

Personal Reflections on Aural Rehabilitation: Past, Present, and Future

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This paper presents excerpts from the keynote address delivered at the 1989 Summer Institute of the Academy of Rehabilitative Audiology.

Aural rehabilitation historically has focused on two groups of clients: (a) prelingually profoundly hearing-impaired individuals and (b) those with postlingual moderate-to-severe hearing loss. With the prelingually hearing-impaired population, aural-oral rehabilitation included speech and language therapy with manual, oral, or total communication, or the Seeing Essential English (SEE) system. With the postlingually-impaired population, we were interested in amplification, counseling, lipreading, and listening skills. These areas remain the basics of classical aural rehabilitation and education for which this Academy is known. The question I would like to raise is whether or not these interests are represented in today's practices.

AURAL REHABILITATION WITH PRELINGUALLY HEARING-IMPAIRED PERSONS

The present-day prelingually hearing-impaired population has changed and so has the clinician's entry to their care and rehabilitation. We can identify these cases much earlier than we did 15 years ago with more sophisticated identification techniques and diagnostic methods. There are many other professional groups who are aware of early childhood deafness today. Also, current amplification devices are much more efficient. Most major cities have dedicated programs for the deaf child, whereas in the past such programs were present in only a few major cities. In today's population we see fewer clients with only profound deafness and more with complicating involvements. For example, a typical client might be the child who was an ill baby following birth and has a severe hearing loss, as well as other complications such as motor involvement or central nervous system disorders. Years ago these children might not have lived, so that the cases we saw were profound deafness of a more simple nature involving only the auditory system.

With modern hearing aids and FM systems, the hearing-impaired children of

today receive more auditory input and, therefore, their speech and rehabilitation needs have changed. With improvements in amplification devices, the prognosis for these children has changed in terms of their long-term educational and social success. With this change, our rehabilitation and educational goals also have changed. Instead of simply providing aural awareness and limited oral abilities, we now work toward aural-oral communication for these children, and their educational prospects far exceed our hopes for the deaf child of 20 years ago.

AURAL REHABILITATION WITH POSTLINGUALLY HEARING-IMPAIRED PERSONS

The age of our postlingually hearing-impaired clients has greatly changed in the past 20 years. The older population of the 90s will demand increased counseling as to hearing aid use, cost, and expectations. Often, the rehabilitation task with this population is to deal more with their minds than with their ears.

Persons with moderate-to-severe sensorineural or conductive loss can expect significant results with modern instrumentation and earmold techniques. They may, however, want miracle results. A primary concern of the hearing aid industry and the audiology profession is that our great advancements in amplification have not only been heralded by the media but have been over-advertised in the media. Now, my clients come to the office wanting the hearing aid that allows them to hear better than normal in noise. They want the hearing aid that disappears in their ear and solves all of their auditory acuity problems. At the same time, they often have limited eyesight and manual dexterity. Thus, their expectations and physical limitations become greater than the limitations of amplification. This situation requires reeducation, and such counseling is truly part of aural rehabilitation.

Acoustical problems with this population can be minimal; their rehabilitation needs from a simple auditory view may be minimal; our goals, however, have changed. Twenty years ago we may have looked at a sloping, moderate-to-severe sensorineural hearing loss in an elderly person and said this is not a candidate for a hearing aid. Today, that client *is* a candidate for a hearing aid and for special rehabilitation. This population will increase, will be fit successfully, and will modify our long-standing biases.

MINIMAL HEARING LOSS

Presently, the population with the most demanding need is that with minimal hearing loss. This is the loss we did not fit 20 years ago, and may not have fit 5-10 years ago. In many clinics today, individuals with normal hearing to 2000 Hz, a mild loss in the higher frequencies, and an SRT of approximately 25 dB are being fitted with amplification. This requires audiologists and clients to learn some things. The task for the clients is to learn to listen in crowds and to make decisions about when to wear the hearing aid. They will need to accept the hearing aid as a communication device. Audiologists must learn to understand

that, in this population, the hearing aid is much like reading glasses: We put them on to read, but not for other visual tasks. Likewise, a hearing aid in this population may be needed only in certain circumstances. Thus, we have to develop new aural rehabilitation goals, guidelines, counseling techniques, and attitudes as to how often the amplifying device must be worn and in what circumstances.

TINNITUS

The toughest fitting in today's world is the tinnitus client who may or may not have a significant hearing loss. The goal is to tune any amplifier, be it a hearing aid or a tinnitus masker, to the ear canal resonance and to the area of hearing loss or the range of tinnitus. This can be done by using real-ear techniques and earmold modifications, and can drastically increase our success ratio. One of the reasons we may not have done well in terms of percentage of successful wearers of tinnitus maskers is our failure to relate testing techniques, that identify the range and intensity of tinnitus, to fitting techniques that ensure that our device is providing masking and/or amplification in the range needed. This population certainly will remain a major concern with needs in the future.

VERTIGO

As I traveled the United States in recent months, I was impressed with the number of clinics dealing with vestibular disorders and the evidence that indicates such disorders, secondary to peripheral etiology, respond to a program of exercise and education. Such a rehabilitation program teaches the client how to deal with vertigo. This makes sense on both a physiological and a rehabilitation basis. The future looks very promising in this area and I encourage our profession to review the literature and consider providing some of the research needed to document clinical impressions.

THE FUTURE

In the years ahead we will probably experience more clients with hearing loss than any current prediction calls for. The largest group will be the older population and the next largest group will be those with minimal hearing loss who need special communication devices to hear in noise.

The prelingually hearing-impaired population will continue to change. The majority will present less severe losses with good aided performance. Further, we will see persons with profound losses who use highly sophisticated implanted devices. Although I was not originally a believer in the potential of cochlear implants, the future now seems to hold great promise for the prelingually profoundly hearing-impaired population in terms of implantable devices.

In the years ahead, various signal-processing devices will assist persons with all levels of hearing loss. Implants in the future will be located not only in the cochlea, but in the external ear canal as well. Many signal-processing devices

that are now being placed in the external canal will not require surgery because their size will be reduced. This is an area in which audiologists need to take the lead. Only audiologists have the information necessary to advise these clients to make the best use of their signal-processing device.

In the future, we will also have processors fitted as transparent amplifiers to aid the normal ear in noisy environments. I believe this is the wave of the future and certainly a future business opportunity.

The demands upon us in the years ahead will be to understand the new technology; and to assist in the development of that new technology so that it is reasonably priced, reasonably packaged, and user friendly. Our next task will be (a) to teach clients to use that technology and then (b) to redefine the word that brought us together today: *Rehabilitation*.

ACKNOWLEDGMENTS

The author wishes to thank the Academy of Rehabilitative Audiology for the invitation to keynote the 1989 Summer Institute and especially thanks Robert Traynor for his support in putting together this meeting.