ADA Convention 2012
PHOENIX RISING

Taking Audiology
ABOVE & BEYOND

November 8–10, 2012
Arizona Biltmore Resort
Phoenix, Arizona

Mark your calendars for 2012 and meet with your fellow ADA members at the beautiful Arizona Biltmore Resort. Known throughout the world as the “Jewel of the Desert,” the Arizona Biltmore provides a restful oasis of 39 acres covered with lush gardens, glistening swimming pools, and Frank Lloyd Wright-influenced architecture. Set in the heart of Phoenix, the Arizona Biltmore has been a favorite of celebrities and U.S. presidents throughout its colorful history.

Registration open now at www.audiologist.org.

Special Issue:
Alternative Revenue Streams

Hearing Aids & Music
The Business of Cerumen Management
LACE Up!
Forensic Audiology

ALSO INSIDE

Have You Heard?

VOLUME 4, NUMBER 2 • JUNE 2012 | WWW.AUDIOLOGIST.ORG
Oticon Intiga: Immediate Acceptance. Immediate Benefits.

Intiga offers Immediate Acceptance and Immediate Benefits with world class audiological performance and full binaural wireless processing.

With Intiga, you can offer your patients:
- **Discreetness** with our smallest form factor and new speaker design
- **Acceptance** with improved speech understanding from the first moment
- **Advanced Performance** with Intiga’s unique core signal processing to optimize user benefits from day one

Visit us at www.noweffect.com or call us at 1.800.526.3921 to learn more about Oticon Intiga and The Now Effect.

Spice+ Experience Innovation. Hear Life.

Our passion for the pursuit of excellence has resulted in a significant step forward in the evolution of the Phonak Spice Generation.

Spice+ provides enhanced sound quality, outstanding first fit acceptance, less fine-tuning effort and long-term hearing delight.

There is a Phonak for everyone
www.phonakpro.com/spiceplus-us
Features

ALTERNATIVE REVENUE STREAMS

8 Hearing Aids & Music
MARSHALL CHASIN, Au.D.

14 The Business of Cerumen Management
RITA CHAIKEN, Au.D.

18 The Profit in Prevention
NANCY GREEN, Au.D.

24 To Provide or Not to Provide Tinnitus Services: That is the Question
RICHARD REIKOWSKI, Au.D.

28 Forensic Audiology
INDIRA ALVAREZ, Au.D., FAAA

30 Hearing Assistance Technology: Work Smarter not Harder to Offer Key Products to Consumers
A.U. BANKAITIS, Ph.D.

37 LACE Up: Why You Should Use Audiology Training in Your Clinic
SANDRA VANDENHOFF, Au.D.

PROFESSIONAL ISSUES

42 Election 2012 Position Statements
Your Voice and Your Vote Matter

2012 is an important election year—both for our nation and for the Academy of Doctors of Audiology (ADA). Many of the specific issues that we must consider as Americans, will also impact us as professional audiologists.

The legislative and regulatory environment is uncertain, as is the economic landscape. Emerging technologies and healthcare delivery models will continue to impact the way that we serve our patients—and the way that our patients view us.

There will be a large number of retiring audiologists over the next decade, and there are not enough students graduating to replace them. Fewer audiologists, coupled with increases in demand for our services as the baby boomer population ages, will stretch our capacity as never before.

Threats and opportunities for autonomous practitioners abound, and it is more important than ever for us to work together. As ADA members, we share a vested interest and a passionate desire to provide exceptional care for our patients and to assure the wide adoption of autonomous practice models.

ADA’s purpose is to protect and advance our collective professional interests and to provide us with access to tools and resources that will help us succeed in our individual practices. Just as it is our civic duty to make an informed vote for our elected government officials, we also have a professional duty to select from our peers, the leaders that will implement and execute the initiatives that will achieve our unified objectives.

You don’t just belong to ADA—ADA also belongs to you. ADA is truly guided by a democratic process that is strengthened by the voice of each voting member. I encourage you to thoughtfully consider the tremendous slate of candidates presented by the 2012 ADA Nominating Committee (beginning on page 42). Each of these qualified candidates brings a unique perspective, background and expertise. Please review the candidates’ biographical information and position statements and be prepared to cast your vote in August. ADA voting members may also nominate additional candidates from our membership as provided in the ADA bylaws (please contact Stephanie Czuhajewski at 866-493-5544 for more information).

I would like to thank this year’s Nominating Committee comprised of Dr. Bruce Vircks, Dr. Charlie Stone and Dr. Jim McDonald for developing such an outstanding slate of candidates for our consideration. I would also like to thank all of the candidates for making the commitment to dedicate their time, knowledge and talent to serve ADA and its members.

Your voice and your vote have never mattered more. I look forward to an unprecedented voter turnout for the ADA 2012 election, and to the continued advancement of our profession!
We understand that relationships matter.

Ours with you – yours with your clients.

We take your business, and your clients’ hearing, personally. By listening to you, by understanding your business and by supporting you day-to-day. We are committed to providing you with exactly what you need to improve your clients’ lives in meaningful ways. Because hearing matters.
This issue of Audiology Practices is devoted to "alternative revenue streams". As most of us learned early in our career, revenue from the sale of hearing aids, audiological/vestibular assessments and associated services is the engine that runs our business. Without a consistent number of hearing aid sales and audiological/vestibular assessments each month our business will sputter and eventually crash. For this reason it is important that we continually monitor our key performance indicator dashboard and fine tune our business engine in order to keep it running smoothly and efficiently.

There are good reasons, however, for any business to slightly detour from their core revenue generators. For example, many physicians are feeling the crunch of lower reimbursement rates and the associated burden of dealing with third party reimbursement red tape. Some physicians have taken a keen interest in alternative revenue streams, which bring additional cash revenue to their practice often with minimal investment in fixed costs. Cosmetic surgery, sleep labs and hearing aids services are three examples of alternative revenue streams that have grown in popularity with otolaryngologists.

Because of the seasonality of the hearing aid business in many markets and relatively low market penetration rate combined with an industry that has a very generous return-for-credit privilege, audiologists are encouraged to explore alternative revenue streams for their own practices.

These alternative revenue sources can help smooth out the bumps in the road caused by any sudden downturn in the core revenue generators of any practice.

Several patient services, which have the potential to supply a private practice or clinic with an alternative source of revenue, are explored in this issue of AP. Dr. Marshall Chasin makes a business case for providing services to musicians and audiophiles. Dr. Rita Chaikin discusses the details surrounding cerumen removal services. Additionally, Dr. Indira Alvarez and Dr. Nancy Green do a splendid job of outlining forensic and industrial audiology respectively. Unfortunately, not every possible alternative source of revenue is mentioned in this issue. I will leave it up to you to explore off-the-beaten path.

Like any other new business initiative, alternative revenue streams have the potential to distract us from the core priorities of our practice, which are usually audiological/vestibular assessments and hearing aid services. A careful analysis of revenue per clinic hour, market demand for a particular service and start-up costs must be considered before taking time away from the core of your business. However, if you are passionate about a certain subspecialty, like Dr. Reikowski in Ohio is about tinnitus management, and the service is within our scope of practice, why not put the pedal to the metal and go for it! The checkered flag awaits those that take the risk.
EVERYTHING IS ON THE MENU

PROFESSIONAL MENU
ACTIVE MENU
FAMILY MENU
COMFORT MENU

CHOICES FOR EVERY LIFESTYLE

MENU, the new 10, 5, or 3 channel hearing aid solution from Widex, gives you unparalleled flexibility when finding the right hearing aid for your patients.

With MENU hearing aids, you, along with your patients, can select the features needed to suit their hearing loss, lifestyle and budget.

The choice is yours.

- **Popular models**: from BTE and ITE to the new IIC (Invisible-In-Canal model)
- **Flex platform**: a new, flexible sound platform featuring an incredibly fast chip technology for outstanding performance and excellent sound quality
- **Fast and easy fitting**: one click fitting gets MENU up and running quickly
- **Flexibility**: your patients only pay for the features they need
Collaboration and Unity, a Silver Lining from the UHC Cloud

Since the launch of the United Health Care/Hi Health Innovations Medicare Advantage program in October 2011, there has been a newfound unity and collaborative spirit among hearing healthcare professionals and the organizations that serve them. New relationships have been established and old friendships have been strengthened in an effort to raise awareness about the risks of online hearing testing and online/over-the-counter hearing aid sales.

Representatives from the Academy of Doctors of Audiology (ADA), the American Academy of Audiology (AAA), the American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS), the American Speech-Language-Hearing Association (ASHA) and the International Hearing Society (IHS) have been meeting on a regular basis to coordinate advocacy efforts.

In February, these groups issued a joint statement on consumer-administered hearing tests and direct-to-consumer hearing aid sales, and in May, the groups distributed letters to state departments of health encouraging health officials to alert consumers to the potential risks of buying hearing aids without being evaluated by a licensed hearing healthcare professional.

In addition to the joint efforts, ADA, AAA, AAO-HNS, ASHA, and IHS have worked through multiple channels individually to express concerns about the UHC/Hi program to their contacts at the Centers for Medicare and Medicaid Services (CMS) and the Food and Drug Administration (FDA). The Hearing Industries Association (HIA) has also done an outstanding job of communicating concerns regarding the UHC/HI initiative to representatives of the FDA, and communicating outcomes back to allied organizations.

Equally important as the efforts by the national and international associations, have been the efforts of the state-based associations, who have worked tirelessly to raise awareness about this important issue with state and federal authorities. In fact, it was a representative from the Minnesota Academy of Audiology (MAA) that alerted ADA about the letter from the FDA to UHC/HI on March 28th, in which the FDA ordered the company to cease marketing its online hearing test. The work of MAA, and other state-based professional associations, has been and will continue to be instrumental to ensuring that consumers receive safe and effective hearing healthcare services.

The teamwork and selfless sharing of information and ideas through state, national and international organizations, by audiologists, physicians, hearing instrument specialists and industry partners regarding the UHC/HI initiative have resulted in an increased respect and goodwill among these professionals, and has opened the door for future opportunities to work together to achieve common goals.

Collaboration and unity is the silver lining from the UHC cloud. Our professional organizations will not always see eye to eye (or ear to ear?), but there are many areas where we can and should work together to the benefit of our members and their patients.
HEARING AIDS & MUSIC

BY MARSHALL CHASIN, Au.D.
Some features of instrumental music and speech

Music and speech are rather similar in that they both are vibrations in the air, and whose energy is constrained to a well-defined bandwidth. Musical cues and fundamentals do extend down into a lower frequency region than does speech, and speech has no energy below the fundamental frequency which is about 125 Hz in males, but both have a rather large bandwidth. Both music and speech have peaks in their spectra and times where there are silences. Both have rapid changes from loud to soft - speech being governed by the mechanics and neurology of the vocal tract, and music just being governed by the musical instrument being played.

In short, music and speech can have similar, albeit not identical, spectra and time based waveforms. The differences lay in their intensities and their crest factors. Instrumental music—even quiet music—can be in excess of anything produced by the human vocal tract. And crest factors can become quite significant as well. Table 1 shows the typical outputs in dBA of a number of musical instruments. In most cases these values were obtained from a horizontal distance of 3 meters. In one case, the values have been measured near the musicians’ ear. These are all from Chasin (2006).

<table>
<thead>
<tr>
<th>Musical Instrument</th>
<th>dBA ranges measured from 3 meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>cello</td>
<td>80 - 104</td>
</tr>
<tr>
<td>clarinet</td>
<td>68 - 82</td>
</tr>
<tr>
<td>flute</td>
<td>92 - 105</td>
</tr>
<tr>
<td>trombone</td>
<td>90 - 106</td>
</tr>
<tr>
<td>violin</td>
<td>80 - 90</td>
</tr>
<tr>
<td>Violin (near left ear)</td>
<td>85 - 105</td>
</tr>
<tr>
<td>trumpet</td>
<td>88 - 108</td>
</tr>
</tbody>
</table>

Table 1: Average sound levels of a number of musical instruments measured from 3 meters. Also given is the sound level for the violin measured near the left ear of the players. Adapted from Chasin (2006). Used with permission.

The crest factor is the difference between the peak of a signal and its average (or root mean square, RMS). For a pure tone it is 3 dB. For speech it is usually taken as 12 dB. That is, for speech, the difference between the peak output in the time based waveform is about 12 dB more intense than the average of the speech signal. We deal with this crest factor concept every day when we assess the function of hearing aids in a test box according to ANSI S3.22 (2003). The reference test gain is the OSPL90 - 77 dB. Well, 77 dB is 65 dB (average speech) + 12 dB. And 12 dB is the crest factor of speech. This value is based on years of research going back to Sivian and White (1933) and also Cox et al. (1988) who found that peaks for speech were on the order of 10-12 dB above the estimated long term speech spectrum. In contrast, musical instruments can have crest factors in excess of 20 dB and this has implications for designing and setting hearing aids. However, as we will see later, this crest factor data may not be as clear cut as first suspected. Table 2 shows some crest factors that have been measured in some common types of music and also from some speech samples.

<table>
<thead>
<tr>
<th>Stimulus</th>
<th>Peak Amplitude - Total RMS Power</th>
<th>Crest Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech #1</td>
<td>-0.92 - -21.97</td>
<td>21.05</td>
</tr>
<tr>
<td>Speech #2</td>
<td>-5.53 - -17.99</td>
<td>12.46</td>
</tr>
<tr>
<td>Speech #3</td>
<td>-3.65 - -17.6</td>
<td>13.95</td>
</tr>
<tr>
<td>Music #1</td>
<td>-8.62 - -19.35</td>
<td>10.73</td>
</tr>
<tr>
<td>Music #2</td>
<td>-5.0 - -15.28</td>
<td>10.28</td>
</tr>
<tr>
<td>Music #3</td>
<td>-0.98 - -22.65</td>
<td>21.67</td>
</tr>
<tr>
<td>Music #4</td>
<td>-2.45 - -21.88</td>
<td>19.43</td>
</tr>
</tbody>
</table>

Table 2: Using a 125 msec analysis window, the differences between the peak amplitude and the total RMS power are calculated to give the crest factor for a selection of speech samples and music samples.
Hearing aid elements and music

The hearing aid has several components, each with their own set of optimal operating characteristics. The hearing aid microphone has been able to transduce 115 dB SPL with virtually no distortion, at least since the late 1980s. The hearing aid receiver has gradually improved over the years and with an appropriate acoustical load (and acoustical plumbing), can transduce significant high frequency output without sacrificing battery life too much. The same can be said about the digital to analog (D/A) converter- both music and speech are well within its operating range. A difficulty arises when we are talking about the front end of the hearing aid- the analog to digital (A/D) converter.

The current implementation of the A/D converter, given a 16 bit architecture, can only handle a 90-96 dB dynamic range (the range between the least intense and the most intense signal). The actual dynamic range of the A/D converter for a 16 bit system is theoretically 96 dB however frequently engineering and design decisions need to be made that reduce the effective dynamic range slightly. A 96 dB dynamic range is quite sufficient for the range of speech sounds that are encountered but can easily fall short with many forms of music. With the joint conspiracy of both intensity and a high crest factor, instrumental music can be far in excess of 96 dB SPL. Adding the various values from Table 2 to levels of 80-90 dBA clearly shows that a problem will exist. (Or simply add values from Tables 1 and 2 will demonstrate that peak outputs can easily be in excess of 96 dB SPL). A quiet piece of music played at 80 dBA with instruments that have a 20 dB crest factor suggests that the peaks of the input will be on the order of 100 dB SPL.

Crest factors revisited

Sivian and White (1933) and Cox et al. (1988) both used a sample length of 125msec for their research. This makes sense because the 125 msec chunk is fairly close to our perceptive limits so using smaller temporal chunks would not be meaningful. However, when it comes to hearing aids and music, we are talking about the input to the hearing aid, and not the output to the hearing aid wearer. The A/D converter is not “aware” of the limits or operating range of the human ear- this occurs much later in the transduction process.

To make matters worse, consider the well-agreed-upon crest factor for speech: namely 12 dB. This value is the result of a

<table>
<thead>
<tr>
<th>Stimulus</th>
<th>500</th>
<th>400</th>
<th>300</th>
<th>200</th>
<th>125</th>
<th>100</th>
<th>50</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speech #2</td>
<td>12.46</td>
<td>12.48</td>
<td>12.46</td>
<td>12.45</td>
<td>12.46</td>
<td>13.22</td>
<td>16.68</td>
<td>16.68</td>
</tr>
</tbody>
</table>

Table 3: Crest factor calculations for speech stimulus #2 measured with varying time analysis windows from 500 msec, down to 25 msec.

Some technologies and strategies to handle the more intense inputs of music

There are a number of creative strategies and electro-acoustic techniques that are being used in the industry to resolve this “high level input- front end” problem for music. Following is a list of eight of the more commonly used approaches that have found it be useful. The first four are strategies that can be shared with patients who already have hearing aids that are optimal for speech but require additional fidelity for listening or playing of music. The next four are technical innovations that are currently available in hearing aids or can be implemented within a clinical setting.

**Strategy #1:** Turn down the input (stereo) and turn up the aid volume (if necessary). If the excessive level of the input to the hearing aid does cause distortion of the A/D converter, then turn down the input if at all possible. If traveling in a car, turn down the level of the radio and (if necessary) turn up the level of the hearing aid to compensate. The output will be the same, but the input would have been reduced to a level that is well within the operating range of the front end of the hearing aids.

**Strategy #2:** Removal of hearing aid for music. Given the higher level inputs of music, the required gain may be close to 0 dB for a desired output. Table 4 shows some data derived for a range of severities of hearing losses at 1000 Hz and the required gains for speech and for music. Even for an 85 dB sensori-neural hearing loss at 1000 Hz, while a person may require 45 dB gain for certain speech sounds, they may only
require several decibels of amplification for many types of music. The best strategy for many hard of hearing consumers may be to simply remove their hearing aids when listening or playing music.

<table>
<thead>
<tr>
<th>dB HL at 1000 Hz</th>
<th>65 dB input</th>
<th>80 dB input</th>
<th>95 dB input</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>35</td>
<td>8</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>45</td>
<td>14</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>55</td>
<td>20</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>65</td>
<td>28</td>
<td>15</td>
<td>2</td>
</tr>
<tr>
<td>75</td>
<td>36</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>85</td>
<td>44</td>
<td>24</td>
<td>4</td>
</tr>
</tbody>
</table>

Table 4: Calculated amounts of gain required for a given hearing loss at 1000 Hz (column 1) based on FIG6. For average levels of music (95 dB A) inputs, virtually no amplification may be required even for very significant hearing losses. Used with permission. www.hearinghealthmatters.org/heartthemusic blog, Chasin, 2011). Downloaded March 19, 2012.

Strategy #3. Use Scotch tape. This is the lowest technology level and is perhaps the easiest to implement clinically. Like the use of a less sensitive microphone (e.g., – 6 dB/octave), using a temporary microphone covering such as Scotch tape shifts its ability to transduce sound downwards by about 10 dB for three layers of Scotch tape. The A/D converter is therefore presented with a signal that is 10 dB less intense and can often be within its optimal operating range. There needs to be some trial-and-error and the hard of hearing consumer can be instructed to play with one, two, or three pieces of tape over both hearing aid microphones. The exact number does depend on the gauge and the brand of the tape. Attenuations of 10 dB which are relatively flat across the frequency range have been measured using this clinical “low tech” approach.

Strategy #4. Change the musical instrument- This is a common strategy used by many musicians. Change to an instrument that has more of its energy in an audiometric region of better hearing. Many violin players have switched to the viola which is a fifth lower in frequency. For many this is a simple approach that has extended a musicians’ enjoyment of their music for many years.

The above strategies are just a few of the many that have been found to be useful over the years. The Association of Adult Musicians with Hearing Loss (www.AAMHL.org) is an organization of hard of hearing and deafened musicians as well as interested hearing health care professionals who work with those in the performing arts. In addition to their very active listserv blog, they have recently come out with a book entitled, “Making Music with a Hearing Loss” edited by Cherisse W. Miller (2011). Chapter 4 of that book is aptly entitled “Personal Stories and Strategies” where many musicians talk about what works best for them. Copies of this excellent book can be obtained through the AAMHL.org site.

The next four sections are about hearing aid technologies that have been shown to be quite useful. This review is not meant to be technically complete. In some cases I have mentioned actual manufacturer names that are associated with each of the technologies and the reader is encouraged to contact the respective manufacturer for more information. This is not an exhaustive list, but ones that I have personally found, to date, to be useful. Other clinicians may have found other approaches to also be useful.

Technology #1. The analog K-AMP has been available since 1988 and through the 1990s and 2000s has been the mainstay for musicians. It was designed with the capability of being able to transduce very intense inputs with virtually no distortion. And because it is analog, there is no A/D converter to be overdriven. The K-AMP is still commercially available (at least in the United States) and is marketed through General Hearing (www.generalhearing.com). I frequently have sent many musicians south of the Canadian border to purchase the K-AMP and the function today is still on par, if not better, than some of the other technologies that have been designed with the more intense components of music in mind.

Technology #2. Head Room Expander (HRX) is a tradename of Sound Design (and now with the recent purchase, is owned by ON Semiconductors). This is a “third party” manufacturer of hearing aid technology whose customers are many of the large hearing aid manufacturers. HRX functions by “auto ranging” the input to the hearing aid and this has the by-product of always ensuring that the levels of intense music that actually reaches the A/D converter is always within the operating range. It is a bit like ducking under a low hanging door way. HRX reduces the input (like ducking under the door way) and then re-establishes its normal level after the A/D components (like standing up again). In this way, HRX can provide distortion free input of the more intense components of music. Those who are interested should contact the various manufacturers directly to determine whether HRX is used in any of their hearing aids. The Digi-K, which is the digital successor of the K-AMP, uses this approach and again, is
available from General Hearing. The HRX technology is also widely used by other manufacturers, perhaps without being explicitly mentioned in their product literature.

**Technology #3.** "Live Music Plus" is a proprietary technology that is available from Bernafon Hearing Instruments (www.bernafon.com). This is a clever approach that is based on the actual definition of dynamic range. The dynamic range over modern 16 bit hearing aids is not 96 dB SPL. It is a range between the least intense signal and the most intense signal that is 96 dB (without any scale). The Live Music Plus technology when implemented transduces all inputs between 15 dB SPL and 111 dB SPL- still a 96 dB dynamic range but it has been shifted up by 15 dB. Levels of 111 dB SPL can be transduced distortion free and, as the name of the technology suggests, is ideal for the listening to, or the playing of, live music.

**Technology #4.** The use of "-6 dB/octave microphone” instead of a broadband microphone has been shown to be quite beneficial with many forms of music. As the name suggests, the hearing aid microphone has been made less sensitive to the more intense lower frequency components of music- specifically -6 dB less sensitive at 500 Hz and -12 dB less sensitive at 250 Hz. This approach will not change the fidelity of the higher frequency elements of music, but since most of the intense components of music are below 1000 Hz, this “fools” the A/D converter into thinking that the input is well within its operating range. A draw-back of using a -6 dB/octave microphone is that it does increase the internal noise floor of the hearing aid. However, expansion can be used successfully in its maximum setting to offset this change in noise floor. Although this can be implemented by any manufacturer, the only one to date that has implemented it is Unitron Hearing (www.unitron.com) and they should be contacted directly for more information.

Of importance is that none of these strategies or approaches are in, or can be altered by software adjustments. Software changes occur after the A/D converter and once an intense signal is distorted by a poorly configured front end, no amount of software manipulation will ameliorate the situation. Software modifications are simply not the approach that should be taken when dealing with the more intense components of music.

**General recommendations for an “optimal hearing aid for music”**

Assuming that one has been able to select or configure a hearing aid to receive the more intense components of music with minimal distortion what are some of the optimal software and electro-acoustic setting for music? There are four general recommendations.

**Recommendation #1-** Similar WDRC parameters for speech and for music. There is no inherent reason why modern day WDRC circuitry should be set any differently for music than for speech. This was perhaps the case in the past because some circuits used a peak detector versus an average or RMS detector. Because of the differing crest factors of music and speech this threshold kneepoint for activation should have been different for the two stimuli, but with the current trend to design primarily with an RMS or average level detector, any differences are obviated. The use of the WDRC circuitry is primarily to re-establish normal loudness growth due to outer hair cell damage, and indeed that what it does. The use of this circuit is primarily then for damage of our auditory systems rather than for the purposes of this article, hearing aids for music.

---

**How to expand your business with musicians**

Musicians are interesting people—they frequently cancel their appointments at the last minute; are chagrined that we don’t fully appreciate that their tinnitus is F# and not F; and sometimes don’t pay their bills on time (at least until their next gig). But, if you still want to see musicians in your practice, here is how:

Start by giving a talk or two at the local College or university music school. Offer to give a talk during the intermission to the musicians at the local philharmonic, and leave your business cards at local music stores. Write a lay article or two in the local newsletter in your community, and then sit back and wait.

You won’t have to wait long. First the rock and jazz bass players come in, then the drummers, next the vocalists and finally the lead guitar—it’s a pretty universal order. In the classical domain woodwinds and violins are the first to show up at your door, then the other instruments, and finally, if at all, the brass players show up.

Whatever the order, there are some things that we can offer musicians- musicians’ earplugs, in-ear monitors, and of course, the subject of this article, hearing aids for music.
than the nature of the input stimuli per se. Davies-Venn et al. (2007), “Chasin and Russo (2004) suggested that WDRC… may be better for music…. That hypothesis was supported by the present data.” (p. 696).

**Recommendation #2.** The “music program” should be set with about 6 dB lower OSPL90 and 6 dB lower gain than the client’s “speech in noise” program. This is called the -6 dB rule and is based on the fact that many forms of music have a crest factor that is about 6 dB greater than that of speech, however as seen in Table 2, this can vary significantly. For example, if the crest factor of music is 18 dB and that of speech is 12 dB, then the peaks of music are 6 dB more intense (18 dB – 12 dB) than those of speech for a given presentation level. Therefore, in order to prevent the peaks of music from causing discomfort, the OSPL90 and, assuming similar WDRC parameters for speech and music, the gain should also be 6 dB less intense than for the “speech in quiet” program setting.

**Recommendation #3.** Bandwidth for a music program. Examining the work of Moore et al. (2011) and Ricketts et al. (2008) several general recommendations can be made. If the hearing loss is mild (and at most up to a moderate level) then a broader bandwidth for music is better. If however the hearing loss is greater than a moderate level, then less may be more- a narrower bandwidth (which can avoid dead regions in the cochlea) may provide a more pleasant sound than a wider bandwidth that extends into the high frequency region. The same can be said about the configuration of the audiogram- a person with a relatively flat audiometric configuration should have the widest bandwidth possible, given the limitations of their hearing loss. In contrast, if the audiogram has a precipitous high frequency loss configuration then again, less may be more- a narrower frequency response would be ideal. Table 4 shows some suggested frequency responses from a number of manufacturers, but these should only be for those with a relatively flat audiometric configuration and a mild to, at most, a moderate sensori-neural hearing loss.

**Recommendation #4.** Disable the feedback management and noise reduction systems, to the extent that they can be disabled. This is not a well-researched area but clinical experience suggests that feedback management systems can “turn off” the hearing aid while listening to, or playing music. The pure tone nature of harmonics in music can be confused with the pure tone like nature of a feedback signal. This is especially true of the higher frequencies. To help resolve this in cases where the feedback management system cannot be disabled, some manufacturers have limited the feedback circuit to the higher frequency region. Siemens Hearing Instruments limits their feedback system to signals over 2000 Hz, and Oticon Hearing Aids limits their system to signals over 1500 Hz. Both are reasonable solutions to an otherwise problematic situation.

**Conclusion**

Most of the strategies and technologies that have been discussed are related to many hearing aids not being able to handle the more intense inputs of music within their operating range. A study of crest factors that are relevant to the input of a hearing aid, rather than the output to our auditory systems, may have far reaching implications for speech as well as music, and this is especially true of a hard of hearing person’s own voice at the level of their own hearing aid microphones.

Like most areas of the field of audiology the realm of music as an input to hearing aids and the technologies that are available is a rapidly changing one. New technologies are on the horizon and many similar ones may be implemented by various manufacturers under a score of different names. ■

---

Marshall Chasin, Au.D. is the Director of Research, Musicians’ Clinics of Canada.

He can be contacted at Marshall.Chasin@rogers.com

**References**


You are a private practice audiologist busy seeing patients. Imagine yourself in these everyday audiology scenarios:

- Upon otoscopic examination of a new patient, who has been referred for a complete audiological evaluation by a friend, you find that an ear is impacted with earwax.

- A current patient, who has worn hearing aids dispensed by you for 3 months, complains of constant feedback. You presume a new ear impression must be made. Otoscopic examination reveals a buildup of soft dark earwax around the second bend of the ear canal.

- After several months of deliberation, a prospective patient finally returns to your office to be fit for a trial with extended-wear hearing devices. While not impacted, the ears now have islands of earwax accumulation.

What is your next course of action in each of these cases? Certainly, the cerumen must be removed before any other test or procedure is performed. Will you refer the patient elsewhere? What might be the ramifications of such a referral? Perhaps it is a wasted appointment slot with you and, therefore, a loss of time and income. Maybe, there is the potential that once referred, the patient will not return for your services, opting instead to go someplace where all their hearing needs can be accommodated. The result of sending a patient away because you do not provide cerumen removal may be that the patient has second thoughts about investigating the possibility of hearing loss and/or amplification.

Over 20 years ago, I was faced with these dilemmas in my private practice. Fortunately, ADA (then the Academy of Dispensing Audiologists), offered a full day cerumen management (CM) workshop at their annual convention in South Florida. Since then, I have made the service available to my patients. Surprisingly, not only did it affect my business’s bottom line, but it also elicited an enhanced level of appreciation of my expertise, ability, and professionalism by the patients. One of my professional goals continues to be educating audiologists about cerumen removal and helping them to incorporate it into their protocols. Let’s examine some of the common questions audiologists typically have about the management of cerumen in their practice.
Why should audiologists provide cerumen removal as part of their practice?

You can certainly list the procedures and tests that are complicated by earwax in the external auditory meatus: inserting a tip for impedance audiometry, making ear impressions, placing a probe tube for real ear testing, placing electrodes on the tympanic membrane, and so on. Chandler (1964) concluded that even a partial occlusion of the ear canal by cerumen can affect the results of pure tone air conduction thresholds, particularly at the frequencies 2000Hz and above. Therefore, the presence of cerumen may have an impact on the results you obtain, even when the TM is somewhat visible.

Referring to other professionals for cerumen removal is also an inconvenience for many patients. Oftentimes it means another day off from work, either for a patient or a relative who must transport the patient. Sometimes it means extra expense for transportation or for a caregiver’s assistance. Additionally, there may be the out-of-pocket charges by the physician, although they may file insurance for cerumen removal, as, for example, a “new patient” fee.

A patient may choose to be treated by their primary care physician. Physicians have for years lamented that they know little about cerumen extraction and learn by trial and error. Many of them delegate the CM responsibilities to paramedical or other support personnel. Even certain otologists will have others in their office remove earwax in the interest of time. These nurses, PAs, MA’s, etc. are also unlikely to have been formally trained in cerumen removal. Few will use any technique other than irrigation.

Another reason that audiologists should consider performing cerumen management is that it is now considered part of our scope of practice in most states. All the major national professional organizations include it when discussing the practice of audiology.

Finally, providing cerumen removal services is fiscally sound. As audiologists, you must pay for training, purchase equipment, secure liability insurance and take clinic time to provide this service. You are the experts in the area and should be compensated for your knowledge and ability, which few others have to offer.

Why do audiologists NOT perform cerumen removal?

Those of us who have practiced audiology for many years will remember the time that cerumen management was considered by the profession to be strictly the purview of the medical community. Of course, that was also the time that audiologists did not make ear impressions or dispense hearing aids. Unfortunately, this currently false notion that cerumen management is outside the audiologist’s scope of practice has been perpetuated by many in the university setting who themselves were never trained to remove earwax, and are, therefore, personally uncomfortable teaching it, let alone teaching best practices in the area.

There are audiologists who are concerned about the liability of what they consider an “invasive” procedure. I ask them, “What is more invasive than placing a foam or cotton block down the ear canal or at the tympanic membrane, followed by injecting a foreign material (impression matter) deep into the ear canal – often beyond the second bend?” Certainly, removing a little wax from the ear is comparably benign. Are performing water calorics for ENG/VNG testing any less invasive than performing the cerumen management technique of irrigation?

Often, the reason that audiologists do not provide this service is fear. They are afraid of hurting the patient. They are concerned that they will cause the ear canal to bleed. Such fears, however, appear misguided when one considers potential risks of other everyday audiological procedures: the possibility of causing a hematoma to be formed from removal of cured ear impression material or causing bleeding when a piece of skin adheres to the impression when removed. Similar concerns could certainly arise as a result of poorly fitting ear molds that cause abrasions in the ear canal.

Fear of performing cerumen management is understandable if a practitioner has not been adequately trained. Many audiologists have learned “by the seat of their pants,” but have no idea of the rules that should be followed for success.

How can audiologists minimize problems occurring as a result of cerumen removal?

Audiologists must be properly trained to perform cerumen management, just as they are taught to make ear impressions. Such training needs to include not only the actual removal skills, but also selection of manageable patients and the criteria for matching each patient with the appropriate technique(s) or recommendations, such as irrigation, suction, manual instrument manipulation, ear drops, or referral. There must be thorough knowledge of the anatomy and physiology of the external ear canal, the appropriate case history,
the conditions found in the outer ear, effective otoscopy, the characteristics of earwax before a cerumen removal process is instituted, and the contraindications to each method under evaluation. Understanding the genesis, migration and features of cerumen is helpful in choosing the correct method and providing appropriate counseling to patients.

An integral part of cerumen removal training must include the opportunity for audiologists to handle a wide variety of equipment and instruments. The expansive range of tools required to perform CM procedures are often surprising to participants of my courses. There are different styles and sizes of curettes, suction tips, irrigation syringes, etc. Some of the more common curettes are shown in Figure 1. Comparing different types of head loupes, coupled with the manipulation of various instruments in a supervised setting, is usually the highlight of effective educational sessions. These educational experiences will inform you as to the initial and sometimes critical decisions of which instruments and equipment you will want to purchase at the outset to begin providing the service to your patients.

It takes time to become proficient at any fine motor skill and CM is certainly not an exception. Have you forgotten how many ear impressions it took when you first started before you made a complete replica of the canal and concha? There is no substitution for practice. The more you practice – on your family, friends, colleagues and then on willing patients – the better and more comfortable you will be with the procedure.

What are some of the “golden rules” to follow when performing cerumen management?

1. Always sit or stand eye-ear level with the patient. The view of the ear canal is compromised when you are bending over or kneeling to look in the ear.
2. Always brace the head. This is an obvious offshoot of the proper method for otoscopy.
3. Have adequate lighting and magnification. The head loup or otomicroscope are the gold standard for performing CM.
4. Always be able to see the tip of whatever instrument you use in the ear canal. If you can’t see where you are touching you do not proceed.
5. Never touch the ear canal. You should always stay on the wax surface.
6. Never pull skin from the ear canal. Doing so is a sure way to cause a scrape and bleeding. Soften the skin and push it aside if necessary.
7. Soften hard wax to assist in its removal. No matter which method you use, you are likely to cause an abrasion if the cerumen is brittle and attached to the canal wall.
8. Wear gloves. Protect yourself and your patient. You should always use the highest level of infection control which is particularly important when providing this treatment.
9. Be aware of the contraindications of using each of the recognized methods of cerumen management. This presumes a knowledge of the case history of the patient as it relates to cerumen removal and a thorough otoscopic examination.
10. Go with your gut. Listen to that little voice in your head that says “I can do this” or “this is out of my league and I need to refer”. The more you do CM, the more confidence you will have in your abilities and the fewer times you will feel it necessary to send the patient elsewhere.
11. Take your time. Part of the reason that ears are abraded in many medical offices is that removal is not a high priority procedure and care is not taken.
12. While abrasions of the skin may be occasionally inevitable when working in the ear canal, the occurrence and magnitude of abrasions will be minimal, if these guidelines are routinely followed.

How can you get started providing cerumen removal services?

It is imperative that you attend a hands-on cerumen workshop before conducting cerumen management in your practice. After you have been trained, begin by setting aside a dedicated area in your office to perform earwax removal. This workstation, like the one in Figure 2, should have all the necessary items for the task. You do not want to be searching for your ear drops, or setting up the suction pump while the patient is waiting to be treated. The seating should enable you to be eye/ear level with the patient and within reach of the...
equipment you may need. When I began offering the service, I purchased a short file cabinet. In the bottom big file drawer, I kept the suction pump. In the drawer above it I stored cotton balls, otoblocks, paper towels, pads of 4 x 4 gauzes, ear drops, etc. In the top drawer, a cutlery divider separated the curettes, suction tips, metal specula, forceps, etc. On top of the file cabinet, were my head loupe, otoscope, box of gloves, and cup of warm water (for suction). The cabinet was on wheels so I could move it from room to room, if needed. Certainly there are more sophisticated and aesthetically pleasing pieces of furniture that can be substituted. The important point is accessibility and convenience.

Always use best practice infection control protocols. Be sure to include equipment and materials to clean, disinfect and sanitize the items utilized for cerumen management. Ostensibly, these things should already be part of your clinic supplies for other purposes.

Begin by ordering an excellent lighting and magnification system. This is the key to safe and successful cerumen removal. Over time, add instruments, including forceps, to move the particles from the ear. I, and many of my colleagues, are partial to the suction technique. Irrigation is also recommended on a limited basis. As mentioned earlier, working with the equipment in a comprehensive training workshop will help you decide what you want and items that should be initially stocked. Some vendors offer “starter” packages of instruments.

How should you get started offering the service to your patients?

During routine otoscopy, it should be satisfactory to simply tell the patient that there is a wax build up in their ears which must be removed before the next procedure is performed. If a video otoscope is available, use it to show the patient that there is a real problem. Since there is an additional out-of-pocket charge, some audiologists may feel more comfortable explaining treatment alternatives to the patient. The patient may attempt to remove the wax themselves using over-the-counter ear drops. Or, the patient can be scheduled to see a physician, who may be able to file insurance in a manner that will cover all or part of the procedure. However, there may be a deductible to pay as well as new patient fees, etc. In either case, it would mean rescheduling your services that were to be performed that day. In the alternative, of course, the patient can have you remove the wax in the ears right then, and move forward with the appointment as scheduled. Few, if any, will be interested in the other two choices if you can confidently advise the patient of the need for the procedure and your ability to perform it competently.

How should you protect yourself when performing cerumen management?

There are a few standard practices that apply whether or not cerumen management is performed. Audiologists should always carry their own personal liability insurance. It is inexpensive and easy to obtain. It is advisable to develop and maintain, a working relationship with a physician should case complications occur. Additionally, the procedure should be well documented in the patient file with the status at original otoscopy, during the procedure and at completion. Finally, informed or advised consent forms are often used by audiologists before the treatment. It is recommended that the parameters of a consent form be discussed and approved by your legal counsel to ensure their effectiveness.

Should you be compensated for performing cerumen management?

Of course you should! Cerumen removal is a procedure that requires specific instruments and equipment, for which you must be trained and develop a level of expertise. However, it should not be part of a hearing aid or hearing aid fitting, like making an ear mold impression. Nor is it part of any other procedure that is performed by an audiologist.

There are some conditions for which certain third party payers consider cerumen removal to be part of diagnostic testing. These patients may not be billed for the procedure.

Continued on page 56
The Profit in Prevention

BY NANCY GREEN, Au.D.

Audiologists spend a significant portion of their time in training programs learning about the necessity of preventing hearing loss. Once graduated and providing care in a real world setting that revolves around the practice of clinical audiology, however, audiologists find that the daily requirements of treating patients result in time spent trying to treat a hearing loss after it happens, rather than time spent trying to prevent it from ever happening in the first place. Audiologists are experts at treating hearing loss, but in many cases it’s like closing the barn door after the horse is already gone.

One of the most noted audiologists in the profession with expertise in the area of noise exposure, David Lipscomb, Ph.D., wrote in his preface to Noise and Audiology as far back as 1978, “…audiology as a profession is responsible for ways to combat the deleterious influences of noise in the environment.” (Lipscomb, 1978). Nothing in that statement is less true today. There is both human benefit and financial profit in prevention activities, if one knows where to look and how to create it for oneself and one’s practice.
ALTERNATIVE REVENUE STREAM
The United States is arguably more of a capitalist rather than socialist society. Our economy is largely profit-driven, and it is easy to witness that motivation at work when observing manufacturing and production facilities. Audiologists tend to shun the word "profit," and dislike thinking of themselves as profit-driven, but it should be noted that as part of a non-socialized health care system all medical providers, including audiologists, must take profit into consideration as part of their standard business practice, regardless of practice setting. The business entity, whether it is a corporation, partnership or proprietorship, must survive if it is to provide the audiology care the public needs and has come to expect. This especially applies to the working, noise-exposed public who is most at risk for hearing loss and for whom hearing loss prevention activities are most necessary and critical.

**Too Few Providers Create Opportunity**

It may be estimated that there are approximately 16,000 audiologists of one type or another in the United States, but many of these professionals do not actually provide Audiologic Care to the public on a full-time basis. A more realistic estimate of the number of full-time, 100% audiology-only practitioners is about 12,000 to 13,000 (U.S. Bureau of Labor Statistics, 2012). Of that number, anecdotally, only about 100 to 200 audiologists devote 100% of their professional practice to what might be called “industrial audiology,” or more euphemistically, “occupational audiology.” Many more audiologists have clinical practices which may, on occasion or even routinely, provide OSHA and/or workers’ compensation evaluations for hearing loss, but those services do not usually form the bulk of a typical audiologist’s workday.

There are 30 million noise-exposed workers in the U.S. (Occupational Safety and Health Administration, 1998), but with only about 200 audiologists to provide the majority of industrial services necessary, each audiologist could have a case load as high as 150,000 workers. Even if the industrial/occupational audiologists were geographically distributed equally and in the same areas as the workers, this is clearly an impossibly large annual caseload.

Complicating this situation is the current shortage of industrial/occupational audiologists – a shortage that is unlikely to be remedied anytime soon due to: 1) the age wave of Baby-Boomer audiologists nearing retirement which will likely cut the number roughly in half, to 100, over the next 10 years; 2) the age wave of hearing-impaired Baby-Boomer workers who will require hearing services over the next 10 to 20 years as they move into retirement; 3) the lack of preceptors whose practices include a substantial component of industrial work and that emphasize prevention services; and 4) a lack of emphasis on and interest in teaching the practical aspects of industrial noise prevention in professional training programs. Students generally receive exposure to the theoretical basis of noise exposure and noise control issues, but are provided with very little information and sometimes no practicum at all on the everyday, how-do-I-do-it, issues involved in preventing hearing loss due to noise. This leaves graduates with a sense of responsibility for prevention activities, but without the practical tools to actually provide the services. It is a sense of “I should,” that is not supported by “I can.” In the end this creates an avoidance reaction that remains long after the diploma is on the wall.

**Becoming a Full Service Hearing Provider**

Clearly, 200 industrial audiologists cannot do it all, and no one expects clinical audiologists to suddenly give up what they currently do in order to provide hearing loss prevention services exclusively. Because of the shortages mentioned above, it is incumbent upon clinical audiologists to keep abreast of developments in federal and state noise exposure regulations and statutes and provide prevention services accordingly, so that employers and employee/patients that need prevention services can find provider locations that are professionally staffed and convenient. Practitioners who are not equipped to provide hearing loss prevention services are missing a significant marketing opportunity to become a “full service hearing provider.” Once recognized by area industries, medical personnel, and other audiology practices as THE practice that has the staff, training and equipment to provide superior quality prevention services, a full service hearing practice becomes the referral site of choice for all prevention-related activities. Employee training, hearing protector fitting, work-fitness evaluations, workers’ compensation evaluations, noise surveys, compliance audits, etc., are all services that an audiology practice that is dedicated to hearing loss prevention should be able to provide for employers and employees within its sphere of influence.

It is true that providing these services takes time, some specialized training (CAOHC, 2002) and at times the need to be away from the practice, but these services not only generate their own revenue stream, the additional referrals they create also lead to increased diagnostic and amplification revenue. Additionally, these services are not restricted by the use of CPT or ICD codes, so billing for time spent is not only permissible, it is the accepted practice. Many of these hearing loss prevention services can be directly invoiced to the employer (provided that the employer requested the service).
In fact, many prevention activities have nothing at all to do with an audiogram, hearing aids, or any other clinical service. In addition, precisely because they don't involve an insurance company, many employers prefer to pay for these services, especially employee training, immediately with a corporate charge/purchase card. These cards can be processed immediately on a smart phone equipped with a credit card swiper (e.g. Square). Once the service is provided (assuming it is not a diagnostic evaluation for which a CPT code exists and must be used), then it can be billed using existing technology that can create and save a report, create and save an invoice, save it into an accounting software program, receive payment for the service, print a receipt, and deposit the payment in the bank, all within minutes and all before leaving the worksite. The usual and customary wait for reimbursement from a third party payer is not even a consideration in these circumstances.

**Audiologists Must Know the Difference Between "Required" and "Recommended" Aspects of Hearing Loss Prevention Programs**

In the American economy, product- and food-producing employers are constantly bombarded with regulations of every kind: pollution standards, safety standards, employment standards, food purity/contamination standards, etc. on all governmental levels. All such federal regulations, state statutes, and local ordinances are written to create a "minimum acceptable practice." This practice is also known colloquially as "how to squeak by." Minimum acceptable practice means that no less performance than that which is specified in the law will be tolerated, and non-compliance will be punished in some way. It does not mean that full compliance with the standard will prevent any and all occurrences of adverse events, even if the purpose of the law is to prevent, reduce, or eliminate those events.

There are dozens of programs containing required performance descriptions that affect audiologists who deal with hearing loss in the industrial environment: Occupational Safety and Health Act/Administration, Mine Safety and Health Act/Administration, Federal Railroad Administration, Environmental Protection Agency, Hearing Protector Labeling Act, Health Information Portability and Accountability Act, American National Standards Institute, and Council for Accreditation in Occupational Hearing Conservation, etc. Interestingly, none of these organizations have standards that are written with zero tolerance for an unacceptable behavior or condition. For example, some unprotected noise exposures are allowed by OSHA.

It is little wonder that “best practice” documents have been created for many professional activities by many organizations. For industries and for many consumers and employees, minimally acceptable practices just aren't enough to create a working environment without exposure to a hazardous agent like noise. It is critical for audiologists working with either, or both, industry and noise-exposed workers to understand the differences between what is actually required by a regulation or statute versus what is best practice, and industry leaders will expect an audiologist to have that information. A nationally accepted guideline that defines the practices that are most protective and also financially acceptable to industry can be most instructive and helpful. The resource that can be described as a “Best Practice” document for hearing loss prevention is the Criteria for a Recommended Standard: Occupational Noise Exposure, Revised Criteria, 1998, created and published by the National Institute for Occupational Safety and Health (NIOSH Publication 98-126, 1998). This document goes well beyond the minimum standards set by OSHA and is available online at http://www.cdc.gov/niosh/docs/98-126/.

The Permissible Exposure Level of 90 dBA TWA in the OSHA Hearing Conservation regulation for General Industry (29 CFR 1910.95), was originally based on the idea that 90 dBA TWA was the upper limit of a daily dose of noise that would not create a disabling loss of hearing in at least 75% of the exposed population during a working lifetime of 40 years (OSHA, 1983). Even if this is accepted as true, it would still mean that even the most OSHA-compliant of hearing conservation programs would still allow disabling loss of hearing to occur, possibly in as much as 25% of their noise-exposed working population. This is not simply any small amount of hearing loss, but a disabling hearing loss. Audiologists generally find this cavalier attitude toward hearing loss unacceptable, especially regarding hearing loss that is as preventable as that resulting from noise exposure. This causes them to perform procedures and recommend specific programs to industry that, while certainly more protective than the OSHA program, may not be more cost-effective in the eyes of those employers who have to pay for those programs.

Full compliance with the NIOSH Criteria Document, though, could reduce the OSHA 25% with disabling hearing loss after 40 years down to as little as 8%, which is a significant improvement. For a large production company, this amount of risk reduction could translate into millions of dollars of savings in the compensation arena for them later. It is the audiologist’s responsibility to reveal and explain to the management the
financial sense of doing more than only the minimum that the law requires.

Even though compliance with the NIOSH recommended standard would reduce risk to 8%, that still would not be as protective as what is known as the Levels document (1972) from the Environmental Protection Agency, which would reduce that number to 4% (EPA, 1974). Unfortunately, the procedures and noise controls specified in the Levels document were so impractical and expensive that it is not considered a reasonable approach to hearing loss prevention today. In contrast, the NIOSH Criteria Document is cost-effective, manageable, and cuts the number of possible hearing disabilities down by 2/3rd.

Other organizations with recommended but not required, voluntary standards such as position statements and practice guidelines include: the Academy of Doctors of Audiology, the American Academy of Audiology, American College of Governmental Industrial Hygienists, American Speech-Language and Hearing Associations, the Institute of Noise Control Engineering, and the National Hearing Conservation Association.

**SEPARATION OF FEDERAL, STATE, AND HEALTH CARE PROGRAMS**

Many audiologists ask why there isn’t a single, national standard for workers’ compensation programs, impairment ratings, and permanent disability payments. The answer is as simple as the constitutional foundation of the country; all powers not specifically granted to the federal government are reserved by the states. Therefore, each state is entitled to handle its workers’ compensation issues any way it sees fit. While there are similarities between state programs, and some state programs do bear a resemblance to federal programs, they are not the same.

It is important therefore, for audiologists to keep three very important issues completely separate in their critical thinking. First, the person that comes to a practitioner’s office may be seeking advice or treatment for their hearing health and his/her visit to the office may have nothing whatever to do with industrial noise exposure during the course of employment. Second, the person may be there as part of a **federally required hearing monitoring program**, like OSHA, and may not require anything more than an OSHA-compliant audiogram or hearing protector fit-check. Third, the person may have already or could be considering filing a state-controlled workers’ compensation claim for hearing loss or for hearing aids. These three programs are administered by different types of government and private programs, providers, and third parties. Additionally, each program is based upon different criteria, and focuses on different aspects of hearing. They are almost unrelated to each other, as defined in Table 1.

Keeping these three types of programs and their related services completely separate will allow the audiologist to know for certain what is needed, required, or optional for each patient. They will also be able to determine easily what

<table>
<thead>
<tr>
<th>PROGRAM TYPE</th>
<th>HEARING HEALTH CARE PROGRAMS</th>
<th>FEDERAL MONITORING PROGRAMS (OSHA, MSHA, FRA, ETC.)</th>
<th>WORKERS’ COMPENSATION PROGRAMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Based Upon…</td>
<td>Best audiological and medical practices, health insurance coverage for CPT procedures with ICD diagnosis codes, and provider and payer type</td>
<td>Federal regulation for establishing data, data interpretation, recording and reporting to the appropriate governmental agency</td>
<td>State statutes (vary wildly from state to state)</td>
</tr>
</tbody>
</table>

Table 1. Focus and Basis by Type of Hearing Program
programs cover and/or authorize which services, what type of provider is authorized to perform those services, what kind of documentation and follow-up is required or allowed, and who is responsible for payment for those services.

**WHAT IS THERE TO FEAR?**

Many audiologists may simply believe that their time is better spent focusing their practices on what they do best, be it hearing aid fitting, tinnitus therapy, cochlear implants, etc. Gravitation to favorite areas is understandable and encouraged, unless it prevents a practitioner from providing the services that would prevent the hearing loss that made the service necessary in the first place. Providing prevention services is every audiologist’s duty and responsibility.

So what prevents audiologists from providing these services? When audiologists are asked this question, the answer, in essence, is some kind of fear; fear of the dreaded logarithm, fear of lawyers and courtrooms, fear of the industrial workplace, and fear of the industrial workforce. For the most part, these fears are unfounded, but it is only by learning about these environments and performing services in and around those that work in them that one will become comfortable with what is required.

First, there is no need to fear the logarithm. In training programs, audiologists are taught to use many formulae that are now typically built into equipment performance. This is not to say that audiologists shouldn’t be familiar with log formulae and tables, rather these equations are not typically part of ordinary hearing loss prevention programs. In order to perform the vast majority of prevention services for hearing loss, no advanced math is required at all. For those services that do require some math, basic arithmetic will usually suffice; adding and subtracting by 5, 7, and 10, dividing by 2, 3, 4, or 6, and multiplying by 1.5 and by 100 are most of what is necessary on a daily basis.

Second, although it is possible for a hearing loss case to eventually go to trial, remarkably few workers’ compensation claims for hearing loss ever get that far. Most are settled early, but those that do proceed are usually heard by an administrative law judge with no jury. In fact, the more complete the noise exposure case history and audiologic evaluation, the more the data supports the decision made from it. Thus it is likely that the claim will be settled early. This is not necessarily true for tort cases when personal injury has occurred (car accidents), nor in community noise cases (neighbor vs. neighbor), where emotions run high.

Third, there is nothing, in this author’s opinion, which will abate one’s fear of large, potentially dangerous equipment and environments except familiarity with what the machinery does and how it is operated. For example, actually watching the almost comical motion of potato chips as they twirl around while being coated with cheese dust in what looks like the back of a cement mixer helps eliminate the trepidation of being around such a large, moving machine. The more opportunities audiologists have to enter workplaces, ask questions, and carefully observe production operations, the more comfortable they will be when they enter workplaces where everything is either sharp, hot, electrically charged or all of the above. In addition, always having and wearing the proper clothing as well as properly using the correct safety equipment for the environment will go a long way toward alleviating any remaining discomfort. Additionally, audiologists who enter production worksites should have their own safety equipment for their personal use, so they are not required to wear the multi-user safety equipment reserved for visitors. This equipment should include but not be limited to hearing protection, hard hat, safety glasses, and steel-toed shoes. The safety official at the worksite can provide information on what specific safety equipment is required to be used onsite.

Lastly, although every audiologist is understandably more comfortable in a clean, quiet, air-conditioned office environment than in noisy, hot, dirty, factories, it is necessary to remember that the people who go to work in those noisy, hot, dirty factories every day and labor to create the products that we buy and consume are no less deserving of the professional’s care and attention than anyone else. Training, counseling, helping employees, by assisting with issues ranging from earplug fit to the meaning of their audiogram, is a privilege.

The working, noise-exposed population is the demographic group upon which the profession of audiology can have the most potential preventive impact. The hearing losses of this segment of the population can be 100% prevented, easily, when prevention services take their rightful place as a core component of the practice of providing Audiology Care.

---

**Dr. Nancy N. Green** is an industrial audiologist in Jacksonville, Florida with over 30 years experience in providing hearing loss prevention services in the workplace. She is also President-Elect of ADA and an Associate Professor (adjunct) at A.T. Still University of Health Sciences where she routinely teaches the Prevention of Hearing Loss and Disability course for Au.D. students. She can be contacted at N2Green@msn.com

Continued on page 56
TO PROVIDE OR NOT TO PROVIDE TINNITUS SERVICES

That is the Question

BY RICHARD REIKOWSKI, Au.D.
While attending the 2011 AAA convention in Chicago, I was amazed at the city sounds — both pleasant as well as those I considered annoying and noisy. Specifically, the “L” Train was very cool in how it smoothly winded throughout the city, above the streets, people, and businesses. I also observed it moving rather close to apartment buildings. I recall asking a friend and fellow audiologist what it must be like to live in an apartment within feet of the noisy “L” Train passing by each and every day. I remarked at how difficult it must be for many to live near those noises and sounds. I also thought many people would not be bothered as those sound may be considered a natural part of “city life.” It was during that conversation that I immediately drew comparisons to those that suffer from tinnitus and how living with the unwanted or unpleasant sounds, that are heard within their heads, during most waking hours, are so very troublesome and even disturbing. On the way to the convention center, my colleague and I continued talking and sharing stories of patients that suffer from tinnitus.
Tinnitus is described in many ways and can be considered defined as sounds that are heard, within the head, without external or real stimuli. There are many potential causes of tinnitus from the most common noise exposure, trauma, medications, to unknown causes. Common belief is that tinnitus is generated within the inner ear, cochlear, and central nervous system. I have found a great interest in offering tinnitus assessments and treatment in our clinical practice. We are seeing an abundance of clinical research from various educational institutions and medical facilities. We are also becoming aware of many tinnitus therapy devices from sound generators fitting at ear level and those portable for desk and table use.

The purpose of this article is to help my fellow audiologists weigh the pros and cons of offering tinnitus services in their practice. Let’s begin by asking the most fundamental question. Should you offer tinnitus management services in your practice? There are many areas to consider when formulating an answer to this question. Since tinnitus management is within an audiologist’s scope of practice it is our responsibility and duty to serve as an advocate for people who may present with this condition. From this standpoint, it makes sense to offer tinnitus management services. My practice has chosen to offer tinnitus management services. We maintain a patient education blog and hold a membership with the American Tinnitus Association. On the other hand, many audiologists choose not to offer tinnitus management services because they are time consuming and treatment options oftentimes result in inconsistent patient outcomes.

**Tinnitus Management Considerations**

Ultra high frequency audiometry is needed for measuring hearing loss in a tinnitus management center. The cost of a new stand alone or PC based ultra high frequency audiometer can range from $4500 and upward. It is also imperative to gain some additional education about tinnitus management by attending a reputable workshop or course on the subject. In addition, we are challenged to educate insurance carriers to have a greater awareness in maintaining tinnitus assessment billing codes.

We are currently using several devices that are proving successful in helping patients with tinnitus. As a research member of The American Tinnitus Association, our clinical staff places a great emphasis toward gathering post fitting data and clinical outcomes. Successful outcomes can be seen daily with patients having tinnitus.

Let me share a recent case example. A specific patient, male and in his early sixties, having severe tinnitus, felt as though there was no end or hope for his tinnitus. He described the sounds he experienced such as a tire leak, being of a high piercing sound. Once measured, the loudness levels surpassed that of conversational speech. Hearing loss was not causing a significant communication concern. In fact, tinnitus and loudness intolerance, or sensitivity to sounds, were his first and second issue of need and hearing tertiary. There were also concerns of depression and significant anxiety related stress areas.

People in general and potential patients alike do recognize when good services are offered.

Once we obtained the necessary gathering of data, ordering the appropriate tinnitus management device, he is achieving a slow progression toward “better days”. He feels his anxiety level and the short fuse that he prior had was diminishing. The negative effects in which he described his tinnitus, through subjective responses to a series of questions, he is less troubled or disturbed. In short, we have found a desire to be a part of those that have, quite potentially, no source for a resolution. Often they have nowhere else to go. We are proud to be a part of their successes.

People in general and potential patients alike do recognize when good services are offered. If you have been doing the right thing in your practice with a true desire for best patient practices, would people not allow you to treat not only their hearing issues, but their tinnitus? Your physician base is seeking answers for their patients. Shouldn’t they recognize you as a community leader or advocate for helping a great need amongst this tinnitus patient base? During visits to physician lunches the common issue is brought up for discussion is the lack of treatment options for those they serve with tinnitus. We are asked very pointed questions of the efficacy of tinnitus treatment and are called to support our decisions of the choices we make to resolve tinnitus in patients. Offering tinnitus management services can be a great way to provide personalized and effective care to a largely underserved group of patients.

Richard Reikowski, Au.D. is the Director of Hearing, Balance, and Tinnitus at the Family Hearing and Balance Center in Ohio. He can be contacted at: reikowski@familyhearingbalancecenter.com
Tinnitus Management Services as an Alternative Revenue Stream

BY BRIAN TAYLOR, Au.D., AUDIOLOGY PRACTICES EDITOR

We know from Kochkin et al (2011) that about 10% of the entire population suffers from tinnitus and a disproportionate number of these patients also suffer from hearing loss. Additionally, these researchers reported that hearing aids offered substantial benefit for a significant number of patients suffering from tinnitus. Tyler (2012) reports high proportions of tinnitus patients will seek, accept, and pay for treatment, however, they clearly prefer less invasive (i.e., external) devices if they completely eliminate tinnitus. Differences among tinnitus patients are vast and there was only a “...little relationship between tinnitus loudness and annoyance and the amount of money....” tinnitus patients are willing to pay for relief. Furthermore, Tyler (2012) stated that many tinnitus patients would pursue surgical options and many would pay $10,000 for treatments to reduce their tinnitus.

These two recently published articles encapsulate the opportunities and pitfalls associated with offering tinnitus management services in an audiology practice. Indeed there is a relatively large demand for these services, yet the relationship between the magnitude of the tinnitus and patient outcome is murky at best. Once a practitioner makes the careful decision to enter the tinnitus management arena, there are several considerations. One of the most well respected medical institutions in the world, Cleveland Clinic, offers a comprehensive tinnitus management service. If I were opening a tinnitus management center in my clinic, I would seriously consider modeling my program on theirs.

Audiologists interested in opening a tinnitus treatment center are also encouraged to read Tyler et al (2008), which discusses several important considerations. Here is a summary of what Cleveland Clinic offers patients suffering from tinnitus. It should serve as general guide for establishing a comprehensive, patient-centric tinnitus management center.

1. Medical clearance from an otolaryngologist prior to enrollment in the program
2. A multidisciplinary approach to assessment and treatment, including evaluations from neurology, dentists, physical therapy and psychology
3. The use of group education and support sessions
4. Following the multidisciplinary assessment an individualized tinnitus treatment plan is devised. This plan may include the trial use of hearing aids, sound therapy, behavioral modification therapy and/or physical therapy.
5. Patients are charged an initial fee of $300 for the initial visit. Subsequent fees for devices and services may be billed to an insurance provider.

References


**Forensic audiology** is a subspecialty in which an audiologist is called upon to provide expert assessment and opinion in legal issues. As you may imagine it is a relatively specialized field. I have been practicing audiology since 2007 and have had a handful of cases. In all instances, patients sought my services in cases where they were involved in legal proceedings to decide whether their hearing loss or tinnitus was caused by previous activity or exposure in the military, and if so, whether compensation was warranted. Some patients will seek an opinion as to whether their previous occupational exposure was the causative factor in their disability, or whether an accident (in many cases a motor vehicle accident) was a key factor. In addition to working with claimants directly, you may also work with attorneys and employers.

In every case, my protocol is to perform a complete diagnostic evaluation, including a comprehensive history focusing on the details of any noise exposure or traumatic injury to the hearing system, head or neck, or severe illness or conditions which may affect hearing. I also request all previous medical records and military service records, which the patient is responsible for providing. I make sure at the onset of the initial appointment that the patient understands my decision is based completely on a thorough review of the existing evidence, and that my ethical, moral, and professional obligations preclude me from basing my opinion on client's desired outcome. I make sure to discuss this thoroughly with the client before beginning the case. Unfortunately, I have had to pass up working with certain clients, due to the fact that I could immediately see from our initial consultation that they were not expecting an impartial opinion.

In one instance, early on in my experience with forensic work, the patient in question had heard of me from a good friend of his who told I was very helpful. Regrettably, the patient interpreted that I would report exactly what he wanted me to! At the follow-up visit automatically scheduled to review the results of my report, the patient was very upset because the evidence available simply did not support his claim and my report clearly stated that. I learned early on that I needed to do a much better job of clearly explaining the process and potential outcomes to prospective patients. In most cases however, I have found that the evidence does indeed support the patient’s claim and I make it a priority to advocate for them- and sometimes that means going “the extra mile” to find the evidence necessary to make a valid claim. For example, there have been a couple of incidences where I have had to wait weeks to months to obtain records that have been almost impossible to obtain (phone calls and faxes trying to find files that were many years old). In these cases a helpful staff is crucial to being able to deliver.

My work includes a comprehensive report and letter of opinion, as well as expert live testimony in court or as part of deposition hearings, if necessary. In general, I would have the client schedule an initial office visit or phone consult to discuss their needs, and whether or not I could be of service. If appropriate, I give the client an estimated fee, based on the number of hours I think it will take to complete the work, and a deposit is collected. There is a basic agreement signed by both parties, stating the fees are estimations, and any additional services (i.e. court testimonies) could incur additional costs. All fees are based on the number of hours spent working on the case, and I follow the hourly rate calculated for my practice, due to the fact that I use the resources thereof (i.e. staffing support, equipment, etc.) Sometimes the fees are paid for by the client, and sometimes the attorney representing the client will cover the fees.

Because I practice audiology in a private-practice setting, and I am somewhat limited by the types of patients I see due to the market my office is in, I welcome the opportunity to use my skills as an audiologist in different ways. Forensic audiology is interesting, in that you are a detective for the client, exploring their hearing loss and their situation searching for answers. The responsibility is quite serious, as the opinion and interpretation of the evidence I provide could have life-altering consequences. However, due to the nature of the work, I enjoy having the ability to really “dig deep” into all the factors surrounding the clients hearing loss, and enjoy the challenge of justifying and strengthening my decision with the available evidence. It is a worthwhile and fulfilling part of my audiology practice.

---

*Indira Alvarez, Au.D., FAAA.*  
*Alvarez Audiology & Hearing*  
*6615 Gunn Hwy.*  
*Tampa, FL 33625*  
*www.alvarezaudiology.com*  
*dr.indyalvarez@verizon.net*
HEARING ASSISTANCE TECHNOLOGY

Work Smarter not Harder to Offer Key Products to Consumers

BY A.U. BANKAITIS, Ph.D.
For non-medically treatable forms of hearing loss, hearing instruments represent a viable option for improving communication as well as overall quality of life. For audiologists, dispensing hearing instruments is associated with revenue/income advantages above traditional diagnostic or other rehabilitative options since most of the time, patients pay directly out of pocket for product and services. Achieving an optimal hearing program that will meet the communication needs of patients takes patience, time and skill, which certainly justify any costs associated with hearing instrument products and corresponding professional expertise required to make necessary adjustments. As such, it is very easy for audiologists to refrain from getting actively involved in offering Hearing Assistance Technology (HAT), overlooking the potential benefits that these products can offer both the consumer and the clinical practice.

Several barriers have been identified as to why HAT products are not readily integrated into audiological practice. The most commonly cited include limited time, limited resources, and limited space (Servedio, 2001, Prednergast and Kelley, 2002; Ross, 2004). With regard to these barriers, there are ways to generate awareness and offer HAT products to consumers without spending a lot of time, effort, and money. For example, Oaktree Products of St. Louis offers audiologists the Simply the Best Brochure, a free educational tool that parcs down the otherwise overwhelming number of HAT products to samples of only the best based on performance, quality issues, and customer satisfaction. Furthermore, establishing a relationship with multi-line distributors offers audiologists the ability to have product drop-shipped directly to the customer, eliminating the need to stock inventory.

Profitability represents another relevant issue since the gross margin of most HAT, even if greater than 50% will yield a small amount of revenue potential (Bankaitis, 2007). Spending time discussing hearing instrument options is often viewed as a more productive investment of time as opposed to spending the same 30 minutes discussing a HAT product; however, if some of the above strategies are implemented, spending some time educating consumers about HAT can result in a pay off. This pay off may not be immediate but it can plant various seeds for future business in two ways: 1) offering individuals with hearing loss who are unwilling and/or unable to pursue hearing instrumentation alternative products to meet a communication need, and 2) offering motivated individuals with hearing loss a specific solution to a specific communication need. The purpose of this article is to outline some key HAT products audiologist can offer either consumer type as a part of a comprehensive offering of audiological services.

**Options for Non-Hearing Instrument Wearing Consumers**

An estimated 27 million Americans age 50 and older have hearing loss, however, only 1 in 7 actually pursues and/or uses hearing instruments (Chien, & Lin, 2012). Many variables contribute to delaying hearing instrument adoption, including consumer attitudes toward wearing hearing instruments, consumer cost-benefit perceptions, severity of the loss, level of activity, financial limitations, and denial of the hearing loss, to name a few (Kochkin, 2012). It may not be possible to offer a solution deemed acceptable on the part of every consumer that walks into your clinic, however, providing consumers with some relatively low-cost HAT options not only offers an immediate communication solution, but may increase the chances for that patient to return to your clinic when they are ready to pursue hearing instruments (Bankaitis, 2007; 2008). Furthermore, modeling the benefits of specific HAT products by intentionally integrating them into daily clinical practice will orient and educate consumers about HAT without having to take the time to formally discuss product specifics. Two general HAT products that readily fit this need include personal listening devices and TV Listening Devices.

**Personal Listening Device**

Personal listening devices, whether wired or wireless, increase the volume of a speakers voice, providing with individuals with hearing loss the ability to hear better in multiple situations including one-on-one conversations, small group situations, the television, and telephone (Bankaitis, 2007; 2008). Several different products are available including the Comfort Duett from Comfort Audio (Figure 1A) and the Williams Sound Pocket Talker (Figure 1B). These devices should be readily accessible in the audiology clinic in those situations where the patient experiences significant difficulty hearing the audiologist review test results and/or counsel about hearing instrument options. By offering a patient access to a personal listening device, not only will this arrangement facilitate communication, but by personally experiencing the benefits of a product, it simultaneously educates the patient about available technology.

Another benefit offered by having personal listening devices available is that it assists clinics in demonstrating compliance with The Health Insurance Portability and Accountability Act of 1996 (HIPAA). While this security rule primarily focuses on the electronic exchange of protected health information (PHI), the HIPAA Privacy Rule controls the use and disclosure of PHI regardless of the medium (personal communication, Deb Abel). Audiology clinics must make a good faith
effort to protect each individual’s PHI. In the case where verbal information is shared with a hard-of-hearing individual, if the clinician knows that he/she will have to speak loudly due to the individual’s impairment and that others may overhear as a result, a good faith effort would include having the patient use a personal listening device as well as closing the door to minimize the potential for others to overhear the discussion of test results.

**TV Listening Devices**

TV Listening Devices are designed to improve television listening for people such that the volume of the TV need not be turned up so high that it is too loud for viewing companions with normal hearing. Equipped with either Infra-red or Radio Frequency (RF) technology, one component of the device interfaces with the TV and transmits audio output wirelessly to a headset receiver worn by the user. Examples of popular TV listening devices include the TV Ears Digital system (Figure 2A), the Sennheiser Set IS410 (Figure 2B) and the Sennheiser Set 840 (Figure 2C). Relatively inexpensive, setting up working demos of these units with a TV or even a CD player in the counseling room can offer patients not only a means to be engaged in some type of listening situation (i.e. watching TV, listening to music) while waiting for the appointment to start, but also generates awareness of available technology that may serve as a preliminary solution to their communication difficulties, particularly if the patient is currently unwilling or unmotivated to pursue amplification in the form of hearing instruments.

**Options for Motivated Consumers with Specific Needs**

For motivated hearing instrument users, HAT products can offer solutions to a specific communication issue. For example, medical professionals routinely perform auscultation to examine the status of the circulatory and respiratory systems. Auscultation is defined as listening to internal sounds of the body and is accomplished through the use of a stethoscope, a medical device specifically designed to enable medical professionals to detect and analyze lung and/or heart sounds (Bankaitis, 2010a). Physicians and nurses with hearing loss who are current users of hearing instrumentation are highly motivated to find a viable solution that would enable them to perform auscultation without having to remove their hearing instruments. The audiologist must be prepared to offer this specific patient population a solution, even if it means replacing current hearing instrument technology with a more suitable technology capable of fulfilling this need.

**Medical Professionals with Hearing Loss Performing Auscultation**

Medical professionals who are users of hearing instrumentation have access to several alternatives. In the majority of instances, a modified version of an amplified stethoscope is an option whereby the traditional earpieces have been removed and one of several available accessories is used to interface the hearing instruments with the amplified stethoscope (Figure 3). For example, in lieu of traditional ear pieces, hearing instrument wearers may wear a pair of headphones during auscultation without having to remove their hearing instruments (Figure 4). Despite experiencing success, it is fairly common for the medical professional to be reluctant to adopt this configuration from a purely aesthetic perspective; some physicians and nurses may feel self-conscious using a stethoscope
in such a non-traditional manner (Bankaitis, 2010a). Fortunately, a new amplified stethoscope option recently introduced into the hearing industry offers medical professionals the solution they have been seeking.

The Audiologist’s Choice® Bluetooth Electronic Stethoscope

The Audiologist’s Choice® Bluetooth Electronic Stethoscope (Figure 5) is an amplified stethoscope that allows medical professionals with hearing loss to perform standard auscultation procedures, without requiring the removal of hearing instruments from the ears and/or the application of stethoscope accessories including oversized headphones. Designed specifically for use with hearing instruments accompanied with wireless communication devices (i.e. streamers, com device), the Audiologist’s Choice® Bluetooth Electronic Stethoscope utilizes Advanced Audio Distribution Profile (A2DP) technology, a protocol supported by hearing instrument streamers. This protocol allows streaming of CD-quality audio from one device to another and delivers audio input in stereo. As such, the Audiologist’s Choice® Bluetooth Electronic Stethoscope will work best in those situations where the user is a binaural wearer of hearing instruments. While this does not represent an exhaustive list, this stethoscope has been successfully paired during field trials to various communication devices that accompany hearing instruments including the Phonak iCom, Siemens miniTek, Widex M-DEX and Hansaton i-com2.

The Audiologist’s Choice® Bluetooth Electronic Stethoscope is specifically designed to work with hearing instruments that are accompanied with a streamer. In order to operate in a wireless fashion, it will be necessary to pair the stethoscope to the streamer. Once the stethoscope has been paired to the user’s streamer, plugging the chest piece into the stethoscope amplifier will turn the stethoscope on. Conversely, unplugging the chest piece from the amplifier turns the amplified stethoscope off. Heart and lung sounds picked up by the chest piece are wirelessly directed from the amplifier to the user’s streamer/communication device. Similarly, the streamer wireless sends the information wirelessly to the user’s hearing instruments. In the event pairing cannot be achieved or maintained, an audio cable with a 3.5 mm stereo plug on either end is packed with the stethoscope to enable the user to directly connect the Audiologist’s Choice Bluetooth Electronic Stethoscope to the streamer of the hearing instrument.
This serves as a backup option in the unlikely event wireless transmission between the streamer and the amplifier of the stethoscope cannot be achieved.

The frequency characteristics of body sounds represents a critical factor in achieving successful use with the Audiologist’s® Choice Bluetooth Electronic Stethoscope. Both heart and lung sounds represent low frequency sounds; heart sounds of interest to the medical professional range between 20 to 650 Hz whereas lung sounds typically fall within the range of 70 to 2000 Hz. Furthermore, both heart and lung sounds are extremely low intensity sounds.

Based on the frequency characteristics of body sounds outlined above, audiologists will need to be prepared to provide a low-frequency emphasis hearing instrument listening program whereby the low-frequency response of the hearing instrument is set as low as possible (100-250 Hz). In addition, setting available wide dynamic compression ratios in the low frequencies to 2:1 or 3:1 despite the presence of normal audiometric hearing is also recommended.

Options for Consumers Motivated Once Educated on the Need

Whether a current hearing instrument wearer or not, consumers may remain undereducated about the impact their hearing loss may have on some quality of life issues that they never would have considered if it weren’t for the audiologist educating them about it. Recent research in the area of smoke detectors and their ineffectiveness in arousing individuals with mild to moderate hearing clearly show that the populations we serve are at considerable risk of potentially losing their life in the event of a residential fire that may occur at night when hearing instruments are not worn.

Individuals with Hearing Loss and Smoke Detectors

Data compiled by the U.S. Fire Administration indicates that 40% of residential fire fatalities occur in the presence of a functioning smoke detector (Bankaitis, 2010b, 2010c). While multiple factors contribute to fire fatality rate in the presence of a working smoke detector, individuals with mild to moderately-severe hearing loss are at an increased risk in terms of failing to hear traditionally high frequency alarms generated by most commercially available smoke detectors during sleep. Recent research has found that nearly half of those with mild to moderately-severe hearing loss will not wake up to a standard auditory alarm (Bruck and Thomas 2009).

According to the NFPA 72, commercially available residential smoke detectors must generate a distinct audible alarm for a minimum amount of time at a defined intensity level. The current standard does not stipulate specific frequency requirements for residential smoke detectors and it is left up to the discretion of the smoke detector manufacturer. The majority of residential smoke detectors sold in the United States are designed to emit a 3100 Hertz (Hz) or higher frequency signal. Taking into consideration hearing loss demographics and traditional high-frequency audiometric configurations, the ability for individuals with hearing loss to effectively hear a standard smoke detector signal of 3100 Hz or higher remains a concern, particularly since most residential fire fatalities occur between 11 p.m. and 7 a.m., the traditional bed time for most individuals (and when most will not be wearing their hearing instruments).

Regardless of whether or not a patient is a current hearing instrument wearer, audiologists have a responsibility to inform patients with high-frequency hearing loss that most residential smoke detectors emit a high frequency signal, typically 3100 Hz or higher, which places individuals with hearing loss at risk for not waking to an alarm while sleeping. Over the past decade there has been significant amount of research published on the effectiveness of smoke detectors in alerting sleeping individuals. Bruck and Thomas (2009) investigated the effectiveness of a variety of signals on waking adults with hearing loss, specifically, hard of hearing adults with binaural hearing thresholds consistent with mild to moderately-severe hearing loss. Their research found that the most effective signal in waking adults with mild to moderately-severe hearing loss is a 520 Hz square wave with the simultaneous application of a vibrotactile signal.

Several manufacturers offer or market smoke detectors specifically to the hard of hearing or deaf populations. Some hearing aid manufacturers are now offering integrated alarm systems that interface with their hearing aids. However, one product stands out from the rest not only from an efficacy perspective, but from the practical perspective of ease of use and set up. The Lifetone Bedside Fire Alarm Clock (Figure 6) is essentially a bedside alarm clock designed to work with existing smoke detectors already installed in the home. This product contains a built in patented sensor that is specifically tuned to recognize and react to the unique signal characteristics universal to all residential fire detectors (aka T3 acoustic pattern signal). When a standard smoke detector is activated in the home, it will detect the smoke and generate the standard 3100 Hz alarm. The Lifetone device will detect the alarm of the smoke detector and generate its own 520 Hz square wave signal at 90 dBA at bedside. The Lifetone product also
comes equipped with a bed shaker that will also be triggered once the Lifetone detects the activated smoke detector.

One of the benefits of the Lifetone Bedside Fire Alarm device is that it is designed to work with existing smoke detectors, so there is no need to replace current smoke detectors. Secondly, it resides at bedside which is in much closer proximity to the patient’s ears than a signal generated outside of the bedroom. Finally, it also generates a tactile signal so the individual is getting the best of both worlds: 1) a 520 Hz square wave, and 2) a vibrotactile signal.

Summary

HAT products provide audiologists the opportunity to provide varying degrees of communication solutions to different patient population and, when integrated into clinical practice effectively, can be achieved in a manner that does not require significant investment of time, energy, resources, or money. Incorporating personal listening devices into counseling rooms for purposes of facilitating communication with a hard-of-hearing patient will not only assist in creating a more pleasant experience for the patient, but will also simultaneously educate them on available products that could be directly shipped to their home without having to maintain inventory. HAT products may even provide an alternative stream of revenue to practice owners as they have the potential to reach an underserved segment of the market.

For users of amplification seeking a very specific solution to a problem, such as medical professionals who perform auscultation, it behooves the audiologist to be prepared to offer an aesthetically acceptable and viable solution. This patient population is not only highly motivated to find a solution, but typically has access to a higher than average disposable income. Finally, HAT also offers the opportunity to educate consumers about increased risks of failing to hear traditional alarms and smoke detectors, while at the same time providing a communication solution.

A.U. Bankaitis, Ph.D., is Vice President of Oaktree Products, Inc., a multi-line distributor of audiology and hearing-related products based in St. Louis, MO. As a clinical audiologist, Dr. Bankaitis has been involved in educating colleagues about various practical aspects of clinical practice including infection control, cerumen management, and hearing assistance technology. She can be contacted at au@oaktreeproducts.com.

References


I almost quit Audiology, once. Here is my story.

I was so frustrated after 11 years in a busy private practice clinic that I applied for a management job at the SPCA. When they offered the job to me, I seriously considered accepting it. Every day I would have to select which dogs to euthanize. What was I thinking?
I clearly needed a way out. Admittedly, part of my frustration had to do with my own severe to profound hearing loss. With two hearing aids, my ability to understand speech was 16% in quiet. Communication was full of effort. More than that, however, I had lost hope and excitement about Audiology.

I saw some of the same things in my patients, who were primarily older adults. Hearing aid technology was continually improving. Despite that fact, so few people were truly delighted with their hearing aids.

I shared with my patients what I knew about success with hearing aids: Invest in the best technology that you can afford. Get two hearing aids, and wear them consistently. I also offered lipreading classes to interested patients.

Even if they did all those things (and many of them didn’t), I still saw a look in their eyes that I recognized: “Is this all there is?” Whenever they said, “I still can’t hear in noise,” that’s what they were thinking. That feeling, of “Is this all there is?” was the bane of my existence. I couldn’t dismiss it, because I felt it too.

Then, in 2006, two really important things happened to me. I got a cochlear implant (CI). And I fell in love with Audiology again.

I got my CI on a Friday, and I immediately launched a do-it-yourself auditory training program. Over the next three days, I spent 10-15 hours immersed in auditory training, with the biggest smile on my face the whole time.

Off skiing that weekend, my husband arrived home and said, “Who are you, and what have you done with my wife?” Not only could I hear much better after three days, but my eyes were shining. I was so happy. CI technology was part of it. But if I had sat there and waited for the results with my CI to get better, my eyes would not have been shining.

Almost overnight, my outlook had changed. Now, I had something I could work with. Now, I could improve my own plight. I became part of my own solution. I gained back the control that had been taken from me. I realized that, through my own efforts, my life could change. It’s the very definition of life with hope. You put in effort, and things get better. Through your own efforts, your life can change.

This realization changed my hearing and listening skills. Improving your hearing can certainly change your life. But then the effects spread outwards and changed how I approach my health, my relationships, and my spiritual life. This principle became the cornerstone of my business, HEARa, which focuses on aural rehab and education for older adults.

Who knew that spending a weekend in front of a boom box could have such a ripple effect? The thought that you can improve hearing and listening skills is empowering. Empowering people is important. Dr. Sam Trychin, a psychologist with hearing loss, notes that people with hearing loss are at risk for feeling a loss of influence or control (Trychin, 2003). This can lead to a passive outlook.

A passive outlook can then lead to a lack of staying power—and giving up too soon with hearing aids. Most people with hearing loss are not afraid of effort, in my opinion. It’s just that they don’t know exactly where to put their effort. They are afraid that the effort won’t yield any results.

That’s why patients expect you, the professional, to take on all the responsibility for success. Everything rests on your expertise and the performance of the hearing aids. They place all the confidence in you, because they don’t have the confidence in themselves.

If we don’t dispel these ideas, unrealistic expectations of hearing aids become inevitable. This is where LACE comes in. Coincidentally, 2006 was the year that LACE was released. LACE, an acronym for Listening and Communication Enhancement, was developed by two audiologists—Dr. Robert Sweetow and Jennifer Henderson Sabes. LACE is a computer-based auditory training program.

To learn more about how LACE can help you manage your patients’ expectations see this YouTube video: http://bit.ly/JGmpvy.

An important take-away from this video is that by incorporating LACE training into your practice, you are telling your patients, “You have a job to do, it’s important, and it works.” Your patients’ attitudes will shift to one of shared responsibility.

LACE is an auditory training program designed specifically for older adults with hearing loss. Other auditory training programs are available for people with hearing loss, but LACE is the only one that was specifically designed for older adults.

Even with normal hearing, older adults require a 3-5 dB higher SNR than younger listeners (Schneider, et al. 2005). So there is something beyond hearing loss that makes it harder for older adults to hear in noise. That something is: our brain, and how it changes as we age.
To learn more about LACE and the aging process see this YouTube video: http://bit.ly/wGYxay.

An important take-away from the video is to recognize that so many things are changing in the brain as we age: processing speed, working memory, hearing in noise, but also: multi-tasking. As we get older, multi-tasking gets harder. Every time we’re interrupted or distracted, it’s harder to go back to what we were doing before. Hearing loss is an exercise in multi-tasking, 24/7.

At a noisy restaurant with family members, people with hearing loss have to:
• fill in the gaps created by hearing loss
• hold onto parts of the conversation in working memory while searching for a word or phrase that makes sense
• lip-read
• shift attention from one person to another in conversation
• localize in order to use visual cues
and then, you can actually get around to thinking.

By this time, thinking can be the straw that breaks the camel’s back—and lead to system overload. Instead of thinking about the conversation, we have thoughts such as, “What’s he saying? I can’t hear well when I am tired. Should I ask him to repeat that again, or pretend I heard?” A feeling of panic takes over and comprehension plummets even further.

Hearing aids help to fill in the gaps created by hearing loss. Brain training with LACE scaffolds comprehension by improving processing speed, working memory, and the ability to shift attention between speakers. LACE also works on strengthening prediction skills and the use of context.

But one of the most valuable aspects of LACE training, in my opinion, is the effect on the thinking process itself. LACE reinforces the idea that we don’t have to hear every word to understand the message. We learn to keep trying. We learn to keep paying attention, because even though we missed the first part, we may catch the rest later.

This self-knowledge can be a tremendous confidence booster. Many older adults wait years to get hearing aids, and in the meantime, lose confidence in their ability to communicate. When you feel hesitant and unsure, you’re more likely to hang back than join in. Many people with hearing loss would rather stay at home than feel invisible at a party and pretend to hear jokes. They don’t seek out new connections and enter ongoing conversations.

I think this is the most painful aspect of having hearing loss—your world becomes smaller and smaller.

But...

There’s a constant launch of new ideas, products, and services in our profession. We all have to be on the lookout for the next big thing. How do I know that this is worth my time?

Consider the patient who comes in with high SNR loss. You partly solve their problem with directional microphones, to the tune of 4-8 dB SNR improvement, in many environments (Christensen, 2011).

Is this all there is? Is this as good as it gets? With LACE, our answer is, “No. We can do better.” With LACE, the average QuickSIN improvement* is an additional 4.5 dB (Song, et al, 2011 a). In general, the poorer the performance you see initially on speech-in-noise perception, the greater the improvement you can expect.

It’s not just a placebo effect. Song, et al, 2011 b, showed that the brain actually changes how it encodes pitch cues. After LACE training, there is an enhancement in the transition between consonant and vowel sounds.

Better speech-in-noise perception is directly linked to enhanced encoding of pitch cues in this transition period. Better yet, these changes last. Six months later, the improvement in speech-in-noise perception is retained (Song, et al, 2011 c).

In addition, return-for-credit rates drop significantly when LACE training is implemented. Martin (2007) found that consumers who participated in LACE training were four times less likely to return their hearing aids. Taylor and Shrive (2008) reported that the average return-for-credit rate for three clinics went from 15% to 3% after implementing LACE training, representing $150,000 in retained revenue for three clinics over a one year period.

You may be wondering at this point: If LACE is so great, why aren’t more people using it? To be honest, I keep asking myself the same question. Sometimes it just takes time

* Average improvement with full version of LACE (20 sessions).
for new ideas to catch on—even the really great ones. I am hoping that auditory training and LACE won’t take as long to catch on as Copernicus and Galileo’s ideas that the sun, not the earth, is the center of our solar system!

Here’s what I think happened. In some early attempts by hearing care professionals to implement LACE, they made a critical mistake: they handed a LACE CD to their patients and said, “Good luck!” Success rates were low.

We don’t do that with hearing aids. We don’t hand a pair of hearing aids to a patient and say, “I think this will work really well for you. Go for it!” That’s essentially what happened in the beginning. We now know that patients need support to get to the finish line. LACE training is challenging and adaptive. The adaptive part means that it never gets easy. As performance improves, the tasks get more demanding.

A study by Sweetow & Sabes (2010) of 3,000 LACE users found that 70% didn’t finish all 20 sessions to complete the training. Fortunately, it is a short term effort. The 20 sessions are ideally completed over a one-month period. Clinics that have successfully implemented LACE corrected the crucial mistake. They keep in regular contact with the patient throughout the training period, and give detailed feedback about progress.

Imagine that you just had knee surgery and you were told to see a physical therapist to maximize your recovery. The physical therapist gives you exercises that take 20 minutes to complete, every other day. She hands you the sheet of exercises, and then she says, “These exercises will really help you—they’ll strengthen the muscles around your knee.”

Would you do the exercises? Dr. Sweetow’s research suggests that 70% of your patients won’t. What if instead your physical therapist said, “I’m going to keep an eye on your progress. I’ll be checking your scores on a regular basis.” Sure enough, about a week later, you get an email from her saying, “Your strength has really improved! You are 3% above where I expected you to be. Excellent work. Keep going!” Would you be more likely to continue? Probably. And your patients probably would too.

**WHEN SHOULD I START TALKING WITH PATIENTS ABOUT LACE?**

I suggest incorporating LACE into the very beginning of your interaction with your patients. Consider sending information about LACE to the patient before they come into the clinic for the appointment.

**AUDITORY TRAINING AS AN ALTERNATIVE REVENUE STREAM**

**BY BRIAN TAYLOR, AP EDITOR**

Auditory training exercises, like the ones described by Dr. Vandenhoff have been shown in the literature to improve aided benefit, speech understanding in noise and significantly reduce returns for credit in your clinic.

Auditory training exercises could be prescribed for patients presenting to your clinic with a minimal hearing loss who nevertheless describe persistent communication problems in everyday listening situations. Although to my knowledge there is no published data available on the efficacy of auditory training specific to a group of patients with minimal hearing loss that are not wearing hearing aids, it’s logical to expect this subgroup of patients to reap similar benefits compared to hearing aid users who have completed LACE training.

Patients with normal hearing or a minimal hearing loss that have a documented hearing handicap could be prescribed a series of auditory training exercises like the ones outlined in this article. These patients could be billed for the auditory training exercises and improvements in hearing handicap could be documented following the completion of the auditory training program. Clinics that offer this service charge approximately $100 to $200 for the program. Documentation of hearing handicap pre and post training could be completed with a tool like the Hearing Handicap Inventory for Adults.

Don’t forget your waiting room. Brochures and other literature on the importance of LACE, and the second YouTube video, “LACE Auditory Training: a key to hearing better is noise” (which is captioned), can be displayed in the waiting room.

While counselling, you can discuss the effects of hearing loss and aging on communication. Speech-in-noise test results provide a natural opening for this part of the conversation. For the effects of hearing loss on hearing in noise, you
recommend hearing aids. For the effects of aging on hearing in noise, you can recommend LACE.

**Which patients are candidates for LACE training?**

- Patients who have waited years to get hearing aids
- Patients who are hesitant but willing to try hearing aids again
- Patients with a high SNR loss
- Patients who are at risk for returning hearing aids
- Patients with unrealistic expectations
- Patients who keep coming back for adjustments
- Existing hearing aid users who are dissatisfied with hearing in noise
- Patients who give you the look: “Is this all there is?”
- Patients who are not ready for hearing aids yet but are willing to take smaller steps to improve hearing, listening, and communication skills.

I suggest starting with patients who are 50–75 years old who are comfortable using a computer and have Internet access.

Patients should have a grade eight reading level in English. Patients for whom English is a second language have more difficulty with English speech recognition than native English speakers (Rogers et al, 2006). As long as reading level is sufficient, these patients would benefit from LACE training as well.

**How much time does LACE training take?**

After the initial set up procedures, anticipate one to two hours of coaching per patient to support them through the program. Parts of the process can be automated, such as e-mail alerts when the patient has stopped training and progress report templates. Not all of the work needs to be done by the hearing care professional. Some clinics outsource the LACE training entirely.

Your patient will spend 20 minutes per day for 20 sessions. Ideally they will do five sessions per week for four weeks. They can take the other two days off per week to suit their schedule.

**A complete equation**

I am grateful that I didn’t give up on Audiology, a profession that I truly have passion for. I’m also grateful for having found the missing piece to resolve my frustration for all of those years.

Auditory training not only completes the equation:

**YOUR EXPERTISE + HEARING AIDS + AUDITORY TRAINING = SUCCESS**

It also empowers your patients by being part of the equation too. Not only will you have a patient who’s listening, hearing, and communication skills have improved, you will have a client who will re-open closed doors, because they know “Through my own efforts, my life can change.”

---

Sandra Vandenhoff, Au.D. is an audiologist with hearing loss and founder of HEARa (Hearing Education and Rehabilitation for Adults). She can be reached at Sandra@heara.ca.

**References**


Completed ballots must be postmarked by September 26, 2012. For additional information on election procedures, please view our bylaws at www.audiologist.org.

Please give thoughtful consideration to this year’s election and ensure strong leadership for ADA over the next few years.
RITA CHAIKEN, Au.D.
Candidate: President-Elect
Founder/Owner, Atlanta Audiology Services, Inc.
Atlanta, Georgia

EDUCATION
B.S., Syracuse University (1973)
M.M.S., Emory University (1975)

PROFESSIONAL ACTIVITIES
• Adjunct Instructor - Salus University (2001–present)
• Board Certified in Audiology – American Board of Audiology
• Fellow – Academy of Doctors of Audiology (1981–present)
• Board of Directors – Academy of Doctors of Audiology (Jan. 2010–present)
• Board Liaison – Mentoring Committee (2010, 2011), Membership Committee (2012), PRAC Committee (2012), Academy of Doctors of Audiology
• Fellow – American Academy of Audiology
• Member – Georgia Academy of Audiology
• President – Greater Atlanta Audiology Society (1983–1985)
• Executive Council Member- Georgia Speech, Language and Hearing Association (1984-1986)
• Instructor – Emory University Division of Allied Health Professions (1980-1981)
• Instructor – Nationally and Internationally of Cerumen Management Workshops and Courses
• Peer Reviewer – Audiology Online
• Audiology Foundation of America Professional Leadership Award
• Pennsylvania College of Optometry (PCO) Audiology Alumni Award

POSITION STATEMENT
Audiologists have and will continue to be challenged by groups in the health care, insurance, and business professions and industries. As the home of the autonomous audiologist, the Academy of Doctors of Audiology is the place where issues going to the heart of our profession are identified and acted upon for the advancement of our constituents. We must be and remain vigilant in standing up to these forces. Indeed, the events of the past year reflect the reality that the ADA, our membership, you and I, together, must advance our core interests for the benefit of our profession—whether members or not—and for all those we serve.

Strong and courageous leadership will continue to be essential at this critical juncture.

As a member of the ADA for over 30 years, I have participated in the educational, social and leadership opportunities provided by the organization. In many ways, my own professional career was greatly influenced by the ADA. Those influences and the meaningful work the ADA is doing now for audiologists are what make me so passionate about our organization. I want to ensure that the ADA will have the impact on every member of our organization that it has had on me.

My background has included a vast array of professional settings, including serving as an educational audiologist in the public schools, southeast regional manager for a hearing aid manufacturer, owner and operator of a private practice, consultant and educator. Over the past three years, I have brought to the Board both my passion and cross-section of experiences and perspectives that have helped steer the decisions we make. But what about the future?

To ensure the continued success of our organization we must:
• define and promote audiology as an independent profession
• develop and disseminate materials that help audiologists market their expertise
• support the use of best practices throughout the profession
• educate our audiologists about real-world business practices and challenges while maintaining the highest professional standards
• foster genuine mentoring relationships to leverage the hard-earned wisdom of years of practice to teach and model for our younger audiologists
• interact with sister organizations within the broader audiological profession to coordinate and advance shared goals.

It is no coincidence that my personal goals for our organization are aligned with each element of our Mission Statement, and my professional work has been guided by those same values and principles. I am humbled to have been invited to run for President-Elect of the ADA. I believe that my years of prior service have had a positive impact on our organization and our profession. I would be honored to lead the Academy of Doctors of Audiology.
BRIAN URBAN, Au.D.
Candidate: President-Elect
Founder/Owner
Advanced Hearing and Balance Center, LLC
Founder/President, CounselEAR, LLC
Evanston, IL

EDUCATION
B.S., University of Wisconsin - Stevens Point (2000)
M.A., University of Minnesota (2002)

PROFESSIONAL ACTIVITIES
- ADA Board of Directors - Treasurer (2010-Present)
- ADA Board of Directors - Member-at-Large (2009-2010)
- ADA Convention Planning Committee (2009)
- Presenter at numerous state and national conventions
- Board Certified in Audiology – American Board of Audiology
- Fellow – Academy of Doctors of Audiology
- Fellow – American Academy of Audiology
- Member – Illinois Academy of Audiology
- Sponsor and Participant – Conference on Professional Education II (2008)
- 2010 Jerger Future Leaders of Audiology Conference participant
- Adjunct Faculty member at Rush University (2010-Present)

POSITION STATEMENT
ADA leads. ADA educates. ADA supports. ADA fights for our profession. Over the last 3 years, I have been privileged to see this firsthand. ADA has more student members now than at any time in its history offering us in unprecedented opportunity. As President, I would uphold our traditions and work to bring ADA’s spirit to a new generation of audiologists.

ADA is at a crossroads. The remarkable individuals who founded and propelled ADA to national prominence are looking to pass the torch. At the same time, new audiologists are searching for answers regarding how to balance their professional ambitions with their immediate concerns about the high cost of education. I believe that if these needs are not met, we risk forgetting our past as well as neglecting our future.

It is incumbent upon the ADA community to promote a mentality that emphasizes ownership of our profession, regardless of practice setting. Autonomy is just a word without the tools, support, vision, and drive to help get us there. The days of being button pushers are long gone and ADA is uniquely positioned to have a direct impact on how, why, and where audiologists practice for years to come.

One of my most crucial duties as President would be to instill this basic, yet essential, concept in new and soon to be audiologists in order to ensure the future of our profession. I want to reintroduce ADA to the generation of audiologists that are unaware of the sacrifices made allowing us to dispense, to have the Au.D. degree, and in being a strong, consistent voice for autonomy. I want to show all audiologists that their commitment to patient care can and should be valued; their every action has a profound effect on the future of our profession. The dedication of ADA over several decades must serve as an inspiration in facing the challenges ahead.

New Members = New Ideas!
There’s never been a better time to join ADA! ADA is currently offering a free 30-day trial membership to non-member audiologists who are interested in autonomous practice and interested in learning more about what ADA has to offer. Trial membership includes access to ADA’s online resources, e-mail alerts and member communications, a free issue of Audiology Practices (and access to all of the electronic archives), and much more!

Visit http://www.audiologist.org/join.html for more information!
INDIRA ALVAREZ, Au.D.
Candidate: Director-at-Large
Alvarez Audiology & Hearing
Tampa, FL

EDUCATION
B.A, Communication Sciences & Disorders, University of South Florida; Tampa, FL (May 2002)
Au.D, University of South Florida; Tampa, FL (May 2007)

PROFESSIONAL ACTIVITIES
• Owner, Alvarez Audiology & Hearing, LLC (2008-Present)
• Externship Clinical Supervisor, various doctoral programs (2010-Present)
• Board Certified in Audiology: American Board of Audiology
• Fellow – Academy of Doctors of Audiology
• Fellow – American Academy of Audiology
• Hearing Professional of the Year, 2011: Rayovac, Inc.

POSITION STATEMENT
Uncertainty. Is there any emotion more disquieting to a person than uncertainty? As a novice in my profession and in private practice I can tell you, it is the worst of the challenges I face every day. Luckily, I have an armory to draw from, the most powerful and influential being my ADA resources, especially the ListServ and the feedback I receive from my ADA colleagues. I am privileged to belong to an organization dedicated to the advancement of our own profession, surrounded by experienced and knowledgeable leaders.

Now, through my nomination to this Board, I am offered the opportunity to contribute and give back. I graduated in 2007 from the University of South Florida with my Au.D, and almost immediately went into private practice (in 2008). Private practice has been a lifelong dream for me, and now that I am there, uncertainty is looming. The reason I accepted the nomination to run, given the demands of running my practice, teaching students, and raising my family, is simple. The actions we take and decisions we make as a profession in the next decade will decide whether there is a future for my practice and your practice.

As a member of the Board, my focus will be on three different yet vital initiatives. First, we must increase membership exponentially. Although ADA have always been advocates for private practice, in truth we advocate for excellent patient care…it just happens to be we believe as experts in our profession, that we should decide what that is. There is absolutely no reason that there are more than twelve-thousand audiologists, and ADA membership is only a fraction of that number. Even though they don’t own their own practices, our colleagues in other sectors must be made to realize that the leadership they select will have a profound impact on their own futures. You may not want to own your own practice, but everyone who invests the time and hard work required to become a doctor will appreciate being able to be an independent autonomous practitioner. More than anyone else, this is what ADA does.

Second, I have a passion for ensuring ADA is a guiding force in student education. Even though I have been in private practice for a short three years, I began to take in students as soon as I was able. Now having students from several institutions, I realize that universities are doing a fine job of training them as clinicians, but it is up to us to train them to be doctors. Let’s talk about how we can keep the best and brightest out of the corporate clinics and ENT offices and put them into positions where their talent and innate leadership skills will flourish, not be smothered.

Finally, although many of us own our own practices, as of yet we don’t own our own profession. At the heart of the matter I think is the fact that so many veteran audiologists began their careers in a totally alien environment to the environment of practitioners today. The autonomy we need is there for the claiming, we just have to step up. We must move out of our comfort zone. Further organizing and developing our PAC fundraising efforts and helping to develop in each and every member a sense of responsibility to do their own “lobbying” at the local level is a challenge we must meet. As a member I take this challenge very seriously. The first question I ask any colleague upon meeting them is “Are you a member of ADA?” If the answer is no, I immediately hop on my soapbox and try to convince them to join…Now! Can you imagine the impact we could all have in increasing membership if each and every one of us made a commitment to this whenever possible? On the Board, I would be championing these efforts from the onset.

Although I was initially surprised by my nomination to run for this position given the fact that I have not been an audiologist very long, I am very excited. I have a passion for making this wonderful profession the best it can be, for myself, for my colleagues and my students, and of course, for my patients. The truth is the only way to face the challenge of uncertainty is to create our own future. I hope that you will allow me the privilege of serving you and our profession and lead the charge towards achieving that goal.
POSITION STATEMENT

Audiologists are at the crossroads of a great opportunity to propel our profession in a direction that would profoundly impact not only the field of audiology, but more importantly, the care provided to our patients and the general public. It would be an honor to serve ADA as we continue to move the profession forward in these exciting and challenging times. The recent activities of forces outside the profession have brought to the forefront the importance of and value in what we do as audiologists. Some might consider discouragingly the many obstacles our profession has faced over the years. Every obstacle must be viewed as an opportunity for growth, we cannot be deterred, but gain strength as we move forward on the journey toward autonomy. I am excited about the accomplishments that have been made on that journey and would like to continue to contribute my service as ADA continues to advance the profession. ADA supports the goal of autonomous practice as we promote and encourage higher levels of education. ADA has historically provided support through many channels including educational resources, networking opportunities and mentorship. I am excited about the continued emphasis on support of our student membership as young professionals are the future of the profession.

My service since 2010 as Secretary of the Board of Directors of ADA has reinforced my belief that audiologists are the crucial component in the provision of the standard of care that the public expects and deserves in the delivery of hearing health care services. It is imperative that ADA remain at the forefront of advocacy issues as we collaborate with other organizations and professions to ensure a superior level of care and to foster awareness of audiologists as the uniquely qualified professional to provide that care. We must continue to have a voice in local and national legislative issues that impact audiology and the public we serve. We must be diligent in our efforts toward achieving direct access, addressing reimbursement issues, and promoting audiology awareness. We must, at the same time, focus on new hurdles on the horizon including direct-to-consumer sales and online hearing testing.

As we face new challenges I look forward to the role ADA will play in continuing to enhance the profession, and, given the opportunity, I would bring a unique perspective to the Board which reflects my diverse background and experiences which include work in the medical community in an otolaryngology practice, a community liaison for a non-profit agency and over 20 years in private practice.

It has been an honor to serve as a member of the Board of Directors of ADA and I would consider it a privilege to continue in service as a Director-at-Large.
ANGELA MORRIS, Au.D.
Candidate: Director-at-Large
Southeast Kentucky Audiology
Corbin, KY

EDUCATION
B.S., University of Kentucky (1994)
M.S., University of Louisville (1999)

PROFESSIONAL ACTIVITIES
• Private Practice – Audiology (2003 – present)
• Board Certified in Audiology
• Contract Audiologist, Kentucky Commission for Children with
  Special Health Care Needs
• Contract Audiologist, Daniel Boone Clinic, Dr. Samir Guindi, ENT
• Past President of the Kentucky Academy of Audiology
• Conference Chair for the Kentucky Academy of Audiology
• Board member for the Academy of Doctors of Audiology
• Current Membership Chairperson for the Academy of Doctors
  of Audiology
• Board of Governors for the American Board of Audiology
• Regional Captain for the AAA State Leaders Network
• Chairperson for the Student Mentor Luncheon at Audiology Now
• Chairperson for the Marketing and Fundraising committees with
  the ABA
• Member of the Ethics committee with the ABA
• Fellow – Academy of Doctors of Audiology
• Fellow – American Academy of Audiology
• Member – Audiological Resource Association
• Member - Kentucky Academy of Audiology
• Member – Kentucky Hearing Aid Association
• Graduate of Leadership Tri-County (Awarded the Leader among
  Leader award)
• Graduate of Leadership East Kentucky

• Presenter – KAA and KSHA conferences
• Conduct negotiations on behalf of Audiologists in KY with the
  Department of Medicaid Services
• Published article in Advance for Hearing Practice Management

POSITION STATEMENT
I have seen many changes in Audiology over the past several years, and I am excited for what our profession can and will do in the future. I strive in my professional and personal life to be the best I can be at what I am doing. I am passionate about the profession of Audiology and I am honored to be considered for this position.

I am aware through my various activities of the challenges we still have as Audiologists. I will be involved in trying to fix these issues. I want these positive changes to take place, not only for my benefit, but for the benefit of the up and coming audiologists we will have in the future. Our profession is so important to so many people. It is my personal goal to have as many other professionals to see us in the same light.

ADA has been the epitome of positive change for the future of Audiology. I wish to bring my enthusiasm, my knowledge and my desire to move Audiology forward to the ADA board in hopes of continuing this aggressive movement. I have a strong focus for the governmental issues side of Audiology. I am comfortable talking with legislators regarding Audiology issues, and feel it is a responsibility that I have as an Audiologist to do my part. Autonomy is a key factor to our success as a profession, and is something we can never let die. Other issues that I have been involved in include reimbursements to Audiologists. We have the right to be paid for our services, and we have the right to be paid what we are worth. I feel that my work on the state level, which has yielded great success, can be an asset to the ADA board.

I believe it is most important to educate our students with the proper information regarding our profession. The ADA already has in place wonderful opportunities to provide this information to them. I would love to be involved in continuing this student/fellow relationship. I feel that my experience with working on other mentor programs will be of good use for this endeavor. We have come so far at this point, that the only way to “reap our rewards” is to have our profession stay strong for many years after we are gone.

I am greatly appreciative of the opportunity to serve on the ADA board. It would be an honor and a privilege to do so. I do feel that my qualifications are strong for this position, and that I would make an effective member of the board. I would be open, honest and available to all who would want to contact me regarding any issue. This position would not be taken lightly, and I would promise to do my best and to look out for the best interests of all audiologists.
PAULA L. SCHWARTZ, Au.D.
Candidate: Director-at-Large
Audiology Concepts
Minneapolis, MN

EDUCATION
B.S., California State University Long Beach (1982)
M.S., University of Wisconsin Oshkosh (1986)

PROFESSIONAL ACTIVITIES
• Owner/Founder–Audiology Concepts (2002 – present)
• Owner/Founder–Tinnitus and Hyperacusis Clinic (2003–present)
• Fellow–Academy of Doctors of Audiology (2002–present)
• Fellow –American Academy of Audiology
• Member–American Tinnitus Association
• Board of Directors–Tinnitus Practitioner Association (2010–Jan 2012)
• Academy of Doctors of Audiology Convention Presenter: October 2010, October 2009
• Various papers on tinnitus to include "Hyperacusis and Misophonia, the Two Lesser Known Siblings to Tinnitus" Minnesota Medicine, November, 2011

POSITION STATEMENT
My 27-year career in audiology includes managing the national hearing aid division for a large optical company; trainer and sales manager for Ensoniq Corporation (yes indeed this does date me); audiologist for a small local private practice audiologist and most recently my own private practice, which includes a separate LLC Tinnitus Clinic and two offices in the Twin Cities. I bring to the Board a varied cross-section of experiences that influence the challenges that our industry is facing in both the near and distant futures.

In the last 27 years, I’ve seen our industry change from the “Audiologist versus Hearing Aid Dispenser” model some 20+ years ago, to today’s conundrum of delivery models for our patients. Our patients are bombarded with a plethora of choices. Do they purchase their hearing devices from Costco? Internet? Hearing Planet? UHC? Retail dispensing chains? Hearing aid Dispensers? Optical facilities selling hearing aids? Hearing aid manufacturers with retail facilities within their corporate offices? ENT offices? Private Practice Audiologists? No wonder our patients are confused! Indeed it was simpler 20 years ago.

In my opinion, as Doctors of Audiology, we must set ourselves apart from the rest. We must adhere to the highest of standards of patient care….. beyond the hearing aid. What sets us apart is our experience and ethical intentions of providing a superior, full spectrum hearing program for our patients. Some say that the viability of our profession is at risk. I disagree. We are facing challenges of a changing healthcare system, however, those audiologists incorporating best practices model and an “above and beyond” attitude will rise above the rest. This Academy is the organization that supports that model of private practice and offers the tools necessary to make this happen.

I believe as Doctors of Audiology we have the opportunity to use the knowledge and skill sets to provide a market or industry niche. We have the ability to provide services that typically cannot be obtained anywhere but from a Doctor of Audiology…. For example, Tinnitus, APD, Vestibular testing and management. I, myself have chosen tinnitus as my passion and market niche. Tinnitus patients are the spice of life in our Edina clinic. Dr. Courtney Sterk, audiologist in our second location, has selected APD as her specialty and market niche.

I am also an advocate for mentoring and preceptorships. The greatest future and viability of our profession lies in the young Doctors of Audiology entering this profession. It is critical that we share our expertise in business and knowledge of the trenches so that these young audiologists choose the path of private practice, independence and success. My company is a preceptor for 4th year Au.D. students and I will encourage the members of the ADA to participate fully in these programs. I also support programs that bring young students to the Academy. It is here that they will gain autonomy and the skills necessary to guarantee success.

As a Director at Large for the Academy of Doctors of Audiology, I bring a diverse background of skills and experience to include building a very successful audiology and tinnitus practice in one of the most challenging economic times. One of the things that I love most about ADA and my years of attending ADA conferences have been the ideas formed, information shared and the friendships made. Collectively as a group we have a wealth of experiences of which to share and exchange. As an organization, we have the talents and resources necessary to make sure that our profession grows and flourishes. Twenty years from now we can say, “Do you remember when we thought that Internet sales would defeat our livelihood? Little did they know who they were up against!”
ALICIA D.D. SPOOR, Au.D.
Candidate: Director-at-Large
Private Practice Audiologist, A&A Hearing Group
Rockville, MD

EDUCATION
B.A., Michigan State University, East Lansing, MI (2002)

PROFESSIONAL ACTIVITIES
• Academy of Doctors of Audiology (ADA)
  – Fellow, 2007-present [Student member, 2004-2006]
  – Advocacy Committee Chair, 2011-present
  – Advocacy Committee Member, 2010-present
  – Representative, Audiology Physician Quality Reporting System (PQRS) committee, 2010-present
• American Academy of Audiology (AAA)
  – Fellow, 2006-present [Student member, 2002-2006]
  – Academy scholar, 2007-2010
  – State Leaders pre-AudiologyNOW! convention workshop, 2010
  – Poster Presentation (third author): Cochlear implantation in superficial siderosis at AudiologyNOW! 2007
• Doctor of Audiology Preceptor, 2006-2007, 2010-2012
• Gallaudet University, Washington, D.C.
  – Adjunct Faculty and Graduate Teaching Assistant, 2004-2005
• Maryland Academy of Audiology (MAA)
  – Fellow, 2007-present
  – Past-President, 2011
  – President, 2010
  – President-Elect, 2009
  – Convention Committee Chair, 2009
  – Convention committee member, 2008-present
• Mayo Clinic Arizona
  – Audiology Representative, Process for Improvement of Clinical Practice Committee, 2006-2007
  – Alumni Speaker, Mayo School of Health Sciences All School Convocation, 2006
  – Audiology Representative/Speaker, National Youth Leadership Forum on Medicine, 2006-2007
  – National Association for the Future Doctors of Audiology (NAFDA)
    – National member, 2002-2006
    – National Publications Director, 2005-2006
    – National Website Editor, 2004-2005
    – Gallaudet University chapter member, 2002-2006
    – Gallaudet University Chapter Past-President, 2004-2005
    – Gallaudet University Chapter President, 2003-2004
    – National Award: “Outstanding NAFDA Chapter” at Gallaudet University, 2003-2004

POSITION STATEMENT
I consider it a tremendous honor to be nominated as a Director-at-Large candidate for the ADA board. My introduction to ADA began in 2004 when I was a student and attended the convention in Tucson, AZ. At the convention, I was introduced to a network of leaders and breadth of information through the student mentor program. For example, I learned that the Au.D. degree was initiated by ADA’s pursuit to further the education and advancement of the scope of practice for Audiology. This information was not forthcoming in the educational setting or from other Audiology organizations. After such a valuable experience in 2004, I have been fortunate to give back to this program since earning my Au.D. It is amazing to see the growth and transition of leadership that occurs with this program, from both parties. One of my goals, if elected to ADA’s board, would be to continue to support the professional/student mentoring program at the ADA convention and throughout the year. Beyond mentoring, continuing the Au.D. education is also a goal of mine. Issues of coding, reimbursement, and autonomy of the profession appear to be in jeopardy. Education of both current and future Audiologists is vital and continuing education confirms the Audiologist’s role as a doctorate-level professional. These current topics and concerns, and the ability to learn more about them would be a second goal.

During my time serving on ADA’s Advocacy Committee, I have grown though valuable learning initiatives and have also seen areas that need more focus. Threats are coming to Audiologists from all areas, including the health insurance companies, and more are likely to arise in the future. Our organization was one of the first to take action again United Healthcare and fight for the professional’s expertise and consumer’s well-being. Although our initial initiatives were successful, one thing that needs to be an ongoing goal is to develop, maintain, and pursue autonomous professional services for hearing healthcare providers. ADA’s collaboration with other professional organizations can also be beneficial in completing this goal, such as the current work of the Audiology Quality Consortium’s Physician Quality Reporting System committee.

Given the opportunities and posture of the Academy, my passion to promote Audiology can expand on the national level. I look forward to the opportunity to represent ADA’s population as a Director-at-Large and will be receptive to your valuable input and act as a common voice for Audiology during my term. Thank you for your vote!
Alternative Revenue Streams and the Billing & Coding Process

BY KIM CAVITT, Au.D.

The hearing healthcare industry is in the midst of a great deal of change. Many audiology practices, which built sustainable business models on hearing sales, are seeing these revenues at risk. More and more patients now have access to insurance coverage or discount programs managed by third-party administrators. This results in reduced revenues for audiologists and their practices. It is important that audiologists begin to explore modifications in their pricing model, expansion of their clinical offerings and alternate revenue streams.

Kochkin et al 2010 discussed a “common sense” evidence-based process for fitting hearing aids. Inclusion of these services not only constitutes best practices but also offers an excellent opportunity for increased revenue. Here are some of the most commonly omitted procedures and their accompanying codes:

- Hearing aid evaluation (92590/1 or V5010): According to a recent AAA survey, 67% of audiology practices currently bundle their hearing aid and hearing aid services under a single price point and code. Audiologists need to realize that they do not capture payment for their hearing aid evaluation appointment and procedures if they do not bill and collect payment separately for the hearing aid evaluation, especially in cases where the patient does not proceed with amplification. While Medicare does not reimburse these codes, as they are associated with a hearing aid, many third-party payers recognize these codes and pay separately for the associated procedures. It is also important to note that patients may be billed privately for provision of these procedures.

- Evaluation of Aural Rehabilitation Status (92626/7): These codes do allow you to capture reimbursement from the patient or the payer, for completion of procedures such as the Hearing Handicap Inventories, COSI, APHAB, QuickSIN, HINT, etc. These procedures could be completed and billed both pre and post fitting. While Medicare does not reimburse these codes if associated with a hearing aid (although these codes would be covered by Medicare if associated with a cochlear or auditory osseointegrated implant), many third-party payers recognize these codes and pay separately for the associated procedures. It is also important to note that patients may be billed privately for provision of these procedures.

- Electroacoustic analysis (92594/5): These codes allow you to capture reimbursement from the patient or the payer for completing an electroacoustic analysis of the hearing aid (either prior to fitting or on unbundled, for out of warranty hearing aid cases, or for cases where the hearing aid was purchased elsewhere) in a hearing aid analyzer (such as a Fonix test box). While Medicare does not reimburse these codes, as they are associated with a hearing aid, many third-party payers recognize these codes
and pay separately for the associated procedures. It is also important to note that patients may be billed privately for provision of these procedures.

- Conformity Evaluation (V5020): This code allows you to capture reimbursement for real-ear measurement and/or functional gain testing. These codes can be used for both new hearing aid fittings, for follow-up verification if not bundled into the cost, or for patients who procured their hearing aid from another provider. While Medicare does not reimburse these codes, as they are associated with a hearing aid, many third-party payers recognize these codes and pay separately for the associated procedures. It is also important to note that patients may be billed privately for provision of these procedures.

- Hearing Aid Programming/Reprogramming (V5014): This code means “repair/modification of hearing aid”. This code can be used to capture revenue for programming a hearing aid. These codes can be used for both new hearing aid fittings, for re-programming if not bundled into the cost, or for patients who procured their hearing aid from another provider. While Medicare does not reimburse these codes, as they are associated with a hearing aid, many third-party payers recognize these codes and pay separately for the associated procedures. It is also important to note that patients may be billed privately for provision of these procedures.

- Aural Rehabilitation (92630/3): 92630 is for aural rehabilitation on the pre-lingually hearing-impaired and 92633 is for aural rehabilitation on the post-lingually hearing impaired. These codes can be used to bill for counseling, speech reading, auditory training, LACE, and aural rehabilitation. While Medicare does not reimburse these codes if associated with a hearing aid, many third-party payers recognize these codes and pay separately for the associated procedures. It is also important to note that patients may be billed privately for provision of these procedures.

- Tinnitus assessment (92625): This code represents the procedures involved in a basic tinnitus assessment. This must include, but is not limited to, pitch, loudness matching, and masking. Medicare covers this procedure if performed by a licensed audiologist or physician, if it is medically necessary and a physician order is present. Many other third-party insurers also recognize and cover this code.

- Tinnitus Management (92630/3 or 92700): These codes can represent the time and procedures involved in the tinnitus management/rehabilitation/training process. Many private insurers, including Medicare, do not pay for tinnitus management. As a result, the patient is financially responsible for the services.

It is always important that audiologists read their third-party agreements in their entirety and ensure that it includes a current fee schedule. This fee schedule should include codes for all of the items and services your practice provides. These contracts dictate your rights and responsibilities as a participating provider in their plan. Contractual agreements often dictate that if you charge their entity for a given item or service that you charge your general population for that same item or service. In other words, you cannot bill something to a third-party payer that you are giving to others, specifically private pay patients for free. So, sometimes you are going to have to have patients pay privately when their insurer does not cover the item or service. This private payment is becoming increasingly more important as third-party reimbursement decreases and managed care involvement in the hearing aid process increases.

References


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

**ADA Legal Update**

In 2011, ADA filed a lawsuit against ASHA contending that language being used by ASHA in letters to audiologists and on its website regarding the provision of professional services and the supervision of students by audiologists who do not hold the CCC-A was false and misleading. ADA further sought restitution for audiologists who may have been harmed as a result of that language. Though ASHA does not concur that any of the statements were false or misleading, in the interest of assuring that no one was confused, ASHA promptly revised the language (use the following link to review the public statement about the settlement agreement which includes the revised language: http://www.audiologist.org/_resources/documents/legal/ADA%20Legal%20Update%20ADA%20v%20ASHA%20February%202012.pdf).

ADA and ASHA have mutually resolved the outstanding issues between them and have reached a settlement that does not involve either party admitting liability or fault or making any payment to the other. Pursuant thereto, if you renewed your ASHA certification in 2011 after receiving a letter in 2011 from ASHA regarding the consequences of losing ASHA certification, or obtained ASHA certification in 2011 after viewing the related FAQs on the ASHA website, and believe you were misled, and now no longer wish to maintain your CCC-A, please contact Marty Rome (ASHA’s Chief Staff Officer for Communications) 301-296-8716 or mrome@asha.org to receive a refund.

**Important Considerations for Audiologists Before Signing Third-Party Payer Provider Contracts**

Over the last several years, the audiology community has seen the growth of third-party involvement in the hearing aid reimbursement process. These programs are being offered by traditional commercial payers and their subsidiaries, Medicare and Medicaid contractors, government entities, worker’s compensation programs, and third-party administrators. As a result, audiologists and audiology practices are being presented with numerous opportunities to be involved as providers of care in these programs. When reviewing health insurance third party payer contracts, the audiologist or practice should consider each opportunity carefully and not assume that all are good for audiology or the particular practice.

The Academy of Doctors of Audiology (ADA), the American Academy of Audiology (AAA), and the American Speech-Language-Hearing Association (ASHA) have collaborated to offer important factors practitioners should consider before signing any agreement with third-party payer: http://www.audiologist.org/publications20/reimbursement?id=381.

For further questions or assistance, please contact your national associations:

Kim Cavitt, Au.D.  
Academy of Doctors of Audiology  
kim.cavitt@audiologyresources.com

Lisa Satterfield, M.S., CCC-A  
Director of Health Care Regulatory Advocacy  
American Speech-Language-Hearing Association  
latterfield@asha.org

Deb Abel, Au.D.  
American Academy of Audiology  
dabel@AUDIOLOGY.org
ADA Presents Convention 2012,
Phoenix Rising: Taking Audiology Above and Beyond

The Academy of Doctors of Audiology (ADA) presents, “Phoenix Rising: Taking Audiology Above and Beyond”—the ADA 2012 Convention, to be held November 8-10, at the stunning Arizona Biltmore Resort in Phoenix Arizona.

This year's convention theme illustrates the newfound unity within our profession—and our collective commitment to take the unprecedented issues facing audiology and transform them into opportunities for professional growth and success. Together we will take audiology above and beyond through advocacy, education and best practices. Together we will rise to meet every challenge.

Phoenix Rising is the single best opportunity for you to meet with and learn from like-minded practitioners and hearing industry thought leaders. ADA is the organization of choice for autonomy-driven audiologists. Participate in this one-of-a-kind event and to become part of the movement that is shaping the future of audiology.

ADA 2012: More Continuing Education Units to be Provided on the Regular Program—Regular Program begins on Thursday Afternoon

ADA is seeking approval for continuing education credit (AAA, ASHA, NIHIS) for 18 hours of total credit on the program, including 15 hours of regular program credit (included in regular conference fee). ADA will apply for a total of 15 hours of ABA Tier 1 CEUs, including a Tier 1 ABA approved ethics course, presented by Harvard graduate, Mr. Robert Gippin, Esq.

Registration

Register online and review the complete agenda and schedule of events at http://www.audiologist.org/events48/2012-convention. For more information please contact info@audiologist.org. Please note: the course schedule has expanded to include both regular and workshop programming on Thursday, November 8th. Attention Students: ADA convention scholarship applications are now available for the ADA 2012 Convention. The scholarship application deadline is August 31, 2012. Please contact sczuhaewski@audiologist.org for more information.

ADA Webinars Now Available On Demand

24/7 Access and CE Available for New ADA Webinar: High Frequency Audiometry: An Underutilized Clinical Tool, featuring Linda Remensnyder, Au.D.

High Frequency Audiometry is a sensitive tool with fast administration that is underutilized as a diagnostic measure for further exploration of sudden onset hearing loss and its recovery, further investigation of subjective complaints of Obscure Auditory Dysfunction, further quantification of prevalence of asymmetry in pure tone threshold assessment thereby ruling out a need for ABR, and further clarification of aidable hearing when considering the option of fitting extended frequency response hearing aids. Cases will be presented during this informative session. Visit www.audiologist.org/high-frequency-audiometry-an-underutilized-clinical-tool to view the webinar.

Student Webinar: Procuring a Partnership Position in Private Practice Now Available

If you missed the live event—you can still get all of the great information provided from the informative session featuring Drs. Eric Hagberg and Audra Brooks! Dr. Hagberg shares the rationale and criteria that he used in recruiting Dr. Brooks and provides recommendations for students seeking an ownership position in a private practice. Dr. Brooks shares her approach to getting hired and moving into an ownership position within the practice. This webinar will provide students with tangible tips that they can use to prepare for achieving an ownership position in a private practice. Visit www.audiologist.org for more information.

Direct Access Legislation Introduced in the U.S. Senate

On May 24th, S. 3242, the Medicare Hearing Health Care Enhancement Act of 2012 was introduced in the 112th Congress. This bill is sponsored by Senator Robert Menendez (D-NJ) and serves as the companion bill to H.R. 2140, introduced earlier this session by Congressman Mike Ross (D-AR).

S. 3242 eliminates the need for Medicare patients to obtain a physician referral prior to visiting an audiologist for an evaluation. Federal employees and members of Congress have direct access to an audiologist. This bill would afford Medicare patients the same direct access to audiologists.

Please contact your Senator to encourage him/her to support this important piece of legislation.
Peer-to-peer exchanges provide exceptional opportunities for knowledge transfer but more importantly for the discovery or rediscovery of camaraderie and common purpose within our profession. For this reason, ADA facilitates the sharing of member experiences through “Your Story”. This month we feature Jeanne Ward, Au.D.

I graduated from Central Michigan University’s first residential Doctor of Audiology (Au.D) program in May, 1998. After graduating, I worked in a hearing aid dealer’s office for four months and then an ENT office for an additional ten months. I quickly realized I was not cut out to be an employee. As a result, I ended up co-founding Premium Hearing Solutions in August 1999.

AP: Tell us a little about your professional journey and how you ended up in private practice.

JW: I went to Central Michigan University to study sports medicine, but once I got there, I quickly had second thoughts about my career path. Since I did not want to drift without a goal, I took a career exploration class. The results of a personality test put speech pathology at the top of the career recommendations. Speech pathology sounded interesting – I remember thinking “I can play with kids and get paid for it.” I spent the next three years studying a profession I secretly knew was not the right choice, but was afraid to admit it out loud. Luckily, an audiology graduate student saw I was going through the same thing she had gone through and suggested I go talk to Dr. Gerry Church about Audiology. I did. He suggested I take “Introduction to Audiology”; and it was love at first class. The pieces finally fit and I knew I was finally heading down the right path for my future.

As luck would have it, I was accepted into CMU’s first Au.D. residential graduate program. Ironically, I never envisioned myself as a private practice owner while in graduate school. Luckily, my 4th year clinical residency year was completed at South Shore Hearing Center in South Weymouth, MA. Dr. David Citron’s practice was well rounded and gave me experiences in varied diagnostic procedures and amplification. This experience was exactly what I needed, and my confidence grew as a professional. My eyes were opened to private practice and the rewards that came with it. I also found I preferred hearing aid work over any other in the audiology profession.

While working at an ENT office, I was lucky to meet another audiologist, Aaron Gale. The two of us quickly began to brainstorm about how we could create a private practice that would be both fulfilling and financially rewarding. We found the perfect location, borrowed money from our parents, bought everything used and opened our new office in Clawson Michigan in August 1999. Success soon followed, along with years of stress, lost sleep, and no work-life balance! Aaron sold his portion of the business to me and I became the sole owner of Premium Hearing Solutions in 2005.
AP: Can you speak to your ideas on professional autonomy and what it means to you in your current position?

JW: Until After 13 years of private practice, my beliefs on professional autonomy have changed dramatically. In the beginning I was fire and brimstone about the field of audiology – I believed only audiology professionals – Doctor of Audiology professionals, at that – should diagnose and treat hearing disorders. Unfortunately, the fight for professional autonomy has not advanced much in the last 13 years, and I believe the more important fight now is motivating the hard-of-hearing person to seek help. And once they seek it – to actually pursue it. I personally think we spend too much time fighting amongst ourselves and are often forgetting what we went into this profession for: the hard-of-hearing person.

AP: If you could advise a new graduate deciding on a professional setting, what advice would you give them?

JW: The private practice climate has changed a lot over the last few years, and in addition to our current state of economy, it is more challenging than when I first started. I would advise any new graduate to learn as much as they can about the hearing aid industry and marketplace, talk with as many private practice owners as possible, learn about the tax laws for small businesses in the state they want to live in, and seriously soul search before taking the plunge into private practice. Although it has tremendous rewards, running a successful practice also requires much personal sacrifice.

AP: What do you like best about being an audiologist?

JW: Like most of my peers in this profession, I get a personal high from helping people hear better than they did before. Personally, I love working with the older adult, and enjoy educating the families in my care about the hearing issues at hand and how to best deal with them. But as I become more seasoned in this profession, I am finding I am challenged and invigorated by the business end of the profession – how to keep the phone ringing, how to increase sales closure rates, how to motivate employees to succeed in their jobs – than direct patient care. Bottom line: the more we succeed in business, the more people we help.

AP: Tell us about your most memorable patient.

JW: Honestly, at this moment I have a hard time zeroing in on one individual story. I have lost count of the numerous people who have touched my life. Professional or not, many of my patients and their families become friends. When my husband had knee surgery, and I was recovering from separated ribs as a result of bronchitis, one of my patients came to our house and mowed our lawn. I have been to three separate 100th birthday celebrations. I was invited to my patient’s daughter’s wedding, and was treated as one of the family when attending the day before henna party for the bride. I have been to more funerals than I’d like to remember. Of course, improving the lives of those with hearing loss is our primary focus; however, a natural bi-product of truly caring for those you serve is touching each other as humans, not just professional and patient.

AP: Was there any one person in your life that was influential in your career choice/path?

JW: There have been a few. My father is a business owner, and I owe my strong sense of work ethic and need to succeed to his role modeling. Both of my parents have always preached that you are in charge of your own destiny and anything can be achieved through hard work and dedication. I heard “Nothing is handed to you so go out and make it happen” in various forms throughout my life. As for audiology, Linda Seestedt-Standford who ran the student audiology clinics at CMU, further instilled the importance of excellence in everything you set out to do. Then there are my peers; I am very lucky to live in an area where the private practice owners support one another and do not feel threatened by each other. The most shining example of this is Dr. Marina Kade. Marina started her private practice a few years before mine, and she has always been my go-to person for any issue, both large and small. She freely offers direction, friendship and advice. There has been many a day that I could not have gotten through without Marina!

AP: What's the last book you read?

JW: I am currently reading Good to Great by Jim Collins.

AP: What's one thing you want other audiologists to know about your practice or how you take care of your patients?

JW: The biggest thing we have learned over the last few years...
is how to motivate people to improve their hearing. The most important factor is having them attend with their spouse or adult children. We **require** the spouse or other important family member to come with the patient for all hearing evaluations. We prefer the person postpone their appointment with us if their significant other cannot attend. Some find this practice too “sales-like,” but we totally embrace the belief that we have failed the person in front of us if hearing aids are necessary and we don’t successfully motivate them to purchase them.

**AP: What do you want patients to remember about your practice after they leave an appointment?**

**JW:** Since most people take an average of seven years to get the hearing help they deserve, I want everyone who comes to PHS to feel relieved that they are finally taking the first steps towards improved hearing. I want our professional confidence to be easily noticed. Then they will be certain they have chosen the right office to lead them down the path of better hearing. Sure, I want them to think “what nice people.” But more importantly, I want them to be thankful that we are an office that takes our jobs seriously, that pushes them to face their denial about their hearing challenges, and helps them achieve their fullest potential.

**THE PROFIT IN PREVENTION**

*Continued from page 25*

**REFERENCES**


**THE BUSINESS OF CERUMEN MANAGEMENT**

*Continued from page 17*

Medicare does not cover cerumen removal performed by a licensed audiologist. Other insurance providers may reimburse for this procedure. What you charge to provide this service should be based on what is customary in your area, the time units you assign to it, monaural vs. binaural, and/or the specific procedure you choose to utilize. To paraphrase the oft-repeated quote of Abraham Lincoln in reference to lawyers: “An audiologist’s time and expertise is his/her stock in trade.”

My experience providing cerumen management in private practice has been positive financially. More importantly, it has sent a message to patients that I am able to solve a recurrent problem in my office for which they are actually grateful. This is the same report I receive from other audiologists who offer CM services in their practices. There is also often a personal sense of satisfaction from successfully managing such patients, instead of referring them to another professional for treatment.

Otologists scoff when I tell them that I teach a 6 hour course in cerumen removal. They remind me that it isn’t brain surgery or rocket science. Interestingly, primary care physicians have requested training for themselves or their staff. As an audiologist, know that once you develop the confidence and skill through training and practice, you will be able to deliver this service more effectively and with fewer problems than almost anyone else.

Dr. Chaiken is the President of Atlanta Audiology Services, Inc., and an adjunct instructor at Salus University, where she teaches a cerumen management course. She can be contacted at rita.chaiken@gmail.com.

**References**

Oticon Intiga:
Immediate Acceptance.
Immediate Benefits.

Intiga offers Immediate Acceptance and Immediate Benefits with world class audiological performance and full binaural wireless processing.

**With Intiga, you can offer your patients:**
- **Discreetness** with our smallest form factor and new speaker design
- **Acceptance** with improved speech understanding from the first moment
- **Advanced Performance** with Intiga’s unique core signal processing to optimize user benefits from day one

Visit us at www.noweffect.com or call us at 1.800.526.3921 to learn more about Oticon Intiga and The Now Effect.

Spice+ Experience Innovation. Hear Life.

Our passion for the pursuit of excellence has resulted in a significant step forward in the evolution of the Phonak Spice Generation.

Spice+ provides enhanced sound quality, outstanding first fit acceptance, less fine-tuning effort and long-term hearing delight.

There is a Phonak for everyone
www.phonakpro.com/spiceplus-us
Mark your calendars for 2012 and meet with your fellow ADA members at the beautiful Arizona Biltmore Resort. Known throughout the world as the “Jewel of the Desert,” the Arizona Biltmore provides a restful oasis of 39 acres covered with lush gardens, glistening swimming pools, and Frank Lloyd Wright-influenced architecture. Set in the heart of Phoenix, the Arizona Biltmore has been a favorite of celebrities and U.S. presidents throughout its colorful history.

Registration open now at www.audiologist.org.