

# **A Retrospective Look at the Future of Aural Rehabilitation**

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It is accepted that the need to provide aural rehabilitation for servicemen deafened as a result of WW II injuries precipitated the emergence of audiology as a separate profession. Over the years, the profession and individual audiologists have struggled to balance this role with the need to act in a technical support role for the medical profession. In this development, for many reasons, aural rehabilitation has usually been relegated to secondary status, carrying less prestige, recognition, and rewards. A case is made in this article that it is possible to provide for much – not all – of the aural rehabilitation needs of our patients within the hearing aid selection process – with an emphasis on *process*.

## **IN THE BEGINNING**

By all accounts, the audiology profession had its genesis in WW II, as an outgrowth of the aural rehabilitation (A/R) programs provided for servicemen who lost hearing in the war. What the government did was bring together a variety of specialists, tell them to organize an A/R program, and essentially give them a blank check. The result was the kind of program that, in my opinion, has yet to be surpassed, or even equaled anywhere at any time since.

Several military hospitals participated (Walter Reed, Deshon, and Borden hospitals for the Army, and the U.S. Navy hospital in Philadelphia for the Navy). All participants lived in the hospitals for the entire course of the full-time program, which lasted for approximately 8 weeks. As described by Canfield and Morrissett (1947), each participant received a comprehensive evaluation, followed by individual and group therapy, classroom instruction, and ongoing hearing aid evaluations. The staff consisted of acoustic technicians who did the audiometric testing and hearing aid fittings, an auditory training instructor for every 50 pa-

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tients, a lip-reading instructor for every six to eight patients, and a speech correctionist for every 35 to 50 patients, with staff psychologists, social workers, educational and vocational counselors part of the therapeutic team. Occupational therapy and vocational counseling were provided as necessary. Before the patients completed the program, contacts were made with the Veterans Administration for follow-ups. As I read about these programs now, it seems they attained a version of an audiological Camelot. And like King Arthur's Camelot, it has been preserved only in mythology, a dream of an audiological paradise in times of yore.

In my first experience with the field of audiology, I was fortunate enough to visit Camelot, or at least one of its lineal descendants, when I entered the Walter Reed Hospital A/R program in January 1952 as a patient. My impressions of the emerging profession of audiology – and audiologists – were basically formed at that time. Actually, I am not sure if the staff used the term “audiologist” to describe themselves. Somehow I doubt it, but what they did in the next 2 months was what I came to think that audiology was all about and what, in large part, I still think it should be about. For at least 8 weeks and 8 hr a day, I attended various kinds of “classes” and was tested and retested on a number of different hearing aids. Most of the classes, as I recall, focused on speechreading and were quite creative. These included, for example, the use of tachistoscopes (a kind of slide projector) to delivery rapid, sequential visual stimuli and other kinds of visual perceptual and memory exercises, live skits presented in a glass-enclosed room for practice in identifying both verbal and non-verbal messages, and auditory training classes, using a classic Carhart formulation to present the acoustic stimuli (i.e., going from discriminating broad speech features to smaller and smaller acoustic differences).

Although this was the formal program, many “bull-sessions” and informal exchanges between the patients took place during, in-between, and after classes. Although we did not use the term “coping and communication strategies,” this was in essence what was going on. We shared our experiences, some of our feelings (being “macho” young men we did not delve *too* deeply into ourselves), and examples of what kind of communication tactics worked and did not work. Actually, in retrospect, this was probably the most valuable aspect of the program. Although we thought we were learning how to lip-read, and some of us undoubtedly were, what was also happening was that we were learning how to accept the hearing loss and accept ourselves. *One of the reasons, I think, for the subsequent decline in the practice and support for A/R is that it has been defined primarily in terms of the nominal program we received, that is the speechreading and auditory training components, rather than, as it turned out to be, at least for me, its more valuable by-products.* Nevertheless, by all accounts at the time, and in my own memory, this was a very successful A/R program.

Ironically, it now appears that one of its merits may have been that we did not

have a choice: being in the service, we were ordered to go and we did. We did not have the luxury of engaging in agonizing and self-defeating denial behavior; ready or not, like it or not, there we were. And when we were issued monopack vacuum tube hearing aids, rather than the duo-packs given previous groups, we could hardly insist on receiving more “cosmetically acceptable” devices: first, because these kinds of demands were simply unheard of in those days, and second, cosmetics, even if we could conceive of how far down the ear canal it has taken us nowadays, was simply not an issue; we wore what we were ordered to wear. Although we can hardly replicate these imperatives in civilian settings, we should think about being somewhat more assertive in making recommendations that we know will help our patients (more on this below).

The Walter Reed program, as well as the Army and Navy A/R programs, were developed and directed by otolaryngologists. Perhaps this fact explains the duality of vision and practices which characterized us then and still does. Audiologists, as we emerged from the amalgamation of specialists mobilized to care for servicemen with hearing impairment, assumed two roles from our very beginning: one as a technical support person for the otolaryngologist and the other to provide direct rehabilitation services to the patients. From our beginning, therefore, there were questions about our role and our relationships to the physicians who were our original mentors and supervisors. Fifty years ago, Hallowell Davis (1947), undoubtedly one of the pre-eminent pioneers in the field, tackled this duality issue with this definition of audiology (the term had already been coined by Carhart & Canfield in 1945, cited in Newby, 1958):

*We shall use it (Audiology) in a very broad sense. For some purposes, it may be helpful to speak more specifically of “Medical Audiology” when medical aspects of impaired hearing are our primary concern. It is particularly useful here, however, because it indicates an interest in the **function** and not only in the **diseases** of the ear. The diseases of the ear, the recognized province of Otolaryngology may be a threat to life, and hearing then becomes secondary. Audiology considers the ear as an aid to life. (p. 2)*

This distinction was later formalized in 1955 by a committee co-chaired by an otolaryngologist (Gordon Hoople) and the man considered to be the primary founder of audiology, Dr. Raymond Carhart (quoted in Davis & Silverman, 1960, pp. 5-6). Their report stated that “Otolaryngology and clinical Audiology have distinctive yet related tasks,” that otolaryngology is responsible for the diagnosis and treatment of medical conditions, whereas audiology focuses on “the social functions of hearing and upon increasing the ability of handicapped individuals to cope with the communication demands of everyday life.” From my perspective, this is not a bad distinction to make, encompassing both professional autonomy in one role and technical support in a different role. A few years later, Jerger (1976) essentially made this same distinction, by pointing out that audiology “is that field which serves the communication needs of the human being resulting from im-

paired hearing” (p. 25). He went on to say that although we make available to other professional groups the results of our specialized knowledge and techniques, these activities should never define the central core of our field.

### A/R IN DECLINE

Even though the need for A/R was primarily responsible for the genesis of audiology, I do not suppose it was ever realistic to expect that it would remain a dominant component as the profession moved into Academia and into the real-world. There are undoubtedly many reasons for this, including but not limited to the reward system in universities (for promotion, tenure, “respectability,” etc.) and the demands and influence of the marketplace upon our activities. However this happened, the fact remains that our focus did change. From a key defining activity of the profession, A/R moved into the periphery. Academically, it was relegated to one, or at the most two, courses in speechreading and auditory training, and clinically assigned to the lowest status professionals in the department. Except for a few centers, notably some VA clinics, a few university clinics, and the various Leagues for the Hard of Hearing, few professionals provided A/R, even with its restricted definition as consisting of just speechreading and auditory training. It is not that audiology ever explicitly abandoned A/R. It remained – and remains – a significant element in our self-definition. All past audiological curricula – as well as current AuD ones – include A/R courses. When it becomes necessary for us to justify our existence as a unique profession to various health, education, and governmental agencies, we never fail to claim this activity as our own. We just do not do it very much or manage to get it rewarded very well.

As a matter of fact, it was the feeling that audiologists were neglecting this very important function that led to the formation of the Academy of Rehabilitative Audiology (ARA) 30 years ago. As I read the story (*ARA Newsletter*, 1967), when coming back from an ASHA convention in 1964, three audiologists – John O’Neill, Herb Oyer, and one other (my apologies for not giving credit to this person) – were complaining about the lack of interest exhibited in rehabilitative audiology and they decided to do something about it. And so at the 1965 ASHA convention they convened a group of 11 other audiologists who felt similarly and formed the Academy of Rehabilitative Audiology. Clearly, the organization has helped keep the idea of A/R alive by lending respectability to the function, by encouraging rigorous research into the activity, and by demonstrating that it was not just stumblebumps and second raters who were interested in it.

Still, the formation of the ARA did not dispel the feeling of many audiologists that the practice of A/R was being abandoned, in reality if not theoretically. Perhaps abandonment is too strong a word, but at the least it was relegated to a professional back-burner. For many people it was as if we were repudiating our own history, our very reason for being. We can get a sense of this unease by looking at the following quotes:

*The drift from aural rehabilitation has been so extensive that it represents a change in the basic direction of the field. . . . The audiologist who voluntarily chooses the role of rehabilitation worker must be truly dedicated, for he runs the danger of being considered incompetent for other functions by his peers.* (Rosen, 1967, p. 172)

*The poor audiologist is presently accused of being ill-trained, uninterested, and not engaged in Aural Rehabilitation! . . . The criticism in most instances is perfectly valid.* (Williams, 1968, p. 70)

*Within the past few years there has been a growing concern about the rehabilitation of the hearing-impaired person. This revival of interest in aural rehabilitation is of importance to the field of Audiology if it is to justify itself. . . .* (Northern & Sanders, 1972, p. 694)

*Audiology, I believe is at a crossroads and a critical factor in determining its future role is related to what we do in the area of aural rehabilitation. Without aural rehabilitation services we will have a difficult time from becoming medical technicians.* (Hardick, 1977, p. 51)

*What we are saying is that Audiology must define itself primarily in terms of the non-medical habilitation and rehabilitation of hearing-impaired individuals. The aural rehabilitation aspects of our profession have not been emphasized for many years.* (Ross & Giolas, 1977, p. 19)

#### **RESEARCH SUPPORT FOR SPEECHREADING AND AUDITORY TRAINING**

Earlier I alluded to the notion that the decline in the popularity and practice of A/R was possibly due to its initial restrictive definition as just speechreading and auditory training. As scholarship became seen as a vital component of the maturing profession, it became necessary to evaluate objectively the effectiveness of these activities in order to justify them. Questions arose on whether we had unambiguous research support for the belief that we can actually teach speechreading, or that as a consequence of “auditory training,” people could learn to incorporate previously ignored acoustic stimuli into their perceptual framework. If a profession that defined itself primarily in A/R terms could not demonstrate the effectiveness of its own procedures, then certainly the legitimacy of this particular role would be questioned. After 50 years of research on speechreading and auditory training, I think the jury is still out. Although there are studies which demonstrate an apparent increase in either speech or auditory perception at the conclusion of the research, there are others that have failed to demonstrate a significant improvement *as a function of our therapeutic intervention*. In these early years, the profession needed a somewhat sturdier scaffold on which to build its legitimacy than our founding role – hence, at least one reason for the decline in A/R and the rise in the technical support (medical audiology) role.

I should clarify what I am saying here. I do believe that people who have sustained hearing losses can and do improve their overall speech perception skills with effort and time. For example, we all know some people with hearing im-

pairment who have phenomenal abilities in speechreading. Learning clearly has taken place; we just do not know if it was our teaching, the innate capacities of the patient, or the encouragement to focus attention on the lips and on the message, that was responsible for the improvement. And to demonstrate that I am not exactly the first to make this observation, the following is a quote written by Juan Pablo Bonet in 1620 (cited in Bender, 1981).

For the deaf to understand what is said to them by the motions of the lips there is no teaching necessary; indeed to attempt to teach them it would be a very imperfect thing, for though it might appear possible to reduce it to a system it could not be universal, but so special as to be only understood by the master and the scholar . . . to enable the deaf-mute to understand by the lips alone, as it is well known many of them have done, cannot be performed by teaching, but only by great attention on their part, and it is to this that their success is to be attributed, and not to the skill of the master . . . and if anyone claims to have done this it will really have been done, not by the master but by the pupil, who he is seeking to deprive of this honor in order to confer it upon himself . . . (p. 41)

Lately a consensus has arisen (Arlinger et al., 1996) that people wearing hearing aids may indeed improve their speech perception skills as they accustom themselves to the pattern of amplification provided by the hearing aids (the "acclimatization" effect). This is not the same, however, as explicitly intervening with an auditory training program to increase speech perception skills. What seems to happen is that when hearing aids present additional and/or new acoustic information to the user, people eventually learn how to integrate this information into their perceptual repertoire. This may occur without a formal program in auditory training. These improvements seem to emerge primarily from the normal processes of speech perception, that is, from the attentional effort a person makes to comprehend a message. This same observation is even more applicable to post-lingually deaf adult cochlear implant users. They must learn how to incorporate even stranger auditory sensations into their pre-existing perceptual framework than do new hearing aid users. In both these instances (hearing aids presenting new acoustic information and cochlear implants being used by post-lingually deaf individuals), the "gold standard" study would be one in which, after a person's performance with the device has plateaued, therapeutic intervention can be demonstrated to further increase performance – an increase which would still be evident a year or so down the road. To my knowledge, this kind of study has not been done (or reported) for either speechreading or auditory training.

One that comes close is an unpublished study reported by Katz (1996). Katz noted that new cochlear implant users and people with central auditory processing (CAP) problems both exhibit major discrepancies between the perceived acoustic signals and existing phonemic decoding strategies. Drawing on his rationale for training individuals with CAP problems, he administered a phonemic training procedure with two pre-lingually deaf cochlear implant users. Both had worn implants for some months with just "some" improvement in speech perception skills

(it was not known, however, whether pre-therapy speech perception scores had plateaued). After administering an eight-step *auditory training* training program (introduction of the phonemes, discrimination, focusing attention, training short-term memory, resistance to interference, phonemic synthesis, phonemic analysis, and other speech recognition tasks), he reports a dramatic improvement in open-set auditory-alone word and sentence speech recognition scores.

These results lend research support to how Willott (1996) views the neural plasticity of the auditory system, that is, that the brain continues to reorganize itself right into adulthood in response to sensory stimuli it receives. As I read this article, it suggests that the brain restructures itself in response to novel and consistent auditory stimuli, and that the enhanced auditory stimulation provided by hearing aids (and certainly cochlear implants) may induce a secondary plasticity in the auditory system. That is, the brain will be stimulated to devote more space and develop more synaptic connections in response to the novel auditory sensations. But as described by Robinson and Summerfield (1996) in the same *Ear and Hearing* monograph (devoted to late onset auditory deprivation and acclimatization), this can best be accomplished by providing a systematic approach to auditory training and re-learning, one based on explicit psychoacoustic and learning theory rationales. Using these new models and theories, coupled to rigorous training procedures, it does seem that it is time the profession revisited the entire area of auditory training.

But this is in the future (not too distant, I hope). Right now, if we consider that speechreading and auditory training are practices only questionably supported by the available research (and seldom provided at that), where are we in terms of conceptualizing A/R?

#### **BROADENING THE DEFINITION OF PRACTICES OF A/R**

Where we are at is the necessity to broaden our definition of A/R to include the evaluation and management of the communicative and psychosocial implications of a hearing loss. If we do this, then I think we can move into a more defensible posture for the future. We have any number of studies that demonstrate that the personal perception of handicap is reduced after a short-term A/R program, or after being fit with hearing aids (Weinstein, 1996). We can move into this new A/R framework without rejecting speechreading and auditory training, but by placing them within a broader framework of coping and communication strategies.

What has emerged in the past 10 or 20 years has been a focus on the inter- and intrapersonal consequences of a hearing loss, beginning with the realization that a patient's perceptions are the most valid source for estimating the communicative and psychosocial impact of a hearing loss. These perceptions can best be tapped by using one of the many standardized self-report scales which have been developed during this same period of time. Actually, I do not see how it is pos-

sible to plan and execute a responsive and *accountable* rehabilitative program without first administering, and then re-administering, one of these scales. And not just to the patient, but to family members as well.

What the results of these scales show is that an adventitious hearing loss is far from a benign event (Stone, 1993). Besides the easily observable communicative effects of a hearing loss, there are often subtle or profound psychosocial consequences. Sam Trychin has identified 12 recurring issues through working with adults who are hard of hearing and their families; these are **depression, isolation, anger, exhaustion, anxiety, insecurity, despair, negative self image, inability to relax, loss of group affiliation, paranoia, and loss of intimacy** (Trychin, 1993). As I first read this list, in an article by Abrahamson (1991), I had an "aha" experience; we all know people who are hard of hearing who show or have complaints in one or more of these areas. How on earth can we believe that fitting hearing aids with one or two individual follow-up visits are adequate responses to these cries for help? And, of course, they are not.

Ironically, there was never a time when we had available more good material on A/R than we have now. Once, as most ARA members will recall, Derek Sanders' book (1972) was about all there was. Now, just among the members of this academy, we have excellent books by Alpiner and McCarthy (1993); Schow and Nerbonne (1989); Clark and Martin (1994); Spitzer, Leder, and Giolas (1993); Erber (1993); Kaplan, Bally, and Garretson (1985); Kricos and Lesner (1995); Giolas (1982); Hull (1992); and one now in preparation by Barbara Weinstein. And if I missed any, I apologize. Not only do we have this abundance of texts, with really superb chapters on various aspects of A/R, we also have the ARA journal itself. In preparing this paper, I reviewed the articles published in the *JARA* for the past 27 years; what a great resource we have in our own journal, headed by the superb monograph that J.-P. Gagné and Nancy Tye-Murray edited (1994)! No one should plan or execute any kind of A/R program, or write any paper on the topic, without first consulting this marvelous repository of material. Likely one will either find that somebody has anticipated their bright ideas, or that someone else has important insights and information to contribute to the proposed project. It is not only the wheel that gets periodically, and unnecessarily, reinvented!

Many of these ARA articles are devoted to an entirely different concept of aural rehabilitation than the initial emphasis on speechreading and auditory training. I like the term used by Erber (1993), "Conversational Therapy," because it not only focuses on a key issue – the overall improvement of comprehension in a conversational setting – but it permits us to include traditional speechreading and auditory training concepts, as well as various kinds of coping and conversational repair strategies, within either structured, semi-structured, or informal conversational settings. Aural rehabilitation programs can now offer the realistic workbook exercises that Kaplan et al. (1985) include in their book; detailed analytic



training procedures found in Plant's new workbooks (1996); interactive computerized laserdisc training reported by Tye-Murray, Tyler, Bong, and Nares (1988); specific conversational enhancement procedures that Erber (1993) developed; and the kind of group facilitation sessions in communication and coping strategies that Trychin (1993) has been practicing. And I am just giving some examples, and not being comprehensive in referring to these recently developed A/R concepts and procedures.

I also like the term "assertive listening" that Montgomery (1993) uses. What this term implies is that much of the responsibility for ensuring the success of a communicative exchange rests with the person who is hard of hearing. It is our job to suggest how this can be done, and to provide people who are hard of hearing with the necessary informational and emotional support during the learning process. Personally, I have found the term and concept of "assertiveness" to be somewhat liberating. It makes the person who is hard of hearing a partner in the communication process, and not just a passive recipient. To employ a fashionable (but accurate) cliché, assertiveness "empowers" patients to take more personal responsibility for the success of a conversational exchange. People who are hard of hearing *can* learn to be more assertive in instructing how communication partners should modify their speech output, asking, for example, that background sounds be turned down, or requesting that waiters present a written copy of the day's specials. And, yes, I would define this advice and the support necessary to engage in assertive listening as A/R.

Actually, up to this point, I really have not defined what I mean by A/R. I have suggested that it transcends the traditional areas of speechreading and auditory training, and of course it does. Does it include evaluating and selecting hearing assistance technologies of all kinds, both auditory and visual? Well, yes, of course. *It includes, in my judgment, any device, procedure, information, interaction, or therapy which lessens the communicative and psychosocial consequences of a hearing loss.* Every audiologist who tests someone's hearing and counsels him or her regarding the communicative implications of the hearing loss is engaged in A/R. Every audiologist who dispenses hearing aids is practicing A/R. Where we as a profession tend to fall short, where we see gaps in our rehabilitation coverage, is mainly after the aid has been selected. This is where too many of our patients enter into a therapeutic "black hole." We have simply assumed that our patient's major communication needs have been met by dispensing hearing aids and by scheduling one or two follow-ups – with an admonition to call "if you have any problems." It is not that we are not helping, of course we are, but many, if not most, people with hearing losses can use and benefit from additional or intensified therapeutic services and this is where we fall short.

If we define almost any practice that we engage in as constituting A/R, then we should examine how often we engage in these various practices. The most recent data I could find on this topic was the survey conducted by Schow, Balsara,

Smedley, and Whitcomb (1993). Their results can be found in the following table (see Table 1).

What their results make abundantly clear is that even by self definition – not the most reliable indicator of actual practices – audiologists report that they are engaged in what I would consider a minimum of A/R activities. Moreover, the situation did not seem to improve very much from 1980 to 1990. Even this dismal picture still appears optimistic, however, if one considers actual practices. For example, although 57% of the respondents report that they advise their patients regarding hearing assistance technologies, only 19% actually dispense these devices. We are entitled to a little doubt regarding the efficacy of the “advice” offered by those who do not actually dispense. When one also considers that at the time of this survey, only 24% routinely administered some self-assessment scale, their results do not encourage an optimistic view regarding A/R practices. If we do not assess the handicapping impact of a hearing loss, as reported by the patient and his or her family, how on earth can we develop a remediation program? How do we demonstrate accountability, either to our patients, to ourselves, or to society, if we cannot provide any objective evidence of our effectiveness?

The difficulties in securing adequate funding are often raised whenever the topic of A/R is broached. And this *is* a crucial issue and I do not want to minimize it. But there are a few prerequisite issues that first should be addressed, the most important ones being our belief in its necessity and efficacy, and furthermore, our confidence that we are the logical profession to provide this service. If we have doubts regarding the necessity and efficacy of A/R or our ability to help people cope with a hearing loss, then there is no way that it will ever represent

**Table 1**  
Percentage of Audiologists Engaged in Indicated Services

	1980	1990
General hearing aid orientation	87%	88%
Individual hearing aid orientation	83%	86%
Group hearing aid orientation	14%	17%
Self-assessment	18%	33% <sup>a</sup>
Communication training	38%	23%
Speechreading	38%	19%
Auditory training	31%	16%
Advise clients about HAT		57% <sup>b</sup>

*Note.* Adapted from “Aural Rehabilitation by ASHA Audiologists: 1980-1990,” by R.L. Schow, N.R. Balsara, T.C. Smedley, and C.J. Whitcomb, 1993, *American Journal of Audiology*, 2, p. 28-37. Copyright 1993 by the *American Journal of Audiology*.

<sup>a</sup>Only 24% routinely administered a self-assessment scale (HHIE ranked the highest). <sup>b</sup>Only 19% dispense, maintain, or display hearing assistance technologies (HAT).

more than a peripheral professional concern, a kind of vestigial remainder (and reminder) of our beginnings. Yes, A/R takes time and it will take money, but to quote Tom Giolas, "time is relative to the perception of value received" (Erdman, Wark, & Montano, 1994). This applies to any therapeutic endeavor; if we provide a service that we believe is valuable, and is perceived as valuable by the recipients, then funding will be less of an issue. Erdman et al. (1994) said this very well in their classic *JARA* article (one that should be read and reread periodically, and assigned to all Audiology students):

*To assume the position that change is not possible because of time constraints or reimbursement constraints when we know change is indicated is indefensible. Ultimately, when we make time, when our services are defensible, and when we are truly accountable, reimbursement will not be a concern. (p. 55)*

These authors are not postulating some mystical course of events that mysteriously bestows rewards on audiologists for practicing A/R. What they are saying is that if we do what we should be doing, we will be in a position eventually to convince individuals and funding sources that our services deserve to be reimbursed. The more doubts we have, the less we actually practice A/R, then the less likely it is that A/R will be part of our professional future. In that case, the question of funding is irrelevant.

### **BACK TO THE FUTURE**

The duality which characterized our genesis is still with us, but our two roles are not advancing equally in practice. We have made tremendous strides in our *technical* role, the one that requires us to serve as a resource to the medical profession. Although in our beginning all we could provide was air and bone conduction pure tone and speech tests, we can now make available, administer, and interpret a truly awesome variety of diagnostic tests. We have gone way beyond simply measuring the extent of the hearing loss, or differentiating between a conductive and sensorineural pathology. With our diagnostic tools, we can assess the integrity of the middle ear with immittance tests, the viability of the outer hair cells through otoacoustic emissions, the status of the auditory pathways from the cochlea to the cortex with evoked response audiometry, the integrity of central auditory pathways by various dichotic measures, and the balance and vestibular mechanisms through ENG tests. And I am sure there are probably others that I have not named.

Our colleagues are to be found in all types of medical settings, from the largest research hospital to the local ENT office. And what we do in these settings is essential and respected. But when our duties focus primarily on the administration of diagnostic tests, these activities do not fully define what we are about as a *profession*. As a profession we do not have the responsibility or the legal authority to translate our audiometric test results into medical treatment. We can, and do,

consider the communication implications of the diagnostic test pattern (i.e., normal otoacoustic emissions and abnormal ABRs, or normal individual ear responses, but abnormal dichotic results), so there is a certain amount of “blurring” in our dual roles. But to the degree that the results are obtained for use by a different professional group, to that degree, in that role, we are not functioning as an autonomous profession. As J. Jerger (personal communication, 1996) recently put it:

If we want to have a unique profession, it must be founded on the non-medical management of hearing disorder, not on ABR or ENG or Intraoperative monitoring, or anything else that places us in the role of technician supplying helpful information to a member of a different profession.

Although there are eminent medical audiologists who do more than serve as a resource to their physician colleagues, who function at the cutting edge in their investigations of the physiology and abnormalities of the auditory pathways, the respect they are accorded by their medical colleagues, and the collegiality of their relationship with physicians, are primarily conferred upon them as competent and creative individuals and not as members of the audiology profession. The mantle of their “halo” does not descend upon the rest of us. We have to earn our own way with efforts that define our own autonomous professional activities. There is no need for us to encroach upon the physician’s responsibilities in order for us to gain respect; we have our own independent role – and from the point of view of those whose hearing losses cannot be remediated medically or surgically – an indispensable and vital role; if we but practice it.

To be an autonomous and respected profession, we must incorporate A/R into our efforts and value it as much as we do our technical support role. Pediatric and educational audiologists do this as a matter of routine day after day. In my estimation, these colleagues of ours are fully rounded professionals, whose activities incorporate both the diagnostic and rehabilitative roles. But they represent no more than 10% to 20% of practicing audiologists. The rest of us work primarily with adults who have adventitious hearing loss, and who comprise approximately 90% of the average patient load in the average clinic. What about their rehabilitative needs and what are we doing to meet those needs? This, in my view, should be the main thrust of our future professional efforts. By meeting their needs we will be nourishing our own future by tapping our own roots.

#### **A MODEST PROPOSAL**

And now I want to make a modest proposal. Although we cannot go back to the audiological Camelot of our early days, I think we can meet *most* of the A/R needs of *most* of our patients, within the framework of the hearing aid dispensing process, without either the patients or the dispensers incurring additional expenses. Consider the facts, as reported by Kochkin (1996) that 18% of people

who own aids do not wear them, that about 17% of aids are returned for credit, and that only 53% of hearing aid users expressed "satisfaction" with their hearing aids (to be fair, a higher percentage of people wearing recently purchased hearing aids expressed satisfaction with their aids). There is clearly a need to provide hearing aid users, particularly but not limited to new hearing aid users, with an organized group hearing aid orientation (HAO) program, that is, my "modest proposal."

The consumer group Self Help for Hard of Hearing People, Inc. (SHHH) has taken a position in favor of such a program. Consumers recognize that there is a necessity to improve the conventional hearing aid selection process.<sup>1</sup> Far too many people who are hard of hearing are *not* getting the information and support they need to gain the most benefit from a hearing aid; they are *not* being introduced to the world of Hearing Assistance Technologies (HAT) in any organized fashion; they are *not* being sufficiently exposed to coping and other assertive listening strategies; and the impact of the hearing loss on the family is *not* being sufficiently addressed. I believe we can help accomplish these objectives within the scope of a group HAO program. Really, this is a short-term A/R program, and as Abrahamson (1997) reviews in a recent publication, there are many ways to go about it and still deliver needed services to people who are hard of hearing.

We all know that the decision to purchase hearing aids is not one that people take lightly. Beyond the specifics of where to go, what units to buy, and having to deal with often outrageous costs, they have had to first accept the reality of their own hearing impairments. For many people, this is a difficult period and they need all the help, information, guidance, and support that they can get. Some hearing-aid users expect more from the hearing aid than is realistically possible, although others may not be deriving as much benefit as it can confer, like knowing how to use a telephone coil as an assistive listening device.

During the course of the hearing aid selection process, most audiologists will make a sincere effort to respond to their patients' informational needs. The reality is, however, that much of this information will be incompletely understood or retained by the hearing-aid user. It takes time to assimilate new information, and this simply cannot be done in traditional post-dispensing "counseling" sessions. Additionally, there are inherent limitations in the effectiveness of the one-on-one audiologist-client relationship. There are some areas of need that can best be met in a group setting, where people with hearing losses have an opportunity to learn and share with others who have similar problems (Kricos, 1997). In other words, the interchanges occurring in a group offer advantages and possibilities that cannot be met in individual follow-up appointments. The effectiveness of group HAO programs has been repeatedly demonstrated in studies which compared hearing aid satisfaction and use by people who have been enrolled in such pro-

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<sup>1</sup>The following are edited excerpts from the SHHH position paper and portions of an article I wrote for the June 1996 issue of *The Hearing Review*.

grams compared to those who were not (Abrahamson, 1997; Ross, 1987).

People who purchase hearing aids should at least be offered the *opportunity* to participate in a group post-hearing aid training and rehabilitation program. Typically, this would consist of weekly 1 to 2 hr meetings for about 4 to 6 weeks. Although the specific content and outline may vary, the intent must be to provide both an instructional component and time for the emergence of group exchanges. Examples of the content in the instructional component would be: (a) an overview of the anatomy and physiology of hearing, (b) the audiogram and how it relates to speech perception, (c) caring for hearing aids and earmolds, (d) hearing assistance technologies other than hearing aids, (e) introduction to speech-reading and auditory re-learning, (f) coping and conversational repair strategies, and (g) the implications of the ADA for people who are hearing impaired. Recently, Wayner and Abrahamson (1996) developed an A/R curriculum which includes material that can be used and/or adapted in a group HAO program.

The goals of the group meetings would basically be to foster the interactive dynamics in such a way as to stimulate mutual support and information among the members. This is particularly important during the initial adjustment period. Realistic expectations can be fostered based on the experiences of others. Because hearing loss is a family affair, the participation of hearing relatives and friends should be encouraged. An effective way to increase the sensitivity of normally-hearing family members is to play the audio tape "Unfair Hearing Test" during the first session. A group program is also a good way to communicate the partnership concept, namely, that all of us, the professionals, the family, and the patient are working together on a common objective. When I use the line: "although X may have the hearing loss, the entire family has the hearing problem," I get very definite nods of understanding.

I want to make clear that I am not making an original suggestion. Some version of group HAO programs has existed from the very inception of Audiology, and some of us still practice it (Abrahamson, 1991; Binnie, 1991; Kricos, 1997; Montgomery, 1991). But as we saw from the Schow et al. (1993) study, not enough of us are doing it. I think of these programs as a professional obligation, as a way of serving the needs of our patients and getting in touch with our roots. But these programs can also be justified in economic terms, as a cost-effective way of providing services to patients. And they can be. Consider:

1. The incidence of hearing aid returns is likely to be much less for people who attend HAO programs than for those who do not. The problems and unrealistic expectations that come up during the first months of hearing aid usage can be remedied as they occur, before people lose patience and return the hearing aids. Telling people to "call if you have a problem" is not a good way to ensure careful follow-up and to reduce return rate.

2. A hearing aid orientation program is going to translate into more satisfied and loyal clients; and they are going to stick with you when they need hearing

aids in the future. You are building a client base for the long-term.

3. More satisfied users also mean more word-of-mouth referrals, maybe the most effective marketing strategy available. Everybody knows somebody else who can use a hearing aid. Everybody knows somebody who owns aids located in dresser drawers rather than in ears.

4. During the course of the program, and as a result of group dynamics and the information presented, some monaural users will opt for binaural fitting.

5. The program provides sufficient time to display, demonstrate, and dispense other types of hearing assistance technologies, such as assistive listening systems and signaling/warning devices. From my perspective, this is a major weakness in current dispensing practices; we can all agree that hearing aids are necessary, but they are also often insufficient.

6. Although a group HAO program should supplement and not supplant individual orientation programs, it is likely that the group meetings may eliminate the necessity of some individual meetings, particularly the unscheduled drop-ins that occur when people are having problems.

7. The inclusion of family members multiplies the number of contacts and future referral sources. There is always going to be more than one person in the extended family or social circle who has a hearing loss and can use a hearing aid. Make a good impression with the group program, and you are likely to have some of these people come flocking to your doors.

8. The additional time available for troubleshooting instruction should translate into less returns for such problems as impacted wax in the hearing aid receiver and also reduce the number of drop-in and individual follow-up visits.

9. The program provides a logical opportunity to sign people up for a "battery club." Over the long-term, battery sales can make a major contribution to the "bottom line."

So far, all I have listed are the potential advantages, and as far as I am concerned, that is all there are. I do not know of any downside.

I often hear audiologists tell me that most of their patients do not need such a program, that either they are giving the patients all the help that is needed, or that the patients will not accept such a formally scheduled follow-up program. I think this reasoning is wrong on both counts. If the handicapping impact of a hearing loss is sufficient to require amplification, then the chances are that the person can benefit from the information and interactions taking place in a group HAO program. It is true that many people will not take advantage of the offer, but when it is presented as a component of the entire hearing aid fitting process, many others will. The HAO program has to be communicated as part and parcel of the entire hearing aid selection process; it is something that *we* have to firmly believe in before we can convincingly communicate its necessity to our patients. We may never bat a 1000 percent, but what is wrong with 333? It is too easy and too self-serving to dismiss the potential advantages of a group HAO program because

“it is too much trouble,” or “people will not come to it,” or “it is not very helpful.” What it comes down to, I think, is inertia – climbing out of a rut takes too much of a commitment of time and mental energy, and the fact is that therapy of any kind is given less priority in an audiological practice than our belief in the efficacy of new technology.

As Montgomery (1991) puts it:

I'm concerned that our profession, in its clear ongoing success at incorporating technology and miniaturizing hearing aids, has led us to be technicians, not professionals. If all you are doing is pure tone testing, making an earmold for an ITE, sending it off, waiting for it to come back, putting it on the client, doing a little hearing aid orientation and sending the client away, *hoping he or she will not be back*, then you're acting like a technician. On the other hand, if you make aural rehabilitation a part of the hearing aid fitting process, if you arrange it so that you are sure that you will see the client on an ongoing basis through an adult aural rehabilitation group, you are a professional taking responsibility for the management of the client. (p. 230)

Besides, as Montgomery goes on to say, “it’s fun.” And it is; we *should* be enjoying what we do!

In summary, then, if we want to keep in touch with our roots and have a future as an independent, self-supervised profession, evaluating and managing the communicative and psychosocial impact of a hearing loss has to be our core purpose, our basic reason for being. And if audiologists do not take the lead to bring A/R into the actual, as opposed to the mythological, mainstream of audiology, then who will? This is not meant to suggest that we discard or deemphasize the technical support role of our profession; not only is this an intellectually challenging and valuable role in its own right, but the test results often have a direct bearing on the communication performance and management of a client. It is only when we do not deal with the communication implications of our own diagnostic tests, when we curtail necessary hearing aid follow-up services for our “uncomplicated” patients, and when we virtually ignore more extensive A/R services for those people who need these extra efforts, that we are being untrue to our roots and stunting our future.

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#### REFERENCES

- Abrahamson, J. (1991). Teaching coping strategies: A client education approach. *Journal of the Academy of Rehabilitative Audiology*, 14, 43-54.
- Abrahamson, J. (1997). Patient education and peer interaction facilitate hearing aid adjustment. *High Performance Hearing Solutions* (Supplement to *The Hearing Review*), 1, 19-22.



- Alpiner, J.A., & McCarthy, P.A. (1993). *Rehabilitative audiology: Children and adults* (2nd ed.). Baltimore: Williams and Wilkins.
- ARA Newsletter. (1967). 1(1), 1.
- Arlinger, S., Gatehouse, S., Bentler, R.A., Byrne, D., Cox, R.M., Dirks, D.D., Humes, L., Neuman, A., Ponton, C., Robinson, S., Silman, S., Summerfield, A.Q., Turner, C.W., Tyler, R.S., & Willott, J.F. (1996). Report of the Eriksholm Workshop on auditory deprivation and acclimatization. *Ear and Hearing, 17*, 87S-90S.
- Bender, R.E. (1981). *The conquest of deafness* (3rd ed.). Danville, IL: Interstate Publishers.
- Binnie, C. (1991). New perspectives in audiologic rehabilitation. In G. Studebaker, F. Bess, & L. Beck (Eds.), *The Vanderbilt hearing aid report II* (pp. 233-243). Parkton, MD: York.
- Canfield, N., & Morrissett, L.E. (1947). Military aural rehabilitation. In H. Davis (Ed.), *Hearing and deafness: A guide for layman* (pp. 318-340). New York: Holt, Rinehart, & Winston.
- Clark, J.G., & Martin, F.N. (1994). *Effective counseling in audiology*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Davis, H. (1947). *Hearing and deafness: A guide for layman*. New York: Holt, Rinehart, & Winston.
- Davis, H., & Silverman, S.R. (1960). *Hearing and deafness* (Rev. ed.). New York: Holt, Rinehart, & Winston.
- Erber, N. (1993). *Communication and adult hearing loss*. Melbourne, Australia: Clavis Publishing.
- Erdman, S.A., Wark, D.J., & Montano, J.J. (1994). Implications of service delivery models in audiology. *Journal of the Academy of Rehabilitative Audiology, 27*, 45-60.
- Gagné, J.-P., & Tye-Murray, N. (Eds.). (1994). Research in audiological rehabilitation: Current trends and future directions. *Journal of the Academy of Rehabilitative Audiology Monograph Supplement, 27*.
- Giolas, T.G. (1982). *Hearing handicapped adults*. Englewood Cliffs, NJ: Prentice-Hall.
- Hardick, E.J. (1977). Aural rehabilitation programs for the aged can be successful. *Journal of the Academy of Rehabilitative Audiology, 10*, 51-67.
- Hull, R.H. (1992). *Aural rehabilitation*. San Diego, CA: Singular Publications.
- Jerger, J. (1976). Our professional future: Paper presented to the 1960 American Speech and Hearing Convention, Los Angeles. *Tejas, 2*, 25.
- Kaplan, H., Bally, S.J., & Garretson, C. (1985). *Speechreading: A way to improve understanding*. Washington, DC: Gallaudet University Press.
- Katz, J. (1996). *Central auditory processing and cochlear implant therapy*. Unpublished manuscript.
- Kochkin, S. (1996). Marketrak IV: 10 years of trends in the hearing aid market: Has anything changed? *The Hearing Journal, 49*(1), 23-34.
- Kricos, P.B. (1997). Audiologic rehabilitation for the elderly: A collaborative approach. *The Hearing Journal, 50*(2), 10-19.
- Kricos, P.B., & Lesner, S.A. (Eds.). (1995). *Hearing care for the older adult: Audiologic rehabilitation*. Boston: Butterworth-Heinemann.
- Montgomery, A.A. (1991). Aural rehabilitation: Review and preview. In G. Studebaker, F. Bess, & L. Beck (Eds.), *The Vanderbilt hearing aid report II* (pp. 223-231). Parkton, MD: York.
- Montgomery, A.A. (1993). Management of the hearing-impaired adult. In J. Alpiner & P. McCarthy (Eds.), *Rehabilitative audiology: Children and adults* (2nd ed., pp. 311-331). Baltimore: Williams & Wilkins.
- Newby, H. (1958). *Audiology*. New York: Appleton, Century, Crofts.
- Northern, J.L., & Sanders, D.A. (1972). Philosophical considerations in aural rehabilitation. In J. Katz (Ed.), *Handbook of clinical audiology* (pp. 685-694). Baltimore: Williams & Wilkins.
- Plant, G. (1996). *Tactrain Tactaid 7 training program for profoundly deaf adults*. Somerville, MA: Hearing Rehabilitation Foundation.

- Robinson, K., & Summerfield, Q. (1996). Adults, auditory learning, and training. *Ear & Hearing, 17*, 51S-65S.
- Rosen, J. (1967). Distortions in the training of audiologists. *Asha, 9*, 171-174.
- Ross, M. (1987). Aural rehabilitation revisited. *Journal of the Academy of Rehabilitative Audiology, 20*, 13-24.
- Ross, M., & Giolas, T.G. (1977). Audiology at the crossroads (again?). *Tejas, 3*, 19-22.
- Sanders, D.A. (1972). *Aural rehabilitation*. Englewood Cliffs, NJ: Prentice-Hall.
- Schow, R.L., Balsara, N.R., Smedley, T.C., & Whitcomb, C.J. (1993). Aural rehabilitation by ASHA audiologists: 1980-1990. *American Journal of Audiology, 2*, 28-37.
- Schow, R.L., & Nerbonne, M.A. (1989). *Introduction to aural rehabilitation* (2nd ed.). Austin, TX: Pro-Ed.
- Spitzer, J.B., Leder, S.B., & Giolas, T. (1993). *Rehabilitation of late-deafened deafness*. St. Louis, MO: Mosby.
- Stone, H.E. (1993). *An invisible condition*. Bethesda, MD: Self Help for Hard of Hearing People, Inc.
- Trychin, S. (1993). *Communication issues related to hearing loss*. Washington, DC: Gallaudet University Press.
- Tye-Murray, N., Tyler, R.S., Bong, R., & Nares, T. (1988). Computerized laser videodisc for training speechreading and assertive communicative behaviors. *Journal of the Academy of Rehabilitative Audiology, 21*, 143-152.
- Wayner, D.S., & Abrahamson, J.E. (1996). *Learning to hear again: An audiological rehabilitation curriculum guide*. Austin, TX: Hear Again.
- Weinstein, B. (1996). Treatment efficacy: Hearing aids in the management of hearing loss in adults. *Journal of Speech and Hearing Research, 39*, S37-S45.
- Williams, H.M. (1968). The audiologist: Aural rehabilitation. *Asha, 10*, 70-71.
- Willott, J.F. (1996). Physiological plasticity in the auditory system and its possible relevance to hearing aid use, deprivation effects, and acclimatization. *Ear and Hearing, 17*, 66S-77S.