



*Academy of Rehabilitative Audiology
Summer Institute 2002*

*Lake Lure, North Carolina
June 7-9, 2002*

FRIDAY, JUNE 7

8:30 - 8:45 Opening Remarks

Barbara Parker, President

David J. Wark, Program Chair; *University of Memphis*

9:00 - 10:00 INVITED PRESENTATION

**Psychological Factors in the Outcome of Pediatric
Cochlear Implantation: Are They Important?**

John Knutson; *University of Iowa*

Since the inception of cochlear implantation as a possible intervention for persons with profound deafness, the possible role of psychological variables has been debated. Although the early interest in psychological factors in implant outcome focused on adults, as pediatric implantation was established as a clinical option for prelingually deafened children, a consideration of the role of psychological factors in implant use and outcome in pediatric populations

emerged. Because of the variance in implant outcome, psychological factors have been implicated as determinants of implant use as well as audiological benefit. Additionally, psychological factors have been offered as potential indices of implant benefit or, conversely, implant failure. Although there is hope that technological developments will mitigate the influence of variables outside the sphere of hardware and software in determining implant outcome, variance in implant benefit among the recipients of the current generation of implants suggests that researchers and clinicians cannot summarily dismiss any variables that might influence implant outcomes. The present paper will review the existing empirical research that assesses psychological factors in pediatric implant use and benefit. In this review, a broad range of psychological and psychosocial variables, including parent-child relational variables, parent-child communicative skills, psychological adjustment, and intellectual functioning will be considered. This empirical work will then be discussed in the context of how aural rehabilitation specialists might incorporate psychological variables in their efforts to serve pediatric implant recipients.

10:00 - 10:30 Then and Now: Performance Changes in Profoundly Deaf Children Associated With Cochlear Implantation

Ann E. Geers; *Central Institute for the Deaf*

Data from a recently-completed study of 180 children from across the U.S. and Canada who used cochlear implants will be compared with data we have collected over the past 25 years from various samples of children with profound hearing loss who used hearing aids. Data from children with cochlear implants indicate: a) a stronger relation between auditory speech perception ability and oral communication, b) a closer approximation to the language of hearing age mates, and c) an increased use of speech by children in total communication programs.

10:45 - 11:00 Management of Auditory Processing Disorders in Children: Relationship to Assessment

Judith T. Blumsack; *Florida State University*

Management of auditory processing disorders in children is complicated by a leap that must be made from site-of-lesion oriented auditory processing assessment to the complex communicative problems encountered in the classroom. The presentation will a) review briefly neurological models and current research designed to relate assessment to intervention and b) advocate for development of additional assessment tools that relate directly to communicative performance.

11:00 - 11:30 The Impact of Knowledge of Results on Novel-Word Learning by Children With Hearing Loss

Sheila Pratt; *University of Pittsburgh*

The ability of children with hearing loss to quickly learn novel words was assessed within a single-subject, multiple-baseline design. Novel-word learning was evaluated with an incidental learning task without feedback and then with knowledge of results provided. The children exhibited difficulty learning the words incidentally (through simple exposure) but showed learning and maintenance when knowledge of results was provided.

11:30 - 12:00 Psychosocial Rehabilitation Groups for Cochlear Implant Users

Gitry Heydebrand, Susan Binzer, and Margaret Skinner;

Washington University School of Medicine

Elizabeth Mauze and Nancy Tye-Murray; *Central Institute for the Deaf*

Group-based rehabilitation workshops were conducted for cochlear implant users and their partners. The workshop was held over 2 consecutive days with a half-day follow-up session 1 month later, and was led by two rehabilitative audiologists and a neuropsychologist. A variety of self-assessment questionnaires were given prior to the workshop and 3, 6, and 12 months following the workshop. Videotaped conversations with an unfamiliar speaker and the participant's partner were made. Workshop content, test measures, initial results, and impressions will be discussed.

1:30 - 2:30 INVITED PRESENTATION

Enhancing Clinical and Counseling Skills Through Self-Exploration

Marilyn Dunham Wark; *University of Memphis*

Webster and Ward (1965) suggest that "... the development of the clinical student's ability to enter into satisfactory human relationships is regarded as the larger whole of the process of professional preparation." They further suggest that for the student to be able to provide conditions for growth for their clients, they need the same opportunities for their own growth as well. This presentation will discuss a) the basic interpersonal communication skills thought to be necessary for the skilled clinician/counselor, b) the importance of teaching interpersonal skills through a process of self-exploration and experimentation, and c) methods of achieving this within a program's curriculum.

2:30 - 3:15 The Scope of Counseling Responsibilities in Audiologic Rehabilitation

Sue Ann Erdman; *ARCS, Hot Springs, Virginia*
David J. Wark; *University of Memphis*

Delimiting the scope of audiologists' counseling responsibilities is essential to promote development of appropriate curriculum and practicum content and to resolve audiologists' reservations regarding their role and qualifications as counselors. The presenters will outline areas of counseling responsibilities for rehabilitative audiologists by reviewing a) current professional standards and preferred practice guidelines, and b) normative data on communication and adjustment problems experienced by those with hearing impairment. Examples of adjustment difficulties and maladaptive behaviors that are within audiologists' scope of responsibility and professional purview will be contrasted with personality and mood disorders that warrant referral to mental health professionals. Using a scope of counseling responsibilities for rehabilitative audiologists defined by the above, requisite areas of knowledge and skills will be discussed with guidelines for curriculum and practicum experiences.

**3:30 - 4:00 PANEL DISCUSSION
Counseling in Audiological Rehabilitation – Roles and Boundaries**

John Knutson; *University of Iowa*
Marilyn Dunham Wark; *University of Memphis*
Sue Ann Erdman; *ARCS, Hot Springs, Virginia*
Joseph J. Montano; *Long Island University – CW Post & Children's Hearing Institute*
David J. Wark; *University of Memphis*

**4:00 - 4:30 Adjusting to Hearing Loss in the Workplace:
The Domain Frequently Overlooked**

Carren J. Stika; *Rehabilitation Research and Training Center for Persons who are Hard of Hearing or Late Deafened*

Results of studies conducted by the Rehabilitation Research and Training Center for Persons who are Hard of Hearing or Late Deafened indicate that hearing loss – even a moderate hearing loss – can and often does have a major impact on the individual's employment status. Despite the significant adjustment problems that people with hearing loss frequently encounter, professionals who provide rehabilitation and audiological services to hard of hearing individuals frequently do not address these psychosocial and employment

issues. One reason may be that professionals themselves are not aware of these adjustment difficulties and, therefore, are not in a position to provide information and assistance. This presentation will summarize research findings and offer recommendations relative to these results.

4:30 - 5:30 POSTER SESSION

1. Hearing Aids and FM Systems: Effects on Psychosocial/Physical Health

Carl Crandell and M. Samantha Lewis; *University of Florida*
Michael Valente and Jane Enrietto; *Washington University*

2. The Effects of a Group Hearing Aid Orientation Program on Patient Success

Lindsay B. Gillette and Alice Holmes; *University of Florida*

3. A Profile of College Classroom Acoustics

Laura J. Kelly and Lisa Brown; *Miami University*
Charles Hayden; *National Institute of Occupational Safety and Health*

SATURDAY, JUNE 8

9:00 - 10:00 INVITED PRESENTATION

Understanding and Promoting Intentional Behavior Change

Carlo DiClemente; *University of Maryland, Baltimore County*

Health promotion and protection as well as management of high risk behaviors require human behavior change. In order to increase health protection behaviors, stop addictive behaviors, or manage chronic health problems individuals must cease some behaviors, modify others, and initiate others. Even physical therapy, properly using aids, and pharmacological interventions require compliance and adherence to a medical regimen. Understanding intentional human behavior change and learning how to facilitate that process of change is a critical objective of health care delivery. This presentation will examine the motivational and coping aspects of this process of change from the view of the Transtheoretical Model of human behavior change, which identifies specific stages of change and the tasks, goals, and strategies most appropriate for each stage. How to use this model in health care delivery and particularly in promoting compliance with health behavior recommendations will be highlighted. Recent strategies developed to foster movement through the process of change will be discussed.

10:00 - 10:30 PANEL DISCUSSION**Panel – Applications of the Transtheoretical Model to AR**

Carlo DiClemente; *University of Maryland, Baltimore County*
Lt. Col. Lorraine Babeu; *Aberdeen Proving Ground, Maryland*
Sue Ann Erdman; *ARCS, Hot Springs, Virginia*
Patricia Kricos; *University of Florida*

10:30 - 11:00 The Inclusion of Significant Others in the Group Aural Rehabilitation Process

Jill E. Preminger and Barbara Eisenmenger; *University of Louisville School of Medicine*

A project was conducted to determine whether involvement of significant others in group aural rehabilitation classes influences the measured hearing handicap of adults with hearing loss. Experienced hearing aid users completed group aural rehabilitation classes, which included training in speech-reading, auditory perception, and communication strategies. There were two groups of subjects: those attending classes alone and those attending classes with a normal hearing significant other. All subjects and their significant others completed self-assessment scales prior to the 6-week class and after the completion of the class. The results revealed that inclusion of significant others did impact the measured hearing handicap.

11:15 - 11:45 Introducing Auditory Retraining Therapy: A New Approach to Treating Hearing Dysfunction

John Isenhath; *Private Practice*

Auditory Retraining Therapy (ART) is an experimental procedure designed to improve a listener's ability to understand speech in background noise. It is our position that inability to understand speech in noise is often due in part to deficiencies in the underlying hearing skills. Hearing skills refers to the learned ability a person acquires to perceive, sort, and interpret sound into meaningful words, measurable with word recognition tests. Loss of acoustic stimulation from hearing loss desensitizes auditory processing reducing the perceptual capacity to interpret sound accurately. ART uses a sound conditioning technique to stimulate auditory plasticity by challenging the brain to adapt to a series of acoustic environments. To assess change in hearing skills, word recognition ability is measured with the SIN Test (etymotic research) before and immediately after training. In an ongoing pilot study involving over 100 patients, ART achieves a 95% success rate in six ses-

sions. Preliminary results show that enhancing hearing skills can significantly improve hearing performance with or without hearing aids.

11:45 - 12:30 Psychosocial Dynamics for Facilitating Successful Group Aural Rehabilitation

Scott J. Bally; *Gallaudet University*

There is limited research, which explores the efficacy of group approaches to aural rehabilitation. This presentation is grounded in the professional literature of social work, counseling, and psychology. The presenter posits that numerous defined group dynamics may be applied to aural rehabilitation contexts and may be effectively utilized to facilitate adaptation to hearing loss. A survey of research in these areas reveals more than a dozen dynamics, which have proven useful in facilitating human adaptation to adverse conditions and in modifying maladaptive behaviors in a variety of rehabilitative contexts. Using an ecological perspective and the Bally Aural Rehabilitation Model, the presenter will provide practical applications each, using case examples to illustrate how these dynamics may be employed or facilitated in group aural rehabilitation.

SUNDAY, JUNE 9

**9:00 - 10:00 INVITED PRESENTATION – Sponsored by SID 7
Documenting Outcomes: Why? How? When?
& Whoa!**

Robyn M. Cox; *University of Memphis*

Self-report outcome data provide insight into the effectiveness of hearing aid fitting from the client's point of view. This talk will review the reasons to collect these types of data as well as the different domains of outcome that are available for scrutiny. Several existing outcome inventories suitable for clinical use will be reviewed, and data will be presented about optimal timing of outcome measurements. Finally, some caveats about potential threats to the validity of outcome data will be presented.

10:00 - 10:30 Dual-Microphones Hearing Aids: Considerations and Counseling

John A. Nelson; *Widex Office of Research in Clinical Amplification*

Dual-microphone systems are now available in BTE, ITE, and ITC hearing aid styles. As with all high-technology hearing aids, it is the signal pro-

cessing implemented that determines if two are better than one. In this presentation the design considerations for dual-microphones to maintain performance and customer satisfaction will be discussed first. Then, the counseling topics necessary to empower the individual with these hearing aids will be outlined. Once again, counseling is critical to success of even the best-designed systems.

10:30 - 11:00 Hearing Aids and the Internet: Implications for Counseling, Hearing Aid Benefit, and Satisfaction

Perry C. Hanavan; *Augustana College*

Increasing numbers of patients access online resources to acquire information about hearing loss and amplification. The Internet is relatively easy to access. The Internet has become a portal for healthcare research and will play an ever-increasing role in patients' attitudes, beliefs, and expectations of outcomes. However, online information lacks guidelines and regulations. Manufacturers of hearing aids who provide information on the Internet were assessed as to the quality, type, and focus of patient oriented information and its role in patient education. The implications and role of online hearing health care information will be discussed.

11:15 - 11:45 Subjective Otologic Effects of Airbag Deployment

Julie Dunphy Weaver; *Dayton VAMC*

Kathleen Hutchinson and Laura Kelly; *Miami University*

Each year millions of motor vehicle accidents in the U.S. cause airbag deployments. Although airbag deployment has saved thousands of lives, deployments can cause injuries as well. One effect of an airbag deployment that is seldom discussed in medical literature is damage to the auditory system. Recent research has shown that the noise generated by an airbag deployment reaches 170 dB SPL or louder. A noise of that intensity can cause hearing loss, tinnitus, and hyperacusis. For this study, 5 adults with auditory damage secondary to airbag deployment were surveyed to investigate the potential damaging effects of airbag deployment on the auditory system and to determine how such damage affects quality of life. Data analyses reveal some useful guidelines to assist in earlier diagnosis of hearing loss following automobile accidents and improve treatment for persons experiencing such losses.