Infant Hearing Screening in the Developing World
Statement of Policy: The American Academy of Audiology publishes Audiology Today as a means of communicating information among its members about all aspects of audiology and related topics. Information and statements published in Audiology Today are not official policy of the American Academy of Audiology unless so indicated.

Audiology Today accepts contributed manuscripts dealing with the wide variety of topics of interest to audiologists including clinical activities and hearing research, current events, news items, professional issues, individual-institution-organization announcements, entries for the calendar of events and materials from other areas within the scope of practice of audiology.

All copy received by Audiology Today must be accompanied by a 100M Zip disk or CD clearly identified by author name, topic title, operating system, and word processing program (in WordPerfect or Microsoft Word, saved as Text). Submitted material will not necessarily be returned. Specific questions regarding Audiology Today should be addressed to Editor, Audiology Today, 11730 Plaza America Drive, Suite 300, Reston, VA 20190 or by e-mail to jnorth1111@aol.com.
In 1995, the World Health Assembly urged member states to "prepare national plans for the prevention and control of major causes of avoidable hearing loss, and for early detection in babies, toddlers and children" and "to consider the setting-up of mechanisms... for support to, and coordination of, action to prevent hearing impairment." The recent rapid successes that we have had in the US in establishing universal newborn hearing screening should make every audiologist proud. But newborn hearing screening in the developing countries of the world is often struggling to get underway. AT features three articles in this issue which highlight the problems faced in developing countries before infant hearing screening can become a reality.
ne tangible sign that the Academy has come of age was the actual sign with the Academy name and logo posted in the Rayburn House Office Building in Washington, DC. I saw this sign as I arrived at the State Leader’s Workshop during Convention 2005. The growth and strength of our annual convention event is but one indication of our coming of age as a profession and as a professional organization. The passion and energy experienced during Convention 2005 “Vote Audiology” provides a terrific springboard to move ahead in our advocacy efforts. More than any other activity of the Academy, advocacy efforts impact each and every member and require involvement by each and every member. As a profession, these efforts are critical to our recognition.

When I ask audiologists about their dreams, they talk about professional recognition and influence. The influence and recognition we seek are clearly rooted in advocacy. Lack of interest in advocacy is endemic to society. Except for the past few Presidential elections, the number of Americans who participate in the simple advocacy act of voting is abysmal. The global nature of this apathy does present an advantage for audiology however. Squeaky wheels get greased—and if others don’t participate in the process, policymakers have more time and attention for us. This translates into greater recognition and influence for audiology. The challenge is to create the “squeaky wheels.” Our Academy and profession have become more sophisticated as we have matured, and we need to continue to create a culture designed to influence change and shape our future. The amazing growth in AudiologyPAC contributions this past year is an example of the culture of advocacy. Your contributions have provided opportunities for audiology to participate in the legislative process with a greater degree of sophistication.

This culture of advocacy must become part of the fabric of audiology. During my master’s degree MA program in audiology, advocacy issues were never mentioned. As I entered our profession, I never saw a connection between politics and audiology. My real education in advocacy came as I entered a graduate program in Hospital and Health Services Administration. An advocacy culture was communicated to students in academic courses, internships, and expectations for participation in the legislative process, grassroots lobbying, and contributions to the PAC are both stated and modeled. In addition to educating fledgling professionals, a mature professional organization has a sophisticated legislative program that is coordinated on the local and national levels. This fact became painfully clear years later when hospital administrators were working against Universal Newborn Hearing Screening (UNHS) legislation in Ohio based on the single mantra: Unfunded Mandate. No matter what we as audiologists presented in support of UNHS, all they heard was “blah, blah, blah, unfunded mandate.” Eventually, UNHS legislation passed, but the message of hospital administrators was unmistakably heard by legislators, and concessions were made based on “unfunded mandate” marketing.

Obviously, there is much to learn from other professions in terms of a culture of advocacy. In order to nurture this culture, we need to LIVE IT. We can see the benefits of educating professionals early in their careers. One tangible example is the impressive number of students that have contributed to the AudiologyPAC. NAFDA’s promotion of PAC activities is indeed an admirable activity in the development of advocacy. This education process must also be targeted at every member in the Academy. A number of years ago, one of our State Representatives addressed the Ohio Academy of Audiology. He talked about politics being about relationships. He stated that advocacy is not about asking for support for a specific audiology issue but in helping him to understand what audiology is and why issues are important to us as audiologists and to our patients as his constituents. The relationship we developed with this legislator continued to benefit audiology as he rose to become President of the Ohio State Senate.

As I was preparing to address the State Leader’s Workshop on this topic at Convention, my 9-year-old daughter, Merritt, asked to hear my presentation. As she listened, she suggested that I tell audiologists about the best motion picture ever made to demonstrate grassroots influence and the process of how a bill becomes a law: Legally Blonde 2: Red, White, and Blonde. This is a must-see film related to advocacy. The main character, Elle Woods (played by actress Reese Witherspoon), is a Harvard trained lawyer who’s atypical in many ways. She lobbies Congress to pass a bill to prohibit animal testing for the past few Presidential elections, the number of Americans who participate in the simple advocacy act of voting is abysmal. The global nature of this apathy does present an advantage for audiology however. Squeaky wheels get greased—and if others don’t participate in the process, policymakers have more time and attention for us. This translates into greater recognition and influence for audiology. The challenge is to create the “squeaky wheels.” Our Academy and profession have become more sophisticated as we have matured, and we need to continue to create a culture designed to influence change and shape our future. The amazing growth in AudiologyPAC contributions this past year is an example of the culture of advocacy. Your contributions have provided opportunities for audiology to participate in the legislative process with a greater degree of sophistication.

This culture of advocacy must become part of the fabric of audiology. During my master’s degree MA program in audiology, advocacy issues were never mentioned. As I entered our profession, I never saw a connection between politics and audiology. My real education in advocacy came as I entered a graduate program in Hospital and Health Services Administration. An advocacy culture was communicated to students in academic courses, internships, and expectations for participation in the legislative process, grassroots lobbying, and contributions to the PAC are both stated and modeled. In addition to educating fledgling professionals, a mature professional organization has a sophisticated legislative program that is coordinated on the local and national levels. This fact became painfully clear years later when hospital administrators were working against Universal Newborn Hearing Screening (UNHS) legislation in Ohio based on the single mantra: Unfunded Mandate. No matter what we as audiologists presented in support of UNHS, all they heard was “blah, blah, blah, unfunded mandate.” Eventually, UNHS legislation passed, but the message of hospital administrators was unmistakably heard by legislators, and concessions were made based on “unfunded mandate” marketing.

Obviously, there is much to learn from other professions in terms of a culture of advocacy. In order to nurture this culture, we need to LIVE IT. We can see the benefits of educating professionals early in their careers. One tangible example is the impressive number of students that have contributed to the AudiologyPAC. NAFDA’s promotion of PAC activities is indeed an admirable activity in the development of advocacy. This education process must also be targeted at every member in the Academy. A number of years ago, one of our State Representatives addressed the Ohio Academy of Audiology. He talked about politics being about relationships. He stated that advocacy is not about asking for support for a specific audiology issue but in helping him to understand what audiology is and why issues are important to us as audiologists and to our patients as his constituents. The relationship we developed with this legislator continued to benefit audiology as he rose to become President of the Ohio State Senate.

As I was preparing to address the State Leader’s Workshop on this topic at Convention, my 9-year-old daughter, Merritt, asked to hear my presentation. As she listened, she suggested that I tell audiologists about the best motion picture ever made to demonstrate grassroots influence and the process of how a bill becomes a law: Legally Blonde 2: Red, White, and Blonde. This is a must-see film related to advocacy. The main character, Elle Woods (played by actress Reese Witherspoon), is a Harvard trained lawyer who’s atypical in many ways. She lobbies Congress to pass a bill to prohibit animal testing so that her dog’s mother can be released from an animal testing facility in time for Elle’s wedding to a Harvard law professor. As harebrained as this plot may seem, there are a number of points that one can learn from this film. Influence
and change are based on the relationships that Elle is able to cultivate and the passion she has for the issue. And although the real world isn’t quite like the movies, the focus on purchased influence underlies the need for a powerful PAC.

At the climax of the film, Elle addresses Congress and encourages Americans to “use their voice.” She states that if we do not use our voices, as is both our right and responsibility, we are at fault for not initiating the change we wish to create. Elle states that she learned that one true voice can be heard over a crowd. Although this may sound like a marketing slogan for a hearing instrument manufacturer, it also applies to advocacy efforts in audiology. Audiologists are passionate about what we do and how hearing and balance services benefit those we serve. In order to impact change, we merely need to tell the truth about what’s important to us in our one true voice.

In addition to renting Legally Blonde 2 to view these important lessons, there are specific activities that you can do to create and nurture the culture of advocacy. You can do any or all of these activities which help to make audiology a household word:

- Develop a relationship with legislators on both the state and national levels. Get to know their staffs. Contact them regarding concerns, questions and ideas. You don’t have to travel to Washington, DC to meet with legislators as you can meet with them “at home” in their district offices with your colleagues. Or, host an open house in your office for your legislators and colleagues.
- Check the Academy website regularly for legislative activity updates (www.audiology.org).
- Actively participate in your state Audiology Academy. If there is no Academy in your state, work to start one.
- Encourage your patients to contact legislators about the critical role of hearing and balance care in their lives. Legislators must understand how audiology is essential in the lives of their constituents and the best people to deliver this message are those who receive the services we provide.
- Discuss advocacy issues with your colleagues.
- Develop a plan for contributing to your state audiology PAC and AAA, Inc. PAC, the Academy’s Political Action Committee, on an annual basis.
June 6, 2005

Newsweek – Letters
P.O. Box 2120
Radio City Station
New York, NY 10101-2120

Dear Editor:

We want to commend you on the cover story “How to Keep Your Hearing.” You provided an outstanding service related to both the prevention of hearing loss and addressing technologies available for maximizing communication for people who currently experience hearing loss. Audiologists, professionals educated and trained in hearing and balance disorders, are integral in the successful diagnosis and non-medical treatment of these maladies. Regrettably, the article failed to address the essential role the audiologist plays in hearing healthcare. The audiologist’s expertise includes the diagnostic evaluation that identifies the type and degree of hearing and balance impairment, the selection and fitting of hearing aids and assistive devices, programming and follow-up of cochlear implants, and auditory and vestibular habilitation to improve the quality of life for patients with hearing and balance disorders. Audiologists play a unique role in meeting the needs of those patients with hearing and balance anomalies.

In addition to the resources provided in the article, I would encourage readers with concerns about their hearing and/or balance to visit www.audiology.org and consult the “Find an Audiologist” section for a local audiologist. For further information, please contact the American Academy of Audiology at 800-222-2336.

Sincerely,

Richard E. Gans, Ph.D.
President
American Academy of Audiology

Editor’s Note: Audiologists were surprised and pleased to see the June 6, 2005 issue of Newsweek cover story “How to Keep Your Hearing: Why Young People Are At Risk; The Latest Treatments” Academy members were dismayed, however, as they read the Health Section article to see that the eight-page spread, complete with fabulous photographs, diagrams, and discussions of ear protection, hearing aids and cochlear implants, to see that there was absolutely no mention of audiology or no comments or quotes from audiologists. Academy President, Richard Gans, promptly sent a response Letter to the Editor of Newsweek, on behalf of all audiologists.

The above letter was published in the June 20, 2005 issue of Newsweek. Newsweek indicated that among the numerous comments received about the cover story on hearing, that "Some audiologists were thankful for the story but felt left out. Discussing hearing aids without discussing audiology is like discussing orthodontic appliances without discussing the orthodontist" and from another reader who said "We cannot remain deaf to a problem that is reaching epidemic proportions."
Can the World’s Infants With Hearing Loss Wait?

Reprinted with permission from the International Journal of Pediatric Otorhinolaryngology (2005) 69, 735-738

Of the 133 million babies born yearly worldwide, an estimated 126 million will live past their first year of life when child mortality is highest. About 90% of these survivors reside in developing countries where prevailing health and socio-economic conditions also account for substantial morbidity. Although various multilateral partnerships are actively involved with child survival programs poverty, weak health-care systems and unstable political leadership continue to hamper the much-desired progress. Sporadic armed conflicts and natural disasters equally threaten sustainable improvement in many countries.

Providentially, the vast majority of children will survive and live from an average of 46 years in sub-Saharan Africa to 78 years in industrialized economies (Table 1). And should health conditions improve, many more will survive. These realities have stimulated growing interest in health-related quality of life for these survivors especially in the early crucial years for optimal childhood development. Of particular concern is the impact of permanent childhood disabilities associated with the prevailing and intractable adverse congenital/perinatal conditions.

Globally, over 665,000 babies are born annually with significant hearing loss (>40 dB HL) (Table 1), and this estimate increases with age, almost doubling by age 9 years. Infant hearing loss stands out as the most common congenital sensory disorder. Its late detection compromises speech, language and cognitive skills essential for optimal early childhood development. Intervention by age 6 months is associated with outcomes comparable to normal hearing peers up till age 5 years. Yet, services are still rudimentary in many countries, in sharp contrast to visual impairment. It was Helen Keller who, from her personal experience of both impairments, pricked our conscience about this apparent inequality when she once remarked that “blindness disconnects from things but deafness disconnects from people.” Communication disorders are now recognized as a major public health issue for the 21st century because, untreated, they adversely affect the economic well-being of a communication age society.

Early hearing detection through universal newborn screening has assumed unprecedented prominence as a measure of best practice in child health care within the last decade in the developed world. Reported uptake in the first 3 months of life is well over 90%, even in communities where newborn hearing screening is not mandated by legislation. However, this standard of care is improbable in many developing countries because current priorities of external funding/donor agencies only favor reduction in mortality through primary prevention. It is argued that the incidence of permanent childhood hearing loss is best addressed by the same efforts aimed at improving maternal and child healthcare. Unfortunately, healthcare services in many of these countries are unlikely to develop rapidly to levels that will significantly curtail the incidence of childhood hearing loss.

Economics of intervention is a major consideration for UN agencies and their partners before embarking on new programs.

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of countries</th>
<th>GNI per capita (US $)</th>
<th>Total population (000)</th>
<th>Annual births (000)</th>
<th>Prevalence of hearing lossa</th>
<th>Children born with hearing loss</th>
<th>Infant mortality ratea</th>
<th>First Year survivors with hearing loss</th>
<th>Life expectancy at birth (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa (SSA)</td>
<td>45</td>
<td>496</td>
<td>665,496</td>
<td>26,882</td>
<td>5</td>
<td>134,410</td>
<td>104</td>
<td>120,432</td>
<td>46</td>
</tr>
<tr>
<td>Middle East and North Africa (MEN)</td>
<td>21</td>
<td>1,465</td>
<td>362,498</td>
<td>9,790</td>
<td>3</td>
<td>29,370</td>
<td>45</td>
<td>28,047</td>
<td>67</td>
</tr>
<tr>
<td>South Asia (SOA)</td>
<td>8</td>
<td>511</td>
<td>1,436,478</td>
<td>37,099</td>
<td>5</td>
<td>185,495</td>
<td>67</td>
<td>173,066</td>
<td>63</td>
</tr>
<tr>
<td>East Asia and Pacific (EAP)</td>
<td>29</td>
<td>1,426</td>
<td>1,928,182</td>
<td>31,621</td>
<td>2</td>
<td>63,242</td>
<td>31</td>
<td>61,283</td>
<td>69</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>33</td>
<td>3,311</td>
<td>537,825</td>
<td>11,572</td>
<td>3</td>
<td>34,716</td>
<td>27</td>
<td>33,779</td>
<td>70</td>
</tr>
<tr>
<td>Central/Eastern Europe and Baltic States (CEE)</td>
<td>27</td>
<td>2,036</td>
<td>406,157</td>
<td>5,250</td>
<td>2</td>
<td>10,500</td>
<td>34</td>
<td>10,143</td>
<td>70</td>
</tr>
<tr>
<td>Industrialized countries</td>
<td>31</td>
<td>28,337</td>
<td>949,593</td>
<td>10,829</td>
<td>1</td>
<td>10,829</td>
<td>5</td>
<td>10,775</td>
<td>78</td>
</tr>
<tr>
<td>Developing countries</td>
<td>164</td>
<td>1,225</td>
<td>5,083,370</td>
<td>119,986</td>
<td>5</td>
<td>599,930</td>
<td>60</td>
<td>563,936</td>
<td>62</td>
</tr>
<tr>
<td>World</td>
<td>192</td>
<td>5,498</td>
<td>6,286,228</td>
<td>133,043</td>
<td>5</td>
<td>665,215</td>
<td>54</td>
<td>629,294</td>
<td>63</td>
</tr>
</tbody>
</table>

a Data from (1).

Prevalence rate (estimated by this author) and mortality rate are stated per thousand live births.
This requires the quantification of the full burden of childhood hearing loss in monetary terms, which is a daunting challenge, as with other disabilities. In the advanced economies this task may be readily achieved. For instance, Ruben estimated the economic impact of communication disorders in the USA (based on a 5% prevalence rate) as $154.3 billion per year, about 2.5% of the gross national product. The paucity of credible socio-economic databases forestalls a similar analysis in developing countries. Anecdotal evidence perhaps provides the best way out for these countries. For instance, the primary and the exclusive mode of intervention for hearing-impaired children is currently the enrollment of some in the schools for the deaf (where sign language is the sole means of communication) while the vast majority have no formal education. They are thus unlikely to reach their full potential and will remain a burden to their families and the society for life.

Sadly, the predominant public perception to common health conditions is “if it doesn’t kill, it doesn’t hurt.” For governments and their donor partners already engrossed with prevailing fatal and communicable diseases, the persuasion is “if it doesn’t kill, it can wait.” While influential global child health advocates like UNICEF and WHO acknowledge every child’s right to survive and thrive, their current programs for early childhood development exclude early hearing screening. And this position is unlikely to change soon based on a recent personal inquiry. But can these children really wait in their early crucial years when parents long to establish verbal communication with them from birth? Even where appropriate intervention services are not immediately available parents are endowed with intuitive skills to support such children in many ways. They need to know early enough that their child has special needs. And healthcare providers ought to see this as a moral obligation.

Ironically, the gatekeepers of childhood hearing loss (pediatricians, otolaryngologists and audiologists) for many years did not present this condition as a vital public health issue until the historic formation of the Joint Committee on Infant Hearing in the USA spearheaded by Marion Downs and a few others. The successful introduction of universal newborn hearing screening in the USA with the current global spin-off is largely attributable to this multidisciplinary partnership. The sober truth is that until the primary care physicians and health workers, who are likely to be consulted first by parents are convinced or even aware of the value of early detection and intervention, only minimal progress will be realized. This partnership must therefore be replicated and broadened in developing countries to ensure that national health policies incorporate early detection and intervention for childhood hearing loss. The support of UNICEF, WHO and their partners is equally valuable to translate policy into concrete actions.

We must not overlook the fact that for many governments in the developing world, a moral dilemma between child survival and well-being persists. Donor agencies are also uncertain about how to achieve meaningful results where past programs have failed. These stakeholders want and rightly deserve the assurance that early hearing detection and intervention programs can work in the developing world also. But we must admit that the lack of understanding of the socio-cultural dimensions and determinants of health-related behavioral changes is a principal reason for the failure of many public health interventions in the past. And this context is more pertinent in introducing screening for a health condition that is non-life threatening. Financial aid from international agencies is crucial but hardly sufficient for ensuring satisfactory program outcomes.

Similarly, a strategy that proved effective in one country may not be successful in another if it is not well-adapted to local conditions. It is necessary for hearing screening programs in each country to be driven by accomplished managers with track records of effective organizational change management. Such individuals must be skillful in forming and leading multidisciplinary teams that have clear vision and appreciation of the rules of engagement. Such teams are likely to function best outside bureaucratic settings that impede sustainable progress in health care reforms. Experiences from developed countries also suggest that systematic implementation of infant hearing screening through well-articulated pilot schemes is effective and provides lead time to develop requisite support services.

Finally, I once heard that “knowledge without perspective is a higher form of ignorance.” I hope that this modest contribution offers some valuable perspective to our current knowledge of the plight of some of the world’s disadvantaged infants and the need to uphold their right to survive and thrive. Since optimal intervention for communication disorders is time-bound in early childhood, infants with hearing loss cannot afford to wait.

REFERENCES
Unfortunately the prevalence of hearing loss in developing countries is largely unknown but available figures for the pediatric population indicate a prevalence of not less than one to five per 1000 (Olusanya et al., 2004). The absence of newborn or infant hearing screening in developing countries lead to significantly delayed identification of hearing loss, starting from 2 years old and extending well into adolescence. This is due to a primarily passive initial detection resulting from parental concern about observed speech and language delays, unusual behavior or complications from middle ear infection. Consistently delayed identification of infant hearing loss in developing countries leads to irreversible language, speech and cognitive-linguistic delays for persons with hearing loss resulting in far-reaching social and economic ramifications for individuals, families, communities and countries.

It is therefore not surprising that hearing loss is referred to as the silent, overlooked epidemic of developing countries. An epidemic because even though it is not a life-threatening condition, failure to intervene in time renders it a severe threat to essential quality of life indicators. The adverse affects of hearing loss on language and cognitive development, as well as on psychosocial behavior are widely reported against the established benefits of early intervention. In addition to this, a stigmatized during the entire course of their lives.

Providing scientifically valid early intervention programs in first world nations only, with little consideration of poorer nations where limited healthcare and environmental issues increase the probability of a congenital hearing loss, raises a significant ethical dilemma. Perhaps it is time for the international community of hearing healthcare professionals and the corporate business of hearing loss amelioration to begin facing the ethical, moral and professional issues of global service inequality for the hearing impaired.

**Perspective on developing countries**

The developing world consists of 164 countries with an estimated population of 5 billion people spread over six major regions (World Bank, 2004). The countries in these regions are classified according to various indicators of development such as per capita income, immunization up-take and under-5 mortality rates. This term

---

**Infant Hearing Loss — Silent Epidemic of the Developing World**

In the United States 33 babies are born with hearing loss everyday and universal newborn hearing screening (UNHS) has become such a widespread reality that 9 out of every 10 babies now have their hearing screened before they leave the hospital. However, in the developing countries of the world, 855 babies are born with hearing loss everyday with virtually no prospect of having their hearing screened (according to UNICEF birth rates and a 2.6/1000 prevalence). In fact, the number of babies born with hearing loss may actually be significantly higher since the prevalence of hearing loss has been demonstrated to be associated with socio-economic deprivation.

Unfortunately the prevalence of hearing loss in developing countries is largely unknown but available figures for the pediatric population indicate a prevalence of not less than one to five per 1000 (Olusanya et al., 2004).

The absence of newborn or infant hearing screening in developing countries lead to significantly delayed identification of hearing loss, starting from 2 years old and extending well into adolescence. This is due to a primarily passive initial detection resulting from parental concern about observed speech and language delays, unusual behavior or complications from middle ear infection. Consistently delayed identification of infant hearing loss in developing countries leads to irreversible language, speech and cognitive-linguistic delays for persons with hearing loss resulting in far-reaching social and economic ramifications for individuals, families, communities and countries.

It is therefore not surprising that hearing loss is referred to as the silent, overlooked epidemic of developing countries. An epidemic because even though it is not a life-threatening condition, failure to intervene in time renders it a severe threat to essential quality of life indicators. The adverse affects of hearing loss on language and cognitive development, as well as on psychosocial behavior are widely reported against the established benefits of early intervention. In addition to this, a stigmatized during the entire course of their lives.

Providing scientifically valid early intervention programs in first world nations only, with little consideration of poorer nations where limited healthcare and environmental issues increase the probability of a congenital hearing loss, raises a significant ethical dilemma. Perhaps it is time for the international community of hearing healthcare professionals and the corporate business of hearing loss amelioration to begin facing the ethical, moral and professional issues of global service inequality for the hearing impaired.

**Perspective on developing countries**

The developing world consists of 164 countries with an estimated population of 5 billion people spread over six major regions (World Bank, 2004). The countries in these regions are classified according to various indicators of development such as per capita income, immunization up-take and under-5 mortality rates. This term
refers to countries that have not achieved a significant degree of industrialization relative to their populations, that have a low standard of living, and that indicate a characteristically high population growth. It does not refer to a homogenous group of countries because significant differences in development exist between countries and even within countries, but it does provide a readily available objective basis for comparing the various economies of the world.

Only 20% of the global population live in the developed countries, compared to 80% in developing countries. However, there is a gross mis-distribution of wealth and health care expenditures between the developed and developing world. The developed world, 20% of the global population, controls 80% of the gross domestic product and this same 20% spends 87% of the total global healthcare funds. In comparison, developing countries such as China and India, which comprise 40% of the global population, spend only 2% of the global health care budget (Alberti, 1999). In a survey of hearing aid possession in different countries this discrepancy was obvious, as the possession of a hearing aid was directly related to the wealth of that particular country as reflected in the per capita Gross National Product (Stephens et al., 2000).

**Challenges to Infant Hearing Screening in Developing Countries**

It is clear that this mis-distribution of resources is due to and creates many challenges in developing countries, including low socio-economic levels and high child mortality and morbidity rates. Health care priorities of developing countries are clearly focused on saving lives rather than on improving quality of life. This has led to a general neglect of non-life-threatening conditions such as hearing loss and deafness, despite the fact that at least two-thirds of the world’s population of persons with disabling hearing loss reside in developing countries.

The motivation for addressing an invisible non-life-threatening condition such as hearing loss is very limited in developing countries. This is against the background of an overwhelming infectious disease burden in many countries. Planning or implementing any hearing screening program is therefore often met with a natural resistance. This is further complicated by the invisible nature of hearing loss, which encourages complacency in addressing the disability. Cultural differences in perception of disabilities may also result in inaction, since a characteristic of African families, for example, is often a fatalistic outlook that leads to an accepting passive attitude toward hearing loss. These factors make it difficult to attract resources for the effective management of hearing loss in infants. Even when resources become available, ongoing commitment to prevention programs is uncertain because the consequences of inaction may not seem as frightening as in other epidemics (Olusanya, 2001).

**Status of Infant Hearing Screening in Developing Countries**

Infant hearing screening reports originating from developing countries are scarce. This silence reflects the absence of such programs due to socio-economic, cultural and health care barriers, as well as an absence of trained audiologists and other hearing health care personnel. Poor prevalence and etiological data for hearing loss in developing countries remains an obstacle. Furthermore, data reporting the mean age of hearing loss detection and intervention is virtually non-existent due to the absence of systematic or routine screening programs in developing countries. The current age of identification and management of hearing loss for children in the majority of developing countries is comparable to that of developed Western countries approximately 25 years ago. Reports have even suggested that questionnaire-type screening at school entry is currently the only viable option for “early identification” of hearing loss in developing countries (Olusanya, 2001). With the first 6 to 18 months postulated to be the critical phase for speech and language development, it is clear that identification after 18 months is not early enough and cannot be considered as “early identification.”

Inventories of resources and services available for early detection of hearing loss in developing countries are also extremely difficult to find. Reports from developing countries are typical of
hearing screening programs for young school-aged children. The current body of knowledge clearly indicates that infant hearing screening is not a common practice in developing countries and the lack of basic data needed to plan such initiatives emphasizes the need for comprehensive contextual research initiatives.

The introduction of infant hearing screening programs in developing countries is still widely viewed as unattainable due to numerous socioeconomic, cultural and healthcare barriers. Recently, however, a renewed call was made upon developed nations to assist developing countries with the introduction and implementation of IHS programs (Downs, 2000; Swanepoel et al. 2004). Fortunately a growing global awareness is also currently shedding more light on this hidden health concern in the developing world. There has been an increased focus, particularly in the last decade, on the development of effective prevention programs in developing countries.

What has been done?

The World Health Organization (WHO) has in recent years recognized that deafness is not only one of the most neglected disabilities, but also that it is worse in developing countries (Kumar, 2001). This realization emerged in 1981 when the WHO adopted a new health perspective declaring that health is not simply the absence of disease or infirmity but a state of complete physical, mental and social well-being. This change in healthcare perspective has shifted the emphasis from disease management to total well-being. This new perspective justifies good hearing as a fundamental human right and classifies intervention for an individual with hearing loss is an important health concern since it impacts severely on quality of life.

Following this change in emphasis, the WHO has increased its efforts to stimulate action plans for the prevention and management of hearing loss in developing countries. In 2001, the organization published guidelines related to hearing aids and services for developing countries that provide detailed requirements for the manufacturing of affordable and appropriate hearing aids, as well as provision of services and training of personnel in developing countries. The WHO estimates that developing countries need more than 32 million hearing aids per year and at present they are receiving only three-quarters of a million (Kumar, 2001). It is reported that current hearing aid manufacturers provide less than 10% of the annual need for hearing aids and that only one in 40 hearing aids needed in developing countries is actually supplied. For this reason, the WHO is joining forces with hearing aid manufacturers, charities and aid agencies in an attempt to drastically reduce the price of hearing aids.

Despite these efforts, progress has been slow and doubts have been voiced about the feasibility of implementing large-scale hearing detection programs such as IHS in developing countries. Objections have been raised against the enthusiastic spread of IHS programs from developed to developing countries due to a lack of reliable follow-up services once the children are identified with hearing loss. Failure to deliver the services may produce a negative environment for parents, teachers, administrators and legislators.

What must be done?

In light of these concerns it becomes increasingly important to evaluate the relevance of first world models of infant hearing screening critically within developing contexts. Different healthcare models and existing infrastructures must be investigated for feasible alternative or novel ways of realizing the goal of widespread early identification of hearing loss.

References


Infant Hearing Screening in Developing Countries: Rethinking First World Models

The goal of the Joint Committee on Infant Hearing, namely to provide UNHS to all children, is reaching beyond the borders of developed countries such as the United States and the UK, and is now also becoming evident in the developing parts of the world. If the committee’s premise of providing NHS for all infants is valid, then efforts should be mobilised to put screening programs in place in less affluent countries. But if such mechanisms are not supported in developing countries, a double standard of health care will be promoted which will continue to produce ethical and moral dilemmas regarding the identification and treatment of debilitating hearing loss in infants and young children.

Childhood hearing loss is recognized as a significant health problem by the World Health Assembly who revealed its serious intent by urging governments in developing countries to implement specific actions to address this problem (WHO, 1995). The principle thrust of existing UNICEF programs in developing countries is to ensure that every child is afforded a good start in life as a fundamental human right. This principle fully includes NHS, which improves the quality of life of early-identified infants and allows inclusion and integration into communities. There are a growing number of international initiatives such as those mentioned above, which provide developing countries the opportunity to initiate, develop and implement action plans for identifying childhood hearing loss (Olusanya et al., 2004).

Implementation of these programs is largely dependent on accurate epidemiological data regarding congenital and childhood hearing loss. Unfortunately, however, consistent and comparable data in the developing regions of the world are scarce. The dearth of such data and lack of a service infrastructure to accommodate the infants identified with hearing loss has been posed as reasons for not initiating large-scale hearing screening programs in developing countries. Although the support services are an essential part of a complete early hearing detection and intervention program the need for early intervention services for infants with hearing loss will only truly be realized once screening programs are identifying these infants.

Contextual empirical evidence from pilot studies at community, state or national level, or even as non-governmental initiatives, is necessary to demonstrate the importance of widespread infant hearing screening. Pilot screening programs, taking advantage of existing infrastructures, can take the lead in providing feasible and accountable services, which can serve as examples for future program implementation on a wider scale. These pilot sites can provide a platform for contextual research to promote and guide improvements in service provision suited to each context.

The Need for Alternative Models

The western model of infant hearing screening for newborns before hospital discharge may not be an appropriate model in the majority of developing countries. Many developing countries adopt a primary healthcare approach in which basic services are diverted from larger hospitals to healthcare clinics in communities. In addition to this, many developing countries present with a significant number of births occurring outside big hospitals.

Parents and infants are also often lost to follow-up, and to ensure they attend a centre specifically for the purposes of hearing screening may be difficult. It therefore becomes necessary to investigate existing healthcare platforms that are integrated into primary healthcare services from which screening programs can be launched. Selecting these health care platforms for infant hearing screening must take the goal of identifying hearing loss before 3 months for intervention by 6 months of age into consideration but will depend on the characteristics of each context and the available infrastructures.

One such platform is immunization programs launched in developing countries. The Expanded Program on Immunization (EPI) is a global UNICEF initiative for vaccinations against preventable diseases such as tuberculosis and measles in infants. The vaccines are given at various age intervals during their first year of life and the latest figures indicate a fairly high coverage rate in developing countries (Olusanya et al. 2004). An advantage posed by these clinics is the repeated visits scheduled for multi-dose vaccines that provide a ready avenue to achieve acceptably high follow-up rates. This platform has recently been posed as a possible infrastructure to attain widespread infant hearing screening in South Africa.
A SCREENING MODEL FOR SOUTH AFRICA

A Hearing Screening Position Statement produced by the Professional Board for Speech Language and Hearing Professions in South Africa recently proposed immunization clinics, which form part of the primary healthcare Maternal and Child Health clinics, as a feasible screening platform, especially for the most developing sections of the nation (HPCSA, 2002). The motivation for proposing these clinics as a platform for screening is based on several facts.

Firstly, screening through these clinics is in line with the primary healthcare philosophy adopted in South Africa — to provide accessible services to all peoples. Secondly, a significant number of babies are not born in hospitals. Actual percentages vary greatly across regions with some having less than 50% of births in hospitals and some having more than 90% in hospitals. A third motivation for using immunization clinics as a screening platform is the extensive coverage obtained through these primary healthcare structures. Only 2% of South African children older than one year do not receive any vaccinations. This coverage promises a very significant increase from coverage at hospitals.

Another advantage inherent in immunization programs is the fact that multiple visits are scheduled during the first year of life allowing the utilization of an existing structure as a follow-up system. This advantage is significant in view of the fact that the most prominent reported difficulty in UNHS programs is the poor follow-up return rates.

A recent exploratory study conducted at immunization clinics in a developing South African community was implemented to describe and assess these clinics as hearing screening platforms.

INFANT HEARING SCREENING AT IMMUNIZATION CLINICS — IMPLICATIONS

A screening project implemented at immunization clinics over a 5-month period in a developing South African community has provided the first reports on utilizing these settings as an infant hearing screening context. From the results the following broad set of implications has been compiled:

- The immunization clinics provided a suitable context to screen infants for hearing loss despite prevailing contextual barriers that are characteristic of primary healthcare clinics in developing contexts of South Africa.
- Interactional processes between fieldworkers, clinic staff and caregivers revealed that collaborative partnerships fostered by consistent service delivery, maintenance of an open channel of communication and basic courteousness, facilitated an effective initial infant hearing screening at the clinics.
- Caregivers and infants attending the clinics demonstrated significant degrees of socio-economic depravity, which places the population at an increased risk for congenital hearing loss, poor participation in the hearing screening/ follow-up process, and subsequent poor involvement in a family-focused early intervention process for infants identified with hearing loss.
- Screening with an Automated Auditory Brainstem Response (AABR) apparatus proved to be ineffective with infants, especially older infants, due increased restlessness for older infants.
- An OAE screening is therefore recommended for infants attending their 6-week immunization visits.

Considering the South African national healthcare context with its limited resources and healthcare priorities skewed toward more life-threatening diseases, a screening protocol at MCH clinics for identifying bilateral hearing loss may be a more suitable intermediate solution than High-Risk Register screening. Limited resources also place a greater emphasis on identifying bilateral hearing loss above the more expensive identification of unilateral hearing loss.
It is essential to establish effective collaborative partnerships that are culturally sensitive where all parties share a common philosophy about the need and consequence of services so as to improve the outcomes for the infant.

Despite identified barriers, the immunization clinics demonstrate promise to serve as sufficient platforms for widespread infant hearing screening programs in South Africa. These types of clinics may also, however, be utilized in other developing countries to attain widespread infant hearing screening towards better outcomes. It is alternative models like these, developed from the unique characteristics of each country’s people and its existing healthcare system, that are needed for identifying hearing loss early in developing countries. This is the path that developing countries must tread as we look ahead towards the future.

**INFANT HEARING SCREENING IN DEVELOPING COUNTRIES — THE FUTURE**

Research, research and more research are the first steps and foundation for the long road toward accountable early hearing detection and intervention programs in developing countries. Large-scale longitudinal studies are necessary at different pilot sites, utilizing infrastructures such as immunization clinics, to gather data in a systematic manner. Pilot studies will provide the necessary incidence figures for hearing loss as well as for the presence of risk factors in developing countries. These projects will also serve to establish integrated programs of combined healthcare platforms such as immunization clinics and infant hearing screening programs that can serve as models for attaining the goal of widespread early identification in developing countries like South Africa. It is up to the developing world to start where it can; for the developed world to help where it can, so that, together, we may ensure the best outcomes for infants with hearing loss as widely as we can.

**REFERENCES**


---

**Frontiers in Hearing**

**EMERGING PRACTICES**

**July 28-30, 2005 • Breckenridge, Colorado**

- Identification, diagnosis & management of auditory disorders for all ages
- 20 hours of science & clinical applications
- Clinical & research focus group discussions
- Keynote presentations & small group tutorials
- Pending 2.0 AAA CEUs
- Beautiful Rocky Mountain location
- Great family vacation

For information about Frontiers in Hearing: Emerging Practices, contact the Conference Administrator, Patsy Meredith at the Marion Downs Hearing Center in Denver, 720.848.2828 or email patsy.meredith@ucdenver.edu

Faculty
- Arlene Stedler Brown, MA
- Stephen Cass, MD
- Janet DesGeorges
- Karen Doyle, MD
- Marion P. Downs, MA, DHS, DS
- David Foster
- Carol Foster, MD
- Sandra Abbott Gabbard, PhD
- Linda Hood, PhD
- Herman Jenkins, MD
- Cheryl DeConde Johnson, EdD
- Virginia Kitt Lupo, MA
- Jay Lucker, EdD
- Al Mehl, MD
- Jerry Northern, Ph.D.
- Catherine Palmer, PhD
- Gary Rantz, PhD
- Jay Rubenstein, MD
- Leanne Seavers
- Anu Sharma, PhD
- Vickie Thomson, MA
- Kristin Uhler, MA
- Christine Yoshinaga-Itano, PhD

Program Directors
- Sandra Gabbard, PhD
- Jerry Northern, PhD
HEARING AID COMPATIBILITY WITH WIRELESS DEVICES: What Hearing Health Professionals Should Know

As a professional audiologist, you have the ability to positively affect your patients experience with wireless devices—cell phones and other wireless handheld devices such as a Blackberry. This article is meant to help hearing professionals understand the new labeling and requirements for wireless device use with hearing aids.

**REQUIREMENTS FOR WIRELESS DEVICES AND SERVICES**

Recent requirements by the Federal Communications Commission (FCC) oblige wireless service providers to provide wireless devices that are compatible with hearing aid devices as defined in the American National Standards Institute (ANSI) C63.19 Standard. The first compliance date is September 16, 2005, at which time wireless service providers must offer at least two handset models on each air interface offered by that service provider that comply with a minimum rating of M3 for RF emissions. By September 18, 2006, wireless service providers must offer at least two handset models on each air interface that comply with a minimum rating of T3 for magnetic coupling. Air interfaces are the way a wireless device “talks” to the service providers’ tower. In the US, air interfaces are CDMA, TDMA, GSM, and iDEN.

**REQUIREMENTS FOR HEARING AIDS**

While the FCC does not have regulatory authority over hearing aids, they have encouraged the hearing aid industry to test and label their products according to the level of immunity they have to digital wireless device emissions.

**HOW HEARING HEALTH PROFESSIONALS CAN ASSIST THEIR CLIENTS CHOOSING A COMPATIBLE WIRELESS DEVICE**

The role of the hearing health professional will increase as clients ask questions and advice about what hearing aids and wireless devices they should use.

**THE ANSI C63.19 RATING SYSTEM FOR WIRELESS DEVICES EXPLAINED**

Under the ANSI C63.19 Standard, the level of RF emissions compatibility will be rated with an “M” rating, like the M for the Microphone switch on the hearing aid. This rating is most important for hearing aid wearers who use acoustic coupling. The higher the “M” rating, the less likely the hearing aid user will experience interference when the hearing aid is set in the microphone mode while using a wireless device. Wireless device manufacturers are required to produce handsets that rate M3 or M4.

The magnetic coupling compatibility level will be rated with a “T” rating, like the T for the Tele-coil switch on the hearing aid. This rating is most important for hearing aid wearers who use inductive coupling. The higher the “T” rating, the less likely the hearing aid user will experience interference when using a T-coil hearing aid while using a wireless device. Wireless device manufacturers are required to produce handsets that rate T3 or T4.

Only wireless devices that meet minimum M3 and T3 ratings will be labeled as compatible with hearing aids. Labels will appear on the outside packaging of compatible wireless devices, with further information available in the devices’ manual or packaging insert.

Under the ANSI C63.19 Standard, all hearing aids are expected to have an immunity rating. To determine whether a particular wireless device will interfere with a particular hearing aid, the immunity rating of the hearing aid is added to the emissions rating of the wireless devices. A sum of four would indicate that the combination of wireless device and hearing aid is usable; a sum of five would indicate that the wireless device and hearing aid would provide normal use; and a sum of six or greater would indicate that the wireless device and hearing aid would provide excellent performance. Most new hearing aids should rate to an immunity rating of U2, but audiologists should consult the manufacturer of the hearing aid to determine actual immunity ratings.

**OTHER CONSIDERATIONS FOR CHOICE OF HEARING AID**

Hearing aid style seems to play a role in whether the user is able to effectively use a wireless device. Hearing aids that fit in the ear, such as ITEs, ITCs and CICs, seem to have less interference with wireless devices than BTE hearing aids. Hearing aid manufacturers have found that ITE hearing aids tend to have less of the hearing aid exposed to the RF because the hearing aid is farther away from the wireless device, reducing the overall interference.

Many wireless device manufacturers have reported that BTE hearing aids present challenges more than other hearing aid types. The best solution for the challenges with BTEs is T-coil compatibility with wireless devices. Many of the hearing aid manufacturers are installing or replacing old T-coils with T-coils that have immunity to RF interference. However, hearing health professionals should be aware that not all “new” T-coils are RF immune and many older models of T-coil that provide no immunity to RF are still on the market. In order to find out which T-coils are RF immune, it is recommended that hearing health professionals contact the individual hearing aid manufacturers.
OTHER CONSIDERATIONS FOR CHOICE OF WIRELESS DEVICE AND SERVICE

The ANSI C63.19 ratings for hearing aid compatibility are not a guarantee of performance for each individual hearing aid user. Air interface, device design and device features are additional factors, in addition to variations within individual hearing loss.

Some anecdotal and clinical reports have indicated that CDMA and iDEN™ are perceived to cause less annoying interference than other air interfaces for some hearing aid wearers. Other research shows that some hearing aid wearers experience excellent performance with any of the digital technologies. Still other hearing aid wearers report no effective use of any digital wireless device or service.

While there is no rule about which style of wireless device works best with hearing aids, some hearing aid users have been reported that the “clam shell” or “flip up” design cause less interference. These designs tend to provide separation distance from the RF transmitter.

Other variables, including backlighting, display, keypad, battery and circuit board of the wireless device, may cause interference but are not tested under the ANSI C63.19 Standard and are not reflected in the M or T ratings. The ability to control the backlighting, an option available on some handset models, may assist some T-coil users. Vibrating alerts for incoming calls, selectable ringer tones, short messaging service (e.g., text messaging), increased volume control, or use of a headset or neckloop have also been found to alleviate some interference issues.

Hearing health professionals should also encourage their clients to “try before they buy.” Service providers’ full retail stores may provide hearing aid wearers better product selection and in store assistance in finding a wireless device that they can effectively use. Hearing aid users should ask how long they have to cancel the service and return a phone without penalty if the wireless device doesn’t work with their particular hearing aid outside of their in-store experience.

The ATIS AISP4-HAC (“Incubator”) is composed of technical experts from the wireless industry (wireless manufacturers and service providers), hearing aid industry, and representatives for consumer advocacy and disability groups. The Incubator is sponsored by the Alliance for Telecommunications Industry Solutions (ATIS). ATIS is a US based body committed to rapidly developing and promoting technical and operations standards for the communications and related information technologies industry worldwide using a pragmatic, flexible and open approach. http://www.atis.org/hac/index.asp
For most members of the American Academy of Audiology, Convention 2005 is now a memory. However, as members returned to their homes and went back to work at their offices, the Academy’s National Office convention department began the important process of “debriefing,” to bring down the curtains on the events and experiences of Washington DC, while opening the door to next year’s gathering, AudiologyNOW!™ scheduled for April 5-8, 2006 in Minneapolis. The National Office staff and the new Convention Program Committee immediately begin to work together in an attempt to make AudiologyNOW!™ 2006 an even better experience than Convention 2005. The planning committee takes very seriously the challenge to improve the convention “experience” in terms of knowledge, science and technology and to keep the learner at the center of the learning experience.

Convention attendees were encouraged to go on-line post-convention and answer questions designed to evaluate the entire experience, from preliminary registration to the final events of the meeting. Nearly 18% of attendees completed the on-line survey providing the program committee members and the Academy’s meeting planners with a wide variety of opinions and statements – including the best and the worst of the convention experience. It is important for the Academy membership to know that these post-meeting evaluations are analyzed, with each response carefully considered during the planning sessions for AudiologyNOW!™ 2006. Based on the post-convention evaluations, a sampling of the issues are presented.

Here’s what attendees enjoyed most about convention 2005:

- Educational program: “Great educational program!” “It was hard to choose between classes,” “Excellent sessions!”
- Interactive sessions – “The interactive sessions made it more fun – especially the ethics class!”
- Senator Harkin’s General Assembly Speech – “It was inspiring to listen to.”
- Networking with colleagues and friends from all over the country
- The exhibit hall – “talking to the reps and learning about new products available for my patients”
- Box lunches – “Box lunches were great – they allowed me to see more of the exhibit hall”
- The venue - Washington DC “I liked the location in DC since there is so much to see and do in addition to attending the convention!”
- There were also informative and useful remarks in response to the question, “What did you enjoy the least?” There were a few subject areas that fell into the needs improvement category that the Program Committee and Academy staff are working diligently to improve:

Housing. The housing situation in Washington, DC was hard for both attendees and exhibitors alike. The lack of a large convention center hotel that was promised 5 years ago when the contracts were signed never materialized due to political and business issues in downtown, Washington, DC. The lack of a large nearby hotel and the high attendance numbers sent some of our attendees to more outlying hotels and to hotels that turned out to be less than acceptable. Steps are being taken for AudiologyNOW!™ to ensure the housing process is easy, plentiful and painless.

Handouts. Many members were disappointed by the lack of handouts at the sessions, although others felt the immediate availability of session handouts on the Academy website following the meeting was a good innovation. Although there was inconvenience for some taking notes during the sessions, huge quantities of paper were not wasted as previous experience showed that many...
attendees pick up handouts that inevitably end up in the trash. In the pre-convention e-mails and publications, new programs and plans for “going green” outlined the need for conserving resources — but some members missed that message. An advantage of the online storage of convention presentations is that they can be archived and retrieved in future years.

NUMBER OF SESSIONS. Many noted that there were “less” sessions available to choose from than previous conventions. While this is true, it was by conscious choice. It was felt by the 2005 Program Committee that being more stringent on the selection of sessions would result in a higher quality of the overall program, but yet still provide enough variety during each time slot.

PROGRAM BOOK. Some attendees noted that they wanted more information in the Final Program. The Program committee has listened to these comments and will be revamping the Final Program to include all session abstracts.

BOX LUNCH SEATING. This is being addressed for AudiologyNOW!™, and more seating will be available in the Exhibit Hall, as space allows, as well as additional seating areas throughout the convention center.

Thank you to all those who provided your valuable feedback, the comments and suggestions help us to continually improve the convention experience for you, the members! If you missed the survey but would still like to send in a suggestion or comment please e-mail convpres@audiology.org.

THE YEARLY STATISTICS FROM 2005 CONFIRMED that the Washington DC meeting was the third largest ever for the Academy in terms of attendance — the highest since the national tragedy of September 11, 2001. Total attendance was 6,747 with a pre-registration number of 5,800 and 1,066 on-site registrations. We attracted 899 registrants from out of the US — one of our largest contingencies of international participants. Most attendees registered on-line through the Academy website (3,266), although 1,553 Faxed their registration and 289 mailed their registration forms. Tables 1 - 5 summarize the demographics of Convention 2005 attendees.

Table 1 International Registrants

<table>
<thead>
<tr>
<th>Country</th>
<th>Registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>18</td>
</tr>
<tr>
<td>Brazil</td>
<td>43</td>
</tr>
<tr>
<td>Canada</td>
<td>202</td>
</tr>
<tr>
<td>China</td>
<td>29</td>
</tr>
<tr>
<td>Denmark</td>
<td>87</td>
</tr>
<tr>
<td>France</td>
<td>11</td>
</tr>
<tr>
<td>Germany</td>
<td>59</td>
</tr>
<tr>
<td>Italy</td>
<td>10</td>
</tr>
<tr>
<td>Japan</td>
<td>42</td>
</tr>
<tr>
<td>Mexico</td>
<td>20</td>
</tr>
<tr>
<td>Netherlands</td>
<td>21</td>
</tr>
<tr>
<td>New Zealand</td>
<td>38</td>
</tr>
<tr>
<td>Norway</td>
<td>29</td>
</tr>
<tr>
<td>South Africa</td>
<td>15</td>
</tr>
<tr>
<td>Spain</td>
<td>5</td>
</tr>
<tr>
<td>Switzerland</td>
<td>26</td>
</tr>
<tr>
<td>Turkey</td>
<td>14</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>115</td>
</tr>
</tbody>
</table>

Table 2 Primary Work Setting

<table>
<thead>
<tr>
<th>Work Setting</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic</td>
<td>9%</td>
</tr>
<tr>
<td>College or University</td>
<td>14%</td>
</tr>
<tr>
<td>ENT/Physician Office</td>
<td>16%</td>
</tr>
<tr>
<td>Hospital</td>
<td>13%</td>
</tr>
<tr>
<td>Manufacturer</td>
<td>4%</td>
</tr>
<tr>
<td>Pri/Secondary School</td>
<td>4%</td>
</tr>
<tr>
<td>Military/VA</td>
<td>5%</td>
</tr>
<tr>
<td>Private Practice</td>
<td>28%</td>
</tr>
</tbody>
</table>

Table 3 Specialty Area

<table>
<thead>
<tr>
<th>Specialty Area</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audiologic Rehab</td>
<td>20%</td>
</tr>
<tr>
<td>Dispense</td>
<td>27%</td>
</tr>
<tr>
<td>Hearing Conservation</td>
<td>8%</td>
</tr>
<tr>
<td>Intraop Monitoring</td>
<td>1%</td>
</tr>
<tr>
<td>Pediatric Audiology</td>
<td>17%</td>
</tr>
<tr>
<td>Vestibular Test/Rehab</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>17%</td>
</tr>
</tbody>
</table>

Table 4 Highest Degree

<table>
<thead>
<tr>
<th>Degree</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>AuD</td>
<td>22%</td>
</tr>
<tr>
<td>EdD</td>
<td>1%</td>
</tr>
<tr>
<td>MA</td>
<td>23%</td>
</tr>
<tr>
<td>MD</td>
<td>1%</td>
</tr>
<tr>
<td>MS</td>
<td>24%</td>
</tr>
<tr>
<td>PhD</td>
<td>12%</td>
</tr>
<tr>
<td>MBA</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>14%</td>
</tr>
<tr>
<td>Internally trained</td>
<td>1%</td>
</tr>
</tbody>
</table>

Table 5 Years in Practice

<table>
<thead>
<tr>
<th>Years in Practice</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>9%</td>
</tr>
<tr>
<td>1-5 years</td>
<td>18%</td>
</tr>
<tr>
<td>6-10 yrs</td>
<td>15%</td>
</tr>
<tr>
<td>11-15 yrs</td>
<td>13%</td>
</tr>
<tr>
<td>16-20 yrs</td>
<td>12%</td>
</tr>
<tr>
<td>21-24 yrs</td>
<td>13%</td>
</tr>
<tr>
<td>25 + yrs</td>
<td>21%</td>
</tr>
</tbody>
</table>

Two Academy members who completed the on-line post-convention evaluation will receive free registration for AudiologyNOW!™ 2006 in Minneapolis. Pat Feeney, Program Chair for AudiologyNOW!™ 2006, selected two ID numbers at random from the 647 on-line respondents. The lucky winners are: Ann Sevec, West Chester, PA and Michelle Brooks, Richmond, VA.
Audiologists have long known that some patients are quite pleased with their hearing aids while others never seem to benefit from them. Those that put their hearing aids in a drawer and never wear them often complain that background noise is the primary problem. New research indicates that an individual’s intrinsic acceptance of background noise may be a good predictor of which patients will readily accept hearing aids.

While it seems logical to assume that measurements of speech perception will correlate with hearing aid benefit, research indicates that this is not the case. For example, many audiologists use the Speech in Noise Test (SPIN) to evaluate potential hearing aid benefit. However, results of this test do not correlate well with hearing aid users’ perceptions of their performance (Bentler et al., 1993). Surprisingly, speech perception scores have also been shown to be poor predictors of hearing aid outcome (Humes, Halling, and Coughlin, 1996).

New research indicates that each individual has a specific level of background noise that he or she is willing to accept. This acceptable noise level (ANL) is a predictor of hearing aid success. Anna Nabelek and her colleagues at the University of Tennessee have been studying ANLs in people who use their hearing aids and those who reject their hearing aids. ANL can be measured in sound field prior to hearing aid fitting. The subject listens to recorded speech and adjusts the speech to his or her most comfortable listening level (MCL). Then a multi-talker babble is introduced as background noise, and the listener is asked to adjust the level of the background noise to the highest level that is “acceptable” while still following the story of the recorded speech (BNL). The ANL is then calculated as the MCL – BNL. For example, if a listener’s MCL is 60 dB, and they adjust the background noise to 50 dB, the ANL is 10 dB. Thus, the lower the ANL, the more noise the listener is willing to accept. Nabelek and her colleagues have found that listeners with smaller ANLs have better outcomes in terms of hearing aid use and satisfaction (Nabelek, Tampas, and Burchfield, 2004).

It appears that a person’s ANL is an individual characteristic that does not change with age or as a person becomes accustomed to wearing hearing aids. ANL can be tested in a few minutes, and it can be part of a routine hearing aid evaluation. Nabelek is quick to point out that those with high ANLs (i.e., those who accept very little background noise) are not necessarily poor candidates for hearing aids (Nabelek, 2005). Instead, it may be that these individuals will require more careful selection of technologies designed to reduce background noise, such as directional microphones or assistive listening devices. These individuals may also require specialized counseling regarding the nature and extent of their difficulty in accepting background noise. This new measurement tool may represent a significant improvement in our ability to predict hearing aid outcome. Perhaps more importantly, it may lead to better understanding of the difficulties posed by background noise, and it may promote the development of different strategies for selecting and managing hearing aids for individuals with hearing impairment.

Helping Family Caregivers Just Got Easier for Audiologists

Many of the people you see in your office face the same potentially serious health risk. And it’s not a disease – it is family caregiving responsibilities. According to a 2004 survey by the National Alliance for Caregiving and AARP, nearly 34 million adults provide unpaid care to an individual age 50 or older. Because caregiving can be emotionally stressful and physically exhausting, caregivers often risk their own health, and may unwittingly compromise the care they provide for their aging loved one.

Making the Link, a program of the National Association of Area Agencies on Aging (n4a) with funding from MetLife Foundation, makes it easy for you to help the caregivers of older patients in your care. Often an older individual will come to the audiologist accompanied by a family member who is likely to be involved in addressing the health care needs of the older person. By participating in Making the Link you can help family caregivers by taking advantage of tools that your local area agency on aging representative will provide, including a caregiver self-assessment and a tip sheet for caregivers.

Making the Link is designed to help audiologists and other medical professionals identify caregivers and refer them to services provided by area agencies on aging. These services include support groups, respite care, information and referral, and much more. The American Academy of Audiology is pleased to serve as a partner for the project’s national awareness campaign along with other medical and caregiver association representatives.

For further information about Making the Link and to learn how you can get involved, contact Adrienne Dern, Project Director at 202/872-0888, adern@n4a.org or Angela Heath, Project Manager at 301/589-0252, ahealth@erols.com or visit the site at http://www.n4a.org/makingthelink.cfm.

REFERENCES

Lisa Cunningham, Medical University of South Carolina, Charleston, SC
Lendra Friesen, University of Washington, Seattle, WA

VOLUME 17, NUMBER 4
When I look back to my beginnings in the field of Audiology, some 20 years ago, I see now how little I knew about what it took to be an independent autonomous professional. This problem was partly a result of my attitude because at that time and in those earlier years to follow, I never thought of myself as a true professional. I had a masters degree, but was working in an ENT office with limits and restrictions which did not serve to further my career.

After eight years, I applied to and obtained a position at a university audiology clinic. I was out of the ENT setting and into a university clinic environment. I developed my professional image. This was the turning point in my quest for autonomy. The university took care of applying for my Medicare provider number, my Medicaid number and insurance enrollment paperwork. It was great because it left me time to concentrate on my job. As a matter of fact, I did not even know that I had a Medicare number. The audiology clinic was independent of physicians even though we were part of the same department. At that point, I was billing under my own Medicare number, and I did not even know it!

Three years later I made a decision to leave the university and work for an ENT in a small town. I trusted this physician because she was fair and honorable, and she treated me with respect and professionalism. I negotiated a position that allowed me freedom to develop the audiology clinic as I saw fit. In my fourth year of employment, the otolaryngologist decided to merge with a local medical specialty group. She asked me to stay with her and indicated that my job would not change. I decided to start my AuD program and further develop the clinic in this new setting.

I saw the audiology clinic was making a good profit, and had my hopes set on developing it even further. No matter what I did, I was not being treated as the professional I thought I was from the other physicians. They were in no way being disrespectful to me, just not treating me as anything more that what I would describe as a technician. My AuD program made it perfectly clear that audiologists are autonomous independent professionals. So I moved forward to get my own Medicare number. My AuD studies taught that audiology codes are billed more by physicians than by audiologists, which truly shocked me. I marched to the office...
manager and requested that we pursue my own Medicare provider number. This request went to the clinic manager where it was questioned, and then to the physician board where it got stalled. The concern arose about the loss of income from audiologists billing audiology codes, rather than the physician. I knew what was legal and what was not, what was reimbursable and what was not. I also knew that I would never get beyond where I was until I got that Medicare number and proved that I was just as eligible as the physicians to be recognized by Medicare. The physicians and administration were not as sure and still wanted to research this a bit more. I started to get frustrated and did what any audiologist should do, I called the Academy National Office to get some advice.

Jodi Chappell, Director of Health Care Policy and Deb Abel, Chair of the Coding and Practice Management Committee, gave me great support and provided me with written documentation that fully supported my position in regards to Medicare. Armed with this information, I put together a good argument that it was time to act, regardless of what the board or clinic manager thought. Two factors sealed that decision. First, I would not have to have the physician present when providing a service. No “incident to” rules to deal with anymore! An audiologist billing under a physician can provide services that are “incident to” as long as the physician is on site at the time. If the physician were out of the office, the audiologist billing under the physician’s Medicare number would be in non-compliance with Medicare policy and at risk for fines. Second, the reimbursement fee schedule for an audiologist is the same as the physician payment rate. I had to actually visually show the clinic manager this document, because she was under the impression from her experience that this was not the case.

Currently, my application number is in process and in about 60-90 days I should get my Medicare provider number. Once I get my PIN number, I will be able to apply for the new National Provider Identifier (NPI) number.

I have learned that Autonomy is not a sudden experience, but a series of small steps. You fight the little battles that lead to eventual victory. The only way we will be recognized as autonomous independent professionals is to act like them. We can’t do it by hiding behind physicians, or letting other people dictate what we can and can’t do. We must be vocal in the political arena, support the Academy’s PAC, and be knowledgeable of the rules of Medicare, Medicaid and other third party payors. The American Academy of Audiology is a great resource for us and we should take advantage of their knowledge and experience if we need guidance.
In the early 1970s, the field of cochlear implantation was just beginning as small groups of children and adults received the first clinical systems in this country. Back then, the devices were very basic and provided recipients with only some sound awareness. Today, cochlear implantation is the most accepted form of treatment for severe to profoundly deaf children and adults around the world. Research has demonstrated the improved benefits in children related to the development of spoken language, audition and educational achievement. Adult cochlear implant recipients are active in the mainstream and enjoy a renewed quality of life. With the number of implant recipients now in excess of 70,000, it is important to insure that there is an ample supply of professionals who are trained in working with the recipients of these devices. With this in mind, a small group of specialists in the field of cochlear implantation began to explore the development of an examination to certify specialists in this area.

In March of this year, history was made as the first national examination to certify audiologists who specialize in the field of cochlear implantation was offered. Individuals from across the United States sat for the 2-hour exam which had been developed by a team of specialists in the field. The exam, which was over 2 years in development, tested competencies in the area of candidacy, programming, speech processing, assessment, habilitation and counseling through a multiple choice format.

Demographically, this first group was largely female (96%) with Master’s degrees in audiology (62.5%). AuDs represented approximately 33% of the group. The primary practice setting was, not surprisingly, composed of individuals working in the hospital and clinic settings (37.5% and 25% respectively). Interestingly, 16.6% were individuals who were in private practice. The trend of private practitioners working in the implant field appears to be growing as the ease of programming makes this aspect of implantation more accessible to the larger audiological community. It is hoped that eventually cochlear implants will be dispensed in a manner similar to hearing aids thereby opening access to more recipients and professionals in the field.

There were a variety of reasons that motivated individuals to pursue this new credential. These included professional recognition, employer suggestion, employer subsidization, marketing, pursuit of ABA certification itself and assisting with reimbursement. Geographically, 13 of the 50 states were represented; the states with the largest representation of audiologists pursuing the certification were Massachusetts, Missouri and Florida.

For those individuals in the inaugural class receiving the specialty certification, their certificates are forthcoming. Once the exam is passed, the requirement to maintain the certification is 60 hours of continuing education credits in a three-year period, 30 hours of which must be in the cochlear implant field. With the growing number of workshops, seminars and online courses offered in the area of cochlear implantation, accrual of these hours should be quite easy for someone working in the field.

As the number of children and adults receiving cochlear implants continues to grow the demand on the field will become greater. Consumers of this technology are some of the most knowledgeable and demand the best services for their children and themselves. It is for this reason that parents and recipients will begin to seek out those individuals with the most experience in assessment and rehabilitation post-surgery. The cochlear implant specialty certification will provide consumers with an easy way of accessing those in the field that can meet their needs.

As training programs in audiology across the country expand, graduate students will have more opportunity for exposure to cochlear implant recipients and will complete their training with knowledge and skill in this new specialty field. Certification for these new audiologists who specialize in cochlear implants will provide the field with a much needed influx of new professionals to carry on the work begun back in the early 1970s.
The Centers for Medicare & Medicaid Services (CMS) has issued two major regulations affecting the Medicare program: an interim final rule revamping the process for Medicare appeals, and a final rule creating the Medicare Advantage program.

**MEDICARE APPEALS PROCESS**

When a Medicare contractor (i.e., a Part A fiscal intermediary or Part B carrier) denies a claim for reimbursement and informal appeals to the contractor are unable to resolve the matter, audiologists may have no choice but to file an official appeal. It is important to audiologists that their right to appeal a denial is clear; that the appeals process is fair and impartial; and that appeals decisions are rendered expeditiously. CMS has issued an interim final rule that gives audiologists standing to appeal and that should improve the impartiality and timeliness of appeals decisions.

The new procedures went into effect on May 1, 2005 for Part A appeals and will be effective on January 1, 2006 for Part B appeals. However, the existing appeals process and regulation will remain “on the books” for an indefinite transition period, until all appeals of initial determinations made before May 1, 2005 have been resolved.

**MAJOR CHANGES TO THE APPEALS PROCESS**

The CMS interim final rule makes several major changes to the Medicare appeals process, including the following:

- It creates a single, uniform process for handling Part A and Part B claims appeals.
- It gives providers and suppliers, including audiologists, greater rights to appeal Medicare determinations.
- It establishes five levels of appeal of a Medicare contractor’s initial determination:
  - Redetermination by the Medicare contractor;
  - Reconsideration by a Qualified Independent Contractor (QIC);
  - Hearing before an Administrative Law Judge (ALJ);
  - Review by the Medicare Appeals Council (MAC); and
  - Judicial review by a Federal district court.
- It creates new entities called Qualified Independent Contractors (QICs) that will conduct “reconsiderations” of a Medicare contractor’s initial determination and redetermination. QIC reconsiderations will replace “fair hearings” by Medicare Part B carriers. Going forward, hearings will be held at the next level of appeal, the ALJ level.
- It reduces the amount of time that each decision-maker has to decide an appeal, and allows parties to “escalate” the case to the next level if the QIC, ALJ, or MAC fails to render a decision with the required time limit.
- It reduces the amount-in-controversy required to appeal to an ALJ from $500 to $100, but this amount will be increased annually based on the medical care component of the consumer price index for all urban consumers. There is no amount-in-controversy below the ALJ level.
- It allows providers and suppliers, including audiologists, to request a “reopening” of a Medicare contractor’s denial of a claim in order to correct minor errors or omissions (e.g., clerical errors) by a party or the contractor, without the need to activate the appeals process. A party may request reopening of a contractor’s initial determination or redetermination, a QIC reconsideration, an ALJ decision, or a MAC decision.

**IMPACT ON AUDIOLOGISTS**

The new process gives audiologists greater rights to appeal denials of Medicare claims. According to CMS, “this interim final rule changes the appeals status of providers and participating suppliers, allowing them to appeal all denials of their own accord.”

Any party to a Medicare contractor’s initial determination may appeal by requesting a redetermination. The parties to an initial determination include a Medicare beneficiary who has filed a claim for payment (or had a claim filed on his or her behalf), a “supplier” (e.g., a physician, an audiologist) who has accepted assignment for items or services furnished to the beneficiary, and a “provider” (e.g., a hospital, skilled nursing facility) that has filed a claim for items or services furnished to the beneficiary. These persons remain parties to the appeal at each subsequent level of the process.

In addition to clarifying the appeal rights of audiologists, the rule provides that audiologists and other health care professionals may serve on expert panels that advise the QICs. If a reconsideration involves a determination as to whether an item or service is medically necessary, the QIC must designate a panel of physicians or other appropriate health care professionals to consider the question based on clinical experience, the beneficiary’s medical records, and the evidence in the record. Once the QICs are created, audiologists may want to consider volunteering to sit on these QIC expert panels.

At the same time, the new rule imposes some new responsibilities on parties to an appeal. For example, to help decision-makers meet...
new deadlines for deciding appeals, the rule requires that parties present evidence earlier in the appeals process. If a party fails to present evidence during the QIC reconsideration, the party will generally be barred from introducing that evidence at a subsequent stage of the appeals process. There has also been criticism that ALJ hearings will generally be conducted by video-teleconferencing rather than in-person.

RESOURCES

Updated CMS appeals forms will be made available at www.cms.hhs.gov/forms and at www.Medicare.gov/Basics/forms, as well as through Medicare contractors. Note that requests for redeterminations, reconsiderations, ALJ hearings, and MAC reviews must be made using standard forms to be created by CMS.

CMS is also exploring development of a web-based system that would enable appellants to track the status of their appeals in real time.

MEDICARE ADVANTAGE

CMS has also issued a final rule creating the Medicare Advantage (MA) program, which will replace the existing Medicare + Choice program (Part C). Under the rule, health insurers have submitted competitive bids to CMS for the right to offer coordinated care plans in a given region or local area. Coordinated care plans may include HMOs, preferred provider organizations (PPOs), provider-sponsored organizations (PSOs), as well as private fee-for-service plans, Medical Savings Account (MSA) plans, and specialized plans for beneficiaries with special needs. Medicare beneficiaries will then be able to choose between traditional fee-for-service Medicare or any of the coordinated care plans offered in their region or area.

MA plans must provide beneficiaries with all benefits covered under Medicare Parts A and B, including hearing and balance diagnostic tests. However, MA organizations are not required to contract with any specific type of health care provider, as long as all covered services are available and accessible. MA plans may continue to require referral by a gatekeeper as a way to control utilization of services. MA organizations will enter into contracts with audiologists and other suppliers and pay them according to the terms of their contract.

REFERENCE

70 Federal Register 11420, 11427 (March 8, 2005).
Audiologists beware!...and be aware of conflicts of interest

ROBERT HAHN, ESQ., DEBRA ABEL, AuD, JANE M. KUKULA, AuD, AND
MEMBERS, ETHICAL PRACTICE BOARD, AMERICAN ACADEMY OF AUDDLLOGISTS

The American Academy of Audiology has advocated avoidance of conflicts of interest in all professional interactions by including a prohibition in the Code of Ethics. Rule 4c states “Individuals shall not participate in activities that constitute a conflict of interest.” In the late 1990’s, there was rising concern regarding incentives being offered to and accepted by audiologists (Decker 1999 and Liang 1999). In the early 1990s, a Presidential Task Force was appointed to look into the issue of professional ethics and make recommendations. As a result of the work of the task force, the Ethical Practices Board (EPB) of the Academy of Dispensing Audiologists adopted the Ethical Practice Guidelines on Financial Incentives from Hearing Instrument Manufacturers position statement to assist audiologists in the interpretation of Rule 4c and avoid conflicts of interest. Further, the EPB and others have worked to educate the membership about ethical issues, especially conflicts of interest.

From discussions with membership at local, regional and national meetings, it appears that some members are still unaware that the acceptance of incentives such as trips or cash from hearing aid manufacturers is unethical and may also violate federal law. Some members express the belief that acceptance of trips, business partnership money or points and equipment for a specific volume of hearing aids purchased, and other incentives is permissible as long as one would have prescribed the hearing aid regardless of the receipt of such incentives. While the ethical issues are clearly present despite the denial of some audiologists, it is also important to be aware of the potential for criminal liability under the federal Anti-Kickback Statute, which prohibits audiologists from accepting gifts or incentives in return for prescribing items or services payable under a federal health care program. Possible penalties for violation of this statute could include exclusion from participation in Medicare, Medicaid, and other federal health programs; heavy fines; and imprisonment. The following information is provided to help familiarize members with the Anti-Kickback Statute as well as other important federal laws prohibiting health care fraud.

Anti-Kickback Statute (AKS)

Under the Federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b(b)), it is a felony for any person (including an audiologist) to knowingly and willfully solicit or receive any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, in return for purchasing, leasing, or ordering (or recommending the purchase, lease, or ordering) of any item or service reimbursable in whole or in part under a federal health care program (except for the Federal Employees Health Benefits Program). (Abel and Hahn, 2005). In addition, many states have anti-kickback laws, which may differ from the federal law. If an audiologist accepts incentives from a hearing aid manufacturer based on a reward system for purchasing the manufacturer’s products and then prescribes hearing aids made by that manufacturer that are reimbursable under a federal health care program, this may violate the AKS. The audiologist cannot avoid violation of the law by disclosing the incentives to patient.

As an audiology-based example, consider Ima Gonetotahiti, AuD, who agreed to purchase 25 Poortone hearing aids to qualify for the trip to Tahiti. One hearing aid was dispensed to a Medicaid patient who was reimbursed, in whole or in part, by the state Medicaid program. Dr. Gonetotahiti received remuneration (the trip) in return for prescribing a hearing aid that was reimbursed by a federal health care program (Medicaid).

The Anti-Kickback Statute is a criminal statute so the government has to prove intent, but they only have to prove that inducing or rewarding orders of the manufacturer’s products was one purpose (not necessarily the only purpose) of the transaction. The Office of the Inspector General enforces the AKS. While there are “safe harbors” (i.e., types of transactions that the Inspector General has determined do not violate the AKS), it is doubtful that the typical hearing aid manufacturer incentive plan would fit into any of these safe harbors.

The AKS prohibits kickbacks in the forms of incentives and/or ‘perks’ because (a) they create an incentive to over-utilize reimbursable services, increasing costs to Medicare and other federal health care programs; (b) they distort medical decision-making, compromising quality of care; and (c) they result in unfair competition by freezing out qualified providers who are unwilling to pay kickbacks (Abel and Hahn, 2005).

Gifts or Inducements to Beneficiaries

It is unlawful to knowingly offer or give remuneration to Medicare or Medicaid beneficiaries to influence their choice of provider for any item or service covered by Medicare or a state health care program (42 U.S.C. § 1320a-7a(a)(5)). The law prohibits such gifts, because they increase costs to the Medicare and Medicaid programs by inducing beneficiaries to obtain items and services they do not need. Penalties include civil fines and exclusion from participation in the Medicare and Medicaid programs.

Certain gifts, however, are permitted. These include, for example, gifts of nominal value (i.e., no more than $10 per item or $50 in the aggregate per year per beneficiary). Waivers of co-payments or deductibles are also permitted provided they are not advertised, not routine, and made after an individualized determination of financial need or the failure of reasonable collection efforts.
The False Claims Act and Related Laws

Knowingly submitting a false claim to a federal health care program (e.g., presenting a false bill to a Medicare carrier) violates several laws, including:

Federal criminal laws prohibiting false claims and false statements to U.S. government agencies (18 U.S.C. §§ 287 and 1001)
Medicare and Medicaid Fraud (42 U.S.C. § 1320a-7b(a)(1))
The False Claims Act (31 U.S.C. § 3729 et seq.)

Submitting claims for services not performed, for medically unnecessary services, and for “upcoding” (i.e., coding at a higher level or for more services than were provided) is a violation of the False Claims Act. For example, if an audiologist performs cerumen removal (which is not reimbursed by Medicare) and then performs another procedure that is unnecessary and bills Medicare for the other procedure (CPT) code to guarantee some form of payment for the visit, the audiologist has submitted a false claim.

We can expect to see increased enforcement of the federal and state laws designed to prevent health care fraud and abuse as agencies address the escalating cost of federal health care programs such as Medicare and Medicaid. To that end, audiologists need to review the federal laws and begin to understand how the laws apply to the practice of audiology. These issues, laws and regulations are not always covered in depth in academic programs in audiology. As a result, many audiologists may be unaware of the potential for criminal liability and severe penalties associated with the acceptance of incentives such as trips.

It is clearly the intent of the Ethical Practices Board to advise the membership when particular business practices place them at risk. It is not the intent of the Ethical Practices Board to regulate an individual’s business or to determine the financial needs of an audiologist’s practice. The EPB’s goal is to provide guidance to the membership to avoid potential ethical and legal complications.

We must strive to avoid even the appearance of conflict of interest when interacting with our patients, other health care providers, manufacturers and third party payers. The personal belief that one is putting the patient’s interests first is not sufficient. If it were, there would be no need for objective codes of ethics (Decker, 1999) nor would there be a need for society to enact laws that make some unethical practices illegal.

Audiology is a profession striving for autonomy and with autonomy comes an increased responsibility to our patients and to society at large.

References
Financial statements have many numbers in them that, in isolation, have limited significance. Their real value lies in the various calculations, or ratios, that can be tracked over time to review the financial health of a practice. The question is which ratios to track and what do they actually tell us about the practice’s true strengths and areas for improvement. Freeman et al (2000) describes two forms of financial analysis of ratio comparisons, cross sectional and a time series analysis. A cross sectional analysis involves comparing the practice with industry standards compiled by a trade organization. These cross sectional analyses use financial ratios to make comparisons of one practice with another as the ratios provide a calculation on the totals, thus allowing an easy comparison between practices regardless of the size of the practice. Unfortunately, these cross sectional analyses are not easy across practices in audiology due to the fact that industry standards are not readily available.

Since it is difficult to compare performance to industry standards, it is the time series analysis described by Freeman et al (2002) that becomes the most important to the average practitioner. These analyses compare the practice to itself over periods of time, usually month-to-month or year-to-year. It involves conducting calculations on financial statements, which by themselves, simply present how the practice performed at a particular point in time and have minimal significance in isolation. The real information in financial statements, particularly the balance sheet, is unlocked by a comparison of the statements and ratio analysis across other time periods. When numbers in current statements are compared to financial statements conducted at, for example, monthly or yearly intervals, they come alive with informative data that paints a true picture of how success or failure has developed.

Financial statements, such as comparing the 1st quarter 2004 with the 1st quarter of 2005, or Year Ending December 31, 2003 with Year Ending December 31, 2004, or year to date, can reveal a wealth of information to the stakeholders about earnings over time, possible reasons for soaring or stagnated sales, and even the practice’s capability to pay back a loan to the bank. More specifically, Marshall et al (2002) indicates that these calculations assist in the determination of a practice’s financial position and the result of their operations in terms of liquidity, activity, and debt and profitability analysis. These relatively simple measures can be calculated and tracked by spreadsheets then reviewed over time to demonstrate the health of the practice for obtaining loans or supplier credit, reviewing success and failure for management decisions, or simply general information.

**Balance Sheet Calculations**

The balance sheet is a report or snapshot of assets, liabilities, and the owner’s equity at a particular point in time. These statements provide information regarding whether the practice has the capability of meeting its obligations regarding supplier expenses, employee salaries, product returns, loans, leases, and a multitude of other miscellaneous expenses that become apparent in the balance sheet calculations. Although there are calculations that are of interest on the other statements, most of the important ratios are performed on the balance sheet.

There are three major ratios used to analyze the balance sheet to demonstrate the strengths and weaknesses of a practice: liquidity, activity, and leverage. While liquidity ratios are used to measure the short-term ability of a practice to generate cash to pay currently maturing obligations, activity ratios measure how effectively the organization is using its assets by specifically analyzing how quickly some assets can be turned into cash. Debt or leverage ratios reflect the long term solvency or overall liquidity of the practice and are of interest to the investors and/or the bankers that have loaned money to the practice. These ratios are described in more detail in the following sections.

**Liquidity Ratios.** A common liquidity ratio is the Current Ratio (CR). The CR is sometimes called a Working Capital Ratio, as it is a calculation of how many times the practice’s current assets cover its current liabilities and if the practice has sufficient resources to meet those liabilities. Put another way, the Current Ratio asks the question, can the practice pay its bills or not? The Current Ratio is figured as follows:

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

If the result of a CR calculation is less than 1, the practice will not be able to meet its current liabilities and if the CR is 2 or more, the practice can pay its bills with money left over. Usually most bankers and practice managers like to see this ratio at least between 1 and 2. The CR includes prepaid expenses (such as insurance, etc.) and the inventory, which sometimes will present a cloudy view of the real picture for Audiology practices. These are days of custom hearing instruments, ordered upon demand; therefore, most Audiology practices do not have much inventory. Thus, a very
common modification of the CR is the Quick Ratio (QR), also known as the Acid Test Ratio (ATR). The QR evaluates the practice’s liquidity without considering the inventory and prepaid expenses and, in doing so, presents a more accurate indication of the liquidity of an Audiology practice. The QR is figured as follows:

$$\text{Quick Ratio} = \frac{\text{Cash} + \text{ Marketable Securities} + \text{Account Receivable}}{\text{Current Liabilities}}$$

As with the CR, Quick Ratio values less than 1 demonstrate that the practice has serious difficulty meeting everyday expenses. Managers also prefer to see this ratio between 1 and 2.

Another useful liquidity calculation is the Defensive Interval Measure (DIM), a ratio that measures the time span that the practice can operate without any external cash flow or how long the practice can operate if there is no business. As with personal finances, wise practice managers keep an emergency fund at hand in the case business drops off or ceases for some reason. In Accounting, these emergency funds are called Defensive Assets (DA). By definition, the DA are those assets that can be turned into cash within 3 months or less, such as cash (savings), marketable securities, or accounts receivable. In order to figure the DIM, it is first necessary to know the Projected Daily Operating Expenses (PDOE) or how much it costs to keep the practice open each day. To find the PDOE, simply add up the cost of goods sold in a year, the selling and administrative expenses in a year and other ordinary cash expenses for the year and divide by 365:

$$\text{Projected Daily Operating Expense} = \frac{\text{Total Yearly Expenses}}{365}$$

Once the daily operating expenses (PDOE) are known, the DIM is found by dividing the DA by the PDOE:

$$\text{Defensive Interval Measure} = \frac{\text{Defensive Assets}}{\text{Projected Daily Operating Expenses}}$$

The DIM calculation gives the practice manager the length of time the business could survive if revenue was substantially reduced or absent.

Activity Ratios. Activity Ratios are calculations that allow the manager to review how efficiently the practice uses its assets to generate cash. Although there are a number of Activity Ratios that can present the efficiency of the practice, the Accounts Receivable Turnover Ratio (ART), The Inventory Turnover Ratio (IT), and the Total Assets Turnover Ratio (TAT) are useful to practice managers.

Although ideally all patients need to pay when services are rendered, reality is that insurance companies pay slowly, sometimes 60-120 days after the services are rendered, and may often not pay the first time the claim is submitted. Additionally, some patients need credit to pay for goods and services they require such as hearing aids, batteries and other goods or services. Although how and when credit is given to patients is not a trivial matter, this topic encompasses an area too broad to be covered in this writing. The main point is that the receivable account should be closely monitored to determine how much is due to the practice and how long, on the average, it takes to collect these credit sales. The Accounts Receivable Turnover Ratio (ART) reveals how many times the receivable account is turned into cash each year. To obtain the ART ratio it is necessary to first find the average amount that is due the practice from the receivable account or average Accounts Receivable (AR) balance. This is obtained by adding the accounts receivable balance at the end of last year to the balance of the accounts receivable at the end of the current year and divide by 2:

$$\text{Average Accounts Receivable} = \frac{\text{AR (Year 1)} + \text{AR (Year 2)}}{2}$$

Once the average AR is computed, the ART ratio, or the time it takes to convert this account into cash, can be obtained by taking the Net Sales (sales after cost of sales are subtracted) and dividing that amount by the average accounts receivable balance:

$$\text{Accounts Receivable Turnover Ratio} = \frac{\text{Net Sales}}{\text{Average Accounts Receivable}}$$

Once known, the ART can tell the manager how long it takes, on the average, to collect the amounts in the accounts receivable. In this calculation the higher the ratio the better; for example, if the ART ratio is = 5.3, the practice turns over the accounts receivable 5.3 times per year or every 2.26 months. To obtain more detail, the calculation of the number of days it takes to turn the accounts receivable can be obtained by simply dividing the average accounts receivable into 365, in this case 68.86 days.

As indicated earlier, Audiologists tend to not keep too much inventory: a few loaner hearing aids, some demonstration instruments, batteries, accessories and some assistive listening devices. Although not much of an inventory for most practices, it still may be beneficial to understand how fast this inventory turns over. In Accounting, there are specific methods of figuring inventory and determining the best one for a practice and therefore should be discussed with a professional. Generally, the Inventory Turnover (IT) Ratio is a calculation that measures how fast the inventory is sold. To arrive at the IT ratio it is necessary to obtain the value of the average inventory on hand in the practice. Thus, the average inventory is found by adding the beginning inventory for the period to the ending inventory and dividing by 2:

$$\text{Average Inventory} = \frac{\text{Beginning Inventory} + \text{Ending Inventory}}{2}$$

Once the average inventory is known, the IT ratio is computed by
dividing the cost of the goods sold by the average inventory. If, for the year, the IT ratio was 5.9, the inventory will turn almost 6 times each year.

**Inventory Turnover Rate** = \( \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}} \)

As with other activity ratios, the turning of the inventory can be further delineated to reflect how long it takes the inventory to sell out in days by simply dividing 365 by the IT ratio. In this example, if the inventory turns about 6 times per year, then it takes about 61 days for the inventory to sell out. These data assist the manager in planning product orders efficiently throughout the year ensuring that there is always a fresh, sufficient supply as well as taking advantage of discounts.

An activity measure that presents how effectively assets are turned into cash is the Total Assets Turnover (TAT) Ratio. The TAT ratio looks at the sales for goods and services and divides by the total assets to arrive at how many times the practices assets turnover per year.

**Total Asset Turnover Ratio** = \( \frac{\text{Sales}}{\text{Total Assets}} \)

Of course, the higher the ratio the better, as this is an indication that the assets turn over more times per year, suggesting an efficient practice that uses its assets to the most benefit.

**Debt or Leverage Ratios**. Two ratios, beneficial in providing the practice manager with information as to how much practice debt is relative to its assets are: the Debt to Assets (DA) Ratio and the Times Interest Earned (TIE) Ratio. These ratios give indications whether the practice has the capability to support more debt for the purpose of adding equipment, opening another location, or other activities.

The DA presents how much liability the practice has for every dollar of assets and provides the creditors with information about the ability of the practice to withstand losses without impairing the interest of the creditors. The DA is simply the total Liabilities divided by the total Assets:

**Debt to Assets Ratio** = \( \frac{\text{Total Liabilities}}{\text{Total Assets}} \)

A desirable DA is a low number since the higher the number indicates that the practice is more dependent on borrowed money in order to sustain itself. If the DA is high, it suggests that small changes in cash flow may cause serious difficulties in the capability to repay debt.

**Times Interest Earned Ratio** = \( \frac{\text{Earnings Before Interest and Taxes}}{\text{Interest Charges}} \)

The Times Interest Earned (TIE) ratio is an indication of how many times the practice earns the amount of interest charged on the money that it has borrowed. The TIE is computed by taking the earnings before interest and taxes and dividing it by the interest.

Freeman et al (2000) indicates that in audiology practices the TIE should be somewhere between three and five, which would indicate that the earnings are at least three to five times greater than the interest payments. A TIE that is less than 1 indicates that the practice cannot pay its interest commitments.

**INCOME STATEMENT CALCULATIONS**

Although most routine calculations are conducted on the balance sheet, sometimes the ratios that may tell the most about a practice are the profitability ratios that are conducted on the income statement. These profitability ratios are clues as to how well the practice has performed and looks at whether the practice’s net income is adequate, what rate of return was achieved, and profit margin as a percentage of sales. The ratios routinely considered in this group are the Profit Margin On Sales (PMOS) and the Asset Turnover (AT) Ratio that uses information from both the income statement and the balance sheet.

The Profit Margin On Sales presents the profit margin achieved after all of the expenses are subtracted and presents how much of every dollar of sales are profit. To compute the PMOS, Net Profit is divided by Sales:

**Profit Margin On Sales** = \( \frac{\text{Net Profit}}{\text{Sales}} \)

PMOS results are presented in a percentage that reflects the amount of each dollar that is profit. For example, if the calculation yields 20% then $0.20 cents of every dollar collected is profit. These values can be tracked to determine if there are changes in profitability that require attention.

**TRACKING**

An easy method of tracking these ratios can be the use of a spreadsheet. By simply creating a spreadsheet and entering data each month, the data can be analyzed at a glance as presented in Figures 1 and 2. In Figure 1, it is easy to see that the Quick Ratios for the years 2000 and 2001 indicate that the ability to pay the bills was easily achieved. In 2002, however, there were problems paying...
everyone, but in 2003, the situation was much better and 2004 was also rather good. This allows the manager to search further for differences between 2002 and the other years to insure that these difficulties do not repeat for 2005.

Another example of tracking is the ART ratio as presented in Figure 2. Presented is how long in days it takes for the practice to turn credit sales into cash. It is obvious from these data that in most years it only takes 40-50 days to clear the accounts receivable. In 2002, however, it took over 90 days to clear the accounts receivable.

By reviewing Figures 1 and 2 together, the practice manager can see at a glance, one possible reason for the problems in 2002. At the same time (2002) it was difficult to pay the bills, the Accounts Receivable turnover Ratio indicated that it took over 90 days to turn credit sales in to cash. Tracking the various ratios and reviewing them interactively over time facilitates great knowledge for practice managers and allows them to see the problems and to fix them before they have had too much impact. Although this information is of great benefit, it must be remembered that all financial statements and the ratios conducted upon them is information from the past. These data reflect how business has been in the past and, due to competition, market pressures and other significant factors, may or may not be a predictor of the health of the business in the future.

**SUMMARY**

Although ratios can be very helpful in the evaluation of a practice, Freeman et al. (2000), Tracy (2001) and Marshall et al. (2002) all offer cautions on the use of ratio analysis. They indicate that the best information about a company’s health is determined from comparison and analysis of a group of ratios, not a single ratio, and that these comparisons need to be made from like-times of the year to arrive at accurate data on the practice’s performance. Additionally, Freeman (2000) offers that these ratios may be distorted somewhat due to the reimbursement policies of insurance companies. In the tracking example offered in Figures 1 and 2, it could be that the insurance companies paid slowly during 2002 and that was the reason the Accounts Receivable Turnover was 90 days and the Quick Ratio indicated that there was difficulty paying the practice liabilities.

The development of an assessment technique to track various important components of your particular practice should be developed with the help of a Certified Public Accountant or other trained professional. Once set up, these calculations can be tracked using an spreadsheet analysis to facilitate managerial decisions.

**REFERENCES**


The Marketing Scene

Love Your Patients...and Success Will Follow!

Bob Nagen, President, WhizBang Training, Grand Haven, MI

There has never been a better time to be a small business entrepreneur. As big business gets bigger, it creates an amazing opportunity for those of us who know how to play the game small. Sure, hearing impaired patients can purchase hearing aids from on-line websites or wholesalers for seemingly lower prices. If a patient insists on finding the lowest price, let them go to the people who offer the lowest price.

An important business truth for all small business people to understand is this..."Live by price, die by price." Patients who are only looking for the lowest price will abandon you the second someone else offers a better deal. You don’t want them! You want patients who appreciate your professionalism, desire outstanding service, demand top quality products, and understand that having a good personal relationship with their audiologist is good business.... and are willing to pay a little more for it. I know of only one sure-fire, never-fail, super-profitable strategy for battling the big boys: Always put your patient's wants, needs, and desires first. Charge a little more, but deliver a lot and you will keep your patients coming back again and again.

Love Your Patients...

Marketing genius Jay Abraham puts it this way, ‘The secret to success is to fall OUT of love with your product, service, or organization, and fall IN love with your customers.’ It’s not about your degree or the services you provide, it’s about your patients. I call it “The Big Switch.”

Keep business hours that fit your patient's schedule, not your own. All your policies should be written with your patient’s best interest in mind. Make your return policies generous, not restrictive. Your entire staff must be thoroughly trained so your patients get the same great service from everyone in your organization that they get from you. The list goes on and on, but it all starts with making “The Big Switch” and looking at everything you do through the eyes of your patients.

And Success Will Follow!

When you truly love your patients, success will follow. I guarantee it.

Let me share my personal “Ah Ha!” experience with you – the moment when this strategy was permanently embedded in my brain. I was working on the sales floor of my store, the Mackinaw Kite Co. (a kite and toy store) helping a young-ish grandmother pick out some gifts for her five grandchildren. Always one to do a little market research when the opportunity presented itself, I asked her how often she would be shopping for gifts for her grandchildren. I thought I was asking about the number of times a year she shopped, or on which holidays she shopped for gifts. But her answer stopped me dead in my tracks... “FOREVER.”

Of course! She would indeed be shopping for gifts for her grand kids forever. Now, my eyes must have glazed over as my mental calculator started whirring. She had five grandchildren, and there were at least three gift purchases a year that I could count on (birthdays, Christmas and Easter), and our average sale was about fifty dollars...that’s $750.00 a year. And she would probably be buying gifts for at least another fifteen years. In an instant, this woman was worth nearly $12,000 to me, not just the $49.99 she was plunking down at the moment.

I knew then that I had to do everything in my power to love this customer and keep her coming to my store for as long as she was buying gifts for her grandchildren. My goal? A customer for life. Since patients are getting younger and living longer, imagine what the “lifetime value” of a hearing impaired patient may be to your business or organization.

By putting your patients’ needs, wants, and desires first, you will dramatically increase the lifetime value of each patient — the total amount that person will spend with you over the course of their lifetime. When you love your patients and nurture your relationship properly, they will return when they need to purchase new amplification or need additional audiology services, and send their family, friends, and colleagues to you.

The Potential Is Enormous.

My challenge to you today is to make the “Big Switch.” Fall out of love with the services you provide and the technology that you dispense and fall in love with your patients. Make it your goal to create patients for life. Every business or organization needs to make money and the surest way to accomplish that is to love your patients.

Nagen offers short, practical on-line “WhizBang! Tips of the Week.” If you would like to receive these via e-mail, complimentary registration is available at www.WhizBangTraining.com.
The National NAFDA organization recognized the University of Pittsburgh’s chapter as “Outstanding NAFDA Chapter” at the 6th Annual NAFDA National Meeting in Washington, DC March 31, 2005. In order to be distinguished as an “Outstanding NAFDA Chapter,” the chapter must meet the requirements in each of the following four categories:

**EDUCATION** Chapters must provide its members with opportunities for advanced education and/or technical training. Chapters must help make educational and/or technical resources available to its members.

**POLITICAL INVOLVEMENT** Chapters must help keep members informed about political issues and events of concern to the profession and the student. Chapters must be an active “voice” for AuD students and programs at the state, regional, and/or national levels on educational, professional, or political issues of concern.

**PROFESSIONAL DEVELOPMENT** Chapters must actively participate in national NAFDA events and activities. Active participation includes attendance by 80% of members at the NAFDA Convention. Chapters must make financial resources available to its members that enable them to pursue professional development opportunities.

**PUBLIC RELATIONS** Chapters must develop and implement projects that promote hearing health care to the public.

---

**CDC Funding Opportunities**

The Centers for Disease Control and Prevention (CDC) recently announced that beginning October 1, 2005, all CDC grants funding opportunity announcements will be published through www.grants.gov. Grants.gov is the centralized, secure online processing system for 26 Federal grant-making agencies and provides a single source for announcing Federal grant opportunities and submitting online applications. Because all announcements will be posted on www.grants.gov, CDC grants funding opportunity announcements will no longer be published in the Federal Register.

Registering through www.grants.gov is the first step in submitting applications online. One-time registration information is located in the “Apply for Grants” section of www.grants.gov. Visit www.grants.gov at least 30 days prior to filing your application to familiarize yourself with the registration and submission procedures. It is suggested that electronic applications be submitted prior to the closing date in the event that difficulties are encountered, you will have enough time to submit a hard copy of the application prior to the deadline.
On April 5, 2005, Idaho Governor Kempthorne signed the Speech and Services Practice Act. This is a landmark occasion since audiologists now have licensure in 49 states and registration in one. The Academy’s State Licensure Subcommittee continues to actively work with state leaders to ensure appropriate language and scope of practice when states legislators open licensure laws for revisions and updates. In New Mexico, Governor Richardson signed their new audiology licensure law which requires a doctoral degree by the year 2007 for all new graduates and entrants into the audiology profession. All current practicing audiologists in New Mexico will be grandfathered (exempt) from this requirement. The Academy Department of Health Care Policy, the State Leaders Network and State Licensure Subcommittee are available to provide guidance and support to states where audiology licensure is up for review.

Audiologists are now licensed/registered in all 50 states!

On April 5, 2005, Idaho Governor Kempthorne signed the Speech and Services Practice Act. This is a landmark occasion since audiologists now have licensure in 49 states and registration in one. The Academy’s State Licensure Subcommittee continues to actively work with state leaders to ensure appropriate language and scope of practice when states legislators open licensure laws for revisions and updates. In New Mexico, Governor Richardson signed their new audiology licensure law which requires a doctoral degree by the year 2007 for all new graduates and entrants into the audiology profession. All current practicing audiologists in New Mexico will be grandfathered (exempt) from this requirement. The Academy Department of Health Care Policy, the State Leaders Network and State Licensure Subcommittee are available to provide guidance and support to states where audiology licensure is up for review.

2005 National Conference on Rehabilitative Audiology and Research

The 2005 NCRAR conference, “The Aging Auditory System: Considerations for Rehabilitation” will be held in Portland, OR, September 22-23, 2005. Topic areas to be presented include behavioral studies of auditory aging, pathophysiology of the aging auditory system, cognitive components to auditory aging, and amplification issues associated with the geriatric patient. Speakers will be Robert Frisina Jr., Sandra Gordon-Salant, Kathleen Pichora-Fuller, Pam Souza, James Jerger, Therese Walden, Jack Mills and Arthur Wingfield. The keynote address will be delivered by Moe Bergman, Emeritus Professor, Sackler School of Medicine, Tel-Aviv University and Hunter College of the City University of New York. A poster session will be held on Thursday, September 22. Eight scholarships are available to practicing audiologists. Scholarship applications are due by 5/13/05. For details see the NCRAR website www.ncrar.org. For online registration, scholarship application details, poster submissions and more information see www.ncrar.org. For additional information, e-mail Carolyn.Landsverk@med.va.gov or telephone Gaby Saunders at 503-220-8262 x 56210.

California Academy of Audiology Conference

“Hear the Magic” is the theme of the California Academy of Audiology’s (CAA) 6th Annual Conference, to be held September 15-17, 2005 in Anaheim, CA. The guest faculty will include Gail Whitelaw, President of the American Academy of Audiology, who will discuss current national issues, Anita Pikus will present information on congenital hearing loss, and Beth Cooper will summarize NASA’s work with noise abatement. Other topics will include cortical plasticity, audiology ethics, neurophysiology of hearing and live speech mapping. A special Educational Audiology Workshop featuring Cheryl de Conde Johnson and Alison Grimes is planned. Register for the Conference on-line at www.caaud.org and mention the CAA Conference rate when calling the Crowne Plaza Resort in Anaheim at (714) 867-5555 to make hotel reservations. The resort hotel is within walking distance from Disneyland where the 50th Anniversary Celebration is underway.

Tinnitus Treatment and Management - ATA’s Course for Professionals

The American Tinnitus Association will present additional online courses for hearing health care professionals including audiologists, otolaryngologists, psychologists, hearing instrument specialists and other professionals. Two new courses are scheduled for October 3- October 28, 2005 and January 16-February 10, 2006. Tinnitus Treatment and Management - ATA’s Course for Professionals is designed to give health care professionals a detailed view of tinnitus causes, triggers, neurophysiology, treatments, medical and audiological evaluation and management, sound therapies, coping techniques, alternative approaches, current research, the emotional impact that tinnitus has on patients, and the resources that are available to patients worldwide. The 4-week course consists of online reading materials, a one-hour weekly Chat with each instructor, an interactive Message Board, and a weekly quiz. CEUs are offered through the American Academy of Audiology (1.6 CEUs), and the International Institute of Hearing Instruments Studies (16 contact hours). Class size is limited to 20 per Course. Early registration is recommended. Online and mail-in registration are available. For complete syllabus, chat times, instructor list, and fees, visit: www.ata.org/about_tinnitus/-professional/pro_course_register.html.
National Hearing Conservation Association 2006 Call for Presentations

Proposals are now being accepted for poster presentations for the 31st Annual Conference of the National Hearing Conservation Association (NHCA), February 16-18, 2006, in Tampa, FL. Topics related to “the prevention of hearing loss due to noise and other environmental factors in all sectors of society” will be considered. Presentations may be applied research, scientific investigations, or practical applications of hearing loss prevention issues. The deadline for workshop and platform presentations was June 15, but the poster deadline is October 1, 2005. Your proposal should include the title, type of presentation (workshop, platform, poster, etc.), presenter(s), and a seventy-five word description. Send proposals to the NHCA office at 7995 E. Prentice Ave., Ste. 100, Greenwood Village, CO 80111 or e-mail to nhca@gwami.com or fax to 303-770-1614.

E. Harris Nober, Professor Emeritus at the University of Massachusetts and a respected audiologist, passed away on May 23 at his home in Arlington, VA from liver cancer at the age of 77. Nober was the recipient of the 1998 American Academy of Audiology Honors Career Award in Hearing. He received his undergraduate and master's degrees from Brooklyn College and earned a doctorate in experimental psychology from Ohio State University. During his outstanding academic career, Nober trained hundreds of audiologists while teaching at Adelphi University (1957-62), Syracuse University (1963 –69), and serving as Department Chair at the University of Massachusetts from 1969 to 1977, where he remained for the rest of his career. Nober was well known for his work in aural rehabilitation and as co-editor of the text, “An Introduction to Communication Disorders: A Multicultural Approach.” Nober, achieved public notoriety for his work in the 1980's when he pioneered the use of strobe lights as alerting devices in the homes of deaf and hearing impaired persons. Nober examined the waking effectiveness of household smoke and fire-alert detection devices, and tested the volume of detectors and the time it took for sleeping participants to respond and leave for safety. His system connected doorbells, telephones and smoke detectors to engage strong visual cues of flashing lights thereby providing a visual alarm system to indicate, by the frequency of its flashes, what exactly was making the noise, whether it was a baby-minding alarm or a knock at the front door. Dr. Nober will be missed by his family, friends and profession. More information about Nober’s remarkable career can be found at www.umass.edu/loop/people/articles/18508.php

NIDCD Research Training and Career Development Opportunities for Audiologists

An initiative for the short-term (2-3 month) research training of Audiology AuD doctoral students was published in the NIH GUIDE, as part of an NIH-wide Program Announcement (see the web link under Section VII.1: Scientific Research Contacts): National Research Service Award Short-Term Institutional Research Training Grants (T35) http://grants1.nih.gov/grants/guide/pa-files/PA-05-117.html. This initiative provides support for AuD students to pursue a full-time (40 hours per week) hands-on clinical or translational research experience in the hearing sciences over a two-three month period. This research training experience, involving the conduct of a small-scale research project, shall be within the laboratory and under the mentorship of an independent investigator having a funded research program in the host institution. The research experience should be feasibly accomplished during the duration of the short-term traineeship appointment. The awardee institution may recruit and appoint students enrolled at other institutions, as well as its own. This initiative augments the research training and career development programs showcased to the Audiology community in a recent GUIDE NOTICE we issued: http://grants.nih.gov/grants/guide/notice-files/NOT-DC-05-002.html. Questions may be addressed to Daniel Sklare, Research Training Officer, NIDCD at sklared@nidcd.nih.gov.
The NASA Glenn Research Center Acoustical Testing Laboratory has produced JeopEARdy, an interactive multimedia training resource that has been developed to support effective employee education in occupational hearing conservation programs. JeopEARdy consists of a Microsoft® PowerPoint® file (accompanied by additional linked files containing sounds, videos, and other resources) that can be used as a unique interactive “game” by hearing conservationists. This resource may be used either in its basic (“ready-to-use”) form, or it can be customized to meet specific needs of the audience and instructor (with periodic updates to remain current with policy and program changes). JeopEARdy was created by the NASA Glenn Research Center Acoustical Testing Laboratory, in collaboration with the NASA Johnson Space Center Audiology and Hearing Conservation Clinic, and is distributed for public use by hearing conservationists. The JeopEARdy CD also contains tutorials on selected technical topics related to developing multimedia PowerPoint® shows.

To request a single free copy of the disc, please visit the Acoustical Testing Laboratory web site at http://acousticaltest.grc.nasa.gov and look in the section on Hearing Conservation for the Auditory Demonstrations II on-line request form. Please allow four to six weeks for delivery. JeopEARdy is one of several educational outreach products developed and distributed by the NASA Glenn Research Center Acoustical Testing Laboratory. Please visit http://acousticaltest.grc.nasa.gov for information about other offerings.

The American Auditory Society (AAS) held its 2005 meeting in Scottsdale, AZ, March 20-22 with a record-setting attendance of more than 300 registrants. An expanded scientific program, under direction of Roger Ruth serving as President-Elect and Program Chair, included general session translational research presentations by leading authorities as well as contributed platform research presentations and poster presentations. The unique transitional sessions are devoted to showing how basic science findings can be applied to clinical situations. The annual Carhart Memorial Lecture was presented by David Kemp who spoke on “Otoacoustic Emissions – From Conception to Clinic.” Paul Abbas introduced the Mentored Student and Resident Research Program with a presentation entitled “The Importance of Research to Clinicians and of Clinicians to Research.” The AAS Life Achievement Award was presented to Ira Hirsh, who was unable to attend the conference, and accepted in his behalf by Bill Clark. The AAS social program provided time for golf, tennis and a dinner social event under the stars at the Desert Botanical Garden.

The American Auditory Society (AAS) is a multidisciplinary organization composed of individuals whose professional work is dedicated to the ear, hearing and balance. The 2006 Conference will be held at the Chaparral Suites Resort in Scottsdale, AZ on March 5 – 7. The Call for Papers and Posters will be issued in September, 2005. Fifteen NIH-funded scholarships for outstanding scientific poster presentations will be available to students on a competitive basis selected from submitted abstracts. Watch for the AAS Call for Papers or visit www.amauditorysoc.org for additional information.
The Audiological Resource Association (ARA) celebrated 30 years of supporting professional excellence and independent practice in audiology. The anniversary gathering of ARA was held during their Winter Conference, February 25-27, 2005 where participants enjoyed reminiscing about the history and success of ARA while visiting the historic district of Charleston, SC.

The Audiological Resource Association (ARA) began in 1975 as a small group of private practice audiologists from the Southeastern United States meeting to discuss common problems and needs. These meetings were deemed necessary because state and national associations had become so large and broad in scope that they could not reasonably be expected to solve the problems or to meet the needs of the audiologist in private practice. Realizing that other audiologists in private practice in the same geographic region had similar problems and common needs, a decision was made to formally organize the Association. Other audiologists were invited to an organizational meeting, officers were elected, by-laws adopted, and a charter was granted in February 1976 by the State of Tennessee. Dan Schumaier of Johnson City, TN served as the first president.

Over the years, members have found comradeship through sharing of successes and problems. Biannual conferences are held during February and July (or August) of each year. Program subjects are chosen by the membership and are designed to cover a wide range of issues and concerns brought about by individual practice such as practice management, marketing, billing/coding and third-party reimbursement, HIPAA compliance, professional ethics, hearing aid technology, diagnostic audiology, and hearing conversation.

ARA conferences have featured many outstanding speakers and leaders in the profession including Charles Berlin, Robin Cox, David Hawkins, Richard Gans, James Jerger, Gus Mueller, Jerry Northern, Neil Shephard, Wayne Staab, Roger Ruth and numerous others. At the 30th Anniversary Banquet Bash, members enjoyed entertainment by SlowHand, a band including Ron Taylor of Grason-Stadler/Viasys. Jim Carroll was honored as ARA Audiologist of the Year and Eric Hecker was honored for his service as Past President. Ken Parker will serve as President for 2005 with Dan Schumaier as President-Elect, Lynda Klee as Secretary/Treasurer and Jill Howard as Vice-President for Special Affairs.

Today, the Audiological Resource Association (ARA) has a membership of over 130. Membership has expanded to include audiologists from across the country as well as the Southeast. ARA members often serve as mentors for other members, providing advice, encouragement, and serving as “sounding boards” for new ideas. Over the past 30 years, the Audiological Resource Association has inspired members to pursue autonomous practice and professional excellence. ARA provides a practitioners’ scholarship through the Audiology Foundation of America for members pursuing the AuD through distance learning. ARA members have also been actively involved in promoting better hearing through humanitarian efforts. In 1992, a group of ARA members, including Dan Schumaier, Ben Dawsey, Daniel Orchik, Laura Dennison and Jackie Niedringhaus spent two weeks in Rybinsk, Russia testing hearing, making earmolds and fitting hearing aids on students at a deaf school. ARA has been a “family tradition” for many members. Eric Hecker, son of the late Henry Hecker, grew up with the organization and has followed in his father’s footsteps by serving in many leadership positions for ARA. Sarah Schumaier Campbell, daughter of Dan Schumaier, is currently an AuD student at East Tennessee State University and is now a student member of ARA.

ARA represents a proud and rich history and the achievements of our members! ARA welcomes new members. To learn more about the ARA, visit www.audresources.org or contact Lynda Klee at LJKLee@cs.com.

By Lynn Lehman, AuD, Spartanburg, SC.
DRUM ROLL PLEASE....

The American Academy of Audiology proudly introduces our new online Academy Store! With just a few simple clicks of your mouse, you can now order all your favorite marketing and educational tools as well as cool logo apparel and Audiology-related gifts utilizing our secure server.

You can access the store by visiting www.audiology.org and selecting the Academy Store link on the left-hand side menu of our home page. Members will want to sign in with an Academy ID and e-mail address to receive special member-only discounts! Then you can start shopping for apparel and gifts or marketing/educational tools. Just select the amount and/or size and it will appear in your shopping cart. When you are ready to check out, your member information will already be in the system. Choose a method of payment, “click” submit and voila, your order has been completed. Be sure to print out the confirmation page for your records.

The store has all the same great brochures, CDs and kits as our order form, as well as hats, t-shirts, mugs and AAA Foundation note cards and wristbands. Now you can take care of all of your Academy shopping needs day or night.

We have already had great success with online ordering so far and hope that all our members will take advantage of this quick and easy benefit. Be sure to check back often, as we will continue to add new products as they become available. To log on and start shopping now, visit www.audiology.org today!

1. **Sign in using your Member ID and e-mail.**

2. **Click on ACADEMY STORE on left side menu.**

3. **Select either MARKETING AND EDUCATIONAL TOOLS or LOGO APPAREL AND GIFTS to start shopping (You can shop both categories in one trip).**

4. **Add desired items to your shopping cart (To continue shopping, click RETURN TO PREVIOUS PAGE after adding each item).**

5. **When finished, click on VIEW CART/CHECK OUT. Here you can modify your order, such as increasing quantities or deleting items.**

6. **Once you are satisfied, click on CHECK OUT.**

7. **Your shipping information that we have on file will automatically appear. Make any necessary changes and click SUBMIT.**

   Your billing/cardholder information will also appear. Again, make any changes, select method of payment, enter appropriate information and click SUBMIT.

   Wait until your confirmation page appears and then print it out for your records.

...ALL DONE!!
Feeling Dizzy? Evaluation of the Vestibular and Balance System
According to the latest research, 85% of all dizziness and balance problems can be accurately diagnosed and successfully treated with a thorough evaluation. This colorful brochure includes an overview of dizziness and balance problems, symptoms, a self-quiz and the role of the audiologist in evaluating the vestibular system. (Package of 100) Non-Members $50, Members $40.

Crank it Down: Noise, Hearing Loss and Children
As many as 12% of children between the ages of 6 and 19 have noise-induced hearing loss. To educate parents, teachers and the general public, the American Academy of Audiology and the National Hearing Conservation Association have collaborated on “Crank It Down: Noise, Hearing Loss and Children.” This colorful brochure includes tips for parents and teachers, a list of childhood noise risks and an explanation of how noise can damage hearing. (Package of 100) Non-Members $50, Members $40.

Hearing Loss?
Brochure refills for the physician’s kit. Enrich your growing relationship with the physician each time you drop off more educational patient brochures on hearing loss. Each full-color brochure includes indicators for detecting hearing loss, reasons why the patient may be unaware of a hearing loss, general information on hearing aids, the Hearing Health Quick Test, and room for your practice’s contact information on the back. (pkgs of 100) Non-Members: $50.00; Members: $40.00.

Tinnitus
The patient who complains of hissing, roaring or ringing in the ears offers a special challenge to audiologists and other hearing health professionals. “Tinnitus” includes detailed information on what causes tinnitus, who suffers from it, what treatments are currently available, and what one can do to minimize its effects. Geared toward patients and their families, the brochure encourages tinnitus sufferers to consult an audiologist who is knowledgeable about tinnitus to help develop a management program. (pkgs of 100) Non-Members: $50.00; Members: $40.00.

HIV/AIDS Related Hearing Loss
Intended for anyone concerned about this issue for themselves, a family member or a friend, this brochure discusses the connection between HIV/AIDS and hearing loss. It also explains how this type of hearing loss can be prevented, what treatments are available, and why it’s crucial for HIV/AIDS patients with hearing loss to work closely with an audiologist. (pkgs of 100) Non-Members: $30.00; Members: $25.00.

Selecting the Hearing Aids That Are Right For You
Choosing hearing aids can be a confusing and often stressful experience for those dealing with hearing loss for the first time. This brochure offers a step-by-step guide to purchasing hearing aids and covers a broad range of hearing aid topics including styles, technology, and why consumers should consult an audiologist. The Academy’s Pre-Purchase Assessment Guideline for Amplification Devices is also included. (pkgs of 100) Non-Members: $50.00; Members: $40.00.

Newborn Hearing Screening
Intended for both parents and allied health professionals, this informative brochure emphasizes the importance of hearing screening for newborns. The brochure explains why a baby should be tested as soon as possible, how the testing will be done and the hearing milestones that are a part of an infant’s normal development. (pkgs of 100) Non-Members: $50.00; Members: $40.00.

Your Baby’s Hearing
Ideal for new parents, this brochure contains information on infant hearing milestones and hearing loss with simple advice for parents. Highlighting the importance of normal hearing in babies, it encourages parents to seek help from audiologists to request hearing testing. Available in English and Spanish. (pkgs of 100) Non-Members: $30.00; Members: $25.00.

Crank it Down: Noise, Hearing Loss and Children
As many as 12% of children between the ages of 6 and 19 have noise-induced hearing loss. To educate parents, teachers and the general public, the American Academy of Audiology and the National Hearing Conservation Association have collaborated on “Crank It Down: Noise, Hearing Loss and Children.” This colorful brochure includes tips for parents and teachers, a list of childhood noise risks and an explanation of how noise can damage hearing. (Package of 100) Non-Members $50, Members $40.

Hearing Loss?
Brochure refills for the physician’s kit. Enrich your growing relationship with the physician each time you drop off more educational patient brochures on hearing loss. Each full-color brochure includes indicators for detecting hearing loss, reasons why the patient may be unaware of a hearing loss, general information on hearing aids, the Hearing Health Quick Test, and room for your practice’s contact information on the back. (pkgs of 100) Non-Members: $50.00; Members: $40.00.

Tinnitus
The patient who complains of hissing, roaring or ringing in the ears offers a special challenge to audiologists and other hearing health professionals. “Tinnitus” includes detailed information on what causes tinnitus, who suffers from it, what treatments are currently available, and what one can do to minimize its effects. Geared toward patients and their families, the brochure encourages tinnitus sufferers to consult an audiologist who is knowledgeable about tinnitus to help develop a management program. (pkgs of 100) Non-Members: $50.00; Members: $40.00.

HIV/AIDS Related Hearing Loss
Intended for anyone concerned about this issue for themselves, a family member or a friend, this brochure discusses the connection between HIV/AIDS and hearing loss. It also explains how this type of hearing loss can be prevented, what treatments are available, and why it’s crucial for HIV/AIDS patients with hearing loss to work closely with an audiologist. (pkgs of 100) Non-Members: $30.00; Members: $25.00.
Say What...?
An Introduction to Hearing Loss Audio Cassette/ CD-ROM
This 12-minute interactive presentation discusses hearing and hearing loss and includes an activity segment of ten discrimination words filtered with various low-pass filter cut off frequencies to simulate sensorineural hearing loss. The CD demonstrates how difficult it is to identify sounds when a person has a significant hearing problem. Ideal for student and adult audiences, “Say What...?” can be used as a key part of medical and allied health in-service presentations. Cassette: Non-Members: $15.00 each; Members: $12.00 each. CD: Non-Members: $20.00 each; Members: $15.00 each.

Frontline Office Training Kit
This indispensable resource can improve the way your front office staff interacts with patients. The kit includes an informative videotape, educational audio cassette, an easy-to-use reference book, and a workbook - everything you need to ensure that every patient is met by someone who is a good communicator AND a good listener. Non-Member $120, Member $100.

Ethics CD  Two Featured Sessions on Ethics that were presented at Convention 2003 appear on this CD-ROM: The Ethics of Audiologic Research and Collaboration with Industry (FS801) and Ethical Practices Board Draft Conflict of Interest Guideline (FS805). Each CD-ROM includes: complete audio track and slides, learner assessment questions, session evaluation, user-friendly interface and .3 CEUs (must be on the Academy's registry). ABA Certificants: CEUs earned from this CD-ROM count toward the ethics continuing education requirement. Non-member $90, Member $75.

Diagnosis and Treatment of Hearing Disorders CD-ROM
This interactive educational program provides a tutorial review and illustration of current major test procedures in audiology, including behavioral and electrophysiologic techniques. In addition, it covers a wide range of disorders and pathologies, explores in-depth case studies, and includes an online exam that can be used to obtain GEUs from the American Academy of Audiology. $95 each.

Audiology Practice Essentials (APE) CD-ROM
This compilation of 65 helpful forms and letters is a valuable tool for your practice. The APE CD includes patient letters, surveys, case histories and intake forms as well as physician referral letters that will help cultivate your growing relationships with your referrals sources. Non-Members: $75 each; Members: $50 each.
**C H A R T S & P O S T E R S**

**Audiogram of Familiar Sounds**
This chart illustrates the frequency and intensity of general English sounds during normal conversational speech relative to common environmental sounds. Black & White. (pkgs of 100) Non-Member $30.00; Members: $25.00.

You can effectively market your audiology services to physicians with the highly acclaimed, test-marketed Complete Physician’s Referral Starter Kit. Each Starter Kit includes the comprehensive Building Bridges Instructional Binder and the Physician’s Hearing Health Kit, which comes complete with a Physician’s Handbook, 25 educational brochures on hearing loss for patients, an interactive PowerPoint presentation for “lunch & learns” and the HearPen Screener. Non-Member $90. Member $75.

**Ear Anatomy Chart & Poster**
This attractive full-color illustration is an updated version of the classic Zenith Ear Chart by Ernest W. Beck. Small Poster (8.5” x 11”) (pkgs of 100) Non-Members: $35.00; Members: $30.00. Large posters (17” x 22”) (single copy) Non-Members: $7.00; Members: $4.50.

**Ear Anatomy Write-On/Wipe-Off Chart**
This full-color 14” x 16” laminated ear anatomy chart allows you to write on the illustration and erase with a damp cloth. It is ideal for educating patients about the inner workings of the ear. (single copy) Non-Members: $15.00; Members $12.00.

**Supplemental Physician’s Hearing Health Kit**
Drop off one of these handy kits to every physician you want to partner with. Each Physician’s Hearing Health Kit comes complete with a Physician’s Handbook, 25 educational brochures on hearing loss for patients, an interactive PowerPoint presentation for “lunch & learns” and the HearPen Screener. Non-Member $60. Member $50.

**Private Practice (Audiology Today 2001)**
This wonderful resource provides everything you need for a successful private practice. Nationally known experts in the field cover many topics including getting started, counseling, marketing, quality assurance, specialization, partnerships, pricing and enjoying your business. (32 pages) Non-Member $20, Member $15.

**Adverse Drug Reactions and Audiology Practice (Audiology Today 2001)**
Some drugs can have a serious impact on hearing and auditory perception. This comprehensive listing of 315 side effects provides important information to audiologists and is a valuable reference tool. (20 pages) Non-Member $20, Member $15.

**Academy Monograph #1: American Wartime Military Audiology (Audiology Today 2002)**
The origin of audiology is generally acknowledged to have evolved from the rehabilitative services developed by the military during WWI and II. Audiology pioneer Moe Bergmen authors this well documented and widely researched historical account detailing the birth of the profession. (24 pages) Non-Member $15. Member $12.50.

**EDUCATIONAL Materials**

**Ethics in Audiology: Guidelines for Ethical Conduct in Clinical, Educational, and Research Settings (“The Green Book”)**
“As the specialty of audiology gains greater recognition as an essential health-care benefit, the public will fully expect that the practitioners have placed patients’ interests above their own. Advancing research and using evidence-based medicine is also crucial to the growth of a profession. This book provides guidance for those conducting research and provides advice for those in academia who are responsible for training the next generation of audiology professionals. The chapters cover a broad array of issues and will provide practitioners, researchers, and audiology students with valuable information. I trust that the reader will find this book a valuable guidepost, keeping in mind that ethical questions are not always theoretical and intangible but, rather, are often encountered in everyday life.” - From the foreword, by Richard Gans, PhD, President, American Academy of Audiology. Non-Member $75, Member $45.
American Academy of Audiology

is now offering to ALL members

**Association Health Programs**

<table>
<thead>
<tr>
<th>Health Insurance</th>
<th>Disability Income &amp; Critical Illness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td><strong>Dental &amp; Vision</strong></td>
</tr>
<tr>
<td>Group - full/part-time employees</td>
<td><strong>Retirement, Financial &amp; Estate Planning</strong></td>
</tr>
<tr>
<td>Student Plans</td>
<td></td>
</tr>
<tr>
<td>Short-Term Coverage</td>
<td></td>
</tr>
<tr>
<td>Medicare Supplements</td>
<td></td>
</tr>
<tr>
<td>International Travel Insurance</td>
<td></td>
</tr>
<tr>
<td>Health Savings Accounts</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Long-Term Care Insurance</th>
<th>AAA Business Owners Insurance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Care</td>
<td>Property &amp; Casualty</td>
</tr>
<tr>
<td>Assisted Living Care</td>
<td>All Risk Policies</td>
</tr>
<tr>
<td>Nursing Home Care</td>
<td>Call For A Proposal!</td>
</tr>
</tbody>
</table>

| Life Insurance                        |                                       |
|---------------------------------------|                                       |
| Term                                  |                                       |
| Universal                             |                                       |
| Survivorship (2nd to Die)             |                                       |
| Key Person                            |                                       |
| Executive Benefit Life                |                                       |

Rates and availability may vary by state.

**AAA Association Health Programs**

6319 West 110th Street, Overland Park, KS 66211
Toll Free (888) 450-3040
Phone (913) 341-2868
Fax (913) 341-2803
Web [www.associationpros.com/assoc/AUDIO](http://www.associationpros.com/assoc/AUDIO)
Email help@associationpros.com

Receive enhanced insurance benefits for yourself, your family, or your employees (both full and part-time)!
The American Academy of Audiology offers its members several benefits of membership. You may not even be aware of some of the advantages that come with being an Academy member. Not only are our members part of the world’s largest professional organization of, by and for audiologists, but they also benefit from discounts in a number of programs. Read on to find out more about the benefits of membership with the Academy.

**Publications:**
- Audiology Today
- Journal of the American Academy of Audiology

**Academy’s Annual Convention and Exposition:**
The largest in the world, displaying the latest technological advances in audiology at reduced member registration rates.
- 2005 – Washington, DC
- 2006 – Minneapolis, MN

**Continuing Education:**
The Academy’s CE Registry provides a transcript of your CEUs at a discounted member rate.
www.audiology.org/professionals/ce

**Professional Support Materials:**
The Academy offers discounted prices to members on a wide variety of:
- Educational Publications
- Audiograms
- Marketing Tools
- The Front Line
- Office Training Kit
- Market-tested Physicians

**FIND AN AUDIOLOGIST/LINKUP:**
LINKUP advertises your website for an annual subscription fee. Email ssebastian@audiology.org to order. This web feature helps consumers find you and enables you to network with other audiologists.

**Research Dome:**
The Dome online research subscription is the premier information service developed for clinicians, educators, researchers and students in the field of Audiology and Communication Sciences and Disorders. Save 47% off the regular price ($119.95) of an annual Dome subscription.

The special member price is $63.95. Academy candidate members save too! Candidate members subscribe for $35 (regular student price is $49.95), a 30% savings. Go to www.audiology.org for a free trial or to subscribe.

**Framing Success:**
Members receive discount prices on quality frames to display your membership certificate. Call 1-800-677-3726 today and proudly display your membership certificate or credentials.

**Academy Credit Card:**
With the Academy Credit Card, MBNA “gives a little something back” to the Academy every time you make a purchase, and you can earn points toward travel and brand-name merchandise. Apply online at www.audiology.org/professional/members/benefits or call 866-227-1553. Please mention priority code QL6K.

**Car Rental Discounts:**
Members can get up to 15% off with Hertz and Alamo. Additionally, coupons are available for one car-class upgrade and $10 off a weekly rental with Hertz, and one free day or $10 off with Alamo. For Hertz use Discount Code (CPD# 1299750) and/or call the Academy for member discount coupons. For Alamo be sure to request Rate Code BY and ID# 706768 and/or call the Academy for discount coupons.

**Compensation & Benefits Survey:**
The American Academy of Audiology conducted its fourth annual Compensation and Benefits Survey in the Fall of 2004. A full report of the survey with detailed information is available for Academy members online at www.audiology.org/hearcareers.

**Members can get up to 15% off with Hertz and Alamo.**

**Discounted Conference Call Services:**
The American Academy of Audiology has recently entered into a partnership with Premier Global. As a member benefit, you can take advantage of their state-of-the-art conferencing technology and award-winning billing systems at special member-only discounted rates.

**Geico Auto Insurance:**
Academy members may qualify for an additional discount off Geico’s already low rates. Call Geico today for a free rate quote at 1-800-366-2734. Tell them you are a member.

**HearCareers:**
Whether you are seeking a job or filling a position, the American Academy of Audiology’s HearCareers site has everything you need to achieve your hearing career goals. This online employment service allows job seekers to post their resume and view job postings for free. HearCareers offers discounted rates to our members who post positions. Go to www.audiology.org/hearcareers to make your next career connection with HearCareers.

**Membership Card/Calling Card:**
This dual-purpose card can be used as a GlobalPhone domestic or international calling card. It is also your permanent membership card for easy reference to your membership number. U.S. rates are from 3.9 cents per minute with no surcharges. To activate your calling card, call 1-800-866-895-5714 or go to www.audiology.org/callingcard.

**Professional Liability Insurance:**
The Academy has endorsed the professional liability insurance program offered through Healthcare Providers Service Organization (HPSO). We selected this program because of the plan’s many benefits, affordable rates, and their commitment to customer service. For more information, call 1-800-982-9491 or visit their website at www.hpso.com.
If you answered yes to one of the above questions, then you should explore what HearCareers has to offer. The American Academy of Audiology’s employment site provides valuable resources to individuals seeking employment and to employers looking to fill a position within the audiology field.

Employers can reach hundreds of job seekers looking for employment in the audiology field by simply posting a job on HearCareers at the lowest rates available anywhere. With a 30-day job posting, employers have access to an extensive database of resumes. Employers have the option to contact job seekers directly through the site, or have job seekers contact them directly through the site. There is no limit to the length of the job posting and if they prefer, employers may list their company information as confidential. Once the job is posted, employers will have the ability to see how many times their job posting was viewed by job seekers.

Whether you are preparing to graduate or just need a change, HearCareers can help you achieve your career goal. In addition to being able to post your resume for potential employers to view, the site also provides valuable information regarding resumes and interviewing. Take advantage of one of the many features offered on HearCareers such as Notify Me! Notify Me! gives job seekers the option of receiving weekly emails alerting them that a job matching their search criteria has been posted. Up to three documents can be uploaded onto HearCareers making it easy for job seekers to apply for jobs directly through the site. There is no charge to post a resume, and if desired, it can be listed as confidential.

HearCareers provides audiology professionals with an easy and convenient way to achieve employment goals. For more information be sure to visit the site at www.audiology.org/hearcareers.

### CLASSIFIED ADS

#### GEORGIA

**PRIVATE PRACTICE FOR SALE:**


#### MISSOURI

**IMMEDIATE OPENING FOR AUDIOLOGIST:**

Full-time audiologist in a busy ENT office located in Southeast Missouri. AuD preferred. Services include basic diagnostic audiology, HA dispensing, some electrophysiological testing and vestibular rehabilitation. Experience with programmable and digital hearing aids a plus. Competitive salary and excellent benefits package, including health, dental, life, disability, and malpractice insurance, licensure and dues. Please FAX or e-mail CV to 573-335-4466 or call 573-334-5539. E-mail address: semoent@igateway.net

For information about our employment website, HearCareers, visit www.audiology.org/hearcareers. For information or to place a classified ad in Audiology Today, please contact Elizabeth Hargrove at ehargrove@audiology.org or 1.800.AAA.2336, ext 1039.