Direct-to-Consumer Services Comments on the *hi HealthInnovations* Hearing Aid Dispensing Program

By Mark Ross

Mark Ross, longtime contributor to *Hearing Loss Magazine* and renowned audiologist, takes a close look at the UnitedHealthcare® *hi HealthInnovations* from both the professional and consumer viewpoint.

When *hi HealthInnovations,* a subsidiary of the UnitedHealthcare® Group, announced that it would be dispensing hearing aids directly to consumers via the Internet, it soon elicited concerned reactions from the American Speech-Language-Hearing Association, the American Academy of Audiology, and the Hearing Industries Association. These organizations all contacted the FDA to express their judgment that the program would not be in a consumer's best interest.

While it is tempting to dismiss these concerns as being motivated purely by self-interest, which undoubtedly does play a role, the professional and trade groups raise legitimate points which should be addressed. The purpose of this article is to describe and comment on this specific dispensing program (not Internet sales of hearing aids in general) basically from the point of view of consumers; this is not always congruent with that of either professional organizations or trade groups.

A Close Look at the UnitedHealthcare Plan

The plan offers hearing aids for no cost to certain UnitedHealthcare Medicare Advantage members, as well as directly to Medicare enrollees outside of their network at a reduced price. The line of hearing aids range from in-the-ear (ITE) aids at $949 to mini and regular behind-the-ear (BTE) aids at $749. These are modern, digital hearing aids and include such features as wide-dynamic-range-compression (WDRC), directional microphones, a noise management program, and a feedback suppression program. What these aids have in common, and this is a crucial component of the program, is that only people who can use an "open-fit" device (no personal earmold required) are candidates. This would be those whose hearing losses are 40 dB or less at 500 and 1,000 Hz and 65 dB and less at 2,000 through 6,000 Hz. We would classify these people as having a mild-to-moderate hearing loss. Most of the people with a hearing loss who do not currently wear hearing aids likely fall into this category.

Audiological Candidacy

In the *hi HealthInnovations* program, audiological candidacy is determined by a test taken online. The test consists of two components: adjusting the loudness of tones until threshold is determined, and completing a twelve-item self-report questionnaire (the Hearing Screening Inventory) that asks people to rate everyday communication difficulties. Consumers can also elect to have an existing audiogram sent to the company rather than taking the online test.

The test results are used to program the hearing aids with three different listening options; the user selects the one that is preferred. Nowhere is there face-to-face contact with a professional to provide personalized fitting and such follow-up services or individualized information as might be required.

While many of these people might not require further services, this cannot be determined beforehand. This indeed is a major point made by the professional and trade organizations in their contacts with the FDA.

Another crucial point in the complaints to the FDA concerns the accuracy of the online tests. There are two such types of tests, one specific to clinics and one to be taken at home (only the home version is currently available). In both versions, the printed directions on the screen require subjects to adjust a virtual volume control at each test frequency until thresholds are obtained. It is the home-based test that has elicited the most concern. It is not possible in that setting to control the calibration of the different earphones used or the acoustical conditions in the home. An accurate hearing test, in other words, is almost by definition impossible. Several complaints to the FDA cited instances of normal hearing people who failed the test and were thus considered hearing aid candidates. When queried about these false positives, Dr. Dianne Van Tassell, who developed the test, suggests the false positive responses may have been due to answers given in the twelve-item subjective questionnaire or to the relatively lax standards used to define "normal hearing." In any event, it is clear that further research would be desirable.

In the article in *The Hearing Journal* describing the test's development, Dr. Van Tassell points out that the purpose of the online test is not to determine absolute hearing thresholds across frequency but, specifically, to acquire sufficient information to correctly program a hearing aid. It is usually assumed that air-conduction thresholds are a prerequisite for programming a hearing aid; however, the study describes

a procedure for programming hearing aids that does not require conventional hearing thresholds.

In order to do this, it is necessary to consider the two main contributors to the individual variations in audiometric configurations—the severity and the slope of the hearing loss. In the *hi HealthInnovations* approach, the severity of a hearing loss is addressed by factoring in the predictive relationship that occurs between the scores on the self-report questionnaire and a person's average pure-tone thresholds. A person's score on this test is highly related to the severity of the hearing loss, as determined by conventional audiometry. This relationship was indeed found in the study.

Slope information is estimated by comparing the difference between the measured thresholds at 2,000 and 4,000 Hz. Although it is not possible to deduce the absolute thresholds at these points, it is possible to accurately define the difference between the obtained thresholds; the larger the difference, the greater the degree of high frequency hearing loss. This information, combined with information on the person's age and gender, is used to predict the three most likely audiograms. (The details for how this formula works—patent applied for—is not included in this article.) The program then generates a suitable hearing aid response for these three audiograms and programs the aids with three listening options.

The research study compared the hearing aid response obtained in the online test to the one that would have been recommended were conventional air-conduction thresholds available. The results showed that there were only minimal differences between the prescription recommended when the online test was used and that chosen when a conventional audiogram was the basis for the prescription. In other words, even without a conventional audiogram, it proved to be possible to accurately program a hearing aid.

Given the same acoustic responses, it is presumed that people who purchase hearing aids using this approach would hear as well with their hearing aids as those whose aids were selected by a professional. Perhaps so, but we should understand that this is a procedure with a narrow view of the hearing aid selection process, or the potential value of the totality of the interactions between a dispensing professional and their clients. It might be useful to evaluate this procedure in light of the bundling versus unbundling clinical framework when selecting hearing aids.

Bundling vs. Unbundling Pricing Models

In "bundling" there is one price for the entire selection process, from the initial audiological examination, hearing aid selection procedures, to several scheduled follow-up appointments. In some dispensing practices, the bundled service would also include a short-term individual and/or group hearing aid orientation or aural rehabilitation program. In short, bundling includes all services deemed "necessary" to successfully fit a hearing aid. All these services would be included in the total cost of the hearing aid. The downside on bundling is that people who do not need, or do not elect to avail themselves of some services, would be paying the same price as those who did. Moreover, as one would expect, the composition of the actual "bundle" differs considerably in different practices. Most, however, would include a comprehensive audiological evaluation, necessary hearing aid selection procedures, informational counseling, and one or more routine follow-up appointments.

In the extreme "unbundling" concept, the entire dispensing process is broken down into its component parts. There would be a fee for each component that a person receives; i.e., every audiometric test (pure tone, speech tests, comfort, tolerance, etc.), any and all tests administered during the hearing aid selection (real-ear, speech, comfort, tolerance, etc.), reprogramming and verification visits, informational counseling, communication training and so on.

In the current ongoing debate the big question appears to be the composition of the "bundle;" i.e., the services and procedures that should be included in the basic selection of hearing aids. Some opt for more tests, more information, more follow-up, etc. Others, citing cost considerations, opt for less, limiting the selection procedure to its most fundamental activity and then charging a fee for any additional test or service.

The *hi HealthInnovations* program is an extreme example of unbundling. This is probably the reason it is able to dispense aids at such reasonable prices. The test and hearing aid selection constitutes the entire procedure. No face-to-face contacts, no counseling, no individualized selection of tests, no information on the care and maintenance of hearing aids, etc. A printed User Guide is provided as the main source of information. However, for those who elect to do so, the company does have professional advice available via the telephone or the Internet. The big question is whether this program can provide the help that hearing aid users require, a need that more often than not transcends the focus on the hearing aid (the product) and relates to issues arising out of the problem (the hearing loss itself). My concern is that a narrow focus of the hearing aid selection process trivializes the sense of hearing; it implies that all that people with a hearing loss need is a hearing aid, and lo and behold, their problems are solved. The auditory sense is just too important to be treated so casually.

Still, the program does have some redeeming features (at least from my point of view). While the price of aids has often been dismissed as a major obstacle to the purchase of hearing aids, it nonetheless presents a serious barrier for many, particularly for those with mild and moderate hearing losses. Or precisely that population for whom this procedure has been designed. Many people in this loss category can "get along" without hearing aids; they often feel that expensive hearing aids do not offer sufficient value for the money. But when hearing aid costs are significantly less, the potential hearing benefits produced by hearing aids may now be worth the investment. Thus, by reducing the cost of hearing aids, there is a strong possibility that the program may attract people who, heretofore, rejected

continued on page 30

hi HealthInnovations

continued from page 29

the use of hearing aids and thus expand the percentage of hearing aid users in our society.

It is the clinic version of the *hi HealthInnovations* procedure, however, that may ultimately have the greatest impact. From what I was told, this version, not yet available, will soon be distributed. The company plans to distribute a free software package and calibrated earphones to primary care physicians, encouraging them to include the hearing test as a routine part of their physical examinations. An even moderately successful clinic program can significantly increase the number of hearing aid users. Studies in the United Kingdom (as cited by Dr. Van Tassell) have already shown that open-fit devices can increase access to hearing aids. Unlike the home version of the procedure, the resulting thresholds are directly comparable to those obtained using traditional audiometry. Any patient who meets the audiometric criteria for an open-fit hearing aid can be referred directly to *hi HealthInnovations*. Those found to have more severe hearing losses are referred for appropriate medical or audiological services. The clinic program has the merit of ensuring that all potential hearing aid candidates have already ruled out any condition that precludes the use of a hearing aid (by virtue of the examination by the primary care physician).

It is the first-time user, the person who receives aids via the home version of the program, which concerns me the most, not experienced users who are just in the market for a reasonable hearing aid replacement. Not that they couldn't benefit from additional aural rehabilitation services, but this is not as crucial a consideration in their case. They pretty much know what they're looking for. The new user, on the other hand, may not be aware that other services (i.e., assistive devices) or useful coping strategies exist. They might even not know enough to ask the right questions, believing that all that can be done to ease their hearing plight are hearing aids.

Summary

Clearly there are both positive and negative elements to this program. On the positive side, the program might introduce hearing aids at a reasonable cost to a heretofore relatively unserved population, those who are candidates for an "open-fit" hearing aid. The question to ask here is whether these people would be better off not using personal amplification at all, rather than one who omitted personal contacts with the hearing aid dispenser. As much as I would hate to see the professional community essentially bypassed, my judgment is that for this population only the merits of the program outweigh the negatives. Some help is better than none. And hopefully, for those who need more, this is just a first step. HLM

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Mark Ross, Ph.D., is retired and wrote for many years for Hearing Loss Magazine *as an associate at the Rehabilitation Engineering Research Center (RERC) at Gallaudet University. He was awarded the HLAA Lifetime Achievement Award in June 2008. He and his wife, Helen, live in Storrs, Connecticut. To find more Dr. Ross articles on technology for consumers, go to* www.hearingloss.org and www.hearingresearch.org.