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# Hearing assistance technology and patient counseling in audiology

Jessica Teymouri

*Washington University School of Medicine in St. Louis*

Michael Valente

*Washington University School of Medicine in St. Louis*

Au Bankaitis

*Oaktree Products, Inc.*

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# HEARING ASSISTANCE TECHNOLOGY AND PATIENT COUNSELING IN AUDIOLOGY

BY JESSICA TEYMOURI, MICHAEL VALENTE, AND AU BANKAITIS

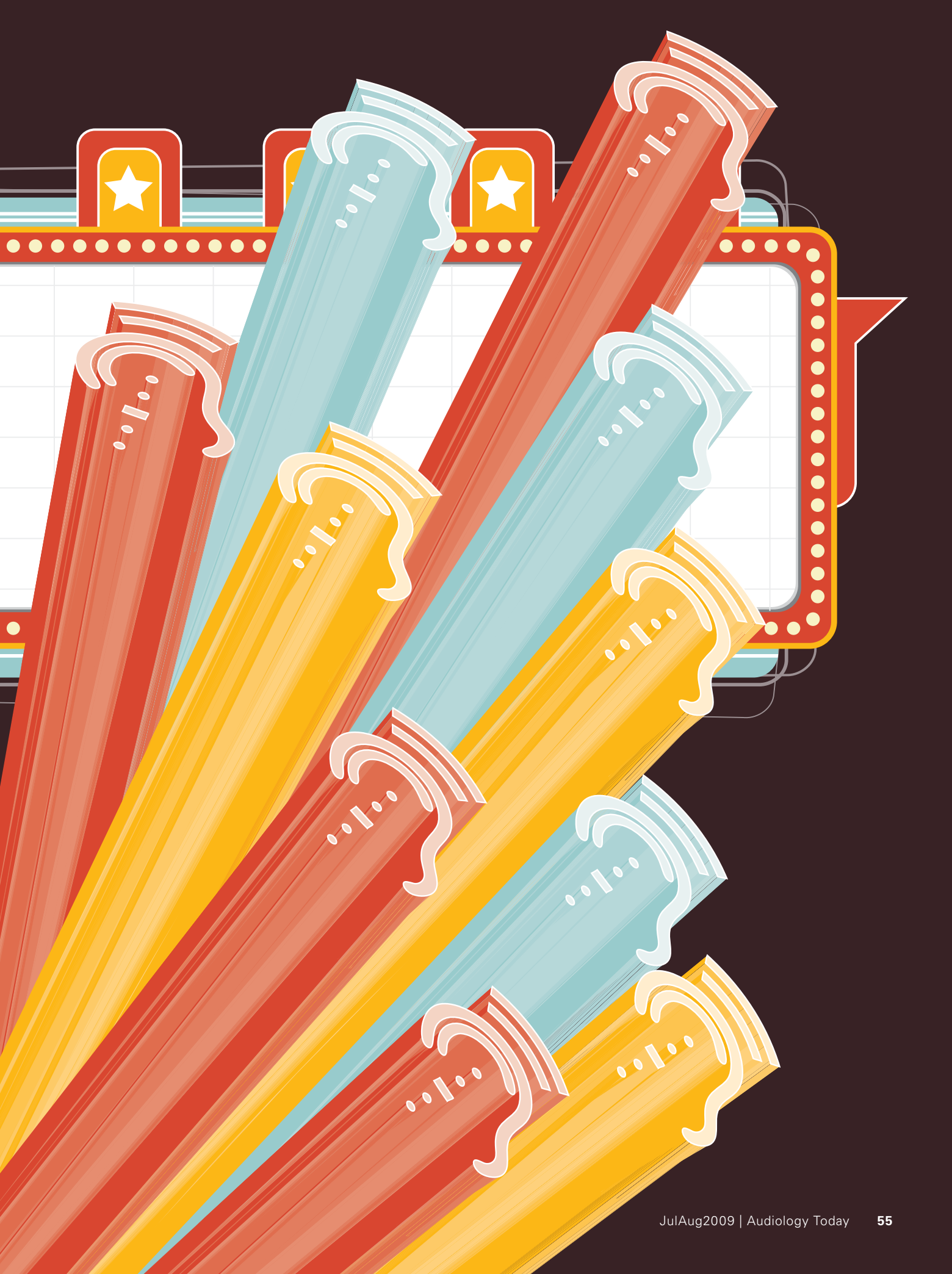
**With the widespread availability of hearing assistance technology in cinemas, theaters, and symphony halls, those with hearing loss do not have to make terms with an empty social calendar. All that these patients may require is basic information and encouragement.**

A tendency toward isolation is arguably one of the most devastating consequences of hearing loss, and also the most elusive.

Frequent incidences of miscommunication often lead to embarrassment for those with hearing loss. Whether it is laughing at an inappropriate time or appearing confused during conversation, many of our patients find it less painful to simply avoid social interactions rather than risk making another hearing loss related faux pas. As a result, those with hearing loss may forego attending theater and symphony performances or going to the cinema.

One of the ways audiologists can play a pivotal role in alleviating patients' social fears is by familiarizing them with hearing assistance technology (HAT). With the widespread availability of HAT in cinemas, theaters, and symphony halls, those with hearing loss do not have to make terms with an empty social calendar. All these patients may require is basic information and encouragement.

The Division of Adult Audiology at Washington University School of Medicine in St. Louis, and the Program in Audiology and Communication Sciences



(PACS) at Washington University School of Medicine have adopted a simple, yet novel, approach to showing patients that they do not have to remove themselves from social activities that involve active listening. We have succinctly listed entertainment venues in the greater St. Louis metropolitan area that offer assistive devices for those with hearing and vision loss, and provided this information to our patients in the form of a brochure (below), with more detailed information available on the PACS Web site (<http://pacs.wustl.edu>), and the Web site of the Division of Adult Audiology at Washington University School of Medicine in St. Louis (<http://audiology.wustl.edu>).

The extent to which we address and strive to allay quality-of-life deficits has far-reaching implications for our patients. We already know, for example, that the average duration of an untreated hearing loss is approximately ten years. By the time a potential patient decides to pursue amplification, the likelihood that he or she has developed maladaptive strategies is high. Decreased confidence is a common side effect experienced while

adjusting to a sensory deficit. For example, in a recent psychological profile, working adults with mild-to-moderate hearing loss were found to be more susceptible to depression, anxiety, interpersonal sensitivity, and hostility, as compared to subjects without hearing loss (Mozani et al, 2008). The authors surmised that “the sensory impairment and its associated disability may discourage hearing-impaired individuals from exposing themselves to socially challenging situations, producing isolation that leads to depression.... The same psychological symptoms can compound and worsen the picture by influencing social behavior of the affected persons” (p. 61).

The philosophy behind the creation of a HAT brochure as a counseling tool is steeped in a comprehensive approach to aural rehabilitation. Cinema, theater, and music venues are among the main purveyors of entertainment and education in popular culture. Such forms of artistic expression have the remarkable ability to provoke our emotions, stir memories, and remind us of our common bonds. These experiences ought not to



be underestimated as means of social stimulation from which our patients with hearing loss could especially benefit. Furthermore, discussion of a performance can often be a catalyst for conversation and socialization, which is precisely what we are encouraging our patients to do!

Personal fears aside, what stands between our patients and their enjoyment of these performances? According to Harkins and Tucker (2007) it is often a lack of information. In their study, the authors reported some of the difficulties with obtaining HAT in public venues. Of 276 respondents, 83 percent had used HAT in a public place. Of this group, 75 to 80 percent reported that they sometimes, often, or very often experienced problems related to inadequate signage for locating HATs in public venues, if assistance was offered at all. It was with these concerns in mind that we created the HAT brochure for our patients.

The project began by compiling a list of entertainment venues from Web sites such as yellowpages.com, where we thought HAT might be offered. Often, we had

to search further to find a phone number that would connect us to staff, as opposed to the number that is published for general recorded information on showtimes, hours, and location. Once the correct contact number or e-mail address was obtained, we called each venue to confirm that HAT was available, and, if so, requested to speak to someone who was knowledgeable. We inquired about types of technology (e.g., rear window captioning, infrared, FM), how many pieces of equipment were available, which manufacturer was used, where and how patrons could rent equipment, sanitization methods, and what type of collateral, if any, was required to obtain the device. Additionally, we obtained information on other forms of assistance, including narrative devices for the visually impaired, sign-language interpretation, and preferential seating.

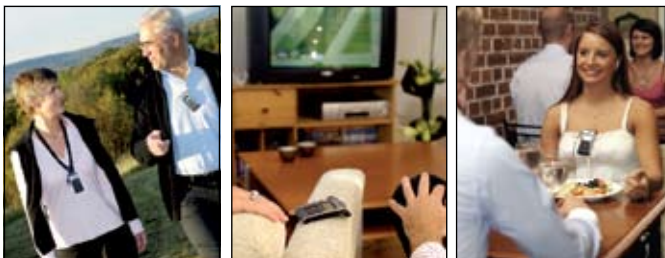
We faced challenges reaching someone who was knowledgeable in these areas and were often referred to managers who were not readily available. Requesting information, and, consequently, waiting to receive

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**Figure 1: Personal Devices for Theater Settings**

**T-coils**

If your hearing aids have a telecoil (t-coil) or t-coil program, you may use this setting in theaters with induction field loop systems. T-coils can be thought of as mini-antennas, which receive magnetic information. Your hearing aids will detect the signal being emitted from the stage, or sound system, and send the sound directly to your hearing aids. Therefore, there is no need to rent equipment.

**Personal Neck Loops**

Just as a large loop around the room creates a magnetic induction field, so can such a “loop” of wire around a person’s neck create a usable magnetic induction process. As sound in public places is transmitted over loudspeakers, it can also be transmitted (wirelessly) to small receivers that are owned by patients with hearing loss who may be seated anywhere in the audience. If you own such a device, you are able to plug your neck loop into your FM receiver and, with the t-coil turned on, hear the sounds that others are hearing via loudspeakers, much clearer than normal hearing people. This is called a personal FM system.

**Personal FM Systems**

If you own a Clarity C120 personal listening system you may use your headphones in theaters without any additional equipment. The Clarity C120 system has a “home” setting, as well as an “away” setting. Simply set the channel on your headphones to “away,” and they will detect the infrared signal at the venue and direct the sound from the stage, or sound system, directly to your headphones. Be sure to reset the channel back to “home” after the performance so you can enjoy the use of your C120 at home.

responses via voice mail or e-mail was common. It was also discovered that many theater troupes, although listed under the heading of “theaters” in references such as yellowpages.com, actually rent space in various theaters and are unaware of what is offered at each site. There were theaters at which we left numerous voice messages to no avail. We attempted to include these sites by sending a questionnaire through traditional mail but did not receive responses from these venues.

The overwhelming majority of theater employees were prompt to return our messages and glad to answer our questions. However, none accepted our offer to visit their venue to verify that all equipment was functioning, troubleshoot broken equipment, discuss sanitization procedures, or brief employees on how the technology works so as to better explain its use to patrons, despite the fact that these services would be provided by a volunteer AuD student at no charge. Typically employees, or managers, responded by stating they were not interested in this service, or explained they adequately maintained the equipment and did not need assistance. All venues stated

they used alcohol wipes to disinfect their equipment, or replaced the foam padding covering the earphone after each rental.

After gathering the pertinent information on HAT, we needed to design an informative, yet brief, brochure to be dispersed to patients at our three clinics in the St. Louis area. In the brochure, we use the disability access symbols for ease and familiarity. A brief explanation of the symbols is offered with a smaller version of the symbol listed next to the name of the theater at which it is offered. For example, the Municipal Opera Association of St. Louis offers HAT, audio descriptions, sign-language interpretation, as well as captioning. Therefore, all four symbols are shown next to this venue. The Web site addresses for all venues are listed, along with the aforementioned Washington University Web sites, which contain detailed information such as which evenings sign-language interpretation is available, where to inquire about renting devices, as well which manufacturer of the available technology is used at a particular location. Patients can also learn more about using their own

personal neckloop or earhook devices, or how to use the telecoil feature in their hearing aids to gain access to the infrared signal in a theater (FIGURE 1). Our Web sites also include a disclaimer, explaining that we relied on testimony from employees when gathering information and cannot guarantee accuracy (FIGURE 2).

The need to encourage our patients with hearing loss to make an effort to stay connected is demonstrable. It is our duty as audiologists to inquire about lifestyle and interests during evaluations or other counseling opportunities, and to address all potential sequelae of hearing loss. For example, when taking a case history, it is not uncommon for a patient to report that he or she stopped going to movie theaters and other performances years ago. Familiar reasons may include: "I don't understand what's being said," or "I can't hear the actors." From our personal experiences, the majority of patients are not aware of what HAT is but are eager to learn more once they know of its existence. This is an opportunity for the audiologist to segue with "Do you know that most theaters provide assistive technology for those with hearing loss?" An explanation of HAT may be given, and the brochure may be presented to the patient.

We believe that by providing information about the various types of HAT in public venues, our patients will feel empowered to reclaim a part of their life they may have abandoned due to hearing loss. It is our hope that, in turn, these individuals will feel bonded to their families, communities, and, of course, their audiologists. 🎧

Jessica Teymouri is an AuD candidate with the program in audiology and communication sciences at Washington University School of Medicine, St. Louis, MO. Michael Valente, PhD, is with the adult division of audiology at Washington University School of Medicine. AU Bankaitis, PhD, is vice president and general manager of Oaktree Products, Inc., in Chesterfield, MO.

## References

Harkins J, Tucker P. (2007) An internet survey of individuals with hearing loss regarding assistive listening devices. *Trends Amplif* 11(2):91-100.

Monzani D, Galeazzi GM, Genovese E, Marrara A, Martini A. (2008) Psychological profile and social behaviour of working adults with mild to moderate hearing loss. *Acta Otorhinolarygol Ital* 28(2):61-62.

### Figure 2: Example Disclaimer

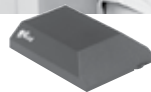
Disclaimer: All information contained in this document is listed as reported by employees of the venues. Accuracy of this information could not be directly verified by any person associated with Washington University School of Medicine. Although we strive to provide thorough and accurate information, the type of hearing assistive technology, the number of pieces of equipment, and collateral information may deviate from what is contained in this report. Deviations may be the result of inaccurate information reported, loss and/or damage to equipment, or implementation of new policies or technology. In all instances where information is incomplete, or missing, it is due to the inability to obtain the information from the venue.

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