A cLEAR™ Solution to the Changing Climate of Hearing Healthcare

By Nancy Tye-Murray, Ph.D.
Last year, the President’s Council of Advisors on Science and Technology (PCAST) recommended that the Food and Drug Administration allow basic hearing aids to be sold over-the-counter so that individuals with hearing loss may purchase them online, at the local pharmacy, or at a big-box store for considerably less money than from an audiologist (PCAST, 2015). This recommendation was endorsed this year by the National Academies of Sciences, Engineering, and Medicine, in their Recommendation #7:

The Food and Drug Administration should establish a new category of over-the-counter (OTC) wearable hearing devices. This device classification would be separate from “hearing aids.” OTC wearable hearing devices would be defined as wearable, OTC devices that can assist adults with mild to moderate hearing loss. (http://www.nationalacademies.org/hmd/~/media/Files/Report%20Files/2016/Hearing/Hearing-public-release-slides.pdf).

These recommendations may offer a new lower cost option for the millions of people in this country who have hearing loss but who might not buy hearing aids because of high costs. At the same time, such recommendations have sent a shockwave through the private-practice audiology community, leading many audiologists to engage in collective soul-searching about who they are, what they do, and where they are headed as professionals (e.g., Fabry, 2015; Windmill, 2016; Weinstein, 2016). In the foreseeable future, many potential patients may not engage a hearing healthcare professional but instead opt for that one-time transaction with a store representative or an online service. The recommendations no doubt portend changing times and explicitly raise the question, How should audiologists in the private practice respond to the shifting climate of hearing healthcare?

One solution is to customize the patient’s hearing healthcare and ensure that the interactions that occur between patient and audiologist are both unique and exclusive. To demonstrate both of these concepts, I’m going to describe my company, clEAR (customized learning: Exercises for Aural Rehabilitation”), but first, let’s consider the solution itself.

One Half of the Solution: Customized Hearing Healthcare

When people walk into an audiological practice, a common assumption is that the audiologist’s only recommendation will be for them to buy hearing aids. This isn’t necessarily an incorrect assumption because the majority of people with hearing loss can indeed benefit from amplification, so the recommendation is warranted. By selling the patient a pair of hearing aids, the audiologist provides benefit. But the assumption is not without its downside, not the least of which is that the audiologist’s role has been converted into that of salesperson, thereby pitting the audiologist’s practice against the likes of Costco and Sam’s Club, which is like pitting David against Goliath without the happy ending. Moreover, this assumption may impinge upon the bond of trust an audiologist attempts to forge with patients. For example, some patients may perceive a practitioner’s concern and empathy as ploys to get them to buy expensive hearing aids. These downsides are reasons for audiologists to recast their role. Instead of approaching patients as a sales people, audiologists will be much more successful in the long run by approaching them as purpose-driven hearing healthcare professionals who are willing and able to play a leadership role in addressing their listening challenges.
In the infamous words of Steve Jobs, “a lot of times people don’t know that they want until you show them.” Most patients know they want to hear better, but they don’t always know how to make that happen. Garfield and Levy in their book, *Can’t Buy Me Like* (2013), argue that great businesses operate from the perspective of purpose. On this preposition, it is the audiologist’s purpose to lead their patients toward a clear understanding of their hearing problems and to make recommendations for a customized hearing healthcare plan. Another way to think about purpose is to ask how audiologists provide value to their patients: audiologists provide value by performing a thorough assessment of a patient’s hearing and communication needs (American Academy of Audiology, 2006) and then by making recommendations for an appropriate rehabilitation plan. Rehabilitation is where customized hearing healthcare comes to the forefront.

Customized hearing healthcare (Figure 1) is comprised of four components:

1. Understanding and addressing the patient’s particular predicament;
2. Giving a central role for the frequent communication partner (e.g., a spouse, an adult child, a caretaker) to play in the hearing healthcare plan;
3. Creating a sense of community and belonging for the patient; and
4. Ensuring that the audiologist is a real presence in the patient’s journey.

By leading patients into customized hearing healthcare, an audiologist will help their patients to understand that good hearing healthcare is not comprised solely of diagnostics and amplification (although both are certainly a big part in addressing their particular predicament), but also entails addressing their idiosyncratic listening challenges, involving their communication partners (after all, conversation takes two), giving them the support of a community, and providing them with ongoing guidance and assurance.

**The Other Half of the Solution: A Unique and Exclusive Hearing Healthcare Experience**

Dedicated cyclists love hanging out in cycling shops. They’re not necessarily there to buy a bike; instead, they may be browsing for the latest bicycle accessories, investigating an upcoming race, or asking about a problem tire. Similarly, many people don’t buy a cup of coffee at Starbucks because they need a jolt of caffeine—for that they can go to any convenience store, gas station, or fast food restaurant—they’re at Starbucks for the experience of relaxing in a comfortable chair, listening to hip music, and luxuriating in the unspoken fellowship of fellow coffee-drinkers.

This is not to suggest that audiologists start selling bicycles or offering high-end coffee, but the experience of interacting with an audiological practice has got to be positive, reassuring, successful, and ultimately empowering. It also has to be one that cannot be easily replicated by those who do not have an advanced degree in audiology.

**An Example: cLEAR™**

cLEAR™ is a web-based service, available to patients only through their audiologist. cLEAR provides affordable auditory training and is designed to enhance patients’ abilities to recognize the speech of their frequent communication partners and of everyday talkers, especially in noisy environments. A multidisciplinary team of hearing and behavioral scientists developed, validated, and
implemented the clEAR training games (see sidebar). A unique feature of clEAR is that it includes a recording and automated editing system so that patients can receive customized auditory training to recognize the speech of a specific frequent communication partner. A second unique feature of clEAR is that the training activities are presented in a game-like format so training is engaging, efficient, effective, and successful (Figure 2).

The clEAR™ solution is designed to promote conversational fluency and has four key elements (Figure 3):

- **Generic Talkers**: Select an FCP
- **Fun activities**: Outstanding compliance
- **Common words**: Fine distinctions
- **Cognitive skills**: Confidence

Figure 2. Screenshots from four of the clEAR auditory training games, in clockwise order from upper right: TreatEAR Island, FarmEAR in the Dell, EARonaught, and pEARl Crunch. Each game trains auditory skills that are important for good conversational fluency, including recognizing the most frequent words of the language, phoneme discrimination, bound morpheme discrimination, connected discourse comprehension, auditory processing speed, auditory working memory, auditory attention, and overall confidence to engage in conversation.

Figure 3. Four key elements of clEAR: 1) The option of receiving auditory training with the speech of generic talkers (male, female, or child) or with the speech of a frequent communication partner (e.g., spouse); 2) games that are engaging and effective; 3) training goals that are based on solid principles of learning (Barcroft et al., 2008; Barcroft et al., 2016); and 4) audiologist involvement through the use of feedback graphs, emails, and a community chatroom.

Research About clEAR™ and Customized Hearing Healthcare

- Customized auditory training works (Barcroft et al., 2011; Barcroft et al., 2016; Tye-Murray et al., 2016).
- clEAR™ auditory training reduces perceptual effort (Sommers et al., 2015).
- clEAR™ auditory training increases confidence to engage in everyday conversations (Tye-Murray et al., 2012).
- Coaching and oversight from a hearing healthcare professional enhances the auditory training experience (Tye-Murray et al., 2012).
- clEAR™ auditory training with the speech of a frequent communication partner such as a spouse enhances word discrimination and reduces everyday listening challenges (Tye-Murray et al., 2016).
- Patients have flexibility in pursuing a training schedule with clEAR, and can either opt to train in training sessions that are “massed” together or that are “spaced” over longer time periods (Tye-Murray et al., in review).
- clEAR™ incorporates proven principles of cognitive psychology and second-language learning (Barcroft et al., 2007; Barcroft et al., 2016).
1. The option of selecting specific talkers and talker types to use for auditory training;
2. The games themselves;
3. The training goals; and
4. The audiologist’s professional oversight and guidance.

cLEAR is a clinical tool, and just one of many, that will augment customized hearing healthcare and make interacting with an audiologist an exclusive and superior experience. With cLEAR, each of the four elements of customized hearing healthcare (Figure 1) are addressed in the following ways:

- **Addressing the patient’s predicament.** cLEAR can be customized with the generic voices that are stored or with the voices of a patient’s frequent communication partners. Using cLEAR’s propriety recording/editing system, patient’s frequent communication partners can record the training stimuli, prompted by cLEAR’s built-in teleprompter. The recordings are automatically incorporated into the auditory training games.

- **Involve the important people in the patient’s life.** Recording the auditory training stimuli gives the frequent communication partners an explicit and positive role to play in their loved one’s audiological rehabilitation plan.

- **Create a sense of community for a practice’s cLEAR patients.** Audiologists who become cLEAR Professional Providers have their own cLEAR bulletin board, which allows them to communicate with their cLEAR patients. By playing the games, patients also earn cLEAR coins, which are tokens that are entered into their cLEAR Professional Provider’s communal “treasure chest”. Coins serve to heighten the sense of belonging to a community because the cLEAR Professional Provider identifies an end goal for which the coins are to be used; for example, the Provider may donate a hearing aid to a child in need after a specified number of coins are earned.

- **Become a part of the patient journey.** cLEAR allows the audiologist to become a partner in each patient’s journey. Our company so strongly believes that an audiologist should be involved that we offer hearing healthcare professionals a wholesale price that is roughly one half the retail price and assign all direct users to a cLEAR Professional Provider. Audiologists can enroll as a cLEAR Professional Provider with no obligation or cost at clearworks4ears.com.

**Final Remarks**

Many patients experience failure throughout their day as a result of their hearing loss—they fail to understand a spoken remark, they fail to respond appropriately in conversation, or they fail to be attentive because of listening fatigue. Not only do the cLEAR auditory training games develop listening skills, but they are explicitly designed to provide a positive experience and to allow patients to experience success because of rather than in spite of their hearing abilities. The difficulty level of many of the games change adaptively with performance by varying background noise, so patients always experience a preponderance of success.

In summary, by offering customized hearing healthcare and a unique and superior experience to their patients, audiologists will continue to reign as the optimal source for hearing healthcare.

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