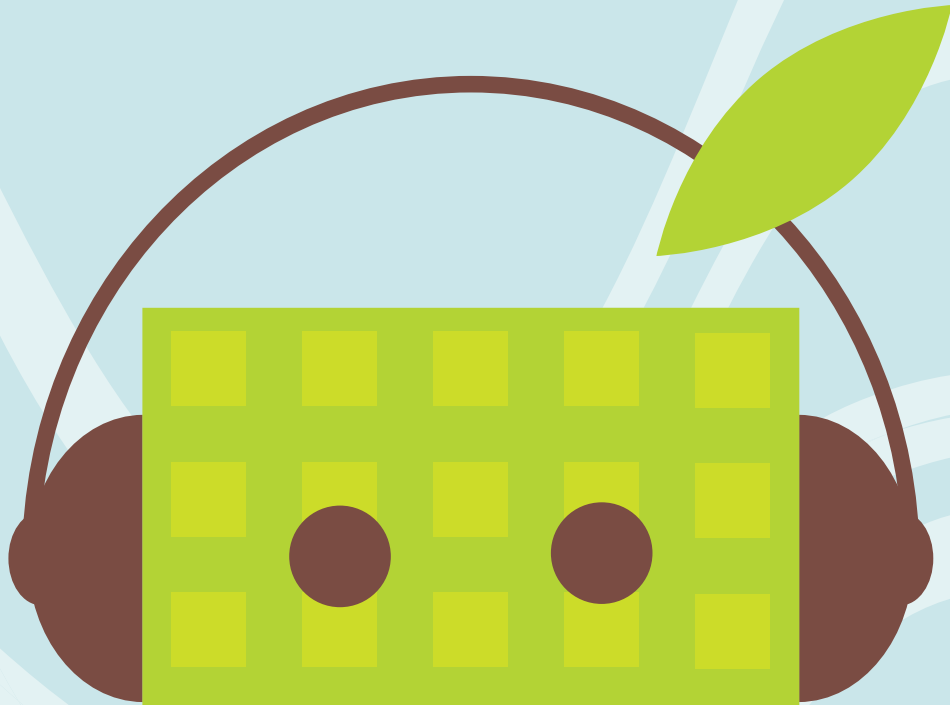


AUDIOLOGY TODAY

The award-winning magazine of, by, and for audiologists



Shhh!
**It's Not
Easy
Being
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It's a Matter of Ethics
Professional-Patient Relationships
Hearing Aid Delivery Models

Music

Phone

TV

Mobile

Re note



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Shhh! It's Not Easy Being Green Named the "greenest" city in the United States by a survey in *Popular Science*, it is fitting that Portland, OR, served as the venue for a special session at the spring 2009 meeting of the Acoustical Society of America, called "The Acoustics of Green Building." *Audiology Today* recently had the opportunity to speak with the cochair of the session Brandon Tinianov, PhD, an expert in the discipline of building science, about the challenges of achieving acoustical comfort in "green" buildings.

By David Fabry

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Best Practice: It's a Matter of Ethics There has been a strong focus on professional ethics from the Academy since about 2001, and this focus certainly appears to be important and appropriate. But what about ethical practice? If we talk about ethical practice, we have to be comfortable saying that there are hearing health-care professionals who are not practicing ethically.

By Catherine V. Palmer

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Creating Successful Professional-Patient Relationships Of the more than 36 million people with hearing loss in the United States, hearing professionals only fit about 23 percent with hearing aid amplification. Even among these, some leave the office without doing anything. The goal of this article is to offer suggestions, concepts, and insights regarding patients who leave without doing anything.

By Douglas L. Beck and Michael A. Harvey

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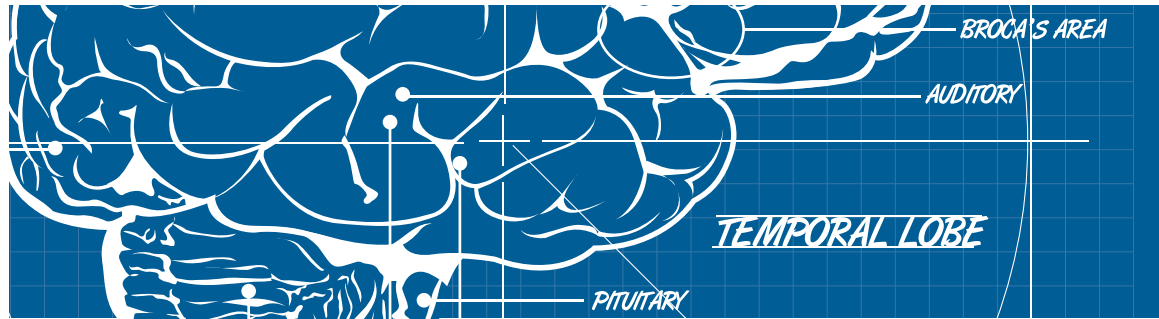
Hearing Aid Delivery Models: Part 1 of 2 Hearing impaired patients seeking rehabilitation can receive hearing aids through a variety of delivery models: from an audiologist and hearing aid dispenser to mail order or over the Internet, and more. Learn about the findings of the Academy's HA Delivery Task Force's report and those central questions that arise when we consider the available delivery models.

By Robert Sweetow



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Award Winner





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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.

Send article ideas, submissions, questions, and concerns to amiedema@audiology.org.

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From Awareness to Real Change: It Might Take a Nudge

Here is a remarkable statistic—

in the United States, association members donate 173 million volunteer hours each year. Visualize 83,000 full-time jobs—with no pay. Amazing!

Our Academy's 18 committees can certainly take partial credit for that statistic. Because October is near, I'd like to highlight the activities of our Public Relations Committee, chaired by Patricia Gaffney. October is National Audiology Awareness Month and National Protect Your Hearing Month, and this committee has developed a wonderful campaign. See page 81 to learn more.

Awareness is just the first step in a complex change process. Change means making choices, but it's no secret that when given choices, humans tend to choose inertia! We know how to support the change process with individual patients, but how to address social inertia?

The answer may lie in the emerging "science of choice." When we promote audiology awareness, we become *choice architects* (Thaler and Sunstein, 2008), because we attempt to steer society toward better choices. Not surprisingly, there are effective and ineffective ways to steer or *nudge* society toward choices that improve quality of life. Examples of *effective* choice architecture abound. You've seen cafeterias encourage healthy eating choices by placing fruit at eye level, while placing desserts in a less convenient location. Positioning fruit as the easier choice is an intentional choice architecture decision.


As choice architects, are we nudging effectively? One way to answer this question is to evaluate our messages. One of our most familiar awareness messages includes this familiar statistic: up to 80 percent of persons with hearing problems do not seek hearing help. This message, although true, nudges the listener to identify with the majority, and thus choose inertia. How many years have we been making this 80 percent point, with no improvement in outcome? We probably have enough evidence to suggest it is not effective to focus on what people are *not* doing.


However, if we emphasize what people are doing, we might nudge individuals toward change. Our message can truthfully report that *millions of people are improving their lives* by obtaining audiological care. This message stimulates a different part of the brain, and encourages listeners to identify with those who are making this choice. This kind of nudge—simply informing people what other people are doing—is called *social contagion*.

Social contagion is very effective. Citizens are more likely to recycle when they learn that most of the community is recycling. People are more likely to "eat locally" or become organ donors when they learn that most of their neighbors are doing so.

As we volunteer this October with awareness activities, let's also become savvy about change. Choice architecture is a specialty beyond conventional audiology, so here is



another nudge: other health-care professions are developing expertise on the neuro-psychological responses to choice, decision-making, and change. Audiology should, too! It's what other people are doing. 



Kris English, PhD
President
American Academy of Audiology

Reference

Thaler RT, Sunstein CR. (2008) *Nudge: Improving Decisions About Health, Wealth, and Happiness*. New Haven, CT: Yale University Press

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A handwritten signature in black ink that reads "Cheryl Kreider Carey".

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The Best Way to Plan for the Worst

Given the increasing dependence on computers and technology, the recent spate of natural disasters and data breaches highlights the need for every practice, no matter its size, to have a carefully crafted disaster recovery plan. A disaster recovery plan must be clear and simple, providing specific guidance that will help employees minimize confusion and downtime. The recovery plan should enumerate the steps to be taken before, during, and after an emergency, and must be thoroughly tested to ensure its viability in the actual event of a disruption. In preparing for the unthinkable, it is essential that the practice leader enjoy the full support of the practice's staff, requiring all employees to understand the potential disruption to business processes that could result from a disaster. Here is a start-to-finish guide for developing, testing, and implementing the most valuable investment you hope never to have to use.

A Coordinated Effort

Successful disaster recovery plans require the full support of everyone in the practice. Key players include the practice leader and anyone responsible for technology, whether

in-house or outside. A successful disaster recovery plan will emphasize the vital role that information systems play in the practice's operations, the effect that a disaster could have on those systems, and the business value of formalizing a plan to minimize the operational disruption that could occur because of a disaster.

How Bad Could It Be?

Risk assessment is a critical part of the planning process. The practice leader must consider the potential impact of a host of disaster types, including earthquakes, hurricanes, and other environmental occurrences; deliberate disruptions, such as data theft and other cyber crime; and technical threats, such as system failure and utility outages. Risk assessment is a complex science that can be particularly challenging to the uninitiated, but there are a wide variety of tools available to help, the most commonly used being COBRA, an application developed in accordance with numerous international standards.

What Comes First?

Prioritization is a critical step in formulating a comprehensive disaster recovery plan. The practice leader must evaluate not only which documents and information must be secured, but also which must be considered the practice's top priorities. Disaster recovery plans should also address the backup and recovery of administrative and patient-service operations, as well as alternative business processes, premises backup and recovery, and insurance coverage. The critical needs should of course be addressed first, starting with the procedures required to keep the practice's facility operational in the event that any one of a number of emergencies

occurs. Back-up computer locations and reciprocal service or usage agreements can all figure into the disaster planning efforts.

Data Collection

Once prioritization is complete, those involved in the development of the plan are ready to begin collecting critical information to incorporate in the plan. This includes important phone numbers, equipment inventory, insurance information, and a vendor contact list. Planners should also inventory office supplies, documents, and any items in off-site storage. The backup and retention schedules for software and data files are also critical pieces of information. Forms that are pre-formatted will help significantly in this process.

Testing and Training

Testing can occur on various levels. At the most basic, planners can conduct a walk-through test simply by reviewing their checklists and going through the motions to check for glitches in the plan or issues they may not have noticed. Simulation testing will help create a more realistic disaster environment, while full interruption testing will be the best indicator of the viability of a disaster recovery plan. Planners should conduct the first waves of testing before or after business hours, and in stages, so as to minimize the level of operational disruption. Auditing and testing should be ongoing, and planners must think of the disaster recovery plan as a living document that can be modified as the needs of the practice change, or better processes are developed. Once the plan is in working condition, the practice must train its employees on how to respond to a disaster through tutorials, procedural reviews, and simulated exercises.

A successful disaster recovery plan can mean the difference between a practice surviving or going under. It is not an area where your practice should cut corners. Ultimately, the successful plan will minimize downtime and delays, foster a sense of security, and, to the fullest extent possible, eliminate the need for decision making in an actual disaster situation. Your practice can think of investing in a disaster recovery plan as taking out an insurance policy for the revenue that could be lost from operational downtime. Like insurance, no one wants to have to utilize a disaster recovery plan, but it is nice to know it's there.



Real Protection in a Virtual World

Cyber security can be tricky. It is an ever-changing landscape where new threats can emerge in as little time as it takes to dash off an e-mail. Over the years, as the online world has spread to almost every corner of human activity, a few universal tenets of cyber security have

emerged. In fact, experts are in wide agreement that there are certain steps that need to be taken to protect any small practice that operates in a networked environment.

The prototype of the hacker is changing. When cyber attacks first began to make headlines, they were often the handiwork of a teenage whiz kid defacing a large corporate or government Web site just to show that he could. Irritating, sure, but for the most part benign, at least compared to the contemporary attacks, which are primarily motivated by profit. Highly organized criminal units, often operating out of countries halfway around the world, are targeting businesses—especially small businesses—with a host of threats designed to extort money, steal identities, or discredit a rival enterprise. Some attacks are even farmed out to contract players hired to corrupt or destroy networks and Web sites for any number of reasons. But whatever the motives for the attack, cyber threats are gaining momentum, and small businesses make for ripe targets. Small practices are much less likely to have an in-house IT department than large practices. Small practices are also constrained by limited budgets, and many choose (despite the strident warnings of computer scientists and entrepreneurs who themselves have survived an attack) to try to implement security on the cheap. If there were ever a single refrain that most experts could agree on, it would be this—don't skimp on cyber security! Here are nine other cyber security strategies that they would probably agree on as well.

Asset Management

Small practices trying to build a reputation might well not survive an incident that threatened their

patients' sensitive information, and many states have enacted laws requiring businesses to notify their customers in the event of a data breach. Improved asset management and inventory control are the first steps to avoiding data loss. With all the elaborate ways that hackers can break into a network and access internal databases, old-fashioned larceny is often overlooked in discussions on cyber security, though it should not be.

Usage Policy

To address the threat of lost or stolen data, many companies are implementing tough restrictions on how their employees handle laptops and other devices, and your practice should do the same. In some cases, employees are not permitted to access confidential data through any device other than company servers, and employees' laptops are subject to routine inspections to ensure they contain no unauthorized files. Other companies have forbidden their employees from using their own PDAs on office computers, and disabled extra USB ports to ensure compliance. Having a stated usage policy and requiring employees to familiarize themselves with it will erase any confusion about what is and isn't permissible. Even though many of the requirements should be obvious (don't open attachments from unsolicited e-mails, no pornography, etc.), putting it in writing will make it clear that cyber security is a top priority. Some of the policies will reinforce responsible actions that your employees are aware of (always log off at the end of the day, never share your password with anyone) but may simply not treat with the diligence they deserve. The usage policy should be a continual reminder of the importance of cyber

security, underscoring the numerous fronts on which threats can emerge.

Limited Access

No one wants to distrust their employees, right? No one hires people they don't trust, particularly when they will be working in arm's length of your most precious patient data. But dishonest employees can be slick, or perhaps their dishonesty only crept in after they began their tenure at your practice. Sometimes we simply fall prey to lapses in judgment. Unfortunately, the sobering reality is that stories of disgruntled employees bilking their employers for huge losses abound. Like any other business objective, there is no room for sentimentality in cyber security. Employees should be granted administrator privileges and other access rights strictly on an as-needed basis. Microsoft recommends implementing a "least security" policy, where the servers are configured to give specific users access only to the programs they need to use, and user privileges are specifically defined.

Terminated Employees

Human nature informs us that a terminated employee might harbor resentment toward his former employer. In simpler times, that employee might have loaded his pockets with binder clips and staplers on his way out the door. The threat of disgruntled former employees used to be more petty than malignant, but times have changed. As soon as an employee's tenure with your practice comes to an end, the person responsible for IT issues should erase the employee's passwords, access codes, and any other electronic mechanisms that would enable him to gain entry into your practice's systems.

Firewalls

Firewalls are the most common security defense in place in the networked business community. A firewall simply blocks unauthorized traffic from accessing a portion of a network. In a practice setting, firewalls typically partition a local private network from the larger external Internet. Some firewalls examine packets for suspicious content and filter out those that cannot be authorized. Firewalls also shield the identifying information of computers in protected networks so that hackers have a harder time targeting specific machines. Put very simply, firewalls are an essential weapon in the security arsenal of any enterprise.

Antivirus Software

Most practices have at least taken the basic step of installing antivirus software. Indeed, many computers come with antivirus solutions preinstalled, but administrators must configure the software to regularly scan workplace computers, as well as monitor all incoming e-mail attachments. However, installing antivirus software is only the first step. New strains of viruses emerge constantly, and it is more than you can ask of any administrator (especially in a small, cash-strapped business) to keep up with them all. Threat reports are available from many security providers, often for free, and many offer services and information specifically tailored to small businesses. The most important thing to remember about antivirus software is that it must be updated regularly. Many solutions prompt users automatically when a new version is available for download, but too often these reminders go ignored.

Passwords

Most people have multiple accounts in cyberspace. The identity crisis that can result from having to keep track of

a myriad of passwords can be a source of endless frustration, and it can also create one of the weakest spots in your cyber-defenses. Between the nuisance of having to remember several logins and passwords, and the irritation of having to contact tech support to have them reset when they slip your mind, many employees opt for a simple, easily remembered string of characters, such as a birthday or a relative's name. It's a logical inclination, but the consequences can be dire. Creating a secure password is an acquired skill. The most important feature of a secure password is randomness. Hackers sometimes use a brute-force technique to crack passwords by systematically trying every possible combination of letters and numbers until they gain entry into the system. To defend against this attack, passwords should be at least eight characters in length, experts advise, and should contain a mixture of uppercase and lowercase letters, numbers, and symbols. Employees should change their passwords every three months, and should never write them down. This of course begs the question of how to remember a random string of eight characters that changes four times a year without writing it down. Simple: Find a set of characters that has meaning to you, but would be completely nonsensical to anyone else. For example, start with a memorable phrase, like "Strong passwords lead to secure protection of data" and create abstractions that will dissociate the final password from the original sentence for everyone but you. The first letter of each word in our example would read: "spltspod." Now, how about some numbers and symbols that are close to the letters or words: "\$p!2sP0d." Two levels of abstraction create a password that carries a meaningful association for you but will appear completely random to anyone else.

Backup Data

This one sounds like a no-brainer, but some small practices either neglect to back up their data entirely, or only do so by making hard copies stored on-site or relying on their computer's hard disk. Both of these are flawed strategies, because you'll want to protect against natural disasters and acts of God, as well as hackers. Keeping backup hard copies on-site will be of little help if your building floods or burns down, and hard-disk failure is an all-too-common occurrence. Also, backup tapes kept on-site are a prime target for burglars or rogue insiders. An effective backup strategy involves archiving data on a regular basis using reliable media, preferably nightly, and storing backup data in an off-site location.


Cyber Insurance

Cyber insurance covers hacked computers, computers disabled by viruses, denial-of-service attacks, and a host of other technology-related issues. While a general liability policy will cover physical assets in the event of theft, flood, or fire, cyber insurance policies can be written, at the policyholder's discretion, to cover the costs associated with downtime, damages resulting from a cyber attack, and Web-content liability. Just like a health insurance policy, the best rates will be awarded to those who can demonstrate that they have already taken certain steps to minimize their risk. So an internal security assessment is a good first place to start when considering cyber insurance.


Whether they ruin hardware, or compromise sensitive patient or practice data, today's cyber attacks are costly. The picture is not all gloomy for small practices, however. There are numerous steps they can take to shore up their systems and protect themselves, their employees, and their patients. Some are common sense, and some are highly technical. When considering how best to guard against threats that can literally be the demise of your practice, enlisting the help of a professional consultant is often the best way to go. Remember, cyber security is not the place to count pennies. **A**

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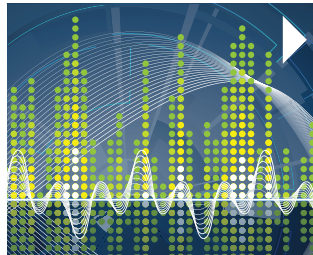


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The American Academy of Audiology has adopted 10 core values, which are aligned with the Academy's pillars of advocacy, education, leadership, public awareness, and research. These core values are both for the Academy as an organization and for the individual members and represent the tenets that govern our professional behavior.

Keywords: Core Values

Vanderbilt Announces New Department Chair: Interview with Anne Marie Tharpe, PhD

The Academy speaks with Dr. Tharpe about her new position at Vanderbilt's Bill Wilkerson Center, Department of Speech and Hearing Sciences in Nashville, Tennessee.

Keywords: Anne Marie Tharpe

FTC Red Flag and Address Discrepancy Rule

The Federal Trade Commission has established November 1, 2009, as the effective date of implementation of the Red Flag and Address Discrepancy Rule.

Keywords: FTC Red Flag

Musicians and Hearing Loss: Interview with Marshall Chasin, AuD

The Academy speaks with Dr. Chasin about hearing protection for musicians, spectral warping, and more.

Keywords: Marshall Chasin

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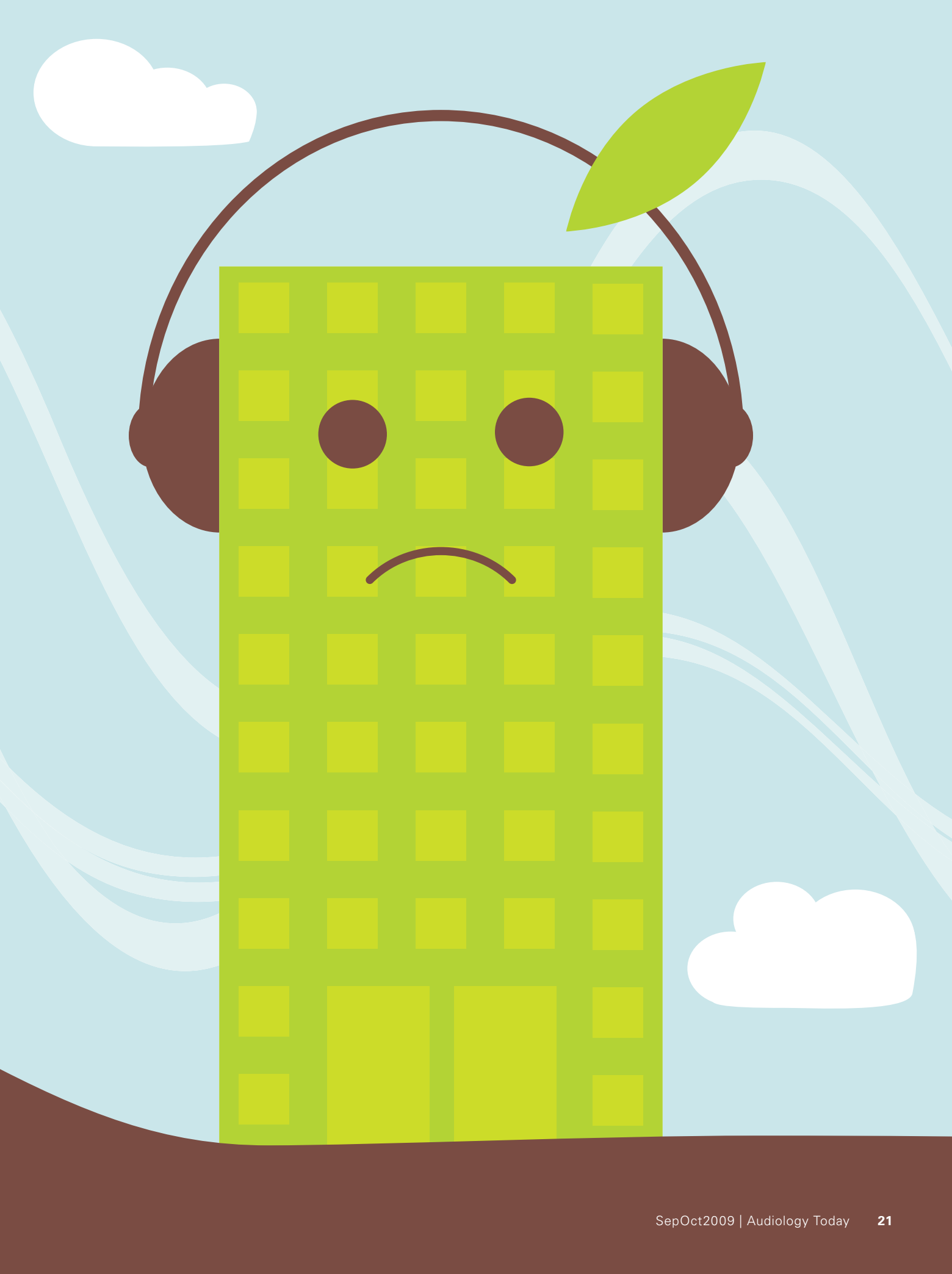
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Shhh! It's Not Easy Being Green!

BY DAVID FABRY

Audiology Today recently had the opportunity to speak with Brandon Tinianov, PhD, an expert in the discipline of building science, on the challenges of achieving acoustical comfort in “green” buildings.





At a September 1969 conference in Seattle, Washington, U.S. Senator Gaylord Nelson of Wisconsin announced that there would be a nationwide grassroots demonstration on behalf of the environment. Senator Nelson first proposed the nationwide protest in an effort to thrust the environment onto the national agenda. “It was a gamble,” he later recalled, “but it worked.” On April 22, 1970, Earth Day marked the beginning of the modern environmental movement. Approximately 20 million Americans participated, with a goal of a healthy, sustainable environment.



Forty years later, the “green” movement is in full force; so much, in fact, that writers such as Thomas Friedman and others have called for a green “revolution,” rather than a feel-good green “party.” In Friedman’s opinion, at the same time that we are congratulating ourselves for tweaking our lifestyles by using paper instead of plastic at the grocery store, the world is becoming more hot, flat, and crowded. Certainly, although every conservation effort is a step in the right direction, the biggest impact will be made when we break free completely from “fuels from hell” (oil, gas, coal, nuclear) and focus our efforts on “fuels from heaven” (solar, wind, water). To break free from what he refers to as “petro-politics,” Friedman and others have issued a “Code Green” alert for the planet.

Although it is easy to become overwhelmed with the idea of making an impact against global warming, it still is important to consider that the collective impact of our actions can make a difference in the world. To that end, many clinicians have developed “green policies” in their

clinical environments, and have counseled patients to buy their hearing aid batteries in simple packaging to minimize waste, in addition to disposing batteries properly and buying mercury-free batteries. *Audiology Today* invites readers to send their environment-friendly tips for the audiology clinic, and we will publish the list in a future issue.

Consistent with the challenge posed by Thomas Friedman and others, however, we also need to think “big,” and that means thinking seriously about energy consumption. As of 2006, buildings consume 40 percent of the total energy consumed in the United States and European Union. This total comprises roughly equal amounts of energy use from commercial and residential construction. Furthermore, nearly 40 percent of the total amount of carbon dioxide produced in the United States may be attributed to buildings. Considering these statistics, reducing the amount of natural resources consumed (and pollution caused) by buildings is crucial for future sustainability. In recent years, the focus on “green” construction has started a quiet revolution in the residential

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and commercial industry. What does this have to do with audiology? Ironically, like so many of our other issues, it has to do with noise.

LEEDing the Way

The U.S. Green Building Council (www.usgbc.org) has established a Leadership in Energy and Environmental Design (LEED) certification system, providing third-party verification that a building or community was designed and built using strategies that improve performance related to use of materials and resources, indoor environmental air quality, energy and atmosphere impact and control, water efficiency, and stewardship of resources and sensitivity to their impact. Although the potential impact of LEED building is huge, potentially saving the United States economy trillions of dollars, it may also have a negative impact for those with hearing loss by not adequately considering ambient noise levels.

Hot, Flat, Crowded...and Noisy?

A recent survey by *Popular Science* (www.popsci.com/environment/article/2008-02/americas-50-greenest-cities?page=1) named Portland, Oregon, as the “greenest” city in the United States, edging out San Francisco and Boston for the title. Criteria used in the ranking included use of renewable energy, mass transit, air quality, recycling, and green living (such as the number of green buildings and the use of parks and other open spaces in urban environments). Portland, America’s top green city has it all, as half of its power comes from renewable sources, a quarter of the workforce commutes by bicycle, carpool, or public transportation, and it has 35 buildings certified by the U.S. Green Building Council.

It is fitting, then, that Portland served as the venue for a special session at the spring 2009 meeting of the Acoustical Society of America (ASA), called “The Acoustics of Green Building.” As it turns out, it’s not so easy being green, especially when it comes to sound

Average Scores by Category

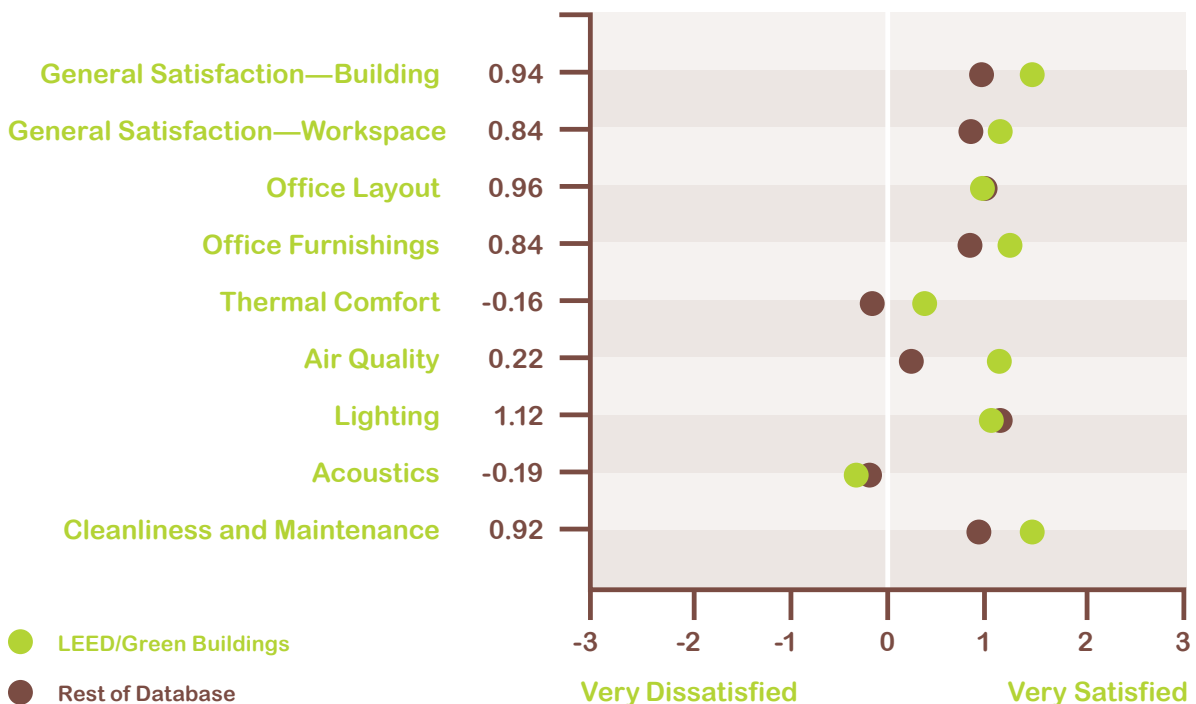


FIGURE 1. Satisfaction graph from CBE survey (www.cbe.berkeley.edu) of 34,000 respondents in LEED buildings (n = 37) and the rest of the CBE database (n = 173)

Source: www.cbe.berkeley.edu

isolation and transmission. *Audiology Today* had the opportunity to speak with Brandon Tinianov, PhD, who was cochair of the session. Dr. Tinianov is a recognized expert in the discipline of building science and in the creation and patenting of novel construction materials to support global sustainability initiatives. He has a PhD in Engineering Systems from the Colorado School of Mines; a MSc in Mechanical Engineering from University of Texas at Austin; and a BSc in Mechanical Engineering from Tulane University.

AT: Thank you for taking the time to talk with us today. Why would the world's experts in building acoustics and noise control devote an entire afternoon to the specific sector of green buildings?

BT: Because we need to. Green buildings outperform their "brown" counterparts in almost every measure—thermal comfort, air quality, cleanliness, and general satisfaction. But according to a study by the Center for the Built

Environment, a survey of 34,000 respondents found that acoustical comfort is bad. In fact, the acoustics of green buildings is worse than that of brown buildings.

No kidding? Why? I thought that green buildings were quieter than brown construction.

Well, for one thing, quiet is not absolutely better. The interplay between masking sounds and distracting noise in buildings is complicated. For example, the more efficient HVAC equipment typically used in green design is quieter, so inoffensive background noise has been reduced, allowing for other noise to make more of an impact. Combating this requires taking acoustics into account during design.

And how is this done?

Green construction typically makes increased use of natural light and open air space, which provides a migratory path for sound. In turn, however, this decreases acoustic privacy.



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Average Acoustic Complaints in LEED-Rated/Green Buildings (n = 21) and the Rest of DBE Database (n = 160)

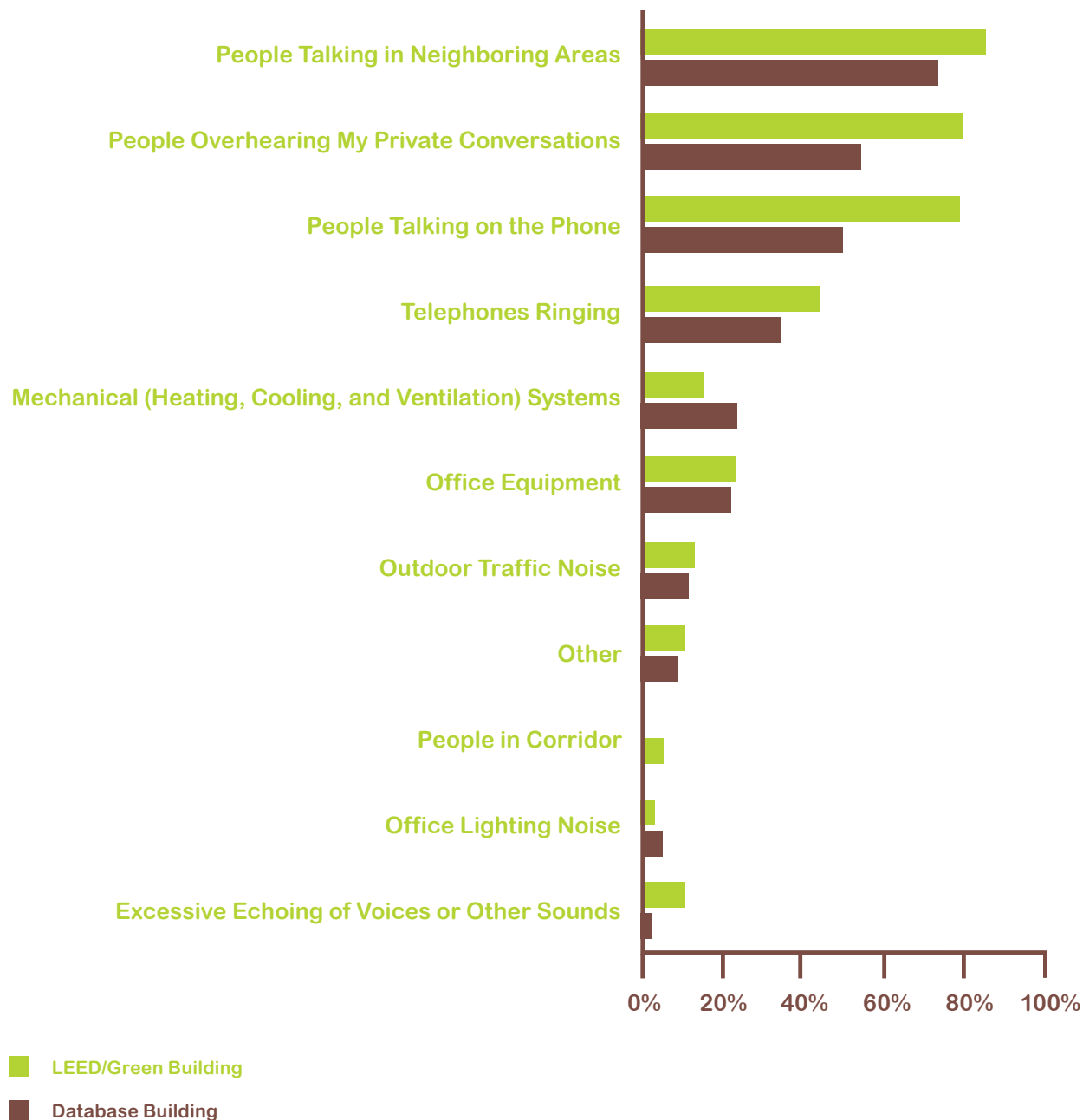


FIGURE 2. Average acoustic complaints in LEED-rated/green buildings (n = 21) and rest of CBE database (n = 160)

Source: www.cbe.berkeley.edu

One of the invited speakers at the ASA special session was Kevin Powell, a research director at the U.S. General Services Administration (GSA). GSA is the largest property manager in the country and has a mandate for green buildings in their property portfolio. Kevin highlighted the need for better privacy in their existing buildings but, more importantly, recognition from the major green building standards regarding acoustics. A survey of acoustic complaints in LEED-rated green buildings revealed an increased number of complaints related to privacy by people in green buildings.

Interestingly, we recently moved into a green building at the University of Miami, and we have had the same experience. One way that the architects have attempted to overcome the lack of privacy is to use "piped-in" masking noise, which sounds very much like HVAC fans.

Yes, a common solution is to use white noise or pink noise to raise the ambient noise level and increase privacy.

But it creates problems in rooms where we are doing auditory-verbal therapy, fitting hearing aids, or counseling patients who have hearing loss.

Exactly.

Are there systems used for classifying the acoustical performance of green buildings?

Acoustic suitability is complex. Some relevant measures include aural privacy, intelligibility, background noise, and reverberation control. The key measurement parameters are sound transmission and sound absorption. Sound transmission categorization (STC) is a frequency-weighted decibel value of attenuation through walls or floors, specifically as it relates to interference for speech intelligibility. STC calculations of 45–50 are the minimum necessary to prevent spoken conversation from being heard in adjacent rooms. Without intervention, some green buildings have STC values as low as 30 dB.



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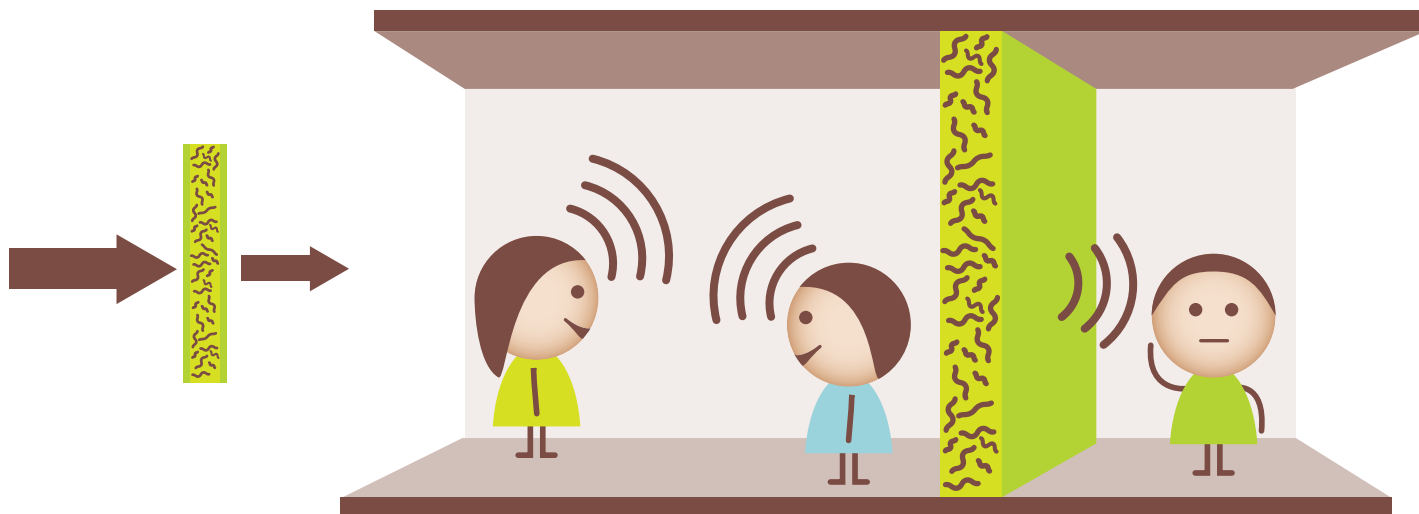
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Sound Transmission



Sound Absorption

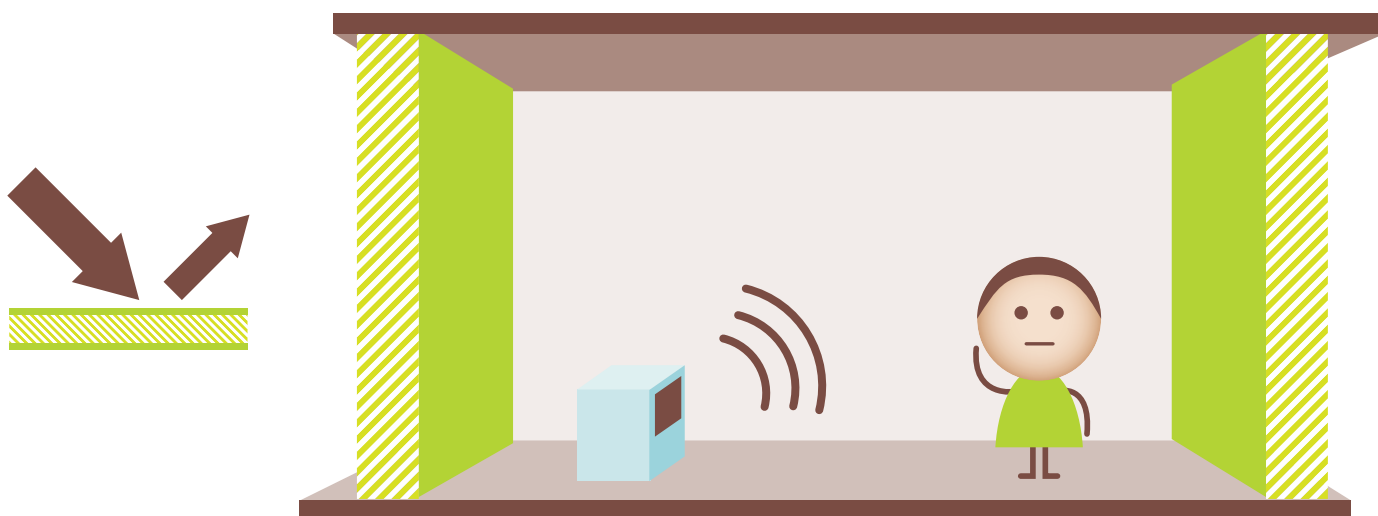


FIGURE 3: Principles of sound transmission and sound absorption

In schools, this would be unacceptable. Green construction is on the rise, and audiologists should be proactive in addressing these issues for hard-of-hearing students.

STC is increased by using damped panels, and also by extending the height of the walls into the plenum, rather than just to the ceiling.

But doesn't this reduce the "green" aspect of modular construction?

It doesn't have to and the costs are not much higher. The problem is related more to lack of awareness in the early stages of the project.

Indeed, this would appear to be vital, particularly in educational settings, but also in many other locations where our patients work and reside. I have also noticed that "green" construction also uses a lot of reflective surfaces, rather than using carpet, curtains, and other materials that are designed to absorb energy and minimize reflections.

Yes, sound absorption performance is measured as a single rating, the noise reduction coefficient (NRC), and ranges in value from 0 (very reflective) to 1.4 (very absorptive). Green construction, which often uses nonfibrous materials, often has very reflective properties, which we know is bad for communication.

Of course, by increasing reverberation time. So how do green buildings fail by design, with respect to acoustics?

By not taking advantage of sustainable options for treatment of ceilings and walls to increase NRC during the planning stage. Although the costs of initial construction can be minimal, re-engineering for sound absorption or sound transmission problems may be prohibitive. The majority of the time, however, cost isn't the issue. Rather, plans are developed without consideration for the acoustical function of spaces, because you can't "see" noise on a plan. The problems only surface when experienced by the occupants. Currently, there is no strong advocacy for acoustic design in green buildings, and in fact, some important noise-mitigating materials are prohibited, and this may impact both normal hearing and hearing-impaired persons. There are minimal LEED credits awarded for acoustics in schools and hospitals.

And the irony is that those environments should have extra credit, due to the need for low ambient noise levels.

Exactly. During the Acoustical Society session in Portland, the panel's points and concerns over current green rating systems were profiled in a *Scientific American* article titled "It's Not So Easy Being in a Green Building." As David Sykes, my session co-chair stated, "There's a need for the profession to understand what's going on in the LEED world and a need for the LEED world to understand what's going on in acoustics."

I couldn't agree more, and I appreciate your taking the time to discuss these issues with us. 🗣️

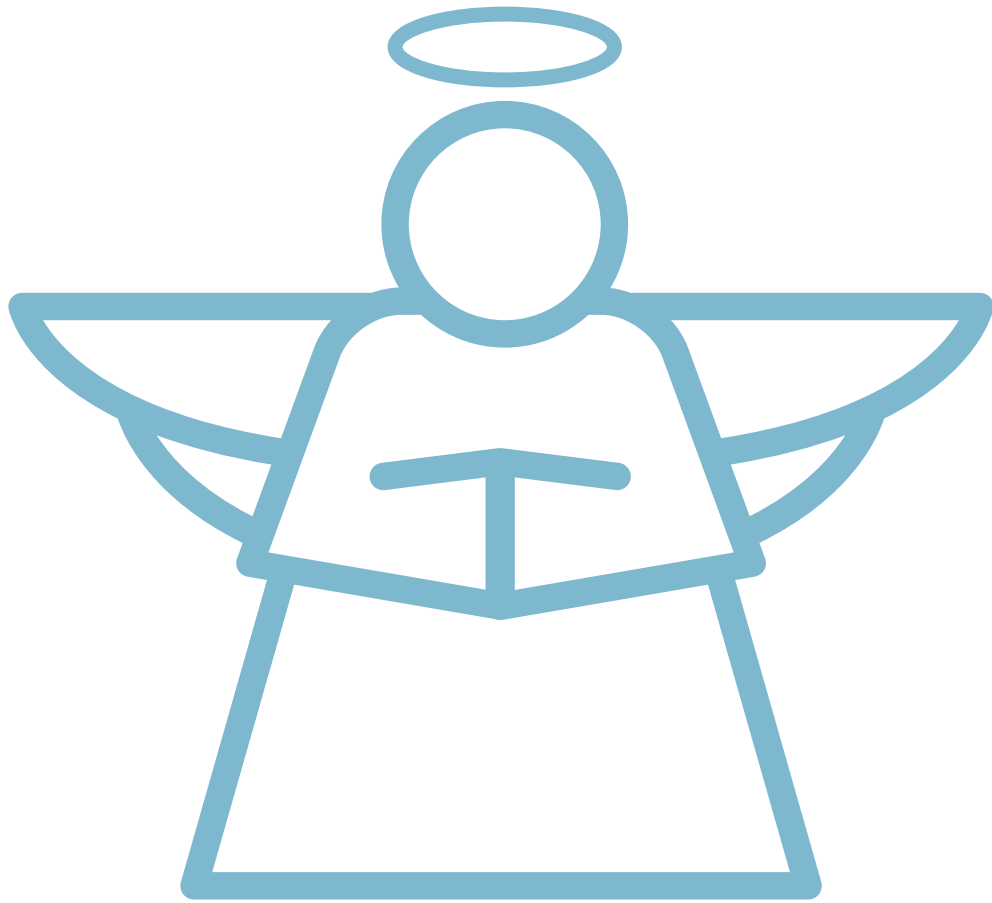
David Fabry, PhD, is the content editor for *Audiology Today* and the chief of audiology at the University of Miami, in Miami, FL. Send comments about this article to dfabry@audiology.org.

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BEST PRACTICE

It's a Matter of Ethics

BY CATHERINE V. PALMER

There has been a strong focus on professional ethics from the Academy since about 2001, and this focus certainly appears to be important and appropriate. But what about ethical practice? If we talk about ethical practice, we have to be comfortable saying that there are hearing health-care professionals who are not practicing ethically.

Brian Walden (2009) published an outstanding article summarizing the recent history of professional ethics in audiology and providing very clear guidelines in terms of what clinicians need to do in relation to conflicts of interest. There has been a strong focus on professional ethics from the Academy since about 2001, and this focus certainly appears to be important and appropriate. But what about ethical practice? I wonder if we have conveniently focused on professional ethics not only because it is important but because it actually is quite easy to talk about without implying anyone is really doing anything wrong. Most presentations start with something like “Although the gifts you are taking aren’t impacting your treatment choices, the perception is that

there could be an impact.” Somehow this lets us off the hook and provides us the chance to change our behavior not because we were actually doing something wrong but because others might think it was wrong. If we talk about ethical practice, we have to be comfortable saying that there are hearing health-care professionals who are not practicing ethically; there are people doing the wrong thing, and it has nothing to do with perception. There is no room for a statement like “It’s okay that you aren’t following best practices by not measuring the output of the hearing aid you are fitting, and it’s okay that you are charging for your expertise but not using it—it’s just that someone might perceive this as the wrong way to fit hearing aids.” Perception is not reality here; reality is reality.

We are all responsible for our profession and must not tolerate behavior that would harm our collective reputation and ability to function as an autonomous profession dedicated to providing communication solutions.

Unethical practice negatively impacts our patients and negatively impacts our profession. We are all responsible for our profession and must not tolerate behavior that would harm our collective reputation and ability to function as an autonomous profession dedicated to providing communication solutions.

The U.S. Food and Drug Administration (FDA) currently regulates hearing aids. This implies that hearing aids are considered devices that could potentially be dangerous to the consumer and that they are devices that need to be dispensed by individuals with expertise in verifying the performance of these devices. Therefore, hearing aids need to be fit by individuals knowledgeable about their features, able to manipulate the various parameters, and equipped to measure the output of these devices in the ear canal of the individual who will be using them. Practitioners must be capable of interpreting data in light of evidence related to how best to achieve the goals of a hearing aid fitting (audibility for a variety of levels of input, comfort, and sound quality).

Failure to measure implies that the hearing health-care professional believes the manufacturer's hearing aid settings are appropriate for the individual patient and there is no need for verification. The evidence that clearly indicates this is a false assumption includes work by Hawkins and Cook (2003), who reported a clear trend for manufacturer-simulated values to overestimate the output that was actually provided by the hearing aids with differences of as much as 20 dB. Keidser et al (2003) demonstrated that different manufacturer algorithms provided significantly different amounts of gain for the same hearing loss through their first fit settings. Mueller et al (2008) showed that there were significant differences between manufacturers when it came to the prescribed maximum output of hearing aids as well. The prescribed maximum output for six hearing aids from different manufacturers resulted in differences of more than 15 dB, and the estimated output graphs varied by more than 8 dB compared to measured outputs. Underfitting leaves sound

inaudible, and overfitting can potentially harm an individual. Both results are intolerable and are avoided when the actual output in the individual's ear is measured.

Mueller (1998) reported that only 34 percent of the audiologists responding to a *Hearing Journal* survey indicated that they used real-ear probe microphone measurements. Perhaps most disturbing in this survey was that 12 percent of these individuals indicated that RETZ was their measure of choice, and, of course, this is not a measurement at all (just a meaningless set of initials that Dr. Mueller added as a foil!). Mueller replicated this survey in 2005 and found similar, disappointing results with very little difference between individuals possessing varying degrees (MA vs. AuD) or years of practice. He had hypothesized that newly graduated AuDs would be using best practices since these clinicians were fortunate enough to be in doctoral-level programs where one would assume evidence-based practice formed the curriculum. This was not the case.

Bamford et al (2001) reported that only 20 percent of individuals fitting amplification to children used real-ear probe microphone measures. These individuals are comfortable relying on manufacturer estimations that Seewald et al (2008) showed generated substantial variation in output in a population that is unable to provide reliable reports about audibility and comfort. This is a population brought to us by parents who trust us by virtue of our membership in a profession. They trust that we are using the latest data and technology to insure that their baby hears the sounds that will be critical to speech and language development. Seewald (2008, p.26) notes that "Failure to appropriately verify the electroacoustic performance of the hearing aid in terms of predicted speech audibility and maximum hearing instrument output can result in obstructing the language benefits an infant would have otherwise received from being identified at an early age and optimally fitted." This is not something any of us would want to be accused of, yet this is exactly what the accusation would be. The individual

who did not measure the audibility of the hearing aid would simply have no defense for that behavior.

Two common responses from individuals who do not use real-ear probe microphone measures are that they cannot afford the equipment or that they do not have time to add this measurement to their hearing aid fitting appointments. Inability to afford required equipment is not an excuse for unethical practice. Until the appropriate equipment is obtained, individuals should not be fitting hearing aids. Inadequate time does not make sense, since verification through real-ear probe microphone measures is much more efficient and less time-consuming than questioning patients about the loudness of a sound that they cannot accurately judge, since they are new hearing aid users or using unreliable word recognition testing (Thornton and Raffin, 1978) to verify the fitting. If there is not time for real-ear probe microphone measures, then there is not time to fit hearing aids.

Audiology practice guidelines clearly state the standard for verifying the output of a hearing aid. The Academy's *Guidelines for the Audiologic Management of Adult Hearing Impairment* states that "Prescribed gain (output) from a validated prescriptive method should be verified using a probe microphone approach that is referenced to ear canal SPL." The guideline goes on to indicate that this can be "simulated" with the use of real-ear-to-coupler difference (RECD), which consists of a probe microphone measure that establishes the difference between the coupler and real ear so the actual response in the ear canal can be accurately estimated. This is the recommended method for fitting pediatric patients since the RECD is a quick measure that does not require the child to sit still for an extended period of time while fine-tuning takes place. The Academy's *Pediatric Amplification Protocol* (2003) supports this recommendation by stating, "Output characteristics should be verified using a probe-microphone approach that is referenced to ear canal SPL.... If probe-microphone measures of real-ear hearing aid performance are not possible, hearing aid performance can be predicted accurately in the real ear by applying age appropriate average RECD values to measured 2-cc coupler electroacoustic results."

Are best practices a matter of ethics? The Academy and American Speech-Language-Hearing Association (ASHA) codes of ethics make it clear that failure to follow best-practice guidelines is a violation. Principle 2 of the Academy *Code of Ethics* states that "Members shall maintain high standards of professional competence in rendering services.... Individuals shall maintain professional competence, including participation in continuing

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education,” and Principle 4 states that “Members shall provide only services and products that are in the best interest of those served.” Principle of Ethics II from the ASHA *Code of Ethics* states that “Individuals shall honor their responsibility to achieve and maintain the highest level of professional competence.” All of these statements point to the assumption that an ethical practitioner will follow the best practices supported by evidence and published by their professional organizations.

Until recently, clinicians who did not use real-ear probe microphone measures were in essence protected from questioning consumers. How could hearing aid purchasers know the standard for verifying the hearing aid response? The patient saw that the hearing aids were connected to a computer and there were graphs on the computer screen. These graphs do not represent measurements. Measurements result from a microphone being placed in the ear canal (either from an independent real-ear probe microphone system or from an integrated probe microphone system that may accompany a particular hearing aid). With the recent publication of the *Consumer Reports* (2009) article focused on hearing aids, consumers now have information that may empower them to ask the hearing health-care provider exactly how the hearing aid response will be verified. *Consumer Reports* indicates that “of that battery of tests, one stands out as a


must-have: the real ear test, which measures the match between your hearing loss and the response of your hearing aid.” The article continues with a quote from Dr. Todd Ricketts, “There is evidence that you get a better fitting with a real-ear test and people are more satisfied” (*Consumer Reports*, 2009). The discussion of this quote on the Academy SoundOFF listserv prompted a comment from one audiologist who indicated that there could be an “over-reliance on real ear measures.” It was heartwarming to see Ryan McCreery’s (audiologist at Boystown Hospital, Omaha, Nebraska) response to this comment,

In my humble opinion, there’s no such thing as an over-reliance on real ear measures among audiologists. The problem is that the vast majority of audiologists don’t do real ear verification so they have no idea what the fit of the device is in that individual patient’s ear... I agree that prescriptive targets are akin to

normative values, and I view them as a starting point rather than a strict guideline to take into account the individual loss of the patient. Regardless of whether or not you choose to even use prescriptive targets, real ear measures still provide evidence that speech is audible through the hearing aid, which is not something that can be reliably determined from the manufacturer fitting screens or algorithms.... I hope we can continue to discuss the reasons that hearing aid acceptance is not higher in the hearing-impaired population. The fact that a doctoral profession is arguing about whether or not to individually verify the gain and output of a hearing aid in a patient’s ear that takes less than 5 minutes might just be a good place to start.

If you are wondering if providing this level of verification will establish you as an expert and set you apart from other providers, keep in mind that it does not

require any particular expertise to attach cords to a HiPro Box, double click on NOAH, enter a patient name, click hearing thresholds on a graph, double click on a manufacturer icon, and click “first fit.” This level of “expertise” does not require a doctoral degree. As a profession, it is time to be

expert. An expert knows exactly what levels of sound are being produced in an individual’s ear canal. These data are used for the initial hearing aid fitting and counseling, subsequent fine-tuning, and assisting in establishing realistic communication expectations based on the level of audibility that has been achieved across input levels and frequencies. 

Catherine V. Palmer, PhD, is the director of audiology at the Eye and Ear Institute at the University of Pittsburgh Medical Center and associate professor in the Department of Communication Science and Disorders at the University of Pittsburgh.

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Creating Successful Professional-Patient Relationships

BY DOUGLAS L. BECK AND MICHAEL A. HARVEY



Photo Courtesy of NIDCD.

Of the more than 36 million people with hearing loss in the United States, hearing professionals only fit about 23 percent with hearing aid amplification. Even among these, some leave the office without doing anything. Perhaps they leave because we have not effectively connected with them, or perhaps we failed to understand their motivation, situation, or purpose. The goal of this article is to offer suggestions, concepts, and insights regarding patients who leave without doing anything.

Unfortunately, there's no Holy Grail in relationships. Sometimes patients seek professional help with problems for which the professional is well trained and competent, and sometimes they don't. Sometimes patients want help with their hearing problems but they're not sure they want to do the work or spend the time or money required to get the help they need. Each situation is unique. There's no "one size fits all" solution.

Beck et al (2007) noted professionals typically don't see the most difficult cases. That is, the ones that *really, really, really* are determined not to do anything about their hearing problems simply don't walk through the door. Generally, professionals only see patients who choose to come through the door. Hearing loss is the third most prevalent chronic health problem in the United States,

exceeded only by arthritis and hypertension (Chisolm et al, 2007). Nonetheless, of the more than 31 million people with hearing loss in the United States, hearing professionals only fit about 23 percent with hearing aid amplification (Hou and Dai, 2004; Kochkin, 2005). Therefore, some 77 percent of people with hearing loss are not receiving benefits from amplification and aural rehabilitation.

thinking, emotions, and cognition. Thus, connectivity is essentially a human experience. Connectivity may have been the essence of the famous Helen Keller quote, “Life has taught me that being blind separates me from things, but being deaf separates me from people.”

Connectivity is so primary and basic that it often goes unnoticed when thoughts, feelings, emotions, and

Given that amplification devices enhance connectivity and improve people’s quality of life, it follows that people with hearing loss should be banging on the audiologist’s door! Unfortunately, most people who would benefit from amplification avoid the door at all costs.

The patients we’ll address in this article are from the 23 percent we see. Even among these, some leave the office without doing anything. Perhaps they leave because we have not effectively connected with them, or perhaps we failed to understand their motivation, situation, or purpose. The goal of this article is to offer suggestions, concepts, and insights regarding patients who leave without doing anything. Unfortunately, if we don’t do all we can to establish successful relationships with each patient, the result may be no relationship.

The three primary themes we’ll address are connectivity, influence, and motivational interviewing. These are each somewhat intuitive, and many successful professionals use bits and pieces of these themes already. However, human interactions are diverse and complicated. The three themes are not mutually exclusive; they clearly interact, overlap, and intertwine. Acquiring a working knowledge of each allows us to be more cognizant of the invisible “forces” working for and against each professional-patient relationship.

Connectivity

Beck and Harvey (2009) framed connectivity as a shared internal experience founded on listening, feeling,

cognitive activities are healthy and stable. However, when connectivity fails to operate normally due to hearing loss, or loss of emotional content, or reduced cognitive ability secondary to the aging process, the failures of each exacerbate the other, often resulting in “negative synergy” (Schum and Beck, 2008; Beck and Clark, 2009).

Connectivity and Untreated Hearing Loss

When hearing loss is untreated, social phobias, depressive symptoms, and frustration and anger in relationships are likely (Harvey, 2001; Kochkin, 2006). Engelund (2006, p. 174) noted that untreated hearing loss can even threaten one’s self identity.

Reduced connectivity often results in a reduced quality of life (QOL). Indeed, even pediatric patients have suffered negative QOL consequences secondary to hearing loss. In a study of 137 children, ages 8 to 17 years, treated for neuroblastoma, Gurney et al (2007) reported that children with hearing loss were at greatest risk for academic learning consequences as well as psychosocial difficulties and decreased self-reported QOL.

Engelund reported (see Beck, 2007) that if an individual does not self-identify as a person with hearing problems, they are unlikely to seek or welcome solutions to

hearing problems they neither recognize or acknowledge. Engelund (2006) addressed problem solving behaviors of hearing-impaired people and noted intentional change involves emotion, cognition, and behavior. Regarding the (approximate) four out of five of people with hearing loss who do not seek treatment, Engelund (2006) suggests that rather than viewing them as stigmatized or in denial, we (and they) would benefit from viewing them as being in different stages of the hearing loss recognition process and as needing different kinds of attention and rehabilitation. Not all people follow these stages step-by-step in a predictable or linear fashion. Some skip steps, and some repeat steps, and some get stuck in steps for extended periods of time, perhaps forever. Engelund's (2006) four stages of recognition of hearing loss are:

1. Attracting Attention (people with an emerging hearing problem)
2. Becoming Suspicious (people who start to think they *might* have hearing problems)
3. Sensing Tribulation (awareness of hearing loss and recognition of problems)
4. Jeopardizing Self (awareness of dangers related to untreated hearing loss and awareness that their QOL can suffer from untreated hearing loss).

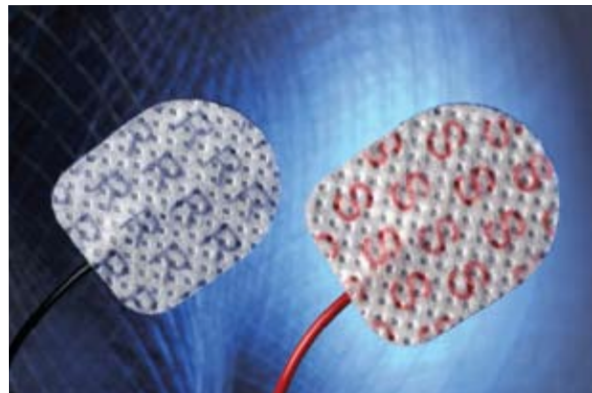
Connectivity and Treated Hearing Loss

When hearing loss is treated via amplification, improvements in relationships as well as improved intimacy and warmth within family and group relationships are evident. From an individual psychological level, emotional stability and a sense of control tend to improve when amplification is employed to treat hearing loss.

In their comprehensive report, Chisolm et al (2007) addressed QOL as it relates to hearing aid amplification in adults. After systematic review and meta-analysis of 16 previous studies, the authors concluded that hearing aids do improve health-related QOL by reducing psychological, social, and emotional effects of sensorineural hearing loss.

As advanced amplification tools become commercially available, the opportunity for enhanced human connectivity and improved QOL also increases. When people connect seamlessly and wirelessly with ease and efficiency using intuitive and familiar tools, connectivity increases. Technical achievements that facilitate enhanced access between advanced hearing aids and more traditional

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devices (such as television and landline-based telephones) through wireless systems (i.e., Bluetooth, WiFi, near field magnetic induction [NFMI], and FM systems) are of paramount importance, as they facilitate increased connectivity.

In years past, audiologists provided hearing aid amplification and then also provided multiple assistive listening device (ALD) systems to allow patients to communicate

Reciprocation

Reciprocation is the tendency to give back to others. In almost all human exchanges, when we give first, the other person is extremely likely to give back. If a friend or colleague offers you a service or acknowledgment, you're very likely to return the gesture. When someone extends their hand to you, you extend your hand and shake.

**People prefer to engage with people they like.
You must genuinely like your patients,
and they must like you.**

via telephone, watch television, and appreciate music. Unfortunately, the ALD system was often perceived by the patient as “just one more thing” to learn about, purchase, and figure out how to use. Patients often responded with “I’ll think about it,” and that was that. Now with integrated and wireless solutions to connect so many common sound sources to advanced hearing aids, connectivity has become seamless, easy, intuitive, and wireless and increases access to people.

The Clear Dilemma

Given that amplification devices enhance connectivity and improve people’s quality of life, it follows that people with hearing loss should be banging on the audiologist’s door! Unfortunately, most people (perhaps 77 percent) who would benefit from amplification don’t actually bang on the door. Rather, they avoid the door at all costs. How can we influence or motivate those who request our assistance?

Influence

The ethical use of influence relates to having integrity, placing the needs of the patient above the needs of the professional, and understanding how people think. In his books *Influence: Science and Practice* (2008) and in *Yes! 50 Scientifically Proven Ways to Be Persuasive* (2008), psychologist Robert Cialdini, PhD, and coauthors Goldstein and Martin addressed six primary principles of ethical influence. The principles are extraordinarily easy to understand, are universal across all human relationships, and can specifically be applied to audiology and aural rehabilitation. The six principles are reciprocation, scarcity, authority, consistency, liking, and consensus.

People like to, and people tend to, reciprocate.

Reciprocation occurs in marketing initiatives too. When charitable groups send direct mail appeals for financial support, the return rate often approaches 25 percent. To achieve this stellar response they often send along an almost insignificant packet of personalized address labels or similar trinket. As a result of receiving a gift, many people respond with a financial donation.

Perhaps an effective application of the reciprocation principle (with regard to amplification) is a trial period with advanced amplification and connectivity devices. When individuals experience positive life-changing benefits through advanced technology within their personal and daily lives, they are more likely to pursue these technologies than they would have been without experiencing the benefit firsthand. In other words, the offer of a trial and the trial itself represent the initial gesture from the professional to the patient.

Scarcity

Scarcity is the tendency for people to want more of things they can only have less of. For example, rare coins, tickets to a sold-out Broadway show, Mickey Mantle or Babe Ruth baseball cards, never-opened original vinyl versions of The Beatles’s *Sgt. Pepper* album, and so on. People like rare, scarce, and unique. However, scarcity can go beyond physical items and may include unique or rare services combined with unique or rare products. For example, when advanced hearing products are introduced, professionals attend product-specific training to acquire knowledge to fit these products. The combination of a sophisticated product and a highly trained professional

may infer the scarcity principle. Thus, the hearing-care professional markets their advanced training in tandem with the new product. Dentists, optometrists, and ophthalmologists often market their talents combined with the latest tools in their professions, also.

Authority

Authority is straightforward. In essence, people like to know the professional they're working with is an authority within their profession and has impressive credentials. Physicians, dentists, and optometrists, as well as accountants, attorneys, psychologists, social workers, and cosmetologists, place their professionally framed credentials (diplomas, licenses, certificates, awards, etc.) in plain view. These credentials establish the professional as an educated person, a person with superior knowledge and talents—in brief, an authority.

Consistency

People's behavior tends to be consistent with what they say. This is a core tenet of motivational interviewing

(discussed below). Professionals must listen carefully and intentionally elicit patients' verbalizations. The words the patient chooses to articulate their intentions and abilities to change (e.g., seek amplification) reflect their own thoughts processes and intentions. When we successfully incorporate their wants and needs into an aural rehabilitation strategy, we increase the likelihood of connectivity and the chance that aural rehabilitation will progress and succeed.

Liking (i.e., likability)


People prefer to engage (or do business) with people they like. Conversely, they don't like to do business with people they don't like. If the professional or patient notices a sincere, real, or genuine reason to like the other person, it makes the relationship easier and makes connectivity more probable. There are two corollaries to the liking principle. First, you must genuinely like your patients, and second, they must like you. It is difficult to establish connectivity with people you don't like. Motivational interviewing (MI) is a counseling approach that is quiet

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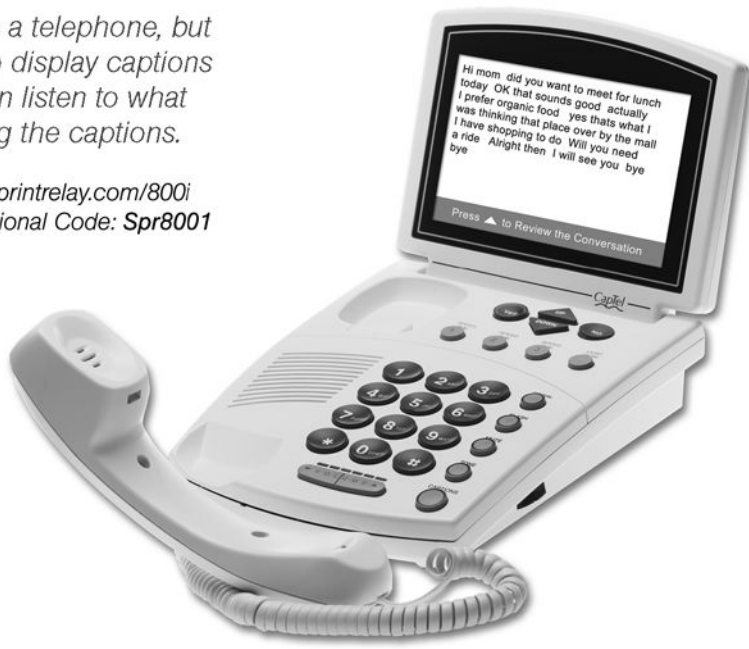
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and friendly, not threatening, domineering, or persuasive. As such, MI has the ability to enhance likability.

Consensus

People generally look around to see what happened to others in similar situations. When faced with major medical decisions, all of us want to know the odds of success based on people who have been through it before. To address consensus, audiologists may provide written testimonials and photos in their waiting room, arranged in intuitive and easily navigable sections to make it easy for the patient to find others “just like me.”

Motivational Interviewing

Motivational interviewing (MI) was originally developed as a goal-directed, patient-centered counseling tool to help alcoholics who had been resistant to change (Miller and Rollnick, 2002). MI has been successfully applied to smoking cessation, weight reduction, drug programs, and more (Centers for Disease Control and Prevention, 2005). MI might be thought of as a protocol designed to

maximize effective and appropriate influence management. To successfully use MI, the audiologist directs conversational discourse to probe and reveal the desired outcomes—as seen by the patient (Rubak et al, 2005; Beck et al, 2007; Harvey, 2007). In other words, the audiologist sets up a context in which the *patient* states the reasons for change.

There are four categories of self-motivational statements (i.e., “change talk”) that the professional elicits from the patient via purposeful questioning. *Problem recognition* might be as simple as asking the patient, “Is it more difficult for you to hear in a cocktail party or noisy restaurant?” An *expression of concern* might be elicited by asking, “Do you have concerns about what your friends might think if you wear hearing aids?” The *intention to change* might be evaluated by asking, “If the hearing aids really helped, can you imagine wearing them?” Lastly, the *degree of self-efficacy* to change can be elicited with “Do you think you’ll be able to wear hearing aids at work and at home?” An audiologist’s dream scenario would be for the patient to respond as such:

Stages of Change

Pre-contemplation

Patient denies the problem.

Contemplation

Patient is ambivalent, considers change, rejects change.

Determination

Patient’s motivational balance tips toward change.

Action

May include hearing aid acquisition or aural rehabilitation.

Maintenance

Help patient identify and use strategies to prevent relapse.

Relapse

Help patient avoid demoralization of relapse.

Source: Prochaska et al, 1994.

Wow, I guess there's more of a problem than I thought and I'm really, really concerned about the effects of my hearing loss. I think it's way past time for me to address this, and I'm ready, willing, and able to do this as soon as you can fit me in your busy schedule! How can you help me?

Fantasy aside, change is not always linear (see Engelund, 2006). Patients often experience repetitive stages in the course of acknowledging and addressing a problem, sometimes beginning with denial.

It is a common phenomenon; when professionals are confronted with a patient "in denial," we become anxious. Then, to mitigate our anxiety, we talk more, lecture more, and use more impressive-sounding words. This strategy is very likely to backfire. As noted above, the patient and professional need to like each other. As our anxiety and syllable counts increase, our likeability index decreases. Professionals skilled in MI tend to talk less, ask more questions, and listen more. MI is a counseling style, and it is nonconfrontational.

The "Stages of Change" are summarized in the sidebar. (A similar illustration, the "Wheel of Change," appears in the following sources: Prochaska et al, 1994; Harvey, 2003a, 2003b; Beck et al, 2007; Harvey, 2008)

Ambivalence and MI

Sigmund Freud may have had some strange ideas, but he was clearly correct when he said that every decision is characterized by some level of ambivalence. Ambivalence refers to the simultaneous feeling of wanting and not wanting something, a feeling of attraction and repulsion to the same thing. Ambivalence often means seeing the good and bad, the right and wrong, the advantages and disadvantages, while being uncertain as to which path to follow.

Freud's dictum is absolutely relevant to the task of health-care professionals. Our task is more than giving advice; our task includes *motivating* patients to do what's in their best interest. Sometimes, using traditional counseling techniques just gets one deeper and deeper into trouble. That is, when a professional voices one side of the patient's ambivalence (change), it precipitates the patient voicing the other side of ambivalence (no change). Indeed, the more the audiologist advocates for change, the more the patient advocates for staying the same. The more we push, the more they pull.

For example, if the audiologist says, "Hearing aids will make it easier for you to hear," the patient might say, "I



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hear pretty well most of the time.” If the professional says, “It’s been shown that hearing aids can improve the quality of your life,” the patient might say, “Uncle Fred is 89 years old, deaf, doesn’t want or wear hearing aids, and he’s doing just fine!” We’ve all been there.

Motivational interviewing guides the professional to talk less and ask more questions to encourage the patient to do most of the talking. There is an important caveat: What you don’t talk about *can* hurt you. Nietzsche said, “Silence is poison.” Keep in mind, the goal is not to elicit

Joan’s Hearing Aid Balance Sheet

Get Hearing Aids	Do Not Get Hearing Aids
More social and family involvement	Continued feeling of isolation
Hearing the bids at bridge games	Not playing bridge
Understanding the grandchildren more easily	Difficulty with soft speech and mumblers
Hearing the TV easily	Playing the TV very loud
Improved ability to use cell and landline phones	Continue to avoid picking up the phone
Finally getting the last word	Continue to argue with son
Cost issues	Keep the money in the bank
Less frustration	Same/worse frustration
Less anxiety	Same/worse anxiety
Less stress	Same/worse stress

just any talk. The professional must try to elicit *change talk* related to problem recognition, expression of concern, intention to change, and degree of self-efficacy. The audiologist's task is to elicit, understand, and effectively manage the patient's ambivalence.

For example, a patient with a mild hearing loss may experience ambivalence that pivots on her desire to hear more clearly combined with her reluctance to wear hearing aids due to cosmetic concerns. Or she may desire the ability to use her cell phone easily, while feeling reluctant to pay for hearing aids (as an aside, patients with mild and moderate degrees of hearing loss often have pronounced levels of ambivalence, whereas patients with severe and profound hearing loss have less ambivalence because their need to "manage" their hearing loss is greater). Thus, the audiologist who appreciates "amplification ambivalence" can respectfully make ambivalence part of the audiologist-patient dialogue, thus voicing (airing) hidden concerns and managing them more effectively, while achieving and maintaining "likability."

Joan is a 68-year-old who recently stunned her adult son by agreeing to an audiology appointment. The audiologist, trained in motivational interviewing, did not rush to be an "agent of change." Rather, he said, "I believe hearing aids will help, but I'm sure you have some concerns, too." He helped Joan fill out a *Hearing Aid Balance Sheet* (see sidebar) to help her acknowledge and amplify (pun intended) her ambivalence regarding pros and cons of wearing hearing aids.

Joan's balance sheet reflects the concerns and thought processes Joan considered and worked through prior to arriving at her decision to try hearing aids. Once the issues were aired and placed "on the table," the audiologist could directly affirm and validate Joan's ambivalence and enter into a frank discussion of the issues important to Joan.

Motivation is not a general trait existing within...an individual...but is an important part of the counselor's task...[which is] not only to dispense advice but to motivate—to increase the likelihood that the client will follow the recommended course of action. From this perspective, it is no longer sensible for a [health-care professional] to blame a client for being unmotivated to change, any more than a salesperson would blame a potential customer for being unmotivated to buy. Motivation is an inherent and central

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part of the professional's task. [Miller and Rollnick, 2002]

Conclusion

Relationships are multilayered, diverse, and dynamic. There is much more to professional-patient relationships than diagnostics, hardware, and software. The quality of the relationship between the professional and patient impacts whether or not the patient accepts our guidance and recommendations. Successful professionals are able to draw on their personal qualities and skills to achieve a higher level of connectivity and to influence and motivate their patients to achieve an improved quality of life.

Motivational interviewing is a directive, patient-centered counseling style for increasing intrinsic motivation by helping patients explore and resolve ambivalence. Through MI, the patient and the audiologist experience connectivity as the patient becomes an active participant in the discourse, as opposed to the patient serving as a recipient of professional information. The “decision to change” results from this collaborative discourse, which leaves the patient feeling validated, respected, and liked by the professional.

These principles (connectivity, influence, and motivational interviewing) remind us of the 76-year-old woman who joyfully reported to her family that she finally got hearing aids! She had previously visited and frustrated many audiologists. Her daughter asked her, “Why now?” She replied, “He was the first person that asked me ‘How are you doing?’ and, he really, really wanted to hear my answer.” 

Douglas L. Beck, AuD, is director of professional relations at Oticon Inc. in Somerset, NJ. Michael A. Harvey, PhD, is a consulting faculty member at Salus University and a clinical psychologist in Framingham, MA.

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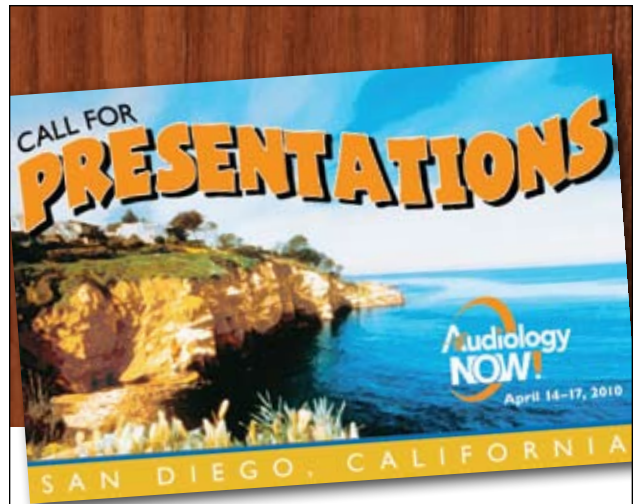
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HEARING AID DELIVERY MODELS

PART 1 OF 2

BY ROBERT SWEETOW

In 2008, Alison Grimes, AuD, president of the American Academy of Audiology, ordered the creation of the Task Force on Hearing Aid Delivery Models, led by Robert Sweetow, PhD. This article is part 1 of 2 describing the findings of the task force's work. The second part of this article, to appear in the Nov/Dec issue of *AT*, will discuss the recommendations of the task force to the Academy Board of Directors.

Patients with hearing impairment who are seeking rehabilitation can receive hearing aids through a variety of delivery models: from an audiologist, from a hearing aid dispenser, from a physician, by mail order, over the Internet, or over the counter. Several central questions arise when we consider the available delivery models: What are the pros and cons of bundling versus unbundling? What are the crucial issues that audiologists must consider when establishing insurance contracts? Should Internet, over-the-counter, and mail order sales be managed, and how should audiologists participate? Should there be any regulation on dispensing by nonaudiologists?

In 1977, the American Speech-Language-Hearing Association (ASHA) *Code of Ethics* Section C-1a stated that audiologists “must not accept compensation in any form from a manufacturer or dealer in prosthetics or other devices for recommending any particular product.” This ruling, in effect, banned audiologists from selling hearing aids to patients, and as a result, dispensing was performed primarily by hearing aid dealers. In 1978, however, the Supreme Court ruled that “A society’s canon of ethics having the effect of limiting compensation among the society’s members is illegal.” Following this decree, 900 audiologists engaged in direct hearing aid dispensing in 1979. By the end of the 1980s, it was estimated that 5,000 audiologists were dispensing hearing aids, and now as many as 10,000 audiologists are believed to dispense. The effect of this shift has been that the majority of hearing aids are now dispensed by audiologists, with the remainder of hearing aids continuing to be dispensed by nonaudiologists (i.e., hearing instrument specialists and, to a lesser degree, physicians).

As baby boomers age, the number of individuals requiring hearing aids and auditory rehabilitation have and will continue to increase substantially. Correspondingly, there has been an increase in the number of insurance benefits that apply to hearing aids. In many instances, the insurance companies and state organizations dictate how services and products are to be billed and provided, that is, whether the services and products are bundled together or unbundled (i.e., listed, itemized, and paid for separately). It is reasonable to anticipate that third-party involvement will continue to grow, and with health-care reform on the very near horizon, the larger unknown is how payment scenarios will unfold.

Another factor likely to exert an effect on the future of hearing aid delivery models is the increase in hearing aid sales via Internet and/or mail order. Trends have clearly shown that modern consumers (sometimes called “e-patients”) are becoming more computer savvy and have substantially increased online purchases. In addition, technological advances may produce offerings for over-the-counter sales of hearing aids.

Findings

While each of the aforementioned central issues contains important and controversial aspects, a common factor that has major implications for each subject is the development of a transparent fee schedule. The analysis of the four issues that led to this conclusion is discussed below.

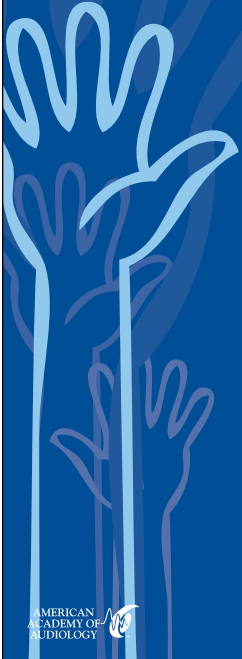
Bundling Versus Unbundling

Bundling refers to the practice of combining products and services into a single fee. *Unbundling* means that products and each service are listed separately in any billing statement. There are no data that definitively support either bundling or unbundling fee strategies for audiologists.

Traditionally, audiologists dispensing hearing aids have been bundling services and products together. Part of the reason for this relates to insurance and other third-party payer restrictions. In addition, patients may want the process of purchasing hearing aids to be easily understood. Unbundling service from the hearing aid may confuse the patient, and lead the patient to believe that vital services could be eliminated in order to minimize cost. Patients may not understand why so many procedures are needed (i.e., probe microphone measures, COSI, QuickSIN, outcome measures, postfitting rehab, etc.) for their hearing aids to be professionally and correctly fit to their hearing loss.

Conversely, if the product and services are bundled, patients may not understand why hearing aids cost so much. By unbundling, audiologists can convey to their patients the true cost of product versus cost of service. Unbundling would allow for transparency (and consistency) that could produce increased confidence, trust, and understanding by patients of the professional component involved in prescribing and fitting hearing aids. In other words, unbundling may assist the patient in understanding the value of the professional services provided by audiologists. This argument is analogous to a knee replacement. The prosthesis has limited value without the professional expertise and services of the surgeon and physical therapist, both of whom expect to be reimbursed. Retail models are far more common in general merchandising offering “sales” and “discounts” to the general public. There is a focus on products rather than (diagnostic and rehabilitative) services. Service providers are blended and appear to have the same “sales” credentials and expertise. Audiologists should not give away professional services. Doing so devalues

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Before contracting with an insurer, be prepared to answer the following questions:

What is the reimbursement schedule for all services that the practice wishes to provide?

How often is the schedule updated, and how is the practitioner notified of the changes?

What are the service provisions of the contract?

Is the practitioner contracted for providing diagnostic services only?

Is the practitioner contracted for providing durable medical equipment (DME)/hearing aids only?

Is the practitioner contracted for both diagnostic and DME/hearing aids?

Are there separate contracts for diagnostic and DME/hearing aids? *Note that if the audiologist is not contracted for DME/hearing aids, he or she is not bound by the payer's fee schedule for DME/hearing aids. That said, the contracted rates, which may be discounted for diagnostics, may be applied to the hearing aid benefit, often an undesirable and unknown scenario.*

Does the contract comply with state and federal laws and regulations? *Note that if the contract dictates "free" services such as hearing tests, there may be a conflict with federal law if the audiologist is charging Medicare for the same procedure. Remember that the most that one can charge a federal program is the least that one can charge a patient or insurance company.*

Are there any prior authorization requirements?

What are the in-network and out-of-network provisions in the contract?

What are the allowed charges, patient copayments, and coinsurance regulations?

Does the contract require that the provider discount the usual and customary charges?

Does the contract allow for balance billing for the product and/or for services? If so, under what conditions?

Does the third-party payer consider balance billing the difference between what was reimbursed and the actual fee charged or the difference between what was allowed and what was paid?

Does the contract allow for billing of noncovered services to the patient?

Does the contract allow the audiologist to capture additional fees in the provision of the service by utilizing the HCPCS codes for those services?

Can patients choose products and services that exceed the allowed charges? In other words, are patients allowed to pay for upgrades as part of the contract if they so choose?

Are there limitations on products and services that may be provided? That is, does the contract limit the patient to only certain manufacturer makes, models, and levels of technology?

Is the provider reimbursed for all services, or are there provisions for nonbillable (uncovered) services, visits, or products? For example, does the insurer require free hearing tests, a certain number of hearing aid checks, services for a certain number of years, warranties, batteries, etc.?

What is the claims submission process (i.e., paper or electronic)?

Where is the claim to be sent?

How long will it take to be reimbursed?

Is there a penalty/late fee/interest that would be added when reimbursement is late?

Are insurance waivers allowed?

Must the audiologist carry liability insurance and, if so, how much?

Are there any fees associated with plan participation? If so, is it per office location, per provider, per occurrence, or annually?

Who maintains ownership of patient records?

What are the termination provisions?

What is the appeal process for denied claims?

Are there any noncompetition clauses?

Is the contract reviewed at least every six months to ensure that ever-greening (changes made without your knowledge) has not occurred?

our expertise and may in fact be illegal in certain circumstances, such as when a practice bills Medicare for hearing tests but then provides the same hearing tests to another patient for free. Audiologists should quantify all the procedures done and identify every available code that was performed and that can be billed. It is common for audiologists to not have an unbundled fee schedule simply because there are no apparent codes available. But the reality is that audiologists can utilize both CPT (Current Procedural Terminology) codes and HCPCS (Healthcare Common Procedure Coding System) codes in establishing a fee schedule.

Another positive aspect of unbundling is that it forces audiologists to have an understanding of their cost of doing business and a rationale for establishing fees for procedures, devices, and services. However, it is important to note that audiologists should not imply to patients that the “invoice cost” is the total cost of that product. There are other direct and indirect costs attached to the product that are involved. As stated below in the discussion of Internet and mail order purchases, this understanding is critical when establishing fees for hearing aids purchased elsewhere. Unbundling also might protect audiologists who are forced by state law (i.e., in California) to return professional service related fees when the patient returns hearing aids for credit.

The decision to bundle or unbundle ultimately must be made by each audiologist given his or her unique practice needs. Even though approximately 50 percent of audiologists are not self-employed, and thus may not be the decision makers for their practice, they still should be aware of the arguments and facts in order to present legitimate and/or necessary pricing strategies and options to their employers. It is clear, however, that whether a bundled or unbundled fee structure is chosen, it is important that each product and professional service included in the hearing aid fitting process be individually and appropriately priced. *Offering “free” services is misleading (and may be illegal for those filing claims to Medicare).* Decisions about the mix of products and services included in either fee strategy should ideally be evidence based (both from a practice management point of view and from a professional point of view).



Establishing Insurance Contracts

Most insurance policies do not cover hearing aids. However, there is a trend toward increasing third-party payer involvement, and it is likely that competition among insurers will continue to drive this movement as well as health-care reform. Some insurance contracts

have fixed rules while others are subject to negotiation. Audiologists need to have a clear understanding of the issues involved prior to entering negotiation or a contractual agreement (see sidebar).

Once these issues are clarified, the audiologist must still determine whether the terms and reimbursement levels of the contract meet the costs and the profit margins necessary for his or her practice. Audiologists must look at each of their contracts and determine if the amount being paid by that contract is sufficient. If not, that contract should not be accepted. It would also be advisable to have an attorney familiar with health-care laws review the contract.

Discount methodology applied by the insurance industry for DME and orthotic/prosthetic device reimbursement levels is actually somewhat standardized. By bundling professional fees into the device costs, we are sacrificing potential reimbursement for professional services. Billing in a manner that is standardized within the insurance industry will ultimately maximize reimbursement. The authors are not aware of any prosthetic

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devices reimbursed by insurance that have professional service and fitting fees bundled into the reimbursement of device. To maximize reimbursement, audiologists need to utilize CPT and HCPCS codes properly. If costs for services and products are bundled, professional fees for testing, evaluation, selection, verification, taking impressions, and so on should be incorporated into the device codes instead of utilizing the procedure codes that define these services. If unbundled, a combination of CPT codes and V (HCPCS) codes may apply. There is a range of allowable fees for each of the existing CPT codes. Audiologists should obtain this fee schedule from the third-party payers with whom they contract.

Internet and Mail Order Issues

It is estimated by a Pew Internet report (Fox and Jones, 2009) that 61 percent of American adults look online for health information; 72 percent of baby boomers (50–64 years of age) and 34 percent of seniors (65+ years of age) use the Internet regularly both for research and product purchasing. Given these numbers, the general consensus is that Internet and mail order hearing aid purchases are a reality of the modern world and are likely here to stay. Therefore, audiologists must be prepared to decide whether they wish to manage patients who obtain hearing aids via these delivery models.

As with the previous discussion, it seems logical that the establishment of a transparent fee schedule is critical so that the audiologist who chooses to service these patients be fairly and appropriately reimbursed. In addition, it is important to understand the financial ramifications and consequences for the patient and audiologist, and the technicalities of this model of dispensing.

Internet Options

Internet delivery models can be classified into three categories. The companies listed below participate in pay-per-click and/or natural search campaigns to drive consumer interest and sales.

Consumer/Patient Referral Sources. Consumers and/or patients are referred to hearing professionals (audiologists and hearing aid dispensers) from a Web site interaction and/or phone call. The professional registers with a Web site either free of charge or pays a set fee and receives patient referrals to their practice. Examples include manufacturer Web sites, www.betterhearing.org, www.audiology.org, www.healthyhearing.com, www.ahaanet.com, and www.aud-net.com.

Marketing/Point of Sale with Face-to-Face Fitting.

Consumers and/or patients respond to Web sites and are referred to local hearing professionals (audiologists and hearing aid dispensers) for services. The hearing aid purchase takes place between the Web-based company and the consumer, and the local professional is paid separately for the fitting and follow-up services. The fitting fee paid to the audiologist is based solely on the outcome of the sale of the hearing aid. Audiologists can still bill insurance for diagnostics in the normal manner. Examples include the following:

- www.hearingplanet.com—The local professional is paid up to \$600/ear for fitting a patient with hearing aids. The local professional receives a flat fee for his or her fitting services regardless of the hearing aids purchased. The entire consumer transaction for the hearing aids and local service takes place between the customer and HearingPlanet. The local professional is paid by HearingPlanet at the conclusion of the trial period. Hearing professionals are allowed to charge (at their discretion) for additional clinical services after the first year of service.
- www.ahearingaid.com—The local professional receives up to \$700/ear for fitting a patient with hearing aids. The consumer makes two transactions, one for the hearing aids only to www.ahearingaid.com and the second directly to the local professional for the contracted service fees.
- www.aidright.com—This company markets to the consumer and then refers him or her locally for all testing and professional services. The local professional completes the entire transaction with the consumer and then pays www.aidright.com with a contracted referral fee. The referral fee amount is based upon which hearing aids are sold. There are questions about the legality of this practice.

Direct to Consumer and Mail Order. These companies sell either “one-size-fits-some” ITC/open-fit BTE nonprogrammable hearing aids or programmable digital hearing aids supplied by the major manufacturers directly to the consumer/patient. Examples include the following:

- www.americahears.com—This company sells all styles of hearing aids and includes software, cables, and a USB connector to perform all the programming in the consumer/patient’s home. America Hears will also

send any programming changes to the consumer via a .wav file to download into the hearing aids. Audiologists are employed at America Hears for consulting and programming assistance. The company also sells its own brand of digital hearing aids for \$750–1,000 per device.

- www.myhearpod.com—HearPod will offer guided assistance to a consumer who can't decide whether a one-size-fits-all open-fit BTE or CIC would be best. Price ranges from \$395/ear for a four-channel device to \$995/ear for a 32-channel device. A one-year supply of batteries is included.
- <http://naturear.com/sys-tmpl/door/>—This company is similar to HearPod. The price for two hearing aids is \$699 (\$389 for one). No programming is involved. The Web site advertises, “Why spend thousands for hearing help when you can order direct at dispenser prices?”
- www.hearingaids.pro—They program and sell hearing aid models from several of the major hearing aid manufacturers (Siemens, GN ReSound, Sonic Innovations, and others) from \$495 to \$1,695/ear. Fitting is based on an audiogram sent in by the consumer. If additional programming is needed, the consumer mails the hearing aids back to them and/or finds someone in their local area to provide service. There is no provision stated for paying the local professional. They advertise, “We will beat any legitimate advertised price by at least \$100.”
- www.precisehearing.com—Fitting is based on an audiogram sent in by the consumer. If additional programming is needed, the consumer mails the hearing aids back to them and/or finds someone in their local area to provide service. There is no provision stated for paying the local professional. They program and sell hearing aid models from several of the major hearing aid manufacturers (Siemens, GN ReSound, Sonic Innovations, and others) from \$495 to \$1,695/ear.
- www.songbirdhearing.com—One-size-fits-all disposable hearing aids are sold for \$79.90 per ear. Their owner's manual claims that battery life will last 400 hours based on three hours of use per day.

Mail Order/Non-Internet. Possibly the largest of the traditional “mail order” hearing aids is Crystal Ear (www.crystalear.com). Devices are \$299 for analog, \$379 for digital one-size-fits-all CICs. They do not do Internet

marketing. Their focus is print, direct mail, and television advertising.

Regulation of Hearing Aid Dispensing

The regulation of hearing aid dispensing is generally determined by each state; however, the Medical Device Amendments (MDA) to the Food, Drug and Cosmetic Act provide that a state law will be preempted under the MDA §360k if any of its requirements (1) are different from or in addition to those in the MDA and (2) relate to the safety or effectiveness of the device or any other matter included in a requirement applicable to the device (21 U.S.C. §360k[a]). In some recent court cases and attorney general opinions, state regulations have been preempted by the federal regulations. In other states, regulations that purport to regulate the sales and dispensing of hearing aids also may be preempted, but they have not yet been challenged.

Some states have statutes that specifically address mail order sales. The sale of hearing instruments over the Internet is somewhat analogous. The U.S. Food and Drug Administration (FDA) considered regulating mail order sales of hearing aids but declined to do so. The regulations stated that “the Commissioner is not aware of any abuses in mail order sales of hearing aids, and several users have indicated their satisfaction with hearing aids bought through the mail. The Commissioner has determined not to prohibit mail order sales provided that all the requirements of the regulation have been met” (42 Fed.Reg. at 9,293). A case regarding HearingHelpExpress and the state of Missouri set the precedent that a state cannot “ban” or “prohibit” direct-to-consumer sales of hearing devices. The Missouri statute prohibited the sale of hearing aids through the mail without prior fitting and testing by a Missouri licensed hearing instrument specialist; there was no written waiver option. The Missouri Board of Examiners for Hearing Instrument Specialists argued that the state requirement was not preempted by the federal requirements because it deals only with fitting and testing, which it argued was not regulated by the MDA. The court concluded that the Missouri statute directly related to the safety of consumers and effectiveness of the devices. This law was ruled to go “above and beyond” the scope of the MDA, referred to as “preemption.” The requirements of the Missouri statute therefore were preempted. The *Crystal Ear v. Florida* legal matter from 2002 further reinforced this opinion.

Legal Summary Regarding Mail Order Hearing Aid Sales—2008

One key to preemption analysis has been the waiver of the physician requirements. As discussed in more detail

below, if the state regulation did not permit a consumer to waive the physician evaluation, the regulation was found to be preempted.

Texas prohibits a person from selling a hearing instrument by mail (Tex. Occ. Code 402.451[a][7]). However, in a recent opinion, the Texas attorney general considered whether the Texas statutes prohibiting the fitting and dispensing of hearing instruments by anyone without a license and prohibiting the sale of hearing instruments by mail were preempted by the FDA. The attorney general noted that the federal regulations specifically permit a waiver of the audiology evaluation, whereas the Texas statute does not contain any provision authorizing a waiver of the evaluation. In addition, the attorney general noted that the FDA commissioner specifically declined to prohibit mail order sales of hearing aids. As a result, the attorney general stated that it is his opinion that these requirements were expressly preempted by the FDA. Vicky Watson of the Texas State Committee of Examiners in the Fitting and Dispensing of Hearing Instruments claimed that she was not aware of the attorney general's opinion and that the committee was still enforcing the prohibition against mail order sales.

In California, the sale of hearing aids by catalog or direct mail is permitted under certain circumstances. Section 3351.5 of the California Business and Professions Code provides that hearing aids may be sold by catalog or direct mail provided that (1) the seller is licensed as a hearing aid dispenser in California, (2) there is no fitting, selection, or adaptation of the instrument, (3) no advice is given with respect to fitting, selection, or adaptation of the instrument, (4) no advice is given with respect to the taking of an ear impression for an earmold by the seller, and (5) the seller has received a statement that is signed by a physician and surgeon, audiologist, or a hearing aid dispenser licensed by the state of California who verifies direct observation of the ear canal and referral to a physician. A copy of the statement confirming observation of the ear canal must be retained by the seller for seven years. If certain medical conditions are present, it is not possible for a consumer to waive his or her right to see a physician. There have been no attorney general opinions or cases challenging the state law on preemption grounds. In addition, according to Yvonne Crawford, head of enforcement with the California Hearing Aid Dispensers Bureau, there is no formal process through which a company may request a determination whether a product is considered a hearing aid for purposes of California regulation. Instead, Ms. Crawford stated that "if the product looks like a hearing aid, and works like a

hearing aid, then it will be treated as a hearing aid." Ms. Crawford said the inquiry most likely would be prompted by a competitor raising the issue.


Florida statutes make it unlawful for any person to sell or distribute hearing aids through the mail to the ultimate consumer (Fla. Stat. § 468.12650). Judy Jordan of the Florida Board for Hearing Aid Specialists reported that the prohibition on mail order sales also applies to sales over the Internet. When asked whether the board had taken any enforcement actions against companies, since mail order and Internet sales seem fairly common, Ms. Jordan stated that "if caught," there would be enforcement. There is no information regarding enforcement on the board's Web site. An amendment was introduced during the 2008 Florida legislative session that would have legalized mail order sale of certain types of hearing aids. The amendment read: "Notwithstanding any provision of law, 'hearing aid' does not include and specifically excludes frequency specific enhancement devices used by sportsmen, hunting deafening devices, ear plugs, and other assistive listening devices of 30 decibels or less, which are not specifically and individually fitted for a hearing impaired person." Although the legislation did not pass in 2008, it may be introduced again in 2009. Even if the legislation is reintroduced, it is difficult to predict if the legislation will pass, but it does offer some insight into the regulatory climate in Florida. The Florida Office of Statewide Prosecution brought a criminal case against Crystal Ear for fraud and falsely representing a product. Although the company was ultimately acquitted, the case demonstrates that zealous prosecutors may seek to use criminal law to enforce the regulatory provisions. Ms. Jordan referred to the case and stated that a company would need to "get a judge to determine whether a new product is a hearing aid" for purposes of the Florida statute. Ms. Jordan's statement reflects a lack of understanding of what happened to Crystal Ear, but it also underscores the lack of clarity regarding what constitutes a hearing aid generally.

Regulating Other Professionals

There are two levels of potential problems when audiologists are not the individuals responsible for dispensing hearing aids. The first level of problems is associated with individuals who have minimal or no training. These individuals may make mistakes that lead to erroneous results when completing testing such as hearing aid verification (e.g., hearing aid tube placement depth), outcome measures, or when programming the hearing aid(s). These errors have the potential to lead to serious misfits. Most of

these “first level” problems might be avoided by providing individuals with appropriate technical training (for example, by well-trained audiology assistants). This, of course, raises the question (beyond the scope of this article) of exactly how to use audiology assistants and how independent we want them to be. At this time, only eight states regulate audiology assistants, and we must recognize that many “assistants” will not be trained by audiologists.

Even with appropriate technical training, a second level of problems may be associated with the hearing aid process when not completed by a well-trained audiologist. This refers to the ability to apply appropriate decision-making processes throughout the collection of technical data. While a technician can apply an established protocol and likely provide a reasonable fit to a large portion of potential hearing aid candidates, it can be argued that a reasonable fit does not necessarily equal an optimal fit. Rather, an optimal fit, especially for the relatively small percentage of difficult-to-fit patients, requires the fitting professional to really understand the entire process well. For example, information in the case history and the basic audiometric results leads to selection of the appropriate prefitting measures that allow the clinician to gather the data needed for appropriate selection and initial setting of hearing aid features. It is simply not time efficient to require a (nonaudiologist) technician to perform a long series of preselection tests that may or may not be necessary in order to gather the important information needed. Instead the audiologist must choose the appropriate test(s), using a logical decision-making process that does not intuitively arise from simple technical training. This decision-making process carries through the rest of the hearing aid process including appropriate instrument selection; selection of appropriate counseling topics (e.g., expectations, use, etc.); choice of appropriate outcome measure(s); synthesis of user complaints, outcome measure results, and verification results in order to make necessary fine-tuning adjustments and/or to provide necessary counseling; selection of appropriate follow-up and rehabilitation/habilitation processes; and so forth. These arguments lead to the following conclusions. Collection of technical data should be restricted to those individuals with the appropriate technical training (this may include audiology assistants), and completion and/or supervision of these technical procedures as well as the hearing aid decisions outlined above should be restricted to well-trained audiologists.

The second part of this article, to appear in the Nov/Dec issue of *AT*, will discuss the recommendations to the Academy Board of Directors. 

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Robert Sweetow, PhD, is the director of the audiology department at the University of California San Francisco Medical Center in San Francisco, CA.

Acknowledgments: Special thank you to the members of the task force who were selected because they represented a heterogeneous group of audiologists with a wide range of professional practice settings:

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AMERICAN ACADEMY OF AUDIOLOGY 



Enhancing The Learning Experience

Abby Bradshaw

From: Lebanon, KY

Education: BS in Communication Disorders, University of Kentucky in Lexington. Now a 4th-year AuD student at the University of Louisville. Currently on externship at Kentucky Ear Nose and Throat in Lexington.

About Me: I enjoy spending my free time with my family. My husband is my high school sweetheart, so it's convenient that we're both from the same hometown! We passionately root for the University of Kentucky Wildcats. It's truly what gets us through the fall and winter!

Favorite Indulgences: Spicy Romano Chicken at Carino's Italian Restaurant and ice cream—any flavor!

Like many AuD students, I am a very busy person. It is a constant struggle to fit my research, family, husband, friends, and student/externship responsibilities into a 24-hour period. If you are an AuD student, you can sympathize.

It is the busy nature of my life that has forced me to make certain adaptations in order to be more organized and productive. My cell phone and day-timer are two must-haves, which have kept me in touch and on schedule for class, clinic, meetings, interviews, work, and the altar. Likewise, watching *Grey's Anatomy*, Facebooking, and completing my literature review simultaneously have taught me to multitask. I wonder how many audiology PowerPoint presentations have been completed while reading Facebook or watching prime-time network drama?

At AudiologyNOW!® 2009 in Dallas, the Academy developed a new student education program to improve the student experience. This new program was created to enhance learning by providing sessions geared particularly for students. Last year's student attendees and presenters agreed that the new student education program was beneficial from a learning perspective and from an organizational standpoint. Students had a guide to assist in their learning process. They felt confident in knowing a session would be both beneficial to them and presented at an understandable level.

After careful consideration of the input received from students and presenters at AudiologyNOW! 2009, we hope the student education program in store for 2010 will be better than ever! You can expect student-friendly sessions within each SuperTrack. You can also look forward to hands-on labs specifically catered to the student population for the enhancement of learning in an interactive fashion. These sessions and labs are a great way to learn, become acquainted with the latest audiologic technology, and meet peers from across the country. In addition, the Academy has taken care of all the organization for you! Each student-friendly session will be indicated in the *ProgramNOW!* for your convenience.

Having just returned from the Program Committee meeting in San Diego, I can tell you that AudiologyNOW! 2010 is a conference you won't want to miss. The educational sessions are innovative, the convention center and housing are fabulous and within walking distance, and the city is absolutely phenomenal. I hope every student will invest in his or her education and take advantage of the student education program at AudiologyNOW! 2010.

Don't forget, registration opens in November! 📅

Keeping Copies of Health Insurer Contracts and Fee Schedules

A thorough understanding of third-party payer contracts is essential to the success of a practice. Discounts that may be applied to one contract may be applied to another if administered by the same payer with results that are unknown to the provider prior to filing a claim. Preferred provider organization (PPO) contracts may apply discount formulas used for diagnostic procedures to hearing aids, a potentially devastating practice that you may not be aware of and one that may disallow balance billing for noncovered services.

It is recommended that you read your contracts, review the available fee schedules, and monitor the explanation of benefits (EOBs) reports to ensure that you are being paid within the parameters specified in the contract. Cultivating a relationship with your provider relations representative is essential so that you will have a contact person to discuss your concerns with should a problem arise.

Advance Beneficiary Notice and Notice from Exclusion of Medicare Benefits

The Advance Beneficiary Notice (ABN) is to be used when you are uncertain if a typically covered procedure will be reimbursed/covered by Medicare. A beneficiary notice is required to be presented to a Medicare patient prior to the procedure taking place, in order to apprise the patient of his or her expected financial obligation. The forms can be found at www.cms.hhs.gov/bni/. If the service is not reimbursed, you are then able to bill the patient. Without the ABN, you cannot bill the patient and must provide the service(s) with reimbursement. The ABN may also be used when service is statutorily excluded such as routine hearing tests, hearing aid evaluations, and hearing aids although it is not required.

According to CMS, as published in *Part B News* by DecisionHealth (www.customcoder.net/signup/aaoa/), you are required to file a claim even when you don't accept assignment for the service, unless the service is noncovered.

When the service is noncovered, as with annual audiograms and hearing aid-related services and treatment, the GY modifier is to be appended to the noncovered CPT codes. A secondary insurance may have a hearing aid benefit that requires a Medicare denial before payment is rendered. By filing the claim with the GY modifier, this signifies to your Medicare contractor that you know it is not a covered service, but a denial is required by the secondary payer. The new ABN, CMS-R-131 (03/08), option 2 may be used for noncovered services.

Recovery Audit Contractor

The 2006 Tax Relief and Health Care Act created the Recovery Audit Contractors (RAC) program, which is now transitioning to a permanent program. The pilot program that began in California, Florida, and New York is now rolling out to all 50 states and will be fully in place by 2010. These RAC teams are tasked with identifying overpayments and underpayments on Medicare claims. An overpayment is when you are paid in excess for a billed service. Underpayment is when you are not paid enough for the service within the allowable fee schedule amounts.

If you know of an overpayment, it is recommended that you reimburse your Medicare contractor as soon as you become aware of it, potentially averting an audit. Based on revisions of the False Claims Act in May 2009, a fine of \$5,000 per overpaid claim could be assessed if it is determined that a provider/organization deliberately failed to return a discovered overpayment.

If a RAC review is ordered, it begins with a medical records request; these are not scheduled to begin until August 2009 at the earliest. The RACs are permitted to review records from October 1, 2007 forward or three years after the date of payment.

Meetings across the country are being scheduled to educate providers. Further information may be found at www.cms.hhs.gov/RAC.

Health-Care Fraud Prevention and Enforcement Action Team

On May 20, 2009, the U.S. Department of Health and Human Services (HHS) announced it is now packing heat with the introduction of the Health-Care Fraud Prevention and Enforcement Action Team. HHS and the U.S. Department of Justice (DOJ) are working together with other agencies that investigate and prosecute fraudulent Medicare and Medicaid providers.

In 2008, the Department of Health and Human Services, Office of the Inspector General (OIG), the Department of Justice, and the Centers for Medicare and Medicaid Services (CMS) obtained 588 criminal convictions and 337 civil administrative actions against individuals and/or organizations that committed Medicare fraud, recovering over a billion dollars under the False Claims Act.

As of July 2009, the DOJ has already recovered nearly a billion dollars and 300 convictions.

FTC Red Flag and Address Discrepancy Rule

The Federal Trade Commission (FTC) established November 1, 2009, as the effective date of implementation for the Red Flag and Address Discrepancy Rule. This rule is a part of the Fair and Accurate Credit Transactions Act (FACTA) of 2003, which requires the development and implementation of written identity theft programs, similar to those seen in banking and other industries.

Medical identity theft is the use of another's insurance information and/or identifying information such as a social security number, tax identification number, or credit card number(s) without the victim's knowledge in order to obtain medical services. It may also involve erroneous entries into medical records, as well as creating fictitious medical records. A "red flag" is "a pattern, practice, or specific activity that indicates the possible existence of identity theft." The FTC considers providers who accept insurance or allow deferred payment for services as "creditors" and are therefore required to be in compliance with the Red Flag Rule.

To guide you in the implementation process, the Academy has an online training course and a manual that you can tailor for your practice. These are available at the Academy store at <https://webportal.audiology.org/purchase/searchcatalog.aspx>.

Further information can be found on the Academy Web site at www.audiology.org/practice/compliance.

Physician's Quality Reporting Initiative for Audiology

The Academy was pleased to be a part of the Audiology Quality Consortium (AQC) collaboration, which was formed to develop outcome measures for the profession to report under the Physician Quality Reporting Initiative (PQRI). The AQC is comprised of the American Academy of Audiology, the American Speech-Language-Hearing Association, the Academy of Doctors of Audiology, Military Audiology Association, National Hearing Conservation Association, Academy of Rehabilitative Audiology, American Academy of Private Practice in Speech Pathology and Audiology, Educational Audiology Association, Directors of Speech and Hearing Programs in State Health and Welfare Agencies, and the Association of VA audiologists.

The AQC developed 12 quality measures that were submitted to the National Quality Forum (NQF) in April to address care coordination. Care coordination is designed to increase communication between the providers involved in a patient's care to achieve improved patient outcomes. These measures included cochlear and vestibular ototoxicity baselines and monitoring, as well as physician referral for specific conditions that require medical intervention and management.

Unfortunately, the measures were not adopted by NQF for 2010. The AQC will continue to work on the development and submission of audiology-related measures in the future. Academy members will be updated regarding this ongoing project.

Modifiers and Medicare


Modifiers -22 (unusual procedural services) and -52 (reduced services) are becoming less recognized by Medicare. Twenty-two (-22) suggests a 20-50 percent increased reimbursement with the submission of appropriate documentation. This documentation should include the increased time, intensity, level of difficulty, and complexity of the patient's condition, as well as the work involved. That said, this might not be enough for a third-party payer to consider the extra expenditure of efforts to be rewarded.

The -52 modifier is often used when one ear is tested, as our codes are binaural or if the entire procedure is not completed. Please note that some third-party payers may not recognize modifiers. It is recommended to follow their guidance on the use of modifiers.

2010 Medicare Physician Fee Schedule

On July 1, 2009, the Notice of Proposed Rule Making was issued for the 2010 Medicare Physician Fee Schedule. Audiology, like many professions, is slated to incur an average 10 percent fee reduction for Medicare services. The Academy submitted comments indicating our objections to this reduction to the Centers for Medicare and Medicaid, which may be found at www.audiology.org/practice/reimbursement/medicare.

Committee Chair Transition

On July 1, 2009, after seven years on the Coding and Reimbursement Committee, four as chair, Kadyne Williams, AuD, handed the reins to Annette A. Burton, AuD (aburton@ctaud.org). The committee is grateful for the commitment, dedication, guidance, and leadership of Dr. Williams. 

From the Top: Efferent Activity Changes with Auditory Training

By Christopher G. Clinard and Kelly L. Tremblay

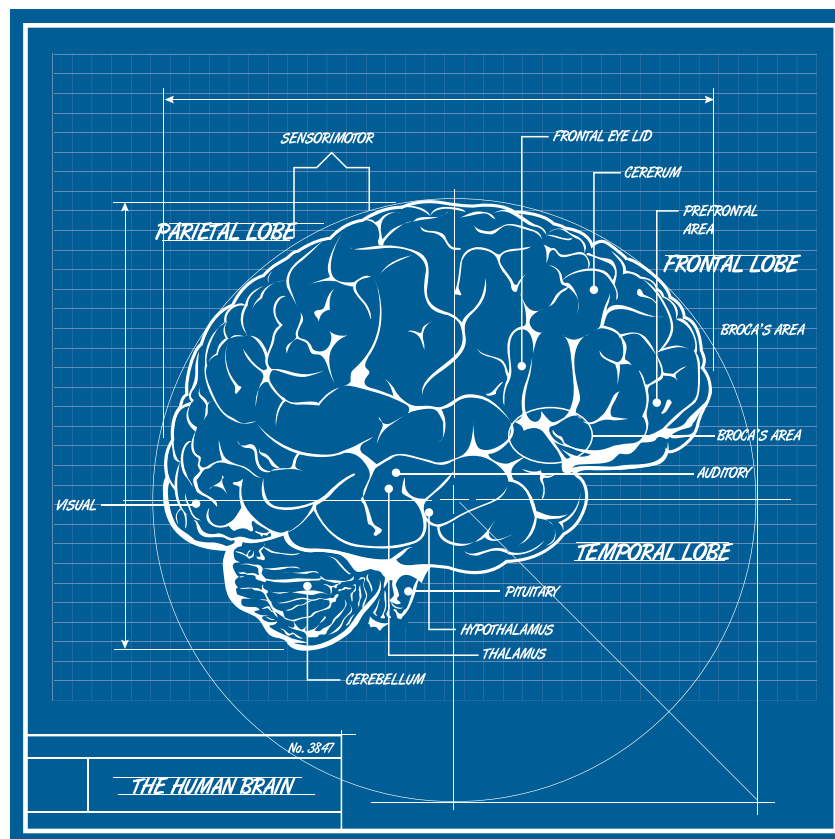
The auditory efferent system consists of many neurons descending from higher regions, such as the auditory cortex, and modulates activity at lower centers of the central auditory nervous system. This descending system is massive and complex. For example, all afferent (ascending) auditory information must pass through the medial geniculate body

(MGB) of the thalamus on its way to the auditory cortex, and there are just as many efferent (descending) neurons projecting from the auditory cortex back down to the MGB as there are ascending neurons projecting up to the MGB (Winer, 2006). Despite these top-down influences, we understand very little about how this system relates to hearing in humans. Findings from animal

research indicate that this efferent system may aid in the discrimination of speech and nonspeech sounds when background noise is present. However, to date, little is known about this function in humans.

One technique that may be used with humans and animal models is to record click-evoked otoacoustic emissions (CEOAEs) with and without a broadband noise, sometimes referred to as a *suppressor*, in the contralateral ear. This technique stimulates the medial olivocochlear bundle (MOCB), which is a group of neurons that project from the superior olivary complex to the outer hair cells (OHCs) of the cochlea (Guinan, 2006). Contralateral noise activates the MOCB, which in turn inhibits OHC motility. This reduction in OHC activity results in reduced CEOAE amplitude, which is interpreted as reflecting MOCB activity. MOCB activity is thought to help counteract the masking effects of background noise and effectively improve listening abilities.


In a recent study, De Boer and Thornton (2008) reported that MOCB activity, as indicated by CEOAE suppression, was related to improvement on a speech-discrimination-in-noise task. They trained young, normal-hearing adults on a discrimination task using synthetic speech stimuli along a “bee” to “dee” continuum. Ipsilateral broadband noise (BBN) was presented at 40 dB SL, resulting in a 10 dB signal-



to-noise ratio for the speech stimuli. CEOAEs were collected with and without a BBN contralateral suppressor in the contralateral ear. Subjects underwent speech discrimination training for one hour a day over five days; CEOAEs and CEOAE suppression were measured at the end of each training session.

As one might expect, there were learners and nonlearners. The learners improved on the discrimination task over the training sessions and had significantly less MOCB activity than the nonlearners on the first day of training. In addition, the learners' MOCB activity increased with speech-discrimination training, whereas the nonlearners did not have an increase in MOCB activity or speech discrimination with training. These findings suggest that an

individual's MOCB activity increases as he or she improves at discriminating speech in noise.

De Boer and Thornton (2008) suggest that the efferent system plays a role during auditory training, even at this relatively low level of the MOCB. Future research may tell us more about the role of the efferent system when our pediatric or adult patients receive stimulation from hearing aids or cochlear implants and are trying to make sense of the new auditory information their brains are now receiving. 

Christopher G. Clinard, MA, and Kelly L. Tremblay, PhD, are with the Department of Speech and Hearing Services, University of Washington, Seattle, WA.

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Sharing Ideas Relevant to the Educational Process

By Maureen Valente

As the doctor of audiology (AuD) degree celebrates 20 years of existence, our profession has transformed and is now thoughtfully considering transition and fine-tuning. There have been a number of “where are we and where do we go from here” conferences, including the American Academy of Audiology’s pivotal Gold Standards Summit: *Transforming Clinical Education in Audiology*, held January 2009 in Orlando, Florida. Interesting topics recently discussed on the educational forefront include such stimulating and thought-provoking ones as:

- What changes may be necessary, if any, within our AuD programs?
- If changes are in order, where are the data to support these changes and what are next steps?
- Who should take the reins in bringing about any needed changes?
- What areas of education should be standardized and what areas should not be?
- What are our optimal outcomes, i.e., what qualities do we seek in newly graduated doctors of audiology and how are these qualities measured?

There are, of course, many other areas worthy of discussion. At the Gold Standards Summit, discussion took place regarding clinical and curricular facets of related disciplines, avenues for enhancing efficiency and effectiveness of our educational systems, and assessment and outcomes measures with regard to our students and graduates. Many worthwhile ideas and goals have been generated, and now it is time to implement the multitude of exceptional ideas. As members of the profession, and the Academy, the task lies before us to come to consensus and determine if changes are in order.

One of the many suggestions made at the Gold Standards Summit was to devote aspects of our professional journals to the sharing of ideas and concepts specifically relevant to the educational process. As I have become immersed into my own Education Committee work, I have increasingly realized the importance of teamwork: specifically, any efforts toward moving forward must be the work of united facets and not just one small committee. We must be well versed on work that previous committees have accomplished to avoid redundancy, and have a solid springboard from which to move forward. We must also be well informed of what other individuals are accomplishing, so that we are not reinventing the wheel or working in

our own individual niches. It is also extremely important for the committees to gain feedback from as many members of the Academy as possible, and to disseminate committee ideas, plans, and goals to the membership.

To help accomplish these goals, which are important “next steps” following the Gold Standards Summit, the Academy is planning a special supplement of the *Journal of the American Academy of Audiology (JAAA)* that is specifically related to educational issues. More information will be shared as the details of this supplement are developed.

In addition, *Audiology Today* will feature this recurring column, which will be devoted to aspects of audiology education. Topics will be from minute to major, and represent a wide-ranging variety of interests, areas, and professional association. We invite you to submit any articles related to aspects of audiology education that you would like to share with the membership and that you feel will elicit stimulating, ongoing discussion.

On the following page you will find an example of a success story at the University of Pittsburgh.

Send your ideas and articles to Dave Fabry at dfabry@audiology.org.

We look forward to hearing from you!

Maureen Valente, PhD, is co-chair of the Education Committee.

Teach the Teachers Conference

By Catherine V. Palmer

The University of Pittsburgh held its third biennial Teach the Teachers Conference on June 11–13, 2009. The first conference, in 2003, titled “The Art and Science of Teaching Amplification,” was set up to be a place where expert teachers from around the country could listen to presentations, and share their methods during discussions and poster sessions. This conference became a reality over the weekend of June 17–18, 2003, with 30 AuD programs sending faculty and clinical instructors to participate in the two-day meeting. To quote one of the written comments from an attendee, “the course was a landmark for the profession.”

The most recent conference was titled “The Art and Science of Teaching Practice Management.” For most programs, practice management is a new topic that was introduced with the AuD program. Many faculty do not feel fully equipped to teach this subject, and we knew that this material would be valuable to all of the AuD programs. A review of programs around the country revealed that 37 (of 65) audiology programs offer a course in practice management. This is in comparison to dentistry, where 41 of 55 programs offer this type of course with half of these programs offering two to three courses in practice management. In optometry, approximately half of the programs offer

a course in practice management, which is a similar to the percent in audiology.

The outstanding keynote address titled “Educating for Practice Success” was delivered by Barry Freeman, PhD, (Starkey Laboratories and Nova Southeastern) and started the interactive program. The conference faculty included: Ian Windmill (University of Mississippi), Eric Hecker (private practice, Newport News, VA), Kady Williams (Audiological Consultants of Atlanta), Paul Pessis (NorthShore Audio-Vestibular Lab), David Cunningham (University of Louisville), Laurel

Gregory (Starkey Laboratories), Robert Wunar (Department of Otolaryngology, University of Pittsburgh), Carol Washburn (Center for Instructional Development, University of Pittsburgh), Catherine Palmer (University of Pittsburgh), and Elaine Morner (University of Pittsburgh).

Talks covered topics such as infusing practice management throughout the curriculum, course content, minimum competencies, integrating didactic and clinical coursework/experience, understanding reimbursement, understanding the law, learning objectives as a



Practice Management Teaching Conference Faculty—Back left to right: Paul Pessis, Gus Mueller, Laurel Gregory, David Cunningham, Barry Freeman, and Eric Hecker. Front left to right: Catherine Palmer, Kady Williams, Elaine Morner, and Ian Windmill.

powerful teaching tool, and avoiding practice burn out—to name just a few. Each day contained planned breakout sessions that allowed for various groups to consider topics raised at the meeting. Our moderator, Gus Mueller, assisted in presenting the results of these discussions and managed to engage the entire group in meaningful dialogue about the various topics raised by audience members and speakers. Dr. Mueller has moderated all three conferences and has committed to coming back for the 2011 conference. An added feature this year was several panel discussions that provided another venue for sharing expertise of the presenters and audience.

Thirty-four individuals from 30 programs attended the conference. Once again, we hosted an international conference, with one colleague joining us from Great Britain. Although people were working hard from 8:00am – 5:00pm each day, a little time was carved out Friday night for Audiology Family Feud, hosted by none other than the audiology game show host (and conference moderator), Gus Mueller. The after-dinner entertainment certainly united and amused the group. This year, we were able to provide a Stanley Cup Championship Celebration on the first night of the conference (congratulations Pittsburgh Penguins!) and a lovely evening at the spectacular PNC Park with the winning Pirates baseball team on the second night of the conference.


The goal of the conference is to bring in a group of expert teachers who can share specific teaching techniques, philosophies, and strategies with audience members. Most importantly, the conference is designed to allow a great deal of interaction between speakers and attendees to share excellent teaching ideas. We

consistently find that attendees have just as much to offer as the invited speakers, which enriches the conference for everyone.

A poster session headed up by Barbara Vento (University of Pittsburgh) was also available for attendees to share their ideas in a more formal setting. Debby Moncrieff (University of Pittsburgh) organized our student volunteers. A CD was produced as part of the conference that provides syllabi, exam questions, class assignments, homework assignments, laboratory sections, and so forth from each of the speakers. Attendees continually comment that the CD is an incredibly valuable resource. Because of this, the University of Pittsburgh sells the CDs (at the price of registration) after the conference. Any money produced from the CDs goes toward the next Teach the Teachers Conference. For the first time, we recorded the conference, so, along with the CD, interested individuals can receive access to the Web site in order to view the entire conference online.

In an effort to keep the registration as low as possible, we have been very fortunate to have several corporate sponsors for the educational event. Our appreciation goes to our corporate donors: Starkey Laboratories, Etymotic Research, the American Academy of Audiology, Widex, and Audiotechnology Specialists. In addition, several audiology-related enterprises donated

materials for review (and raffle) to our attendees. We appreciate these donations from the American Speech-Language-Hearing Association, American Academy of Audiology, Thieme Publishing, and Plural Publishing. To let people know about this important meeting, we received donated promotional support from AudiologyOnline, American Academy of Audiology, the American Speech-Language-Hearing Association, and the Academy of Doctors of Audiology.

The University of Pittsburgh plans to continue the Teach the Teachers conference series every other year. Each year will have a new focus with conferences related to content areas, teaching methods, evaluation methods, integrating didactic and clinical work, and so on. The next conference will tackle challenging teaching issues in pediatric audiology and will be offered June 9–11, 2011. This conference will provide expertise in this area, and once again we will produce a CD with invaluable course materials. We look forward to enjoying the company of colleagues dedicated to providing the best instruction possible in these important areas. 

Catherine V. Palmer, PhD, is the director of audiology at the Eye and Ear Institute at the University of Pittsburgh Medical Center and associate professor in the Department of Communication Science and Disorders at the University of Pittsburgh.

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Focus on Cochlear Implants

By Marilyn Neault

Cochlear implant teams from around the globe met June 17–20, 2009, for the 12th Symposium on Cochlear Implants in Children. The Listen for Life Center at Virginia Mason Medical Center hosted the biennial event. Approximately 1,015 audiologists, otolaryngologists, speech-language pathologists, teachers of the deaf, hearing scientists, and engineers from 40 countries mingled freely, sharing their research, clinical tips, and invitations to visit. I was pleased to be there as the ABA’s representative, serving on the ABA Committee that established the Cochlear Implant Specialty Certification.

“In Pursuit of Synergy” served as the title of this year’s symposium. Synergy sessions arose as an idea from e-mail solicitation to attendees of the last three

ABA Board Profile



Karen A. Jacobs, AuD
 ABA Board of Governors, Academy Liaison

Hails from: Though not a native Michigander (I’m a Hoosier) I have lived most of my life in Grand Rapids, Michigan, where I own and operate a private audiology practice.

Year Certified: 2006

Degree: MA, Central Michigan University; AuD, Salus University

What I Do for the ABA: As the liaison between the ABA Board of Governors and the Academy Board of Directors, it is my responsibility to facilitate communication between these allied organizations. With the ABA Pediatric

Audiology Initiative, Cochlear Implant Specialty Certification, and the growing number of colleagues obtaining ABA certification, I anticipate a busy year.

In My Free Time: I keep busy with work, committees, and volunteer activities. I really enjoy those activities, so it never seems like I work too hard. I also enjoy traveling with my husband, golfing, and if I have a few minutes of down time, nothing beats a good book and a great cup of coffee.

Quote to Live by: “The creation of a thousand forests is in one acorn.”—Ralph Waldo Emerson

conventions held in the United States. The core idea of open sessions fostering dialogue between professionals and industry expanded to 13 synergy sessions. Seventy-five-minute sessions at the end of the day started with brief presentations and left productive time for lively dialogue on topics such as candidacy boundaries, clinic efficiency, surgical issues, infant assessment, what constitutes appropriate habilitation, as well as other topics. Other convention highlights included a special session headed by Drs. Ruth Litovsky and Kelly Tremblay titled “Building Careers in Hearing Science for Women” and a lecture titled “Ethical Conflicts in Caring for Patients with Cochlear Implants” by Rev. Thomas R. McCormick.

Douglas D. Backous, MD, FACS, director of the Listen for Life Center at Virginia Mason, served as the course director. Audiologists who served on the organizing committee included Susan Norton, PhD; Don Plapinger, EdD; Suzanne Quigley, PhD; Kelly Tremblay, PhD; Robin Waterman, AuD; Stacey Watson, MS; and Allison Zarkos, MS. Each of the three primary days of the symposium emphasized a topic of current importance—cochlear


implants in very young children, bilateral cochlear implants in children, and hearing preservation in cochlear implantation. Each day, four National Institute on Deafness and Other Communication Disorders (NIDCD)-sponsored invited speakers launched the day as topic experts, and these 20-minute talks sparkled as the gems of the convention. Podium presentations and posters followed, with a total of 350 abstracts.

Another symposium highlight—Yell Inverso, AuD, PhD, led a lively lunchtime session to discuss how AuD students and externs can access cochlear implant training, an area at the same time increasingly specialized and increasingly in demand. I had the pleasure of informing this group on the status of the updating of the ABA’s Cochlear Implant Specialty Certification examination and the next planned administration at AudiologyNOW!® 2010.

For those audiologists interested in focused educational opportunities, AudiologyNOW! 2010 in San Diego will include a SuperTrack in cochlear implants! SuperTracks are dedicated conference tracks that will provide comprehensive learning opportunities to attendees within a specific topic area through all four days of the convention. Additionally, within each SuperTrack, there is a designation for pediatrics, adults, students, and general interest. The cochlear implant SuperTrack will focus on intermediate and advanced information such as hybrid implants, bimodal hearing, and multidisciplinary management across the lifespan.

If you’re a specialist in the field, make your plans now to take the ABA’s CI Specialty Certification examination in San Diego following AudiologyNOW! on Sunday, April 18, 2010.

A specialty certification represents your commitment to excellence in knowledge and experience. For more information on this specialty certification and the next examination, see the ABA’s Web site at www.americanboardofaudiology.org.

The Cochlear Implant SuperTrack at AudiologyNOW! will be focused primarily on the intermediate to advanced level learner. Plan on attending AudiologyNOW! to access this great CI learning opportunity. To learn more about the SuperTrack as details become available, stay tuned to www.audiologynow.org. 

Marilyn Neault, PhD, serves on the ABA Committee for the CI Specialty Certification.

In a Competitive Economy, ABA Certification Is a Profitable Asset!



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Your Help Is Critical in Passing Direct Access

By Melissa Sinden

On June 24, Representative Mike Ross (D-AR) introduced HR 3024, the Medicare Hearing Health Care Enhancement Act of 2009. This piece of legislation is critical to the audiology profession because, if passed and signed into law, Medicare patients would no longer need to obtain a physician referral prior to visiting an audiologist for an evaluation. In the last Congress, the bill garnered support from 107 cosponsors—double the number of cosponsors from the previous Congress. With your help, the Academy hopes to secure even more cosponsors in the 111th Congress to show a visible

commitment from various members of the House and Senate, and encourage speedy passage of the bill.

How can the typical Academy fellow or friend of the profession help in these efforts? There are a number of ways:

- Use the American Academy of Audiology Legislative Action Center to contact your member of Congress and your senators: <http://capwiz.com/audiology/home/>. When visiting the Action Center, you can locate the names and contact information of your congressional representatives,
- find background information on issues important to the profession, and send editable form letters to the leaders representing you in Washington. Encourage your representative to support hearing health legislation!
- Contribute to the American Academy of Audiology Political Action Committee (PAC). The most effective way to increase the visibility of the Academy and the profession on Capitol Hill is to contribute to the Academy's PAC. Due to the sheer size of comparable

PAC Sizes from Associations Comparable to the American Academy of Audiology

American Academy of Audiology	\$119,293
American Speech-Language Hearing Association	\$278,509
American Chiropractic Association	\$355,610
American Academy of Otolaryngology-Head and Neck Surgery	\$365,179
American Physical Therapy Association	\$1,248,825
American Optometric Association	\$1,769,435
American Medical Association	\$3,263,871

Source: Center for Responsive Politics

organizations' PACs (see previous page), it is easy for our voice to get lost in the shuffle. You can contribute any amount you wish, from \$5 to \$5,000, by visiting our Web site or mailing a check. Consider signing up for an automatic monthly debit contribution in a denomination of your choosing and receive a thank you gift. All contributions will be used to support political candidates and congressional leaders who support and/or advance issues important to audiology. Visit www.audiology.org/advocacy/pac/ for more information.

- Become a key contact. Get to know your member of Congress and his or her staff, so that you can become the "go-to" person in your district for questions on hearing health. By visiting the district office and building a relationship with your representative, you can help the voice of audiology to be heard. With 535 members of Congress (435 members of the House, 100 members of the Senate), it is helpful to have a constituent who is informed on relevant issues with a passion for these topics. Remember—your member of Congress is elected to represent YOU! For more information, contact

Kate Thomas, senior manager of government relations, at kthomas@audiology.org or 202-544-9336.

Do your part to ensure that Medicare patients receive the highest quality of care. We need your help to pass Direct Access in 2009! 🗳️

Melissa Sinden is the senior director of government relations for the American Academy of Audiology.



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Coming Soon!

www.HowsYourHearing.org

In the next few weeks, the Academy will launch its new consumer Web site, www.HowsYourHearing.org. The new site will feature an overview of topics to include hearing, hearing loss prevention, hearing aids, cochlear implants, newborn hearing screening, aural rehabilitation, common conditions, and more. It also features easy access to the “Find an Audiologist” directory and the latest consumer-friendly articles from *Audiology Today*.

Just Joined

New Members of the American Academy of Audiology

- Sara Acciardo, AuD
- Alanna Birdwell, MS
- Dawn Boyce, MS
- Margaret Dean, PhD
- Tara Fogel, MS
- Jenna Gibbons, AuD
- Christie Glick, MA
- Charla Joseph, AuD
- Michelle Kraskin, AuD
- Jan Lohler, MD
- Adrienne Miller, AuD
- Zhanetta Shapiro, AuD
- Carol Sullivan, MS
- Nora Yeung, AuD
- Lorin Zail, MA

New Members of the Student Academy of Audiology

- Tiffany Armstrong
- Carla Brauer-Lalezari
- Amy Formella
- Aurora Grossman
- Stacey Hall
- Jessica Hesson
- Lily Hughes
- Rebecca Lewis
- Jaclyn Scagnelli
- Kelli Shivers
- Megan Watson
- Diana Wu
- Lisa Yamaguchi

Generous Starkey Gift Supports New Student Academy Initiatives

In their efforts to support audiology education, Starkey Laboratories, Inc., is making a gift of \$40,000 to provide philanthropic funding for Student Academy of Audiology (SAA) activities at AudiologyNOW!® 2010 in San Diego. The 2010 Program Committee is working with SAA representatives to plan educational and networking opportunities that will be funded in part with the Starkey contribution.

Dianne Meyer, chair of the AAAF board, announced this generous financial support in her report to the Academy board in July. She informed Academy leadership that the Starkey gift would be restricted to the funding of SAA programs at AudiologyNOW! 2010, and would greatly supplement Foundation funds earmarked for student educational efforts.

"The AAAF is delighted to facilitate Starkey's generous support of the SAA," Meyer said. "Part of the Foundation's

mission is to support educational opportunities for graduate students, and this funding partnership for the SAA's AudiologyNOW! 2010 functions will benefit many AuD and PhD students."

When the SAA was established last spring, the 2009 Program Committee collaborated with student leadership to develop student-focused activities at AudiologyNOW! 2009. For 2010, the Program Committee will work to build upon last year's successes. Some tentative events for the coming year include a student educational track, PhD Networking Breakfast, Audiology Unplugged, and Student Academy Central. These and other activities will be supported with the funding from Starkey.

Dr. Barry Freeman, senior director of education and audiology at Starkey, and past-president of the Academy, relayed his thoughts about this initiative.



Dr. Jerry Northern, director of professional services at Starkey Laboratories Inc., speaks with students at AudiologyNOW! 2009.

Supporting and mentoring audiology students has been a priority for Starkey for many years. We are so pleased to partner with the new Student Academy and the AAA Foundation to contribute to the quality educational opportunities for students attending the Academy's 2010 convention. We are proud to have a number of ongoing educational initiatives for students from scholarships and classes to externship placements. Along with Dr. Jerry Northern, our director of professional services, I welcome the opportunity to nurture future audiologists, knowing that ultimately our future patients will reap the benefits through quality hearing health care.

"Starkey has been a generous supporter of AAAF projects in the past; their continued partnership and philanthropy is valued and appreciated," Meyer continued. "On behalf of the Foundation and audiology students, I extend a huge thank you to the entire Starkey team!"

New Vestibular Research Grant Announced

The AAAF is pleased to announce that it will partner with the American Institute of Balance (AIB) Education Foundation to fund an annual grant in vestibular research. Thanks to a generous gift from the AIB Education Foundation, a grant of up to \$5,000 will be made for balance research or a vestibular fellowship opportunity for an audiology graduate student.

Richard E. Gans, PhD, founder and executive director of the AIB Education Foundation, stated how pleased he is to contribute to the funding of this new award:

I am so pleased to work with the Academy and AAAF to fund new research in balance science. Balance disorders have received growing attention in recent years, and our support of cutting-edge research will contribute to the many breakthroughs that ensure improvements in the quality of life for those with vestibular disorders. It is a privilege to support future scientists who are studying these complex and potentially disabling conditions.

Victoria Keetay, PhD, Academy senior director of education, echoed Gans' enthusiasm for this new research grant when she said, "This gift from the AIB Education Foundation will provide grant funding over five years, allowing the Academy to work with the AAAF to build a foundation for a vestibular research grants program. Thank you, Dr. Gans, for this generous gift and your spirit of collaboration on this new project!"

Researchers will find more information about this opportunity offered through the Academy's Research Grants in Hearing and Balance program at www.audiology.org/education.

New in 2010 Science Fair Award Funding Available to State Academies

Looking for a way to recruit the audiologists of tomorrow? Attend your state science fair! Science fairs act as an important recruitment tool. They create opportunities for mentoring and education about the field of audiology, as well as recognize research excellence in the hearing sciences. To facilitate nationwide involvement, the AAAF is allocating funds to state academies to provide awards for high school science fair participants. Don't miss this exciting chance to share your rewarding profession with a future hearing scientist! Apply or find out more at www.audiologyfoundation.org.

Travel Awards for 2010 ARO Conference

Applications are now being accepted for travel awards for audiologists and audiology students to attend the 2010 Association for Research in Otolaryngology (ARO) Midwinter Meeting, February 6–10, 2010, in Anaheim, CA. Awards of \$500 each are being offered to defray travel and lodging costs associated with attending ARO's annual meeting. These awards are being funded by the American Academy of Audiology Foundation (AAAF), and all applications must be submitted by October 15. Visit (www.audiologyfoundation.org) for more information. 📍



Roger A. Ruth, PhD

The Academy was extremely saddened by the passing of Roger A. Ruth, PhD, on July 13, 2009. Dr. Ruth was an Academy founder, audiology teacher, friend, and colleague, and will be truly missed.

After earning his PhD from Ohio State University in 1977, Dr. Ruth served for more than 30 years as director of audiology and professor in the Department of Otolaryngology at the University of Virginia Health Sciences Center in Charlottesville. His contributions to the profession of audiology were many and varied. He was a founding member of the American Academy of Audiology and, over the years, held numerous leadership positions in the organization. In 2008, Dr. Ruth was honored with the Academy's Distinguished Achievement Award, which is given to those individuals who have had an impact on the profession through their teaching, clinical service, and/or research contribution.

Dr. Ruth served for over 30 years as the director of audiology and professor in the Department of Otolaryngology at the University of Virginia Health Sciences Center in Charlottesville. In 2000, he undertook a joint faculty position at James Madison University as a professor in the Department of Communications Sciences and Disorders. His additional professional service included review of professional journal manuscripts, review of research grant applications submitted to a variety of national funding agencies, and the review of proposals for prospective doctor of audiology programs. He also organized and chaired multiple international conferences for audiologists and hearing scientists.

Dr. Ruth was the author of numerous scientific journal articles and book chapters. He was an internationally recognized expert in auditory electrophysiology, early diagnosis of infant hearing loss, and tinnitus/hyperacusis. Through his influence as a teacher and mentor of graduate-level audiology students, and his continuing education of practicing audiologists at conferences and workshops, Dr. Ruth had a major impact on the quality of life of countless persons worldwide.

Dr. Ruth is survived by his wife, Robin, and his three children. Our thoughts are with his friends and family.




Robert Jirsa, PhD

Robert Jirsa, PhD, passed away on July 8, 2009, in Wallingford, CT, after a courageous five-year fight with leukemia.

Dr. Jirsa earned his PhD in audiology from the University of Kansas in 1970 and was a licensed audiologist in the states of Rhode Island and Connecticut. He had served as director of audiology at both the Montreal Children's Hospital from 1981–1982, and at Braintree Hospital, Braintree, MA, from 1982–1987. He had served as a faculty member at several universities, most recently with the faculty of Southern Connecticut State University (SCSU) in New Haven, CT since 1992. At SCSU, he served in the Department of Communication Disorders as an assistant professor (1992–1994), associate professor (1994–2001), and as a professor since 2001. Of all his titles, he was proudest of being referred to as the “hardest working man on campus,” due to his involvement in numerous committees.

A Fellow of the American Academy of Audiology since 1988, Dr. Jirsa was also an assistant editor of the *Journal of the American Academy of Audiology* since 1997. He authored or co-authored numerous articles and books.

A memorial service was held August 15 at Holt Funeral Home in Woonsocket, Rhode Island. Memorial contributions can be made in Dr. Jirsa's name to the Leukemia and Lymphoma Society, CT Chapter, 300 Research Parkway, Suite 310, Meriden, Connecticut 06450 

Roger Ruth Memorial Scholarship Fund

At the request of the Ruth family, a scholarship fund for graduate students in audiology is being established through the American Academy of Audiology Foundation (AAAF). Friends and colleagues can visit www.audiologyfoundation.org to make a memorial gift online or contribute by mail to AAAF, Attn: Roger Ruth Scholarship, 11730 Plaza American, Suite 300, Reston, VA 20190. Call the AAAF office at 800-222-2336, ext 1049, for more information.

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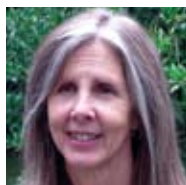
Have you seen all of the new sessions
and events for AudiologyNOW! this
year? It's going to be the best one yet
AND it's in sunny San Diego. We are
either going early or staying late, but
the family is definitely coming. We are
turning the whole trip into a vacation
to spread our travel dollars farther!

You should bring your family, too.
Hope to see you in April.

P.S. Visit www.audiologynow.org for info
on the meeting and the "Cost-Cutting
Corner" page filled with ways you can
save money on attending.



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Peggy Azouqha
Office Administrator

Hails from: Harrisonburg, VA

Years with the Academy: Four months

What I Do for the Academy: I answer and respond to incoming calls on the Academy telephone system, as well as greet guests and visitors to the Academy. I'm also responsible for maintaining inventory, as well as ordering office and kitchen supplies. I perform data entry and word processing duties to support Academy departments, and assist as needed in maintaining the office on a day-to-day basis.

Zodiac Sign: Sagittarius

Cats or Dogs? Cats

Beach or Mountains? Beach

Early Bird or Night Owl? Early Bird

Favorite Pastimes: Reading, gardening, and spending time on the beach. Not necessarily in that order.

Read it or Watch it? Definitely read it

Smooth or Crunchy? Crunchy

Quote to Live by: "An eye for an eye would only make the whole world blind." —Gandhi



Cheryl Kreider Carey
Executive Director

Hails from: Lancaster, PA

Years with the Academy: 10 (Meggan has me on seniority)

Degree: BA, Business Education, Eastern Mennonite University

What I Do for the Academy: I lead, execute, direct, manage, educate, calculate, strategize, innovate, coach, empathize, motivate, and implement—all for the profession of audiology and the Academy.

Cats or Dogs? Dogs (Miss our two beagles)

Beach or Mountains? Beach

Early Bird or Night Owl? Night Owl

Smooth or Crunchy? Crunchy

Favorite Sport: I'm a sports (soccer) enthusiast; intrigued by sports and lessons in leadership.

Read it or watch it? Watch it (all sports)

Quote to Live by: "Leadership is helping others to achieve their own greatness by helping the organization succeed." —Coach John Wooden



Shannon Kelley
Director of Industry Services

Hails from: Jamison, PA

Years with the Academy: Six

What I Do for the Academy: In preparation for the annual AudiologyNOW!® convention, I work year-round with exhibitors and sponsors, convention center personnel, vendors, and Academy staff to develop 300,000 square feet of our exhibit hall—Audiology Solutions—into an aesthetic, interactive, and educational area of learning. I also manage convention center logistics, signage, and food and beverage requirements, as well as act as the Academy's liaison with the Exhibitor Advisory Panel.

Zodiac Sign: Sagittarius

Cats or Dogs? Dogs

Beach or Mountains? Mountains

Early Bird or Night Owl? Early Bird

Read it or Watch it? Read it

Smooth or Crunchy? Crunchy

Quote to Live by: "The happiness of a man in this life does not consist in the absence, but in the mastery of his passions." —Alfred Lord Tennyson



Amy Miedema
Senior Director of
Communications

Hails from: Fairfax, VA

Years with the Academy: Two

Degree: BA in English and Art,
University of Maryland in Heidelberg,
Germany

What I Do for the Academy: I manage the Academy’s publications, which include *Audiology Today*, the *Journal of American Academy of Audiology*, e-newsletters, books, brochures, and multimedia, as well as the Web site and public relations campaigns (“Turn It to the Left”), and communications efforts.

Zodiac Sign: Scorpio

Cats or Dogs? Dogs

Beach or Mountains? Beach

Read it or Watch it? Watch it

Smooth or Crunchy? Crunchy

Favorite Sport: Lacrosse to play; football to watch—Go Cowboys!

Quote to Live by: “Substitute ‘damn’ every time you’re inclined to write ‘very;’ your editor will delete it and the writing will be just as it should be.” —Mark Twain



Katie Toner
Government Relations
Coordinator

Hails from: Boston, MA

Years with the Academy: Six months

Degree: BA from Georgetown
University

What I Do for the Academy: I provide assistance to the government relations department’s work on federal and state audiology legislative, and policy issues. I also perform PAC (Political Action Committee) administrative duties, and help answer member inquiries regarding legislation and policy.

Zodiac Sign: Scorpio

Cats or Dogs? I have a dog named Polly the Pug (aka Scrunchface).

Beach or Mountains? Mountains. I don’t like hot places.

Early Bird or Night Owl? Night owl

Favorite Book: *The Great Gatsby*

Favorite Sport: Snowboarding

Quote to Live By: “There’s no such thing as what might have been. That’s a waste of time” —Tim McGraw



Joyanna Wilson
Senior Publications Manager

Hails from: Rockford, IL

Years with the Academy: Six

Degrees: BA in English, Olivet Nazarene University, and MA in English, Louisiana State University

What I Do for the Academy: My primary duties are copyediting and managing production of the *Journal of the American Academy of Audiology*.

Cats or Dogs? Dogs

Beach or Mountains? Both

Early Bird or Night Owl? Night owl

Favorite Sport? Softball

Read it or Watch it? I’d “watch it,” but scholarly journals aren’t filmed.

Smooth or Crunchy? Crunchy

Quote to Live by: “The greater part of the world’s troubles are due to questions of grammar” —Michel de Montaigne



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Contact Vanessa Scherstrom at vscherstrom@audiology.org for more information.

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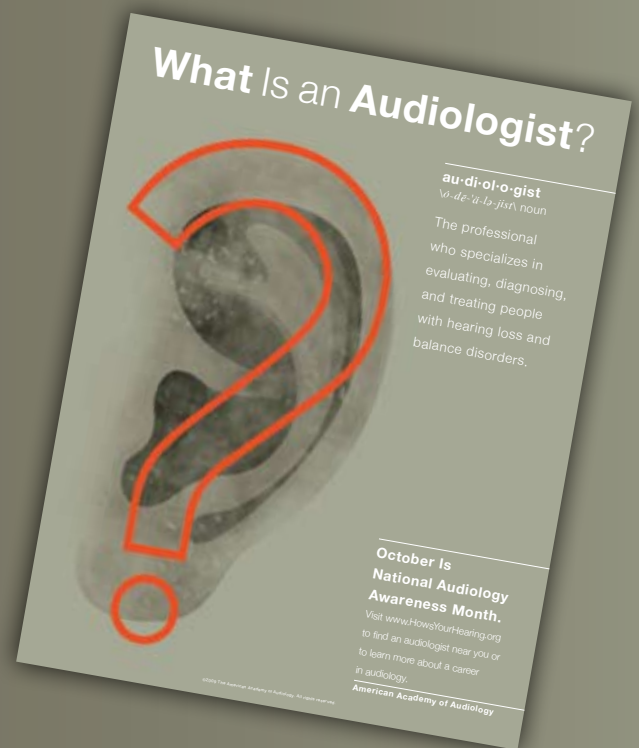
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