16 to 25 Slight	4 to 10	12 to 15
26 to 40 Mild	10 to 20	16 to 20
41 to 55 Moderate	20 to 30	21 to 25
56 to 70 Mod/Severe	30 to 40	26 to 30
71 to 90 Severe	40 to 50	31 to 45
91+ Profound	46+	45 to 55

SOURCE: Clark and English, 2019, used with permission
† Hearing loss levels in dB HL based on 3-frequency PTA using Goodman (1965) descriptors as modified by Clark (1981).
‡ Gain based on sensory/neural hearing loss. Conductive and mixed hearing losses will tolerate more gain and result in less residual deficit.

TABLE 1. Hearing Deficit Following Prescribed Hearing Aid Gain

Full Measure of Assistance Is Not Always Provided

Treatment for those with hearing difficulties should begin with selection of appropriate amplification and HATs (Academy, 2006). In spite of this, when patients come to us for guidance, we often fail to present the augmentative technologies that can improve audition beyond the hearing aid fitting or cochlear implant mapping, or when hearing aids are not yet needed.

In 2002, Stika et al found that only 33 percent of surveyed hearing aid users reported audiologists informed them of HATs. Their finding suggests that either two-thirds of audiologists are not including the topic of HATs in their regular provision of care or are

not presenting this information in a meaningful manner that allows for subsequent patient recall.

More recently, Clark et al (2017) found that only 13 percent of surveyed audiologists routinely discuss HATs with their patients (routinely defined as 75 percent to 100 percent of the time). Moreover, only another 38 percent noted they discuss HATs with their patients more than half the time. Yet, Palmer (2009) notes that patients expect that we are availing ourselves of the latest technologies and adhering to established best practice protocols to ensure satisfactory outcomes. There is truly no personal or professional defense that can be given when one fails to meet these patient expectations of professional practice (Clark et al, 2010).

Research shows a clear need for greater inclusion of HAT discussions on a routine clinical basis. By informing patients of the wide array of HATs available, audiologists have the potential to enhance hearing ability for patients, ensure patients are alerted to important signals and warnings in their lives, and improve patients' overall quality of life.

Effective Means to Prompt HAT Discussions

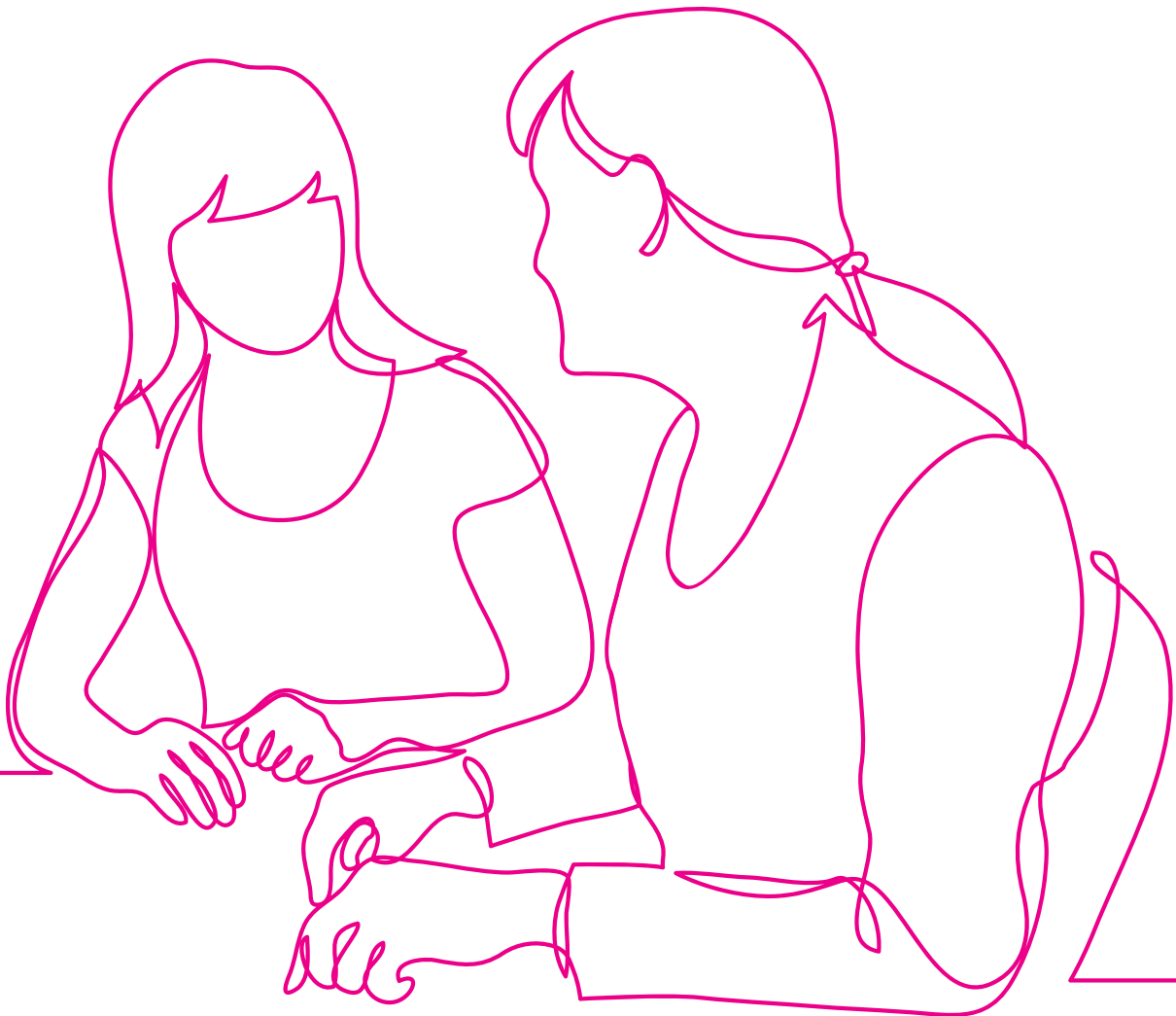
We believe that the relatively infrequent use of HATs is not related as much to a lack of motivation to use HATs as it is to the failure of audiologists to routinely discuss their

availability. It is understandable that altering an established clinical routine presses on the time constraints that many face with appointment schedules. There is, however, one simple addition audiologists can include to efficiently and effectively integrate HATs into clinical routines. The Hearing Loss Association of America (2010) recommends the use of a HAT-focused self-assessment tool to determine the need for and selection of a variety of HATs. Unfortunately, the survey by Clark et al (2017) on adult hearing loss rehabilitation practices suggested that 94 percent of audiologists do not use any form of HAT self-assessment tool to facilitate the discussion or selection of hearing assistance technologies.

Each patient we see has a unique set of feelings surrounding the acquisition of hearing loss. Some may feel

embarrassment, denial, or discomfort in sharing their perceived communicative struggles in various environments. In addition, some patients may not even realize they struggle in a particular area until prompted. A HAT Needs Checklist (see TABLE 2, PAGE 77) can be particularly helpful for those patients who may not provide detailed information about the situations in which they struggle to hear or communicate. This checklist ensures that all important areas of life are addressed consistently so that audiologists can make informed recommendations on the potential use of HATs.

A HAT Needs Checklist is an effective means to frame discussions about assistive technologies in a clinically time-sensitive manner. Although a HAT Needs Checklist can be beneficial to use at any point in the treatment



process, for those fit with hearing aids, it may be most effective if administered at the patient's final post-fitting appointment.

According to Skafté (2000) and Clark et al (2017), the predominant protocol for hearing aid dispensing brings the process to completion for most patients within three or fewer appointments. After these appointments, audiologist-patient communication may be limited. Once patients have a greater feel for their hearing and communication abilities and limitations with amplification, HAT exploration can be more beneficial. If routine hearing evaluation reveals normal hearing sensitivity in the presence of hearing complaints (Beck et al, 2018), the HAT Needs Checklist may be used most effectively during post-evaluation discussions.

Conclusion

Discussing HATs with patients gives them a better understanding of devices that will enhance their auditory levels. This may include adults who have normal hearing thresholds on routine audiometrics in the presence of

expressed hearing difficulties. Audiologists should make this HAT discussion a routine practice to explore the best remedy for hearing loss. 📞

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References

- Aberdeen L, Fereiro D. (2014) Communicating with assistive listening devices and age-related hearing loss: Perspectives of older Australians. *Cont Nurse* 47(1–2):119–131.
- American Academy of Audiology. (2006) Audiologic management of adult hearing impairment: Summary guidelines. *Audiol Today* 18:32–36.
- American Speech–Language–Hearing Association (ASHA). (2006) Preferred Practice Patterns for the Profession of Audiology [Preferred Practice Patterns]. www.asha.org/uploadedfiles/pp2006-00274.pdf. Accessed December 2, 2018.
- Atcherson SR, Franklin CA, Smith-Olinde (2015). *Hearing Assistive and Access Technology*. San Diego: Plural Publishing.
- Beck DL, Danhauer JL, Abrams HB, Atcherson SD, Brown DB, Chasin M, Clark JG, DePlacido C, Edwards B, Fabry DA, Flexer C, Fligor B, Frazer G, Galster JA, Gifford L, Johnson CE, Madell J, Moore DR, Roeser RJ, Saunders GH, Searchfield GD, Spankovich C, Valente M, Wolf J. (2018) Audiologic considerations for people with normal hearing sensitivity yet hearing difficulty and/or speech-in-noise problems. *Hear Rev* 25(10):28–38.
- Clark JG. (1981) Uses and abuses of hearing loss classification. *ASHA* 23:493–500.
- Clark JG, English KM. (2019) *Counseling-Infused Audiologic Care*, 3rd ed. Cincinnati: Inkus Press/Amazon.com.
- Clark JG, Huff C, Earl B. (2017) Clinical practice report card: Are we meeting best-practice standards for adult hearing rehabilitation. *Audiol Today* 29:15–25.
- Clark JG, Kricos P, Sweetow R. (2010) The circle of life: A possible rehabilitative journey leading to improved patient outcomes. *Audiol Today* 22(1):36–39.

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HAT NEEDS CHECKLIST

This checklist is designed to help you identify areas in which you may need additional help. Hearing difficulties may be experienced in the presence of normal hearing, or when hearing aids cannot fully restore existing hearing loss.

It is for these situations that alternative or supportive hearing assistance technologies were developed. To help identify your needs, please complete the following checklist.

INSTRUCTIONS:

Indicate which sounds and situations are difficult for you by using the scale below. If you use hearing aids, complete this checklist indicating difficulties that still remain even with use of your hearing aids.

In completing this form consider how frequently you have difficulty hearing the indicated sound or hearing in the indicated situation. Within the parentheses put an "N" (never), "S" (sometimes), "O" (often) or an "A" (always) to indicate the frequency of difficulty.

N—Never **S**—Sometimes **O**—Often **A**—Always

HOME	WORK	OTHER	DESCRIPTION
			Hearing my telephone ring
			Hearing conversations on the telephone
			Hearing my alarm clock
			Hearing someone at the door
			Hearing the television, stereo, or radio
			Hearing the smoke detector or fire alarm
			Hearing one-on-one conversation
			Hearing in small groups (5 or fewer people)
			Hearing in large groups (6 or more people)
			Hearing at a meeting with one main speaker
			Hearing in a place of worship
			Hearing while driving or riding in a car
			Hearing the turn signal on my car

SOURCE: Clark and English (2019). Used with permission.

TABLE 2. Hearing Assistance Technologies Needs Checklist.

Goodman A. (1965) Reference zero levels for pure-tone audiometer. *ASHA* 7:262–263.

Hartley D, Rochtchina E, Newall P, Golding M, Mitchell P. (2010) Use of hearing aids and assistive listening devices in an older Australian population. *J Am Acad Audiol* 21:642–653.

Hearing Loss Association of America. (2010) Policy Statement: Hearing Assistance Technologies. hearingloss.org/sites/default/files/docs/hlaa_policystatement_hat.pdf. Accessed November 12, 2017.

Laplante-Levesque A, Jenson LD, Dawes P, Nielson C. (2013) Optimal Hearing Aid Use: Focus Groups with Hearing Aid Clients and Audiologists. *Ear Hear* 34(2):193–202.

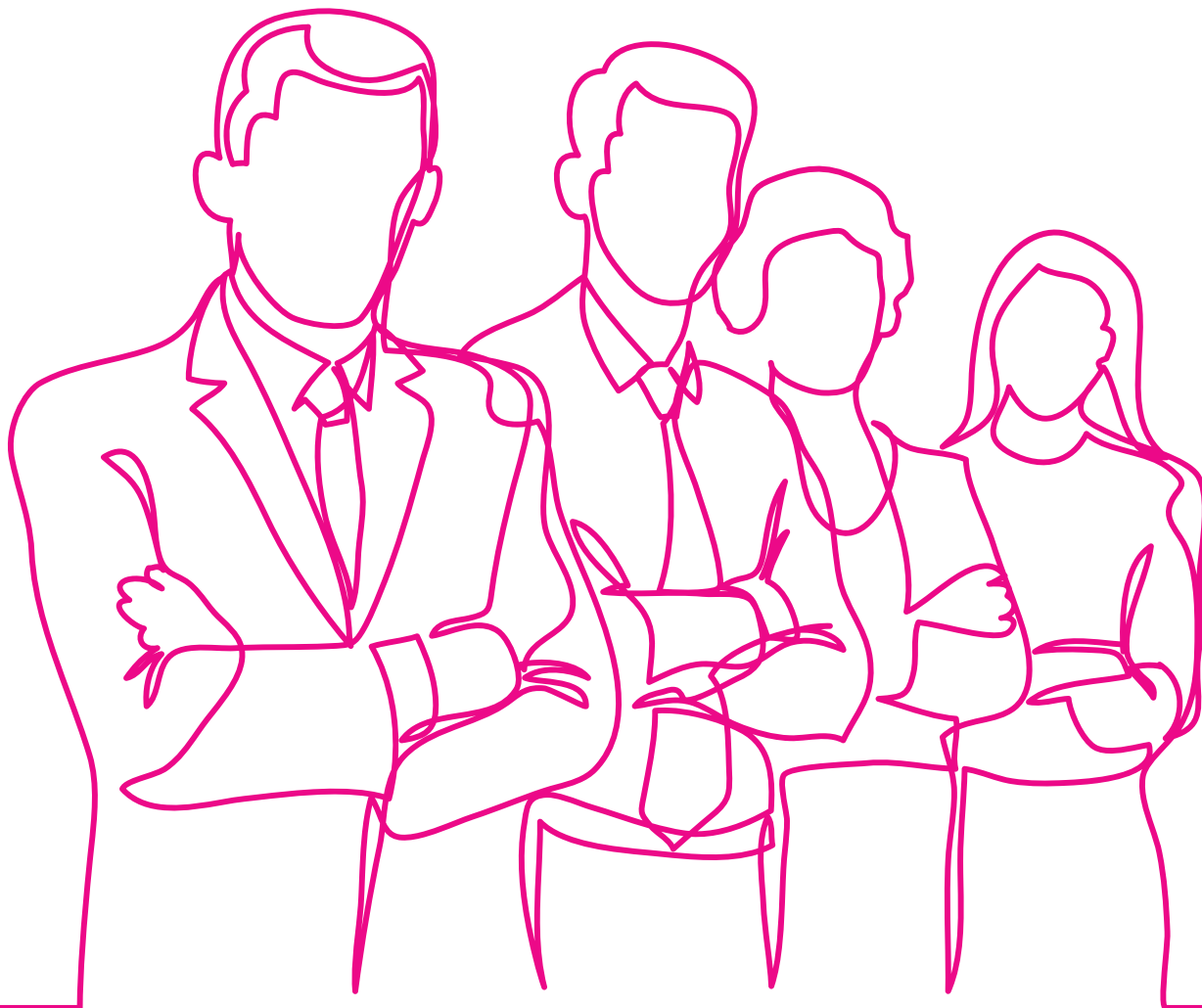
Lesner SA. (2003) Candidacy and management of assistive listening devices: special needs of the elderly. *Intl J of Audiol* 42:S68–S72.

Montano JJ, Spitzer JB. (2014) *Adult Audiologic Rehabilitation*, 2nd ed. San Diego: Plural Publishing.

Skafted MD. (2000) The 1999 Hearing instrument market—The dispenser's perspective. *Hear Rev* 7(6):40.

Stika CJ, Ross M, Cuevas C. (2002) Hearing aid services and satisfaction: The consumer viewpoint. *Hear Loss* (SHHH, May/June):25–31.

Tye-Murray N. *Foundations of Aural Rehabilitation: Adults, Children and Their Family Members*, 4th ed. Stamford, CT: Cengage Learning.



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Hone Your Skills for a Great Interview with the Press

By Vicki Bendure

Great interviews don't just happen. They have years of training behind them. While some people are naturally outgoing, have great interview instincts, and can pull off successful interviews with little training, that isn't the case for most people. And, even after years of training, there are those who need constant work and still get jitters even after a lot of experience.

My friend and neighbor, Willard Scott from the *Today Show* has said numerous times that, in all of the years he was on TV, he never got over being nervous. I've watched him over the years and, although his nerves may have persisted, his on-camera abilities improved dramatically. Experience is the key to

great interviews and practicing the necessary skills is a must.

Take every opportunity to practice. You can do this by doing interviews with your local television station, being interviewed on small podcasts, doing interviews with your local print and online reporters, and meeting with key influencers.

There are a few basic skills that are key to general interviews.

Speaking Ability

Good speaking skills are important for all aspects of business, and everyone benefits from developing great communication skills. While writing skills are equally important, you can't hide behind a laptop and expect to have successful media placements

or great interviews. If you want press coverage, you must not only be able to successfully pitch and communicate your story to media, you also need to deliver a great interview.

Speaking in front of groups is helpful in honing interview skills. You can practice eliminating junk verbiage ("uhms," and "ahs," etc.). These are distracting in interviews. You'll also learn how to speak concisely. Toast Masters is still around in communities across the United States. They hold meetings in the evenings and at lunch time so that working participants can get there. It's an opportunity to stand up in front of strangers and talk about something important to you. It provides a chance for you to hone your

speaking skills, remove junk verbiage and begin to feel comfortable in front of an audience.

Practicing actual interviews is very important, and it is important that you don't know the questions—it's best to learn to think on the spot. Do make sure you've prepared a list of possible questions and answers in advance and then listen to the interviewer and think before you speak. While some stories can be corrected before they run, it's better to work hard at not making mistakes.

Brevity

While one- or two-word answers are not acceptable and make it very hard on the interviewer, you must get your key messages down into concise sound bites. Rambling during interviews is just as frustrating to reporters as one or two-word answers. Your key messages should be concise and to the point, and they should also answer the question.

Practice at home, practice driving to work, practice during any down time. Have your children, spouse or a friend record you with their phone. Review the video honestly, make note of things you can improve and continue to practice.

Active Listening

So many people go into interviews with pre-conceived ideas on what they're going to say. While you should have practiced—written down potential questions and practiced the answers, the interviewer may ask a question you haven't thought about.

A breaking news story may have prompted a different question, or the interviewer may ask a question you've thought of but in a different way. Don't be thrown by the questions. If you've practiced all possibilities and you're trained to think and answer on the fly, listen to the reporter and answer his/her specific question. You can always bridge a

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response that goes back to your key messaging by answering the question but adding, "what's important to remember though is..." or "let me put it this way..." or "keep in mind that..." By bridging, you're basically answering the reporter's question and steering the interview back to what you'd like to talk about.

Your Audience

If you're speaking to a physicians' magazine, a journal, or an industry outlet, it's fine to speak technically; however, if you're doing an interview with a general interest outlet, you have to speak in laymen's terms and avoid jargon and technical terms. You don't want your message to get lost or so overwhelm the reporter that the story never runs.

Do your homework prior to the interview so you understand the audience as well as what the reporter typically covers and what areas of interest he or she has. If you find out that the reporter is a consumer or investigative reporter, the interview is going to be very different

than a simple education piece. If you can't find everything you need on the reporter, contact him or her in advance and ask. Tell the reporter that you want to be prepared and make the best use of his or her time. You can ask for e-mail questions in advance. They may or may not be able to do this but it's at least worth the ask.

After the interview, feel free to follow up. If you made a misstatement, correct it immediately. If there was a question you couldn't answer, get back to the reporter as soon as possible with the answer.

Once the interview has run, feel free to thank the reporter. It's a good way to follow up and maintain a positive relationship. If you're not happy with the interview, follow up with whatever was inaccurate. Do not provide negative input over minor things that went wrong.

Remember, maintaining a good relationship is key to ongoing coverage. Berating a reporter or getting angry over a bad interview isn't in the best interest of the interviewee. Remember that for many viewers, listeners or readers, they may not recognize the inaccuracy. If there's a blatant error that is significant, ask to have it corrected immediately.

If the inaccuracy is marginal, constructively point out to the reporter what was wrong or incorrect and leverage the interview to learn where



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you could have improved. Reach out to the reporter to see if he/she might do a follow up in the near future or pitch another story that will provide an opportunity for the interview you want to see.

Use the interview to your best advantage as social media content. You can write a lead-in that identifies any problems you see with the interview or has your corrections. The fact that the news media is interviewing you lends a lot of credibility to your patient base and your stakeholders. 

Vicki Bendure is president of Bendure Communications, Inc. If you have questions or need additional information, please e-mail Vicki Bendure at Vicki@bendurepr.com.

You can also find several resources including a Public Relations Tool Kit, press release templates, and more, on the Academy's website (www.audiology.org/get-involved/public-awareness).



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Coding Update: Contralateral Routing Device

By Kristiina Huckabay

The American Academy of Audiology (the Academy) and others recently requested revisions for codes and code descriptors in the CROS/BiCROS family and Centers for Medicare and Medicaid Services approved many of the proposed changes. The groups requested the changes to reflect changes in CROS/BiCROS technology.

CROS—contralateral routing of signal—systems are traditionally fit when a patient has unaidable hearing loss in the poorer ear and normal hearing in the better ear, whereas BiCROS—bilateral microphones with contralateral routing of signal—hearing aids are fit when a patient has unaidable hearing loss in the poorer ear and aidable hearing loss in the better ear. Both types of systems aid the listener by transmitting signals coming from the side with poorer hearing to the side with better hearing to overcome the head shadow effect.

The experienced clinician may recall that traditional wireless CROS and BiCROS technology were dedicated device pairs where the signal was wirelessly transmitted from an offside microphone (i.e., transmitter) to either a receiver or a hearing aid/receiver worn on the better ear. If the patient had normal hearing in one ear and unaidable loss in the other ear, a CROS system was ordered that did not provide amplification to the good ear and the system only served to transmit signals from the unaidable side to the ear with normal hearing. If the patient had aidable hearing loss in the better ear and unaidable loss in the poorer ear,

then a BiCROS system was ordered where a transmitter was placed on the poorer ear and a hearing aid/receiver (that could be adjusted to fit the configuration of hearing loss in the better ear, while also receiving a signal from the transmitter) was fit on the better ear.

Current contralateral routing technology can be programmed in a CROS or BiCROS configuration where the hardware is the same, but the programming determines the functionality (i.e., routing) of the signal between the two devices. In addition, current hearing aid technology allows the clinician to dispense a contralateral routing device to an existing CROS-compatible hearing aid when clinically applicable. These changes in technology necessitated new codes in the Healthcare Common Procedure Coding System (HCPCS) system to clarify that the programming is what differs, whereas, the actual hearing devices can be the same.

The following codes and descriptions will increase coding specificity and became effective on January 1, 2019. The new code set also creates a mechanism to bill the unique scenario when a patient loses hearing in one ear, which only requires the addition of a contralateral routing device (i.e., transmitter) on the poorer ear, to be programmed to an existing CROS-compatible device already worn on the better ear.

New Codes

V5171 Hearing aid, contralateral routing device, monaural, in the ear (ITE)

V5172 Hearing aid, contralateral routing device, monaural, in the canal (ITC)

V5181 Hearing aid, contralateral routing device, monaural, behind the ear (BTE)

V5211 Hearing aid, contralateral routing system, binaural, ITE/ITE

V5212 Hearing aid, contralateral routing system, binaural, ITE/ITC

V5213 Hearing aid, contralateral routing system, binaural, ITE/BTE

V5214 Hearing aid, contralateral routing system, binaural, ITC/ITC

V5215 Hearing aid, contralateral routing system, binaural, ITC/BTE

V5221 Hearing aid, contralateral routing system, binaural, BTE/BTE

Updated Code Descriptions

V5200 Dispensing fee, contralateral, monaural

V5240 Dispensing fee, contralateral routing system, binaural

V5190 Hearing aid, contralateral routing, monaural, glasses

V5230 Hearing aid, contralateral routing system, binaural, glasses

Deleted Codes

V5170 Hearing aid, CROS, ITE

V5180 Hearing aid, CROS, BTE

V5210 Hearing aid, BiCROS, ITE

V5220 Hearing aid, BiCROS, BTE

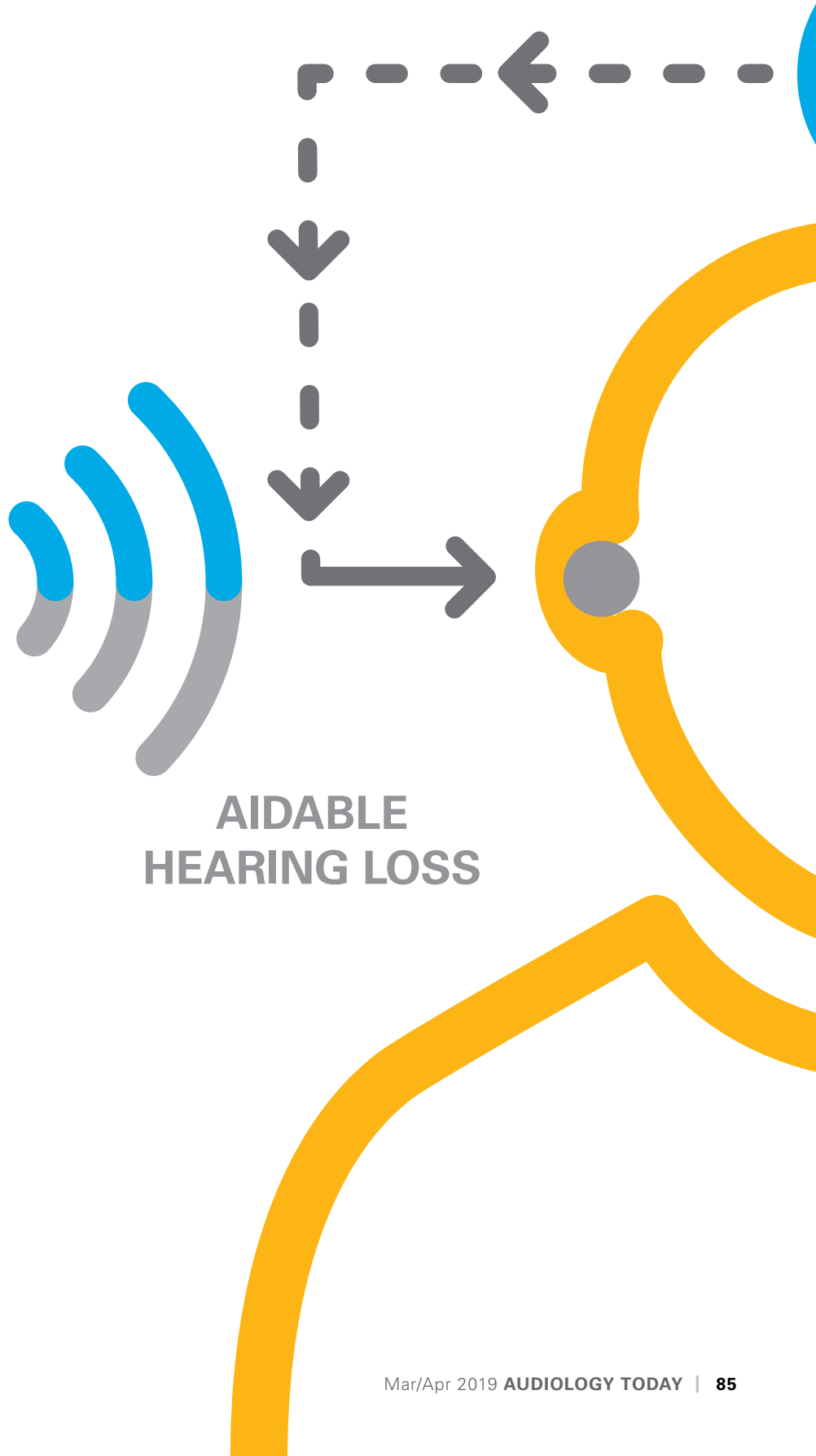
V5171, V5172, V5181, V5190 may be used when dispensing a contralateral routing device to a patient who already wears a CROS-compatible hearing aid in the better ear. The clinician should choose the code that corresponds to the appropriate model being fit on the poorer ear. The corresponding dispensing fee would be **V5200, Dispensing fee, contralateral, monaural** to indicate a contralateral microphone was dispensed.

V5211, V5212, V5213, V5214, V5215, V5221, V5230 may be used when the fitting system is comprised of a hearing aid for the better ear with a contralateral routing device on the poorer ear, traditionally referred to as a BiCROS system. The corresponding dispensing fee would be **V5240 Dispensing fee, contralateral routing system, binaural**.

The following scenarios are meant to further demonstrate appropriate use of the codes.

Scenario 1

Patient presents for fitting with single-sided deafness in the right ear with normal hearing in the left ear and is fit with a bilateral





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contralateral routing system with receiver-in-the-ear (RITE) style on both ears.

Audiologist reports:

- **HCPCS codes:**
 - **V5240** Dispensing fee, contralateral routing system, binaural
 - **V5221** Hearing aid, contralateral routing system, binaural, BTE/BTE
- **ICD10 codes:**
 - **H90.41** Sensorineural hearing loss, unilateral, right ear, with unrestricted hearing on the contralateral side
 - **Z46.1** Encounter for fitting and adjustment of hearing aid

Scenario 2

Patient who currently has bilateral BTE hearing aids presents for a hearing aid consultation following sudden onset of decreased hearing in the right ear. Patient now has a profound hearing loss in the right ear with no measurable word recognition and stable mild-to-severe sensorineural hearing loss in the left ear. The existing hearing aids are compatible with a contralateral routing system, and you fit a contralateral routing RITE device for the right ear to communicate with the patient's left hearing aid.

Audiologist reports:

- **HCPCS codes:**
 - **V5200** Dispensing fee, contralateral, monaural
 - **V5181** Hearing aid, contralateral routing device, monaural, BTE
- **ICD10 codes:**
 - **H90.3** Sensorineural hearing loss, bilateral
 - **Z46.1** Encounter for fitting and adjustment of hearing aid

Scenario 3

Patient presents for hearing aid consultation with a five-year-old ITC in the right ear for mild-conductive hearing loss and has not worn a hearing aid in the left ear due to profound sensorineural hearing loss. Patient is now in

a work scenario that requires the ability to understand speech from the left side, and you recommend a bilateral contralateral routing system. Patient prefers the ITC style in the right ear and a contralateral routing RITE style for the left ear.

Audiologist reports:

- **HCPCS codes:**
 - **V5240** Dispensing fee, contralateral routing system, binaural
 - **V5215** Hearing aid, contralateral routing system, binaural, ITC/BTE
- **ICD10 codes:**
 - **H90.A11** Conductive hearing loss, unilateral, right ear, with restricted hearing on the contralateral side
 - **H90.A22** Sensorineural hearing loss, unilateral, left ear, with restricted hearing on the contralateral side
 - **Z46.1** Encounter for fitting and adjustment of hearing aid

With the new code sets, audiologists will need to carefully review coding options and choose the most appropriate code for contralateral routing fittings. Documentation should support the choice in coding, and the devices should be clearly described within clinical notes.

As payers update fee schedules, providers may receive denials as billing systems may not have been updated to recognize the new codes and descriptions. Providers are advised to follow up with payers to educate them on the new code sets.

Members may inform the Academy of any problems encountered with the new codes through reimbursement@audiology.org. If patterns are identified, the Academy will draft communications to assist in payer education regarding the new code options or contact the payer directly. ^(A)

Kristiina Huckabay, AuD, is the director of audiology services at the Swedish Medical Group in Seattle, Washington. She is also a member of the Academy's Coding and Reimbursement Committee.

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Getting to Know the New Trustees

By Mindy K. Brudereck



Sarah Sydlowski, AuD, PhD

*Audiology Director, Hearing Implant Program, Cleveland Clinic
Board Certified with Specialty Certification in Cochlear Implants*

Tell us about where you work:

I work at the Cleveland Clinic, a large, multisite academic medical center near downtown Cleveland, Ohio. My primary responsibility is managing the Hearing Implant Program, which includes our cochlear, bone-anchored, and auditory brainstem implant services, as well as our single-sided deafness clinic. I am also involved in some clinical research and teach the Implantable Technologies course for the Northeast Ohio AuD Consortium.

We have a large clinical training program, usually accepting 10 to 12 fourth-year externs a year. Volunteering for the profession is also a key part of how I spend my time. I recently rotated off the Academy Board and just finished my term as president of the Ohio Academy of Audiology. I'm also very excited to be part of the Program Committee for AAA 2019.

What's your favorite part of being an audiologist?

What I enjoy most about what I do is the diversity of involvement I'm able to have. One day I'm activating a cochlear implant, another day I'm teaching a graduate course, another I'm working with supply chain on our device contracts or writing an article for a journal. I enjoy the challenge of thinking adaptively, creatively, and innovatively and the aspects of my job that keep me thinking and pushing myself are the most rewarding.

Do you have fundraising experience?

I have volunteered for various organizations over the years where we have done fundraising on a smaller scale, but nothing like the Foundation. I'm looking forward to learning about a new aspect of the Academy Enterprise!

What things do you do for fun outside of the profession?

In the summer you'll find me on the Cuyahoga River where I have rowed crew for the past six years. Rowing is

a sport that appeals to my detail-oriented nature. You're only as good as the weakest rower in the shell; everyone has to be completely in sync. It's more about timing, coordination, and the mechanics of the stroke than brute strength. But when you manage to find that perfect combination, flying across the water is magical. As an added bonus, it's 90 minutes a week where you can't have a cell phone, you get to be outdoors enjoying the city from a vantage point most others never see, and you can't cancel, no matter how busy you get, because the rest of the team is depending on you!

Were there any Foundation projects that you were surprised about when you joined the Board?

Honestly, my biggest surprise was to learn how few of our members support the initiatives developed by the board to promote education, research, and public awareness. Members may not realize that even small gifts of only a few dollars add up when we all chip in to have an amazing impact! What I'm most looking forward to this year is the purse auction at the AAAF Happy Hour at AAA 2019. The inaugural event last year was so much fun. And this year, I'm driving to Columbus so I have even more room for my great finds...no worry about if a purse will fit in my carry-on this year!

What are you most excited to see in Columbus?

I'm most excited for the newest offering at AAA 2019, the Audiology Career Enhancement (ACE) Symposium, generously sponsored by Audigy and Phonak. ACE is an all-day, interactive event that is 100 percent focused on helping you enhance your career experience. It's an opportunity to broaden your perspective by hearing from nonaudiologists about how to communicate, influence, and collaborate your way to your best career. I think this unique program will be a valuable step in the process of diversifying our perspectives and enhancing our capabilities beyond the clinic.

What was the last text you sent?

My last text was with the other members of my Executive MBA study team at Case Western Reserve University, congratulating ourselves on making it through the first semester of the program. It's been a long time since I've had to study for a final!

Where is the most interesting place you've been?

When I was in college, I spent a Semester at Sea, traveling to 11 countries while taking classes on a ship. Each destination was amazing for different reasons, and experiencing so many varied cultures and environments in such a short timeframe was a study in contrasts that further enhanced the experience. Probably the place I never imagined I would go to is Egypt, so it was amazing to walk inside the Great Pyramids. I haven't lost the love

of travel. This summer, I'll be traveling with my EMBA program to Eastern Europe to study emerging and diverse business practices so I'm sure that will quickly make the list of most interesting!

If you could instantly become an expert in something, what would it be?

I would love to be multilingual and have no boundaries because of language or ability to communicate.



Ryan Bullock, AuD

Board Certified in Audiology
San Pedro, California

Tell us about where you work:

I work in private practice in San Pedro, California.

What's your favorite part of being an audiologist?

The corny audiology jokes that seem to never end—and pretending like I never hear them.

Do you have fundraising experience?

I grew up swimming in my hometown in Fort Smith, Arkansas. We used to do swim-a-thons as fundraisers for the swim team. Later on, when I came onto the Student Academy of Audiology (SAA) Board, I was fortunate enough to be the student liaison for the Foundation. Around that time, I established my own nonprofit called Swim to Hear to raise funds and awareness of hearing loss and to highlight the profession of audiology.

What things do you do for fun outside of the profession?

Pretty much anything related to the water. I particularly enjoy open water swim competitions and surf racing. Once I swam over an 8-foot great white shark during a race in Southern California. I work as a part-time ocean lifeguard for the Los Angeles County.

Tell us about your family:

My dad is a New Zealand native who narrowly missed the Olympics in swimming. He came to the States and swam at the University of Iowa where he met my mother, who was studying communication sciences and disorders at the time. My dad was my swim coach growing up and

also worked as a school teacher, and my mother served as my inspiration to dive into the profession of audiology. My sister and brother are both teachers back in Arkansas and are busy raising their kids. I love my family and miss them since they are so far away.

Were there any Foundation projects that you were surprised about when you joined the Board?

Not really. I knew the Foundation was involved with a lot of great initiatives supporting our profession. I am just excited to be part of it!

What are you most excited to see in Columbus?

I overheard that Columbus ranks in the top-five U.S. cities for craft beer production. We love our profession, and what goes better with ears than a craft-brewed beer?

What was the first career you dreamed of having as a kid?

Doctor—I had a doctor kit and a license plate for my bike that said "Dr. Ryan."

What was the last text you sent?

"Still hurts to walk on," referring to my recent stingray wound on the bottom of my left foot.

Where is the most interesting place you've been?

Skiing Mt. Ruapehu, an active volcano on the North Island of New Zealand.

If you could instantly become an expert in something, what would it be?

Investing. ^{AT}

Mindy K. Brudereck, AuD, is the owner of Berks Hearing Professionals, with offices in Wyomissing and Birdsboro, Pennsylvania. She is a member of the Foundation's Board of Trustees.

Audiologists with Hearing Loss: What We Bring to the Table

By Audrey Taylor and Amanda Demas

“So what do you do?” I paused and thought of several different responses that were possible. I responded with a smile and three simple words, “I change lives.”

Over the course of our careers, we are asked many times why we do what we do—sometimes we even ask ourselves that question. While there is a myriad of answers, some individuals have a personal experience with audiology that brought them to this profession. More and more students are entering the profession with hearing loss, and are excited for what the future has in store.

These students have sat on the other side of the soundbooth as patients. The idea of crossing over to the clinician role to help serve others is a dream they are one step closer to achieving. As a student with hearing loss, my biggest desire for audiology as a whole is to help find our voice. We have learned self-efficacy as patients; however, there are different barriers to clear as we find our footing in the professional world.

Students with hearing loss sometimes face a unique set of challenges foreign to their normal hearing peers. For example, one student recalled,

As a first-year, all my classmates were excited to open the listening scopes we received after completing our earmold impression lab. I put mine in and then it dawned on me that the input signal would never go through my hearing aid. The lab instructor was stumped on what to do for me for listening checks.

Other examples of clinical issues to tackle include accurately scoring speech recognition testing and developing communication strategies



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MARCH 30 Student Academy of Audiology

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AT AAA 2019

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to better hear our patients and preceptors. We also must learn how to inform preceptors, professors, and peers about our hearing loss. Requesting reasonable accommodations through our university or department can often be a challenging and stressful web of bureaucracy.

Last year, the inaugural Students with Hearing Loss Meeting was held at AAA 2018 in Nashville. There were 46 students in attendance from 24 different universities across the country. While hearing loss was a common bond between students, the beauty of the group was the diversity of shared perspectives and experiences. Students ranged from undergraduates interested in pursuing audiology to current AuD students, externs, and PhD candidates. Their stories—highs and lows—resonated with each other and created a platform for education and encouragement. When asked about the meeting, one student said, “It was an eye-opening experience to get perspectives of peers and to feel supported.”

Following AAA 2018, the Student Academy of Audiology moved the Students with Hearing Loss group from within the Chapter and Member Relations Committee and created the Students with Hearing Loss Task Force. It is co-led by Audrey Taylor, a fourth-year student from the University of Texas at Dallas, and Amanda Demas, a first-year student at Washington University in St. Louis. Members of the task force have either a unilateral or bilateral loss. Some use hearing aids, cochlear implants, or are bimodal. Audiology is a small field, with an even smaller population of students and audiologists with hearing loss. Consequently, the mission of this group was to create a unique audiology home for students with hearing loss where they can network, grow, and form connections they would not otherwise have at their individual programs.

When asked about how hearing loss has shaped their journey in becoming an audiologist, one third-year AuD student said,

My hearing loss has made me a better clinician because of the empathy and understanding I have for my patients. From the family who just found out their child is deaf to the adult with balance issues, I strive to listen to each of their stories and experiences while providing them hope that they can get through whatever obstacle they face.

My hearing loss has also been a positive experience in the classroom, as my professors and classmates inquire for my point of view about various topics of audiology. I've learned to advocate for myself both in the classroom and clinic, hoping to teach my patients and future audiology co-workers the value of advocacy and accommodations for the hearing loss population.

Help Those Students with Hearing Loss

Comply with their documented accommodations.

- Wear remote microphone technology.
- Take notes.
- Use CART services.

Practice good communication strategies.

- Get their attention first by saying their name or tapping them on the shoulder.
- Have conversations face-to-face with good lighting.
- Reduce background noise as much as possible.

Create a comfortable environment for the student so that clear communication can occur.

- Ask how you can help them grow in their clinical skills.
- Offer time to talk about things that they need help understanding.
- Ask them how they learn best (i.e., some might learn better by visual examples or by practicing).
- Follow through with your conversations.

Read through resources that are available.

- Students with Hearing Loss
Resources: <https://saa.audiology.org/educational-opportunities/students-hearing-loss>
- Ask questions: studentswithhearingloss.saa@gmail.com

Provide them with the information of networking opportunities and support groups.

- Students with Hearing Loss Task Force
- Audiologists with Hearing Loss
- Association of Medical Professionals with Hearing Loss (AMPHL)

A current fourth-year AuD student also said,

It has been very exciting being able to use my unique experiences with both a hearing aid and a cochlear implant to the benefit of my patients and their families. I've been able to change the mind of a middle-aged patient who thinks they are not old enough for hearing aids from a "no way," to scheduling a fitting.

I've also been able to take a four-year-old from refusing to put her hearing aids on to wearing them out the door with a smile (with maybe a few extra stickers in tow as well), knowing it's okay to have a hearing loss because their audiologist has one too. While I've been born with a hearing loss, I am fortunate to take what gifts I've been given and use it for the benefit of my patients.

At the end of the day, our most important legacy is the one that we leave behind. It is words of encouragement, patience for teaching, and compassionate empathy in helping future generations of audiologists embrace their "why moments"—all so they can change the lives of the patients that they encounter. 🗣️

Audrey Taylor is a fourth-year graduate student at the University of Texas at Dallas and is completing her audiology externship with UT Physicians at Memorial Hermann Hospital in the Texas Medical Center. Her audiological interests include pediatric diagnostics and aural rehabilitation, cochlear implants, and advocating for individuals with hearing loss.

Amanda Demas is a first-year student at Washington University in St. Louis. Her audiological interests include educational audiology and working with the pediatric population.

NOTE: Testimonials used in this article were gathered using an anonymous survey of current AuD students with hearing loss.

Students with Hearing Loss Task Force

The primary goal of the Students with Hearing Loss task force is to provide resources and outlets of communication for students who are deaf or hard of hearing. Resources that are currently available include how to request accommodations on the GRE and Praxis examinations, legal rights of individuals with hearing loss, and how to disclose a hearing loss. All of this information can be found on the Student Academy of Audiology website. Under the Educational Opportunities tab, there is a link to the Students with Hearing Loss page, which houses current resources.

The next Students with Hearing Loss meeting will be held at **AAA 2019 in Columbus, Ohio on Thursday, March 28, 2019, 11:30–1:30 pm.** It will be in conjunction with the Professionals with Hearing Loss meeting. Additional resources and networking opportunities will be presented.



New Members of the Student Academy of Audiology

JOINED: November/December 2018

Olivia Adamson

Christine Albaba

Munibah Ali

Richelle Anthony

Leslie Balderas

Alivia Ball

Evalena Behr

Kyndell Belcher

Alex Belinsky

Kamille Bonecutter

Sarah Box

KellyAnne Boylan

Hayden Bruce

Raiza Carmenate

Molly Cooper

Elizabeth Currie

Taylor Devito

Danielle Elder

Cody Elston

Caroline Flint

Ayrís Franklin

Meghan Fuller

Geerthanna Ganthithasan

Kiana Gerard

Kaitlyn Gervais

Patricia Graziose

Liliana Hansen

Caitlin Heaton

Melissa Henry

Michael Hlousek

Devon Holt

Wanting Huang

Sarah Jones

Rachel Kirby

Courtney Kolberg

Madison Koza

Olivia Kozody

Courtney Kroeger

Lauren Langton

Jennifer Lee

Alyse Lemoine

Rachelle Levasseur

Malcolm MacDonald

Tara Mango

Nicole Marzan

Michelle Mattingly

Shannon McCole

Tylar McDaniel

Ashley McMillen

Ashley Medefindt

Emily Merten

Caitlyn Montero

Madison Moore

Hannah Moore

Ashley Morgan

Aryana Nevarez

Jasper Oh

Vanessa Olivares

Ashley Parker

Caitlin Pertmer

Megan Phillips

Diamond Prus

Hailey Pytel

Branson Reagan

Holly Reed

Catelin Robinson Millhouse

Brandon Roppel

Sarah Ruwe

Yvette Samara

Kara Sander

Krystina Schultz

Kendra Searl

Sarah Severino

Victoria Shihadah

Anthoula Spahidakis

Hannah Stull

Talia Terracciano

Sydney Trathen

Jocelyn Tubbs

Maureen Turner

Pitchulee Uayporn

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MARCH 13, 1:00-2:30 PM ET A Fresh Perspective in Case Management for Children with Hearing Loss PRESENTERS: Jane Madell, PhD, and Carol Flexer, PhD	0.15
APRIL 24, 3:00-4:30 PM ET Current Theories for Vestibular/Balance Dysfunction Following Sports-Related Concussion PRESENTER: Jamie Bogle, PhD	0.15
MAY 21, 1:00-2:30 PM ET Screening and Intervening for Peer Victimization in Children with Hearing Loss PRESENTER: Andrea D. Warner-Czyz, PhD	0.15
JULY 26, 2019 1:00 PM - 2:00 PM ET Hearing Assistance Technology and Telecoils PRESENTERS: Juliëtte Sterkens, AuD, and Karen MacLennan, AuD, TSHH	0.1

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OF LIVE AND ON-DEMAND SEMINARS.

ABA in Progress

By Dennis Van Vliet

The Reboot

In November 2018, the board of the American Board of Audiology (ABA) developed a “certification reboot” for its programs that was reported in the November/December 2018 ABA Sounding Board in *Audiology Today*. The goal is to enhance the certification programs to maximize their value and impact for the profession of audiology. Our renewed vision going forward in 2019 focuses on identifying changes and additional efforts needed for our reboot with the goal of announcing major changes at AAA 2019, the Academy’s annual conference in Columbus, Ohio, in late March. The ABA will report more on this work in the future. The following is a brief update:

- The ABA is developing a model for the board certification credential to enhance the benefit to Academy members. Adjustments to the credential cycle and fee structure are intended to make the credential more accessible to a greater number of Academy members.
- ABA is looking at the criteria for Tier 1 continuing education and considering ways to increase the Tier 1 opportunities available to credential holders.
- The next Pediatric Audiology Specialty Certification (PASC) examination will be on March 27, 2019, in Columbus, Ohio, at AAA 2019. The ABA board revised policy so that candidates who pass the exam will no longer be required to pay an additional initial certification fee of \$345, thus

reducing the costs to the new PASC certificant.

- The ABA board approved an extension of the PASC exam eligibility period from one year to five years. This enables candidates who do not pass the PASC exam on their first try to retake the exam without paying additional application fees on top of exam fees.
- The ABA board approved a policy change that allows degree candidates in their externship year to participate in the Certificate Holder-Tinnitus Management (CH-TM) and to receive the certificate provided they attain their state license within their one-year access to the course and submit their completion only after they have their license in hand.

Certificate Programs

More recent additions to the credential programs offered by ABA are the two certificate programs. Unlike board certification or the specialty certifications for which ABA determines minimum qualifications that candidates must meet to qualify but does not provide any training to attain those qualifications, the certificate programs provide content to help the participant to assess mastery of intended learning outcomes. Assessment-based certificate programs build capacity and recognition of a specialty area of practice or a set of skills.

The ABA is committed to promoting rigorous credentialing programs that elevate professional practice and advance patient care. One key way to do this is to elevate and standardize the training that AuD students

get in their externship experience. **Certificate Holder-Audiology Preceptor (CH-AP)** is an online self-study program that teaches preceptors how to facilitate an AuD student’s transition from novice clinician to competent, independent professional. CH-AP advances a pathway for an individual to become recognized as an audiology preceptor with the goal of building a greater pool of trained audiology preceptors who can provide critically important opportunities for students to apply classroom learning in authentic clinical settings. Since the program was introduced in 2017, more than 400 audiology preceptors earned the certificate.

Another way to elevate professional practice and advance patient care is to focus in greater depth on topics that were not covered in detail in school. The **Certificate Holder-Tinnitus Management (CH-TM)** was developed to bridge the gap between formal audiology education and tinnitus-focused training. By creating a comprehensive and unbiased tinnitus management program, ABA seeks to develop a larger pool of tinnitus-trained audiologists to care for the significant tinnitus population. CH-TM is a two-part, comprehensive program with seven modules overall. Part 1 focuses on Foundations of Tinnitus Management and Part 2 focuses on Tinnitus Management Principles in Practice. With nearly 50 audiologists who earned the certificate and more in the pipeline, the CH-TM program is expanding the workforce of audiologists having the requisite knowledge for effective management of the high number of patients with tinnitus.

As a reminder, both CH-AP and CH-TM also qualify as Tier 1 continuing education for meeting recertification requirements for ABA certifications.

AAA 2019

The ABA looks forward to an active role in AAA 2019 in Columbus, Ohio. We will offer a learning module on tinnitus, this year providing participants more practice management experience through interactive case studies. We will again offer the SpeedUpdating session from 3:00 to 5:00 pm on Thursday, March 28, followed by our certificant mixer. Stop by Academy Central at the conference to pick up your ABA lanyard to display proudly that you are an ABA certificant! 🎧

Dennis Van Vliet, AuD, is a life member of the American Academy of Audiology and has served the profession in a variety of leadership roles in the Academy and in state organizations. He is employed as an audiology care provider in Dana Point, California. He was a founding member of the ABA Board and is chair of the American Board of Audiology.

ABA Offerings at a Glance

Certification by the American Board of Audiology

Rigorous credential verification recognized by many states and employers as documentation of qualifications as an audiologist.

Specialty Certification

Signifies recognition of knowledge and professional experience verified by a comprehensive exam in a specialty area such as pediatric practice in audiology.

Certificate-Holder

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For more information, go to www.boardofaudiology.org.

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**Thursday, March 28
10:15–11:15 am**

Wondering what's next for the Academy? Would you like to hear more about the Academy's initiatives, advocacy efforts, and decision-making process?

The meeting will include a brief message from the president, followed by the secretary/treasurer's report. This forum offers you the opportunity to interact with board members and have Academy leaders answer your questions.

Practicing Preventive Audiology: Promoting Healthy Hearing

By James W. Hall III

Case scenario 1...a 30-something audiologist completed a routine diagnostic assessment of a 35-year-old patient referred by her primary-care physician for rather vague complaints of inconsistent difficulty hearing in certain settings.

The audiologist performed tympanometry, pure-tone audiometry, and phonetically-balanced (PB) word recognition testing at a comfortable loudness level. The patient's history was unremarkable for any obvious etiologies or risks for hearing loss, although she enjoyed listening to loud music.

Upon meeting the patient and walking with her back to test area, the audiologist noted the faint smell of cigarette smoke. The audiologist also observed that the patient was overweight and struggling a bit as she stepped into the sound-treated room. After the assessment, the audiologist informed the patient that her hearing sensitivity was within the normal range and a copy of the audiogram would be sent to her family doctor.

Now, fast forward to the same clinical practice 30 years later...same practice in the same town. The audiologist's hair is grayer but her purse is greener. She's a successful audiologist with a good reputation in town. A 65-year old woman comes to a scheduled appointment reporting that she is experiencing serious difficulties hearing people speak, particularly in noisy settings. The patient gets teary eyed when she describes how hard it is to understand what her young grandchildren are saying.

History reveals several systemic diseases, including diabetes and high blood pressure reflecting cardiovascular disease. The patient has also undergone multiple surgeries including hip replacement. The patient insists that she visited the clinic many years ago. Amazingly, the audiologist manages to find an old yellowed file under her maiden name with all of the original test results. Unfortunately, today the patient's audiogram confirms a moderate bilateral sensorineural hearing loss. Word recognition in quiet is only fair, and speech perception in noise is poor. Hearing aid options are reviewed with the patient after an explanation that she probably has an age-related hearing loss. I'll present another version of this case scenario toward the end of this brief article, but please first read the rest of the article.

There is mounting evidence that healthy living contributes to healthy hearing. Diet, as documented with the Healthy Eating Index (HEI), is a critical factor influencing hearing status over a lifetime (e.g., Spankovich, 2011; Spankovich and LePrell, 2014; Curhan et al, 2018).

Other healthy lifestyle choices, such as regular vigorous exercise, not smoking (or quitting ASAP), and consistent use of hearing protection during exposure to high intensity noise or music, also contribute importantly to preservation of good hearing. In addition, hearing impairment in adults is associated with a long list of common chronic diseases, for example, diabetes, cardiovascular

disease and stroke, rheumatoid arthritis, kidney disease, sleep apnea, and dementia. Conduct a literature search of "comorbidity" and "hearing loss" and you will find that the topic is attracting considerable clinical attention and research focus (e.g., Abrams, 2017).

Let's rewrite case scenario 1 while imagining for a moment that our young audiology friend was well aware of the link between healthy living, comorbidities, and hearing status. She always includes distorted product otoacoustic emissions (DPOAEs) in the test battery to detect cochlear dysfunction and also speech perception tests. And, the audiologist routinely incorporates extensive evidence-based counseling about lifestyle choices, supplemented with written patient information, into her clinical practice. And, the audiologist collaborates closely with primary-care physicians of her patients to mitigate the impact of co-morbid medical conditions on hearing loss and vice versa. Indeed, the audiologist approaches patient management with the bold assumption that she could prevent or at least mitigate age-related hearing loss.

We might expect a very different hearing outcome for the 65-year old longtime patient if the wise audiologist had effectively counseled the patient about the importance of healthy living for maintaining healthy hearing and, over the years, worked in tandem with the patient's primary-care physician. Based on current research, it would not be unreasonable to expect little or no

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hearing loss when the relatively healthier patient returned for her 30-year follow up visit.

After reading this brief review, you may find the notion of preventive audiology interesting and perhaps even thought-provoking. Still, you may wonder why I decided to publish this article in ACAE Corner column of *Audiology Today*. Doctor of Audiology programs must prepare students today for evidence-based clinical services that audiologists will... or should...provide in the future (Hunter et al, 2016). It is likely that promoting healthy hearing over the lifespan will, in the near future, become an important clinical goal for audiologists. 

James W. Hall III, PhD, Board Certified in Audiology, has 40 years of experience in audiology as a clinician, administrator, teacher, and researcher. A founder of the Academy and chair of the ACAE Board, Dr. Hall is a professor in the Osborne College of Audiology at Salus University in Elkins Park, Pennsylvania and a professor in the Department of Communication Sciences and Disorders at the University of Hawaii in Honolulu, Hawaii.

References

Abrams H. (2017) Hearing loss and associated comorbidities: What do we know? *Hear Rev* 24 (12):32–35.

Hunter L, Hall JW, Gordon D. (2016) ACAE Corner: Tomorrow's standards today. *Audiol Today* 28(3):68–69.

Curhan S, Wang M, Eavey RD, Stampfer MJ, Curhan GC. (2018) Adherence to healthful dietary patterns is associated with lower risk of hearing loss in women. *J Nutrition*. DOI: 10.1093/jn/nxy058.

Spankovich C. (2011) Bench to bedside: We “ear” what we eat! *Audiol Today* 23(4):32–41.

Spankovich C, LePrell CG. (2014) Associations between dietary quality, noise, and hearing: data from the National Health and Nutrition Examination Survey. *Int J Audiol* 53 (11):796–809.

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Congressional Swearing-In Day—the 116th Congress Begins

By Adam Finkel

On January 3, 2019, the 116th Congress officially was sworn in. Having worked in Washington, DC, for a number of years, when Congress is inaugurated is one of my favorite days of the year. It is a day filled with celebration as the Capitol and surrounding buildings are filled with members of Congress and their families, congressional staffers, campaign staffers, constituents, and lobbyists. With the Democrats winning 40 more seats in the House and Nancy Pelosi becoming speaker, the celebrations were more raucous on the Democratic

side, while the Republican side was a bit more subdued as their members realized that their priorities would be taking a backseat for at least two years.

That morning, I met up with a number of fellow lobbyists who work for other provider organizations belonging to the Patients' Access to Responsible Care Alliance (PARCA). PARCA is a coalition of organizations representing the interests of non-MD/DO health-care providers, including the American Optometric Association, American Nurses Association, American

Nurse Practitioners Association, American Speech–Language–Hearing Association, America Chiropractors Association, and several more. After splitting into smaller groups, our organizations jointly traveled to offices of returning and new members of Congress to congratulate them on being sworn in.

By jointly going to these events, we were able to ensure that members of Congress knew that there were a number of organizations that represent the provider community who are not physicians and who have different challenges than



those organizations. Importantly, I was able to stop by and see some new members of Congress who I had met during meet-and-greets while they were still candidates, as well as key returning members of Congress, who I expect to get a seat on key committees that we follow due to their jurisdiction over health-care policy, including the House Energy and Commerce Committee, House Ways and Means Committee, Senate Health, Education, Labor, and Pensions Committee, and the Senate Finance Committee.

The day concluded with a number of receptions off of Capitol Hill hosted by the newly elected and returning members of Congress. This provided a more informal opportunity to congratulate them and remind them that the Academy is there as the resource on audiology policy.

The 116th Congress is more diverse than previous freshmen classes. Forty-two women joined the ranks of Congress, 38 of whom are Democrats. There are now 102 women serving in the House and 25 women serving in the Senate, an increase of 13 House members and two senators respectively. Twenty-four people of color also were elected, including 10 who represent majority white districts. National security credentials continue to be important to voters as 22 newly elected members of Congress served in the military or worked for the Central Intelligence Agency. On the Senate side, Utah elected former Massachusetts governor and 2012 GOP presidential nominee, Mitt Romney. He is expected to immediately play a key role in Republican policy given his national profile. On a lighter note, there are two former National Football League players who are first-time legislators, Collin Allred (D-Texas) and Anthony Gonzalez (R-Ohio).

In talking with Democrats that day, it was clear that one of their major priorities for legislating lay in health-care policy. Many Democrats looked at the results of the 2018 midterm elections as providing them with a mandate to examine access and affordability issues with regards to shoring up the Affordable Care Act and exploring loftier goals like “Medicare for all.” From what we have heard, there will be a strong focus on pharmaceutical reform and drug pricing right away on both the Energy and Commerce Committee and the Ways and Means Committee. Following that, other issues that the Academy cares about can be tackled, like more direct access, telehealth expansion, and student loan reform. We will be able to use these first few months to lay a strong groundwork for the 116th Congress moving forward.

While swearing-in day is a lighter day filled with less in-depth policy talk, it plays a crucial role for lobbyists and other advocates to get to know their elected officials and their new staff members. By spending the day building on previous relationships and making new relationships, the Academy will be able to really hit the ground running when opportunities arise. In addition to our core health-care policy goals, I anticipate the Academy will comment on issues surrounding the Department of Veterans Affairs and VA policy, National Institutes of Health (NIH) funding issues, and opportunities to continue our regulatory work from the past few years with the Food and Drug Administration (FDA) and the Federal Communications Commission (FCC).

The 116th Congress is expected to be one of the more active Congresses in recent years. With Republicans maintaining control of the Senate, we expect partisan gridlock to continue. By being savvy and finding bipartisan



support for key initiatives, there will be opportunities to move and advance legislative priorities over the next two years. With more than 100 new representatives and senators joining the 116th Congress, it will be crucial to get in early to build long-lasting relationships and expand on our existing work to ensure that we have a productive and meaningful two years. This is where the importance of grassroots efforts both locally and in DC, contributing to the Political Action Committee (PAC) and staying up-to-date on legislative issues, to contacting your members of Congress is so critical. This allows Congress to connect what the Academy is doing on Capitol Hill with what our members are doing back in their home districts. [AT](#)

Adam Finkel is the Academy's director of government relations. He can be reached at afinkel@audiology.org or at 703-226-1060.

2019–2020 BOARD OF DIRECTORS ELECTIONS

Vote

The members presented in this issue of *Audiology Today* are nominees for the president-elect and three member-at-large positions on the Academy's Board of Directors.

One of the nominees for president-elect will be elected by the general membership to serve a three-year term (one year as president-elect, one year as president, and one year as past president) beginning October 1, 2019, and ending September 30, 2022.

Three of the candidates for the member-at-large positions will be elected by the general membership to serve a three-year term, beginning in October 1, 2019, and ending September 30, 2022.

The 2019 American Academy of Audiology election of new board members will be held from April 8, 2019, through May 10, 2019, immediately following AAA 2019, the Academy's annual conference.

All Fellow members with an electronic address in the database will be sent an e-mail linking them to our election website. Please note the election website is separate from the Academy website. The link you receive in the e-mail is unique and can only be used by the member receiving the e-mail. Once used, the unique link is disabled.

It is anticipated that the new board members and the new president-elect will be announced in late May/early June 2019.

Expanded biographical information, position statements, and short videos are available on the election and Academy website, www.audiology.org. Voting for the leadership of the Academy is an important privilege of membership for Fellows of the American Academy of Audiology.

**You are encouraged to
vote and let your voice
be heard!**

2019–2020 BOARD OF DIRECTORS NOMINATIONS

President-Elect

**Shilpi Banerjee, PhD**

*Board Certified in Audiology
President and Chief Learning Officer, Skafold LLC*

- BS:** Audiology and Speech Therapy,
Bombay University (India), 1992
- MS:** Audiology and Hearing Sciences,
Northwestern University, 1993
- PhD:** Communication Sciences and Disorders,
Northwestern University, 2003

I love Audiology! We are scientists, educators, entrepreneurs, and, above all, health-care professionals. We have chosen this profession as a vehicle to help people. In my day-to-day work, I do this by conducting applied research, developing products that improve hearing, providing continuing education and educating future audiologists. Importantly, throughout my career, I have been actively engaged with my state, national, and global professional communities. As a professional, I maintain Board Certification in Audiology, support the Academy's Foundation, contribute to the Academy's advocacy work, and serve in state audiology organizations.

Professional organizations are made up of persons with diverse perspectives, work settings, career aspirations, talents, interests, and time. We are bound together by a desire to engage and contribute meaningfully to our chosen profession. I share this desire and also understand the challenges that accompany this diversity. The camaraderie and fellowship of working toward a shared vision is powerful and rewarding—to me, this is truly a labor of love and ownership. And, yes, I enjoy continuing the audiology discussion as it moves from boardroom to bar! I am interested in serving on the Academy board to do my part in advancing the profession of audiology. I believe that my ability to see possibilities, think clearly and get things done will serve the Academy well.

**Angela Shoup, PhD**

*Professor of Otolaryngology; Chief,
Division of Communicative and
Vestibular Disorders
UT Southwestern Medical Center*

- BS:** Speech Pathology and Audiology,
University of Texas at Dallas, 1989
- MS:** Communication Disorders,
University of Texas at Dallas, 1992
- PhD:** Human Development and Communication Sciences,
University of Texas at Dallas, 1994

As an active and engaged audiologist, I appreciate the shared responsibility of contributing time and effort to the betterment of our profession. I have been a member of the American Academy of Audiology for many years and have had the opportunity to serve in multiple capacities. Through these experiences, I have recognized the multifaceted contributions of the Academy to the professional life of members and to the quality of services we provide to our stakeholders. These stakeholders include patients who come to us for support with hearing, tinnitus or balance difficulties, and also their families, the public, students, and scientists. The Academy serves to elevate our profession by providing an aspirational code of ethics, scope of practice, and guidelines for professional comportment.

The Academy provides tools to achieve these aspirations through web-based continuing education, publications, practice management tools, and educational offerings at conferences, including but not limited to the annual Academy meeting. Further, the Academy seeks to educate other stakeholders through legislative efforts and public relations outreach. The Academy promotes educational excellence for audiologists and for students entering the profession, and supports research and innovation in hearing and balance. All of these are crucial for the profession to remain viable—and all require not only financial support, but also time and talents of volunteers. My personal and professional philosophies align with the dedicated vision of the Academy. As I have benefited from the efforts of my colleagues, I am interested in contributing through service on the Board of Directors.

2019–2020 BOARD OF DIRECTORS NOMINATIONS

Member-at-Large

**Jamie Bogle, AuD, PhD**

Chair, Division of Audiology, Department
of Otorhinolaryngology—Head and Neck Surgery;
Assistant Professor, Mayo Clinic Arizona

BS: Communication Sciences and Disorders,
Saint Louis University, 2002

AuD: Doctorate of Audiology,
University of Colorado at Boulder, 2007

PhD: Doctorate of Philosophy,
University of Colorado at Boulder, 2010

**Joshua Huppert, AuD**

Board Certified in Audiology
Assistant Professor of Otolaryngology/
Pediatric Audiologist
University of Miami Ear Institute—Children's
Hearing Program

BFA: Musical Theatre,
Western Illinois University, 2009

Post-Bacc: Audiology, Northern Illinois University, 2014

AuD: Doctorate in Audiology,
Pacific University, 2017

Audiology is a versatile field that is dynamically changing. Having a strong, decisive voice in how we want to steer our profession is essential to remain relevant in our ever-changing health-care system. We are currently in a challenging time, with questions regarding OTC hearing aids, reimbursement, and patient access as key difficulties for providers in various environments. Determining how we address these key concerns as a profession will solidify our voice and improve our ability to represent hearing health to the public.

I am interested in serving on the Academy board in order to better our profession and improve audiological healthcare for our patients. I am motivated to improve our profession through organization and innovation. I have been a member of the American Academy of Audiology for many years, and have served on numerous committees. Through these opportunities, I have learned from the various providers working in diverse environments, applying new perspectives to the complexities of audiological practice. I believe that our diversity in practice is our strength, allowing for us to evaluate the multifaceted difficulties of hearing health care.

The challenges we face today are opportunities to improve our profession. To achieve this, I believe that we have to be innovative in how we best guide audiology in the current dynamic environment. We must draw from our members in various settings to best represent the whole field and come to consensus on how to provide the best care for our patients.

Receiving the opportunity to represent and serve the Academy membership through tenure on the Board of Directors would truly be an honor, particularly so, as a young professional. While I believe the future of audiology is bright and full of promise, I, too, recognize the number of challenges on the horizon. Thus, we are forced to re-evaluate our present service, care, and delivery models as a result of the dynamic changes impacting the current health-care system, the ever-evolving needs of patients and their increasingly-complex diagnoses, rapid advancements in technology, inadequate reimbursement for the time, services and level of expertise audiologists provide, and disproportionate patient-to-provider ratios-to name a few.

As convoluted and daunting as these obstacles may seem, they are anything but unconquerable. I know this because I've seen our profession prosper time and again over the last 5 years of my active engagement through various leadership roles within the Academy. With a dash of optimism, the efforts of dedicated, passionate volunteers, access to a diverse mind-trust, and a sound, strategic direction moving forward, we will continue to grow and flourish as a profession. I would welcome and embrace the opportunity to help influence and shape the future of our profession through service to the Academy Board of Directors, Academy membership, and by extension, the patients we serve daily.

2019–2020 BOARD OF DIRECTORS NOMINATIONS

Member-at-Large

**Lindsey Jorgensen, AuD, PhD**

Associate Professor
University of South Dakota

BS: Communication Science Disorders,
University of Washington, 2004

MS: Audiology, University of Pittsburgh, 2007

AuD: Audiology, University of Pittsburgh, 2008

PhD: Audiology, University of Pittsburgh, 2012

I believe that the Academy is the best representative of audiologists on a national level. Our organization is one whose goal is to support the current and future practice of audiology; I want to be a part of the board to help in this process. I am excited to be given the opportunity to run for Board of Directors. I would like to make a difference in the process and policy of the Academy and audiology as a profession. My experiences as a chair of the Membership Committee has given me the opportunity to listen to the desires and needs of the membership of the Academy; I hope to continue to represent the voice of the membership in a board member capacity.

My current position in academia allows me to teach, do research, and see patients. This puts me in a unique position to represent all areas of our profession. I am able to work with all audiology professionals and represent them on the board. This makes me uniquely qualified and interested in serving on the Academy Board of Directors.

**Kaitlyn M. Kennedy, AuD**

Pediatric Audiologist
Cook Children's Medical Center

BS: Communication Sciences and Disorders
with a focus in Audiology, Missouri State
University, 2012

AuD: Missouri State University, 2016

Serving on the Academy board is a large undertaking for any professional. Despite the commitment, serving as a new professional would allow me to contribute to audiology's future and its position at the end of my career. Large changes in our field take decades, and I want to be part of determining the changes that will affect my entire career.

As a new professional, I have a unique point of view on current issues, not yet being tainted by history. It allows me to look at ongoing problems with fresh eyes and see solutions overlooked due to years of division. Experienced professionals could easily overlook my opinions and goals. Conversely, I may not understand their expectations or perspectives. However, as a young leader in the field, it falls on me to represent the voice of young professionals in audiology. In the history of audiology, the people who made substantial changes were not typically those ready to retire; change has often occurred by professionals in their 20s and 30s, starting out with ideas, dreams, ambitions, and plans on how to leave audiology better than they found it.

2019–2020 BOARD OF DIRECTORS NOMINATIONS

Member-at-Large

**Steven G. Madix, PhD**

Associate Professor
Louisiana Tech University

-
- BA:** Pre-professional Speech Language Pathology and Audiology, Louisiana Tech University, 1995
- MA:** Audiology, Louisiana Tech University, 1997
- MA:** Speech-Language Pathology, Louisiana Tech University, 1999
- PhD:** Speech and Hearing Science, University of Tennessee, 2005
-

In my 20 years of professional experience, I feel that I'm at the midpoint of my career. I think that I have learned some valuable things to share and can see the future developments and challenges on the horizon that I can help address.

I want to be part of the solutions, and I want the solutions to come sooner rather than later. I have served on many Academy boards, committees, and working groups, and, during that time, I have gained valuable experience with methods that work, as well as those that don't. I am dedicated to seeing audiology recognized as an autonomous profession that is valued for its contributions to healthcare and quality of life among the public and other health-care professionals.

**Devon Weist, AuD**

Clinical Instructor and Hearing Clinic Director
University of South Florida

-
- BA:** Communication Sciences and Disorders, University of Pittsburgh, 2002
- MS:** Audiology, University of Pittsburgh, 2004
- AuD:** Audiology, University of Pittsburgh, 2006
-

For the past 12 years, it has been a privilege to practice audiology. Reflecting back 12 years, I was among the first generation of students to graduate with the doctor of audiology degree. I am thankful every day for my advanced level of education. My training has provided me with opportunities to serve those with hearing and balance problems while educating future audiologists in my role as a clinical instructor.

Along my journey, I have learned from mentors and colleagues the significance of being involved in my profession beyond the everyday nature of the job. I have come to recognize the significance of my involvement at both state and national levels. I am proud to be a member of the American Academy of Audiology and Florida Academy of Audiology, where I have served on numerous committees and volunteered in many activities. Being a member of these organizations, I am able to see firsthand the challenges and opportunities our profession faces in the future.

I welcome the opportunity to serve and will continue to work as a voice for our membership and those individuals we serve. I will continue to promote the mission of the Academy to “advance our profession through leadership, advocacy, education, public awareness, and support of research.” 



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Honors and Awards

JOIN YOUR COLLEAGUES AND FRIENDS AS WE HONOR THESE INDIVIDUALS

The Academy Honors and Awards Banquet, generously sponsored by Phonak, will take place on Thursday, March 28, 7:00–8:30 pm, at the Columbus Convention Center, Battelle A/B, during AAA 2019 in Columbus, OH. This event will recognize some of the great minds in the profession. Tickets for the banquet are \$65 per person and \$30 for students. Tickets are available through the AAA 2019 online registration system. For more information, contact hfinney@audiology.org.

Honors of the Academy Award

Awarded to one audiologist and/or one nonaudiologist for his or her exceptional support of the field of audiology and/or the patients we serve by focusing on issues that directly affect the profession and/or consumers with hearing loss and balance disorders.



Angela Loavenbruck, EdD

*Nominators: Barry A. Freeman, PhD;
Jeffrey M. Shannon, AuD; Jane R. Madell, PhD;
Ian Windmill, PhD; Catherine V. Palmer, PhD*

Angela Loavenbruck is an illustrious leader in the field of audiology, whose high standards, innovations, and commitment have crafted positive and lasting

changes in hearing-care services. Throughout her career, her efforts at the local, state, and national levels spurred audiology to an autonomous profession. As a clinician, Dr. Loavenbruck has dedicated her career to delivery of high-quality, patient-centered services. She is among the first audiologists in the nation to start her own independent practice, generating new delivery models for comprehensive, evidenced-based audiology services directly from audiologists.

At a time when audiologists were prohibited from dispensing hearing aids, Dr. Loavenbruck coauthored the first textbook on *Hearing Aid Dispensing for Audiologists* in 1978. She was among early advocates of the AuD degree and was a principal developer of rigorous educational standards for academic programs. As the first chair of the

Accreditation Commission for Audiology Education, her dialogues spurred the separation of university program accreditation from simple certification. She served on the Board of the Audiology Foundation of America, helping to raise millions of dollars to support the transition to the AuD. During her term as president of the American Academy of Audiology, she focused on assuring that ethical standards for audiologists were unsurpassed in health care.

Dr. Loavenbruck has fruitfully applied her unique ability to resolve complex challenges with reasonable and clear solutions (for the benefit of the audiology profession and the patients we serve), in locations ranging from the halls of Congress to individual audiology clinics.

Jerger Career Award for Research in Audiology

Awarded to an individual for research contributions in the field of audiology/hearing science, whose work has major impact on the field and/or practice of audiology.



M. Patrick Feeney, PhD

Nominator: Tina Penman, AuD

Patrick Feeney initiated his academic career in 1971 at Kent State University. He went on to study at the master's level at Washington State University. Ultimately, after serving a number of years as a clinical audiologist, he earned a PhD at the University of Washington in 1993. His illustrious career spans more than 30 years and is highlighted by a record of excellence and leadership in teaching, scholarship, and professional service and clinical service provision.

He was a faculty member at Ohio University, the Ohio State University, and the University of Washington before taking his current position in 2011 as director of the VA Rehabilitation Research and Development, National Center for Rehabilitative Auditory Research (NCRAR) at the VA Portland Health Care System in Portland, Oregon. He is also a professor in the Departments of Otolaryngology, Head and Neck Surgery and Neurology at Oregon Health and Science University. Dr. Feeney is a highly respected scholar who has received numerous and prestigious grants/awards from federal, state, and local agencies. His research has focused on peripheral and central auditory function in children, adults, and veterans. He is also an active volunteer in professional organizations having served as the 2008–2009 president of the Academy.

In total, Dr. Feeney's research has resulted in more than 50 publications in peer-reviewed journals, 11

chapters in seminal texts for the profession of audiology, and more than 50 published abstracts. More important than these remarkable achievements are Dr. Feeney's dedication to the profession of audiology and to the patients served by our profession. Dr. Feeney mentored and assisted other hearing professionals in developing their own unique lines of academic research and has dedicated a large portion of his significant talent to educating hearing health-care professionals to improve quality of care. His nominator, Tina Penman, AuD, said, "I cannot think of anyone more [deserving] than Dr. Feeney to receive the Jerger Career Award for Research in Audiology."

Early-Career Audiologist Award

Awarded to an individual who provides clinical services in the field of audiology for approximately fewer than 10 years, who makes outstanding contributions to the profession. The recipient shall have made notable contributions in one or more of the following areas: outstanding clinical practice and/or patient care, teaching or mentoring, advocacy, research, and exceptional service to the profession of audiology.



Erin G. Piker, AuD, PhD

Nominator: Gary P. Jacobson, PhD

Erin G Piker began her graduate studies at Vanderbilt University, where she obtained her degrees in 2006 and 2012, respectively.

Dr Piker is notable for outstanding clinical practice, teaching or mentoring, research, and service. Such qualities aptly describe the substantial successes she achieved with respect to participating in academia as an assistant professor, academic adviser, dissertation adviser, director of vestibular and auditory research at a major university—only some six years beyond earning a PhD. Not only has she made significant contributions to the field of audiology through research and teaching future audiologists, her clinical research and direct patient care has resulted in significant contributions to advancing diagnostic tests for identifying balance disorders in the vestibular clinic.

In addition to being both a productive clinician and effective teacher, Dr. Piker exhibits an exceptional level of productivity in the form of 24 peer-reviewed reports, of which she is first author on 41 percent of these, and five book chapters. Other evidence of her extraordinary productivity includes obtaining four internal grants along with six external ones, including the AAA Foundation's New Investigator Grant in 2014. In addition to her clinical, teaching, and research work, Dr. Piker has given back to the audiology field by contributing service in the area

of peer reviews and editorial-board work for academic journals, committee work for professional societies, and state-level advocacy efforts. To summarize, in the six short years after earning a PhD, Dr. Piker has accomplished much in all four areas of assessment for the Early-Career Audiologist Award, including state-of-the-art research on pathological vestibular issues, full teaching and mentoring loads, providing appreciable clinical duties, and giving back to the audiology profession through extensive service.

Humanitarian Award

Awarded to an individual who makes significant voluntary and/or philanthropic contributions to underresourced communities through provision of audiology or ear and hearing services, philanthropic development of educational programs, and/or other service-oriented activities. Work that is done in conjunction with the nominee's employment is usually not considered as being relevant for this award.



Debra Fried, MS

Nominator: Veronica B. Barnwell, AuD

Debra Fried began traveling to Nicaragua more than 15 years ago to participate with Mayflower Medical Outreach in an audio-

logic/otologic medical mission. Since her first trip, she has worked tirelessly on behalf of the hearing-impaired community in the rural, coffee-producing town of Jinotega. She carved time out of her busy career as an audiologist and coordinator of audiology services at Mount Sinai Medical Center in New York to make multiple trips per year, providing comprehensive and on-going services to the people of Nicaragua. Her relentless servitude earned her the positions as the director of audiology and a member of the board of directors for Mayflower Medical Outreach, Inc.

Despite her clinical and managerial responsibilities at Mount Sinai, Debra Fried knew she wanted to expand her footprint and bring her services to those in need. However, she was not content in simply bringing her services to overlooked populations, but rather she wanted to change the landscape of a community by creating opportunities for sustainable health-care access. Her achievements with the Mayflower Medical Outreach team cross the boundaries of audiology, medicine, and education.

Debra's accomplishments in Nicaragua over the past 15 years are impressive. She designed and implemented an audiometric technician training program for the

Nicaraguan Ministry of Health (MINSA) with grant support from the Hearing the World Foundation. This program now has more than a dozen Nicaraguan graduates who provide hearing care in their own country. She doesn't stop there. With a grant from the Oticon Foundation, she designed and implemented an early hearing loss detection program in Jinotega. She co-founded the International Humanitarian Hearing Aid Purchasing Program (IHHAPP), which is designed to provide low-cost, high-quality hearing aids to low-resource environments. Each of her actions and accomplishments indicates she is the epitome of a servant leader. Her service is not just for a moment, not just for two weeks out of a year, but rather for a lifetime committed to lift and lead the hearing-impaired people of Jinotega on a path to self-sufficiency and access to sustainable hearing health care.

Outstanding Educator Award

Awarded to an individual who has made significant contributions to audiology through his or her dedication and skill to the education of students of audiology. The individual may be a clinical or academic educator but should be a faculty or adjunct faculty member of a credentialed AuD program in the United States.



Gail M. Whitelaw, PhD

Nominators: Judy L. Huch, AuD; Amit Gosalia, AuD; Chelsea Bates, AuD

Gail M. Whitelaw serves as the director of clinical instruction and research at the Ohio State University Speech-Language-Hearing Clinic. She works directly with students as a preceptor in the clinic, as a professor, as the fourth-year clinic placement coordinator, and capstone supervisor/committee member. She is the audiology faculty member on the Leadership Education in Neurodevelopmental and Other Disorders housed at the Nisonger Center at Ohio State.

Her students describe how she always goes above and beyond. One of her former students sums it up: "Dr. Whitelaw is much more than a professor and preceptor. She is a remarkable mentor who cares deeply about the profession of audiology and the success of her students. She works harder than most to ensure that her students are receiving exceptional educational and clinical experiences." Among her recognitions are the Central Ohio Speech-Language-Hearing Association Honors as Outstanding Supervisor, and the Distinguished Faculty Award by the Ohio State University Student Academy of Audiology.

Dr. Whitelaw's influence extends far outside of Ohio State. She cares not only for her own students but also strives to create a better experience for all students in the profession. She was instrumental in the development of the American Board of Audiology's Audiology Preceptor Certification and served on the board of the Council of Academic Programs in Communication Sciences and Disorders (CAPCSD). Dr. Whitelaw is also a member of the Accreditation Commission on Audiology Education (ACAE).

Marion Downs Pediatric Audiology Award

Awarded to an audiologist for exceptional contributions in pediatric audiology either as an educator, clinician, or scientist.



Alison M. Grimes, AuD

Nominators: Margaret M. McCabe, AuD; Carmen Brewer, PhD; Sandra Gordon-Salant, PhD; Linda Hood, PhD; Patricia McCarthy, PhD

Alison M. Grimes has served the profession of audiology and the Academy with distinction over the course of her 40-year career. She has been a leader in the field, specifically in the practice area of pediatric audiology, and has served the profession through service at the national, state, and local levels. Dr. Grimes has been a tireless advocate for pediatric patients through her service on professional committees, advocacy, and through task force service. Among her numerous achievements, Dr. Grimes was instrumental in the development of standards for the American Board of Audiology specialty certification in pediatrics. Dr. Grimes has served as the Academy's representative to the Joint Commission on Infant Hearing since 2005; in this capacity, she participated in the formulation of two iterations of the *Principles and Guidelines for Early Hearing Detection and Intervention*, as well as acting as chair of the commission.

In addition to her participation in the critical mission of establishing these guidelines for newborn hearing screening, she ensured dissemination of the guidelines to the audiology community with countless presentations at national and state level meetings. Dr. Grimes has been an instructor for the Leadership Education in Neurodevelopmental and related Disabilities (LEND) programs in California since 2008. She is also

chair of the Academy's Guidelines and Strategic Documents Committee.

International Award for Hearing

Awarded to an audiologist and/or hearing scientist who lives and works outside of the United States and who provides outstanding contributions to the profession of audiology in a clinical, academic, research or professional capacity.



David T. Kemp, PhD, FRS

Nominators: Linda J. Hood, PhD; Glenis Long, PhD; Brenda Ryals, PhD; Sumitrajit Dhar, PhD; M. Patrick Feeney, PhD; Carolina Abdala, PhD; Dawn Konrad-Martin, PhD; Sharon G. Kujawa, PhD;

Beth Prieve, PhD; Glen Martin, PhD; Lynne Marshall, PhD

David T. Kemp clearly merits the Academy's 2019 International Award for Hearing, due to his revolutionary and paradigm-shifting contributions to audiology practices and auditory research around the world. His landmark discovery of otoacoustic emissions (OAEs) in 1978 revealed that the cochlea generates sound and is much more than a passive receptor. Subsequently, David Kemp's basic and translational hearing research with OAEs illuminated our theoretical understanding of hearing. He refined the use of OAEs as a critical method of characterizing auditory function, as now adopted by newborn hearing screening programs worldwide. OAEs have become key tools used to understand auditory neuropathy, probe other forms of cochlear and neural hearing loss, and provide important crosschecks with behavioral test methods.

In addition, David Kemp's discoveries, inventions, collaborations, and teaching serve as the foundations for careers of many audiologists and hearing scientists. He developed a commercial resource to facilitate implementation of OAEs that continues, under his leadership, to be a driving force in the arena of clinical instrumentation. The resources from that company have helped to build a premier auditory research center at the Centre for Auditory Research, University College of London Ear Institute. He is a Fellow of the Royal Society, has earned the Award of Merit from the Association for Research in Otolaryngology, and the von Békésy Medal from the Acoustical Society of America. He is respected for sharing his time and his talents abundantly with colleagues and students.

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The 2019 JAAA Editor's Award

Awarded annually to one or two members of the editorial board of the *Journal of the American Academy of Audiology (JAAA)* for outstanding contributions to the peer review of the journal.

Awarded by editor-in-chief Gary P. Jacobson, PhD, and deputy editor-in-chief Devin L. McCaslin, PhD.



Alaina Bassett, AuD, PhD

Alaina Bassett is director of the USC Balance Center, and an assistant professor of clinical otolaryngology in the Caruso Department of Otolaryngology Head and Neck Surgery at the University of Southern California in Los Angeles. She earned her undergraduate degree, AuD, and PhD in the Department of Special Education and Communication Disorders, all at the University of Nebraska-Lincoln. Her major areas of research interests are chronic illness and vestibular function; aging vestibular system; and fall prevention protocols across medical settings. Bassett hopes to contribute to the research literature for dizziness and imbalance, especially in regard to fall prevention.



Gabrielle Merchant, PhD, AuD

Gabrielle Merchant is a clinician scientist and director of the Translational Auditory Physiology and Perception Laboratory at Boys Town National Research Hospital. She earned her undergraduate degree at Smith College, PhD at the Harvard-MIT Division of Health Sciences and Technology Speech and Hearing Bioscience and Technology program, and AuD at the University of Massachusetts Amherst. Her translational research focuses on auditory mechanics, auditory perception, and advancing evidence-based practice through improved clinical diagnostic tools. Her current focus is working to improve the differential diagnosis of otitis media using a combination of physiological and behavioral measures, including wideband acoustic immittance. 



New Members of the American Academy of Audiology

JOINED: November/December 2018

Ashley Baughman, AuD

Autumn Berry, AuD

Jenny He, AuD

Joseph Hinz, AuD

PK Iwamoto, MS

Valari Koziel, AuD

Michelle Leenerts, AuD

Ashley McDermott, AuD

Lauren Morris, AuD

Carrie Overschmidt, AuD

Charles Palmer, AuD

Samantha Rensch, AuD

Indu Roy, AuD

Robin Stegman, PhD

Meghan Wisneski, AuD

ACADEMY PARTICIPANTS SUPPORT OUR PROFESSION

The Academy's Loyalty Media Programs offer organizations the opportunity to connect with Academy members and the audiology community.

You can find participants featured here in *Audiology Today* magazine, on our Web site (www.audiology.org), and at Academy events. Consider supporting the companies that support your association.

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For more information about the program, contact Samantha Leland at samantha.leland@mci-group.com.



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* 2017 "OVP Study" conducted at University of Northern Colorado examining the effect of Own Voice Processing on spontaneous acceptance among dissatisfied wearers after first fit of hearing aids. Further details: www.signia-pro.com/ovp-study
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