“Conference Welcome”

Whether you are an audiologist, speech-language pathologist, a student, or any professional interested in learning or keeping up to date with new developments in communication sciences and disorders, CASLPA/ACOA’s Annual Conference is an important event for you.

This Conference to be held in Toronto, May 10-13th presents an excellent opportunity for you to compare notes, exchange ideas, and touch base with colleagues from all regions of the country.

The Conference is also a perfect opportunity for you to interact in a less formal atmosphere with CASLPA/ACOA’s President, Executive Director, National Councilors, and Committee Chair on a “one-to-one” basis or voice your concerns at the Members Forum.

For consumer and other public interest representatives CASLPA/ACOA ’89 will provide an opportunity to explore perspectives and points of view both the working sessions and the less formal conversations which characterize CASLPA/ACOA’s Annual Conference.

Come and help celebrate the Association’s 25th anniversary and interact with people of widely varied backgrounds who are involved with the professions of Speech-Language Pathology and Audiology. With your participation, everyone will benefit!

Use Deepn Stewart Anne Godden Conference Co-Chairs

“ON LOOKING BACK TO THE PAST, AND DIPPING IN TO THE FUTURE”

Presidential Address

Awards Banquet

Friday, May 12, 7:30-9:30 pm

CASLPA/ACOA is celebrating its Twenty-Fifth Anniversary in 1989. The Awards Banquet this year will provide the opportunity to review the past accomplishments of the Association, to honour those who have contributed so much to our profession in Canada, and to look ahead to the next twenty-five years.

Norma Wood is the current President of the Canadian Association of Speech-Language Pathologists and Audiologists. Since 1984 she has been an Assistant Supervisor in the Speech-Language Pathology Division of the Nova Scotia Hearing and Speech Clinic in Halifax, Nova Scotia.

Norma graduated from Dalhousie University School of Human Communication Disorders in 1982 and, since that time, has developed interests in all aspects of the profession. In addition to her position as a clinical and administrative supervisor, she has undertaken clinical and academic teaching at Dalhousie and has maintained an active role in professional affairs by serving on local community Boards, a Nova Scotia task force on manpower, and the provincial association, SHANS. Involvement with CASLPA/ACOA has included an interim position as National Councillor, membership on the Committee on Meetings, and the co-chairing of the CASLPA/ACOA Conference 1987 in Halifax.

During her terms as President-Elect and President, Norma had the opportunity to complete several projects, including the National Councillor Handbook and two Briefs on Service Delivery submitted to National Health and Welfare. From 1987 to 1989 she has been a CASLPA/ACOA representative to the Advisory Committee on Health Human Resources, which has been examining the issue of shortages in the rehabilitation professions.

Norma has been an energetic, forward-looking president. She has led the Association through a year of considerable growth and change. We can be proud to be represented by such an outstanding professional.
### Canadian Association of Speech-Language Pathologists and Audiologists
I'Association canadienne des orthophonistes et audiologistes
14th Annual Conference
Hilton International Hotel
Toronto, Ontario
May 10-13, 1989

### WEDNESDAY, MAY 10

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<tr>
<td>3:00-9:00 pm</td>
<td>Registration</td>
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<td>7:00-9:00 pm</td>
<td>Open Reception</td>
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### THURSDAY, MAY 11

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<tr>
<td>8:15-9:45 am</td>
<td>Opening Address</td>
<td>Connell</td>
<td>Toronto I</td>
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<tr>
<td>12:00 - 5:30 pm</td>
<td>Exhibits Open</td>
<td>Demorest, Erdman</td>
<td>Toronto I</td>
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<tr>
<td>8:00-12:00 noon</td>
<td>INVITED PRESENTATIONS</td>
<td>Miyada</td>
<td>Lismer/MacDonald</td>
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<tr>
<td>(Concurrent Sessions)</td>
<td>T/Learning Language to Language-Impaired Children</td>
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<tr>
<td>(Concurrent Sessions)</td>
<td>Adult Aural Rehabilitation: Strategies for Assessment and Intervention (full day)</td>
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<td>8:30-10:00 am</td>
<td>MINSEMINARS</td>
<td>Menczer et al.</td>
<td>Cassen</td>
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<tr>
<td>(Concurrent Sessions)</td>
<td>Communicating Options in the Acute Care Setting</td>
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<td>Varley</td>
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<td>(Concurrent Sessions)</td>
<td>How I do it! Management of Individuals with Velopharyngeal Incompetence</td>
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<td>10:30-12:00 noon</td>
<td>INVITED PRESENTATIONS</td>
<td>Hunter</td>
<td>Harris</td>
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<td>(Concurrent Sessions)</td>
<td>Teaching Language to Language-Impaired Children</td>
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<tr>
<td>(Concurrent Sessions)</td>
<td>Adult Aural Rehabilitation: Strategies for Assessment and Intervention (am)</td>
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<td>10:30-12:00 noon</td>
<td>MINSEMINARS</td>
<td>Menczer et al.</td>
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<td>(Concurrent Sessions)</td>
<td>Auditory Conduction ABR in Screening for At-Risk Infants</td>
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<td>Workload Measurement System: Real Time</td>
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<td>Analysis/Audit Guide</td>
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<td>MINSEMINARS</td>
<td>Rothchild et al.</td>
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<td>(Concurrent Sessions)</td>
<td>Forensic Applications of the Communication Sciences</td>
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<td>Use of Self-Estim on in Speech-Language Pathology</td>
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<td>(Concurrent Sessions)</td>
<td>Pre-and Post-Interventions</td>
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<td>10:30-12:00 noon</td>
<td>PAPERS: SPEECH-LANGUAGE PATHOLOGY I</td>
<td>Roy, Leeper</td>
<td>Harris</td>
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<td>(Concurrent Sessions)</td>
<td>Lesion Size and Location in Buccofacial Apraxia</td>
<td>Mitte, Raade et al.</td>
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<td>(Concurrent Sessions)</td>
<td>Augmentative Communication: &quot;It takes more than one.&quot;</td>
<td>Silverman</td>
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<td>(Concurrent Sessions)</td>
<td>Use of Micro-Computers in Speech-Language Pathology Reports</td>
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<td>1:30-3:00 pm</td>
<td>MEMBERS FORUM</td>
<td>Robertson, Murphy</td>
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<td>(Concurrent Sessions)</td>
<td>Adult Aural Rehabilitation (continued from am)</td>
<td>Demorest, Edman</td>
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<td>Introducing the CELF-R</td>
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<td>(Concurrent Sessions)</td>
<td>Cochlear-Hearing Loss: Anatomical and Physiological Change</td>
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<td>1:30-3:00 pm</td>
<td>PAPERS: SPEECH-LANGUAGE PATHOLOGY I</td>
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<td>Lismer/MacDonald</td>
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<td>Remediation of Stuttering in Children</td>
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<td>1:30-3:00 pm</td>
<td>PAPERS: SPEECH-LANGUAGE PATHOLOGY I</td>
<td>Williams</td>
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<td>3:30-5:00 pm</td>
<td>Changing Perspectives in Leadership</td>
<td>Charlton</td>
<td>Governor General</td>
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<td>1:30-3:00 pm</td>
<td>MINISEMINARS: Workshops for Grandparents of Hearing Impaired Children</td>
<td>Lane, Theimer</td>
<td>Richmond</td>
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<td>Narrative Production and the Communicatively Impaired Kindergarten Child: Part I</td>
<td>Calberti</td>
<td>Casson</td>
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<td>Narrating and Exchanging Information through Telecommunications</td>
<td>Fabey, Ziegler</td>
<td>University</td>
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<td>3:30-5:00 pm</td>
<td>Narrative Production and the Communicatively Impaired Kindergarten Child: Part II</td>
<td>Waine</td>
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<td>1:30-3:00 pm</td>
<td>PAPERS: SPEECH-LANGUAGE PATHOLOGY II</td>
<td>MacKegan, S.</td>
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<td>Development of Symbolic Play in Twins Differing in Auditory Function</td>
<td>Gale, S.</td>
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<td>Language Skills of Chronically Behaviourally Disabled Children</td>
<td>Mack, W.</td>
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<td>A Child With Auditory Verbal Agnosia</td>
<td>Gaines, C.</td>
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<td>Treatment Needs of the Closed Head Injured Child</td>
<td>Rankin, T.</td>
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<td>Reading Skills in Orally-Trained Hearing Impaired Children</td>
<td>Waters</td>
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<td>3:30-5:00 pm</td>
<td>PAPERS: SPEECH-LANGUAGE PATHOLOGY III</td>
<td>Parvis, G.</td>
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<td>Assessing Functional Communication in Infants</td>
<td>Diamond, S.</td>
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<td>Validity Study of Kindergarten Language Screen Measures</td>
<td>Kodama, W.</td>
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<td>Mother's Predictions of Infant's Development</td>
<td>Mackenzie, G.</td>
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<td>Social Communication in Normal and Language Impaired Preschool Children</td>
<td>Finch, P.</td>
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<td>Story Production and Oral Language Performance</td>
<td>Markovich, R.</td>
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<td>3:30-5:00 pm</td>
<td>PAPERS: SPEECH-LANGUAGE PATHOLOGY IV</td>
<td>Hartmann, S.</td>
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<td>Tracheoesophageal Puncture 1: A Rating Scale of Success</td>
<td>Schultz, N.</td>
<td>Richmond</td>
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<td>Tracheoesophageal Puncture 2: Factors Predicting Success</td>
<td>Wizzi, Z.</td>
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<td>Fibreoptic Endoscopy of the Vocal Tract</td>
<td>Holmes, L.</td>
<td>Richmond</td>
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<td>Nasalance versus Perceptual Ratings of Nasal</td>
<td>Broderson, S.</td>
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<td>Posterior Nasal Fricative in Swound Specific Velopharyngologic</td>
<td>Brown, W.</td>
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<td>Preparation and Orbital Language Performance</td>
<td>Markovich, R.</td>
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<td>8:00-10:00 pm</td>
<td>Canadian Auditory Equipment Association Reception</td>
<td>Toronto I</td>
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<td>FRIDAY, MAY 12</td>
<td>Exhibits Open</td>
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<td>INVITED PRESENTATIONS</td>
<td>Giegler</td>
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<td>Facilitating Generalization of Phonological Intervention</td>
<td>Skinner</td>
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<td>Prescribing Real-Ear Gain with Digital Hearing Aids</td>
<td>Freeman</td>
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<td>8:30-10:00 am</td>
<td>MINISEMINARS: Teaching Meaningfulness to the Very Young</td>
<td>Adams</td>
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<td>Tracheoesophageal Puncture 1: A Rating Scale of Success</td>
<td>Duncan, C.</td>
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<td>Tracheoesophageal Puncture 2: Factors Predicting Success</td>
<td>Barrett</td>
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<td>Fibreoptic Endoscopy of the Vocal Tract</td>
<td>Lonson, B.</td>
<td>Casson</td>
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**Program Summary**

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<td>9:00-12:00 noon</td>
<td>Normal Dysfluency in Stutterers: Treatment and Research Volunteers as Service Providers for the Profoundly Handicapped Preschooler</td>
<td>Mellows, Mackay</td>
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<td>Baird, Turner</td>
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<td>10:30-12:00 noon</td>
<td>Speech-Language Intervention: Phonetic, Post-Lingually Deafened Cochlear Implant Patient</td>
<td>Adams</td>
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<td>1:30-3:00 pm</td>
<td>PAM and Hearing Aid Interaction and Optimization</td>
<td>Chasin, Edwards</td>
<td>Trooto II</td>
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<td>KEMAR: Past and Present Uses</td>
<td>Henrickx, Comeau</td>
<td>York</td>
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<td>Pragmatics: Expectations, Realizations, Future Directions</td>
<td>Gallagher, Johnston</td>
<td>Toronto I</td>
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<td>10:30-12:00 noon</td>
<td>VIDEO TAPE PRESENTATIONS</td>
<td>Darwich, Steig</td>
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<td>A Neurolinguistic Approach to Speech and Language Disorders in Children</td>
<td>Menolson</td>
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<td>1:30-3:00 pm</td>
<td>&quot;Together we can know the world&quot; (Books, Music, Art, Games)</td>
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<td>12:00-1:15 pm</td>
<td>HANEN LUNCH FORUM</td>
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<td>1:30-2:00 pm</td>
<td>SCIENTIFIC EXHIBITS</td>
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<td>Computer-Assisted Implementation of the Desired Sensation-Level Approach</td>
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<td>General-Purpose Hearing Aid Simulation and Testing System</td>
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<td>Augmentative Techniques for Clarification</td>
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<td>Pragmatic Activities, Stroke Patents and Families</td>
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<td>CIKE: The Canadian Speech Research Environmen</td>
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<td>PAPERS: ACOLOGY 1</td>
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<td>Canadian Test in Assess Visual-Consonant Abilities</td>
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<td>Validation of a French-Canadian Speechreading Test</td>
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<td>Interactive Video System to Train Speechreading</td>
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<td>Repair Strategies for the Visual Recognition of Misperceived Words</td>
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<td>Counselling Role of Audiologists: Perception of Parents of Hearing-Impaired Children</td>
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<td>Project for Insal Hearing Impaired</td>
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<td>PAPERS: SPEECH-LANGUAGE PATHOLOGY V</td>
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<td>(Consecutive Presentations)</td>
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<td>Phonetic/Acoustic Analysis of Intelligibility in ALS</td>
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<td>Attention to the Acoustic Characteristics of Speech in ALS Patients</td>
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<td>Oral Stimulation of Comatose Closed-Head Injured Patients</td>
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<td>Influence of Training on Phonemic Production and Discrimination</td>
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<td>Self-Monitoring Judgments of Children with Phonological Disorders</td>
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<td>PAPERS: SPEECH-LANGUAGE PATHOLOGY VI</td>
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<td>Mismatching Impairments in Children with Severe Phonological Problems</td>
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<td>Assetennisis and Responsiveness of LD Children</td>
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<td>During a Comprehensive Monitoring Task</td>
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<td>Teaching Teachers to Pakistani Language</td>
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<td>Teaching 14 Children Cross-Cultural Cues to Aid Comprehension</td>
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<td>Quality assurance: Focusing on Outcomes</td>
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<td>Bringing Stutterers; Early Intervention Model; Pam Workshop on Sound Stimulation</td>
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<td>POSTERS: ACOLOGY</td>
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<td></td>
<td>A Model for Adult Aural Rehabilitation</td>
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<td>1:30-3:00 pm</td>
<td>Comparing the Occlusion Effect and Attenuation of Earplugs and Earmuffs</td>
<td>Comeau, Wheathead et al.</td>
<td>Harris</td>
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<td>Comparing the Occlusion Effect and Attenuation of Earplugs and Earmuffs</td>
<td>Lawson, Tang et al.</td>
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<td>Pavek, Monnow</td>
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<td>POSTERS: SPEECH-LANGUAGE PATHOLOGY</td>
<td>Performance Measures: Physiological Speech Characteristics Following Anesthesia</td>
<td>Breder, Desmarais</td>
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<td>Vocal Function Following Radiotherapy and Vertical Nystagmus</td>
<td>Lepper, Gagne et al.</td>
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<td>Quadratic: Apparatus for Comparative Microphone Measures and Consistent Audio Recordings</td>
<td>Doyle, Kwart et al.</td>
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<td>A Community-Based Swallowing Program</td>
<td>Bremberg, Hollard et al.</td>
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<td>Sex Recognition of Electrolaryngeal Voices Produced by Normal Speakers</td>
<td>Schifer, Yoviceich</td>
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<td>The Role of Linguistic and Visual Information in Acquired Aphasia</td>
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<td>Verbal and Nonverbal Aspects of Comprehension Monitoring</td>
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<td>Baby Talk: Encouraging Communication Between Parents and High-Risk Infants</td>
<td>Mullin, Maciellin et al.</td>
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<td>Usztyczkowski, Giovannetti</td>
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<td>McDougald, Jamieson et al.</td>
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<td>Levine, Bredo et al.</td>
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<td>4:00-6:00 pm</td>
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<td>9:30-12:00 am</td>
<td>PRESIDENT'S RECEPTION</td>
<td>Toronto II</td>
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<td>9:30-12:00 am</td>
<td>CANADIAN UNIVERSITIES ALUMNI PARTY</td>
<td>Toronto II/III</td>
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SATURDAY, MAY 13

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<tr>
<td>8:30-10:00 am</td>
<td>INVITED PRESENTATIONS Developmental Changes in ABR: 3 Weeks Conceptional Age Through the First 3 Years of Life</td>
<td>Gorga</td>
<td>Toronto II</td>
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<tr>
<td>9:30-12:00 noon (Concurrent Sessions)</td>
<td>A Model for Ocular-Sensory Examination</td>
<td>Kezi</td>
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<td>Multilingual and Multicultural Issues in Human Communication Disorders</td>
<td>Craig, Curmers</td>
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<td>Facilitating Communication Development in Children with Autism: Assessment and Interventions</td>
<td>Wetherly</td>
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<td>10:30-12:00 noon</td>
<td>Behavioral Research on Auditory Development Applied to Clinical Audiology</td>
<td>Norza</td>
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### Program Summary

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<td>Thomas, Steen, et al.</td>
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<td>Language Impairment and Voice Media</td>
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<td>Cognitive Linguistic Management of the Head Injured Adult</td>
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<td>Hodsdon Phonology Treatment Program: Pilot Study</td>
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<td>The Musician and the Audiologist</td>
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<td>(Concurrent Sessions)</td>
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<td>Informal Testing and Language Sampling Procedures</td>
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<td>Strategy Based Intervention for the Head Injured Child</td>
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<td>Cognitive Language Assessment of the Head Injured Patient</td>
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<td>Interprofessional Management Application of Dewey &amp; Vergotisky</td>
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<td>Tactile Aids for Speech Perception/Production by the Hearing-Impaired</td>
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<td>Sign Language for Parents: A Supplemental Interactive Model</td>
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<td>Velopharyngeal Insufficiency: Use of Diagnostic Information for Effective Treatment</td>
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<td>Occupational Noon: A Public Health Approach to Rehabilitation</td>
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<td>CONSULTATIVE SESSIONS</td>
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<td>Critical Differences for Aided Sound Field Thresholds in Young Children</td>
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<td>Probe-and Microphone Measurements of Loudness Discomfort in Young Children</td>
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<td>Central Auditory Processing and Amplification: A Case Study</td>
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<td>Clinical Experiences with the XOMED Audiant (TM) Bone Conductance Implant</td>
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<td>PAPERS: AUDIOLOGY III</td>
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<td>Central Processing Disorders: Hearing and Language</td>
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<td>The Effect of Acoustic Nuisance on Auditory Processing</td>
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<td>Speech via Bone Conduction: A Comparison of Transducers</td>
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CONFERENCE PROGRAM

Invited Presentations

Audiology

9:00 to 12:00 and 1:30 to 4:30

Adult Aural Rehabilitation: Strategies for Assessment and Intervention

Sue Ann Eriksen
Army Audiology and Speech Center
Walter Reed Army Medical Center, Washington, D.C.

The extent to which hearing impairment poses significant communication and adjustment problems for an individual is often the result of numerous behavioral, environmental, attitudinal, and emotional factors. Identification of variables that are contributing to communication difficulties is a prerequisite to effective intervention, and the key to successful rehabilitation. Clinical use of the Communication Profile for the Hearing Impaired (CPHI) is the subject of this presentation. The CPHI is a self-assessment inventory that was developed for use in a comprehensive aural rehabilitation program for adults with occupationally related hearing impairment. Information obtained from the profile can be used to determine rehabilitation goals and to develop strategies appropriate for the specific adjustment problems thereby maximizing the effectiveness of intervention. The presentation addresses clinicians' responsibilities in identifying these rehabilitative needs and developing appropriate strategies such as problem-solving exercises, counseling services, and support group activities for individual, family, and group intervention.

9:30 to 12:00

Coehlear Hearing Loss: A Detailed View of the Anatomical and Physiological Changes Which Underlie This Disorder

R. V. Harrison
University of Maryland, Catonsville, MD

A major part of the professional activities of audiologists and speech-language pathologists involves patients with some degree of sensorineural hearing loss. In recent years our knowledge concerning the underlying causes of hearing loss and related symptoms has increased considerably. The intention of this session is to review what is currently known about the anatomical and physiological changes that accompany cochlear hearing loss. First, the anatomy and physiology of normal cochlear function will be reviewed. From this background I will consider the various pathophysiologica! conditions underlying cochlear hearing loss, in particular, experimenal studies in animal models of sensorineural hearing loss in which cochlear damage has been caused by a variety of factors. The presentation will also touch upon other aspects relating to cochlear hearing loss arising from the effects of auditory deprivation during development to the principles of cochlearimplant prostheses. The overall objective of this presentation is to give a biological prospective on sensorineural hearing loss that should broaden the audiologist's and speech-language pathologist's understanding of the causes and symptoms of deafness.

Speech-Language Pathology

9:00 to 12:00

Teaching Language to Language-Impaired Children

Pat J. Connell
Northwestern University, Evanston, Ill.

In order to teach certain aspects of language to children who have failed to learn those aspects on their own, it is necessary to structure the language-learning situation in ways that lead children to learn the language rules that control those aspects. It is not sufficient to teach children simply to say the missing aspects under controlled conditions. In this presentation, methods will be suggested for teaching language rules that is, methods for inducing the natural inductive and deductive processes of language acquisition into clinical activities that can facilitate language learning. Teaching children to induce language rules involves presenting them with information from which to draw conclusions about the patterns in the language data they observe. Teaching children to deduce language rules involves presenting them with information that allows them to use their innate knowledge of language to learn sets of rules that are not learnable by other means. It will be claimed that only methods like those that are designed to teach children language rules are effective in actually teaching language to language-impaired children.

9:30 to 12:00

Communication Options in the Acute Care Setting

Pat Mitsuda
Harbourview Medical Center, Seattle, WA

The ventilator-dependent or intubated patient presents health care professionals with a number of challenges. These patients are often acutely ill and are unable to communicate orally because of diversities of airflow away from the larynx. Recent changes in technology have increased the number of communication options available to intubated patients. However, selection of an appropriate augmentative communication approach depends on the decision-making processes of a team of caregivers. This team of professionals providing communication options for these patients are now able to select from a variety of oral and nonoral approaches. A series of oral and nonoral augmentative communication options (including high and light technology) will be discussed, with emphasis on patients who are candidates for each approach. In addition, the skills required of the team
will be reviewed with some discussion as to which team members may offer which skills. Parenting skills for communication, along with a screening protocol will be examined, followed by a discussion of an initial needs assessment and the actual selection process. Finally, the importance of family orientation and follow-up will be outlined, including a discussion of a final needs assessment protocol.

9:00 to 10:30

**How do I do It? Management of Individuals with Velopharyngeal Incompetence**

*Philip C. Doyle*
Catholic University, Halifax, NS

*Hereward Leaper, Jr.*
University of Western Ontario, London, ON

*Jerald B. Moore*
University of Iowa, Iowa City, IA

*David Stringer and Mary Anne Witzel*
The Hospital for Sick Children, Toronto, ON

The management of individuals with velopharyngeal incompetence is of particular interest to clinicians faced with a variety of etiologies, diagnostic techniques, and therapeutic approaches. The need to coordinate information from a number of anatomical and physiological descriptors of velopharyngeal function is often an overwhelming task. While many clinicians have experience with several approaches in the diagnosis of velopharyngeal function with a variety of patient populations, a variety of examination techniques exist that may not be part of their routine testing protocol. This multimedia design is designed to provide information regarding techniques and procedures currently in use in North America. The format is unique for CASLPA/ACOA meetings and will be in the form of Table Clinics. These Table Clinics are divided into four segments: (1) perceptuoliteracy analysis (Dr. Doyle); (2) radiologic (Dr. Stringer and Witzel); (3) nasendoscopy (Dr. Moore); and (4) neurochemical and acoustic (Dr. Leaper). Each segment will provide a 30 minute, intensive exploration of the methodology and exact procedures used by the clinician-researchers in the management of persons with velopharyngeal incompetence. Attendees will rotate from one table clinic to another every 30 minutes to take advantage of the information presented in that specialized area.

1:30 to 4:30

**Remediation of Stuttering in Young Children**

*Edward J. Conoway*
Syracuse University, Syracuse, NY

The purpose of this presentation is to discuss the remediation of stuttering in young children (between two and ten years of age) through the use of parent-child therapy groups. This approach is based on the assumption that, for most children, stuttering develops from a complex interaction between the child's environment and the skills and abilities the child brings to that environment (Conture, 1982). Methods for changing environmental-child interactions to facilitate the child's fluency and related communicative interactions and speech production behaviors while providing their parents with information, practice, feedback, and recommendations for facilitating their child's fluency and related behavior. Clinical experience to date at Syracuse University indicates that utilizing a group approach with these children and their families can be highly successful. Such success appears related to the group's detailed and systematic attention to both the abilities and interests of the child and the needs, and understanding of the parents. Presentation of this paper will be part by part by OSER Grant S020885001X252) to Syracuse University.

1:30 to 3:00

**Introducing the Clinical Evaluation of Language Fundamentals—Revised: CELF-R**

*Elizabeth G. Doyle*
Texas Christian University

This presentation will provide an overview of the development of the CELF-R, in use in the diagnostic process, discussion about new and revised subtots, as well as information about interpretation of their scores.

**Audiology and SLP**

1:30 to 3:00

**I've Been Summoned Now What?**

*Judge F. Williams*
Judge of the Family court of Nova Scotia, Dartmouth, NS

This presentation is an overview of issues that are encountered when one becomes involved in a legal proceeding. Issues covered will include: (1) types of legal proceedings; (2) why would I be summoned; (3) what is privileged information; (4) can my files and notes be summoned; (5) what is an expert witness; (6) can I testify to; (7) what is direct examination and cross-examination; (8) what the lawyer does to prepare for testimony in court.

3:30 to 5:00

**Changing Perspectives in Leadership**

*Zuan Chernin*
University Hospital, London, ON

Knowledge and skills for effective leadership and management can be learned. The associated behaviors are fundamental to the development of empowered people working together in a cohesive team. Join with colleagues who have made the transition from practitioner to manager, and share the peaks and pitfalls of being "the boss." During this highly participative workshop, participants will have an opportunity to: (1) discuss successful behaviors of leaders and managers; (2) define goals related to technical business, and relational skill requirements; and (3) determine strategies to achieve these goals.

**Members Forum**

Thursday, May 11
1:30 - 3:00 pm

Governor General's Rowan
for At-Risk Neonates

Michael

The auditory brainstem response (ABR), a non-invasive electrophysiological technique, provides a powerful tool to evaluate auditory function. A major limitation of the air conduction ABR in neonatal hearing screening is its high false-positive rate for sensorineural hearing loss. This presentation will describe a modified approach employing bone conduction ABR as an adjunct to the air conduction technique in identifying newborn infants with sensorineural hearing loss. The goal of this new approach is to provide more accurate testing procedures in the hearing screening for at-risk newborn infants. The new hearing screening test consists of two phases: (1) normative ABR data collection in which non-risk full-term newborn infants were tested using air and bone conduction ABR; and (2) ABR in neonatal hearing screening in which newborn infants at-risk of hearing impairment were tested using air and bone conduction ABR.

1:30 to 3:00 Conducting Workshops for Grandparents of Hearing-Impaired Children

Susan A. Lane and Joy P. Theimer

B.C. Elks Auditory Rehabilitation Centre, Surrey, BC

When a child is diagnosed as hearing-impaired the life of every family member is affected in some way. Grandparents may go through a grieving process similar to what parents experience, for they, too, have suffered the loss of a "perfect" grandchild. The grandparents are in a unique position of being able to provide support to both the parents and the hearing-impaired grandchild. Although counselling and information is often provided to parents of hearing-impaired children, the needs of grandparents are rarely considered.

The B.C. Elks Auditory Rehabilitation Centre offers workshops to grandparents of hearing-impaired children and toddlers. Examples of workshop activities such as simulated experiences, team projects, and problem-solving will be discussed. Follow-up questionnaires completed by parents and grandparents are used to assess the effectiveness of these workshops in creating and maintaining support for the family of the hearing-impaired child.

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and its accuracy: component 3 verifies output information through establishment of normal/range for performance indicators.

10:30 to 12:00

Spoken-Language Learning and Deafness: Clinical Model for Maximizing Audition
Barbara Ann Johnson
National Technical Institute for the Deaf, Rochester, NY

Frequently, speech-language pathologists are asked to apply their expertise to deaf individuals. Many professionals who perform this feat have received minimal training in the acquisition of spoken language in the presence of hearing impairment (Johnson & Peterson, 1977). Therefore, this mini-seminar will address the language-learning needs of deaf individuals through some principles, procedures, and clinical examples. The focus will be on methods for maximizing the residual hearing of deaf language learners using a developmental model. Research will be cited to show that with proper training, optimally aided residual hearing may in many cases be the key to spoken-language development. Ten principles will be explained, corroborated by literature citations, and supported by clinical examples. Specific clinical procedures will be presented. Participants will gain exposure to some tools that should make way for the proper identification of deaf individuals whose aided audition is potentially usable for spoken-language acquisition. Participants will also learn the importance of maximizing audition and be introduced to some clinical procedures that facilitate spoken-language acquisition in the deaf through maximizing audition.

10:30 to 12:00

Functional Use of Self-Esteem in Speech-Language Pathology Remediation
Roy Saunderson
Parkwood Hospital, London ON

An often ignored element of speech-language pathology remediation is dealing with the patient’s lowered self-esteem resulting from his/her communicative disorder. A patient will evaluate his/her communicative performance in conversation and in therapy. If perceived negatively, the performance will deflate self-esteem and interfere with progress toward therapeutic goals. Besides the patient’s own perceptions of his/her performance, significant others, such as family, friends, and clinicians, also affect the patient’s responses to the communication disorder and undermine improvement (Houk, 1980; Zillah Waine, 1982). At the end of this mini-seminar participants will be able to: (1) understand the development of self-esteem; (2) relate the grieving process to communication disorders; (3) learn how to develop and maintain a patient’s self-esteem; (4) utilize the management of self-esteem towards achieving speech-language pathology goals; and (5) relate information learned to actual case studies.

1:30 to 3:00

Narrative Production and the Communicatively Impaired Kindergarten Child: Part 1 Assessment
Paul Catherall
Glenrose Rehabilitation Hospital, Edmonton, AB

Interest in the narrative skills of language-disordered children continues to grow in the midst of clinical and educational recognition of the social and academic implications of deficits in oral narrative production. The clinical use of this area appears to be the search for viable assessment and intervention procedures for the school-aged population. Developmentally, however, it is generally acknowledged that the roots of narrative acquisition can be traced to the preschool period. Significant deficits in the narrating abilities of a group of kindergarten-aged, communicatively impaired children enrolled in the Glenrose Hospital's Preschool Language Group appeared to warrant clinical attention. Current assessment guidelines were found to be inadequate. This presentation will attempt to provide a preliminary organizational framework for the clinical assessment of narrative skills with kindergarten-aged children. Procedures designed to elicit various narrative types will be described and transcripts illustrating baseline samples from our disordered population will be presented. Problems in establishing clinically feasible measures of narrative production abilities for this age group will be discussed. Based on the assessment information described in this mini-seminar, guidelines for intervention will be presented.

1:30 to 3:00

Accessing and Exchanging Information Through Telecommunications
Ronald Fawley and Luis Zegarra
Hotel Dieu Hospital, Kingston, ON

Telecommunication provides for the rapid transfer of information among groups or individuals. Technology has now developed to enable both professionals working with the handicapped, and the handicapped consumer, to access information as well as communicate with one another. This paper will provide a general overview of telecommunications systems available to computer users including the following: data bases, computer networking, electronic mail, and bulletin boards. A discussion of hardware and software requirements, features, benefits, and costs will be presented. Options for accessing information services and controlling costs of telecommunications will be addressed. Several popular systems will be presented in detail with information on other related systems being provided in a user friendly handbook. Specialization on future applications of telecommunications in speech-language and hearing for information retrieval, consultation, research, and intervention will be proposed.

3:30 to 5:00

Narrative Production and the Communicatively Impaired Kindergarten Child: Part 2 Intervention
Zillah Waine
Glenrose Rehabilitation Hospital, Edmonton, AB

The recent focus on oral narrative skills and literacy has resulted in speech-language pathologists being expected to assess and develop the narrative skills of language-impaired children. However, little clinically useful information is available on assessing and developing narrative in communicatively impaired children, especially preschool and kindergarten children. In addition, no information is available on what intensive practice with narration can accomplish with language-impaired children. The purpose of this mini-seminar is to provide a clinical framework for applying narration is intervention. Because the types of narratives and contexts for telling them can affect narrative
form a variety of narratives from different contexts will be discussed. A fifteen-week group treatment program for preschool and kindergarten children which builds on information gathered through baseline measures (described in Part 2) will be reported. Goals and objectives related to each narrative type will be discussed and treatment procedures will be illustrated through video presentation. Post-intervention narrative examples will be compared to baseline samples.

Paper Presentations
Session 1: 10:30 to 12:00

• Pre- and Post-Clinical Voice Evaluation of Patients Presenting with Functional Dysphonia
  Nelson Roy and Herbert A. Leeper, Jr.
  University of Western Ontario, London, ON
  Voice disorders which are not due to structural lesions fall under the general descriptive term "functional dysphonia." While such voice disorders are common, there is little information concerning their diagnosis and treatment. During a three year period, 19 patients presenting with functional dysphonia were assessed by one clinician in a community based hospital setting. The selected sample of patients was managed by a combination of interview and voice therapy techniques. (Aronson, 1985). Effectiveness was analyzed using perceptual and acoustic measures of vocal function. Results indicated a significant reduction of dysphonic symptoms within one hour, long term maintenance of acceptable vocal quality and significant reductions in perceptual ratings of severity of vocal dysfunction. Measures of voice parameters also showed changes. The results will be discussed in terms of identification and effective management of functional dysphonic patients.

• Lesion Size and Localization in Buccofacial Apraxia: A Retrospective Analysis
  Tessa Mintz and Adele S. Joseph's Hospital, London, ON
  The relationship of neuroanatomical lesion localization and measured lesion size to degree of deficit in buccofacial apraxia is far from conclusive. This study will attempt to extend previous research and answer the following two questions: (1) What is the relationship between severity of buccofacial apraxia and lesion size and localization? Subjects included 40 right handed patients who had experienced a single left ischemic stroke. The patients were previously assessed in the acute stage post-onset using the Western Aphasia Battery at the St. Joseph's Hospital Aphasia Laboratory. The presence and severity of buccofacial apraxia was determined for each patient using the five item facial apraxia subset of the WAB. Results will be presented in relation to lesion size and size information from CT scanning done for each patient in the acute stage post-onset.

• Amer-Ind Gestural Code: A Means to Oral Communication
  Alice M. Marcheloff
  University of New Hampshire, Durham, NH
  This presentation describes the use of Amer-Ind gestural communication as a means of enhancing verbal expression in a case of severe oral apraxia. Mr. K., suffered a left frontal-parietal infarct resulting in severe oral apraxia, aphonia, and mild to moderately impaired comprehension, reading, and writing skills. Amer-Ind was introduced as an adjunct to traditional therapy giving Mr. K. a broader repertoire of expression for ideas, feelings, and occurrences. After five months, Mr. K. demonstrated diminished apraxia. At this time, re-education of oral movements was introduced in conjunction with Amer-Ind. Intelligent scores from spontaneous language and phonetically balanced word lists are compared to the one and three year post-infarct. Videotapes will show: (1) advanced Amer-Ind communication; (2) use expression following one year of therapy; and (3) two year post treatment outcome. Discussion of the potential for use of Amer-Ind in conjunction with traditional treatment will follow.

• Augmentative Communication: It Takes More Than One
  Neeti V. Rothrock
  The Hugh MacMillan Medical Centre, Toronto, ON
  This presentation describes the use of Amer-Ind gestures in conjunction with traditional treatment for a client with severe oral apraxia, aphonia, and mild to moderately impaired comprehension, reading, and writing skills. Amer-Ind was used as a means of enhancing verbal expression in a case of severe oral apraxia in combination with traditional treatment. Therapy for this client was designed and implemented by multidisciplinary team drawn from a specialized augmentative communication clinic and a team specializing in continuing care for adults. The case presentation will focus on two issues: (1) the importance of light technology as well as high technology, and how they can be used to optimize communication with a range of partners in a variety of environments and (2) the importance of trial training with augmentative communication devices for the client over an extended period of time with familiar partners and in a natural setting.

• Practical Use of Micro-Computers to Aid Speech-Language Pathology Reports
  Jeanne S. Robertson
  Nova Scotia Hearing and Speech Clinic, Sydney, NS
  After completing speech and language evaluations, speech-language pathologists find themselves faced with the time-consuming task of writing and detailed reports. In addition, many have long waiting lists for evaluation and treatment. In an attempt to address both of these issues more efficiently, Apple IIe micro-computer with word processor software was used to assist in completing full evaluations.
of all clients on the waiting list. Each client was assessed using standard evaluation procedures, and reports were written using a flexible report form which could be modified easily for individual clients. Data collected during the project period revealed that the amount of time spent by the clinicians on each individual evaluation report was reduced and the quality of the report was improved. Additional information will be presented on other practical, clinic uses of micro-computers including data-base programs and the use of laptop computers.

**Session 2: 1:30 to 3:00**

- **The Development of Symbol Play in Twins Differing In Auditory Function**
  Karyl MacKeigan and Elizabeth Skarakis-Doyle
  School of Human Communication Disorders
  Dalhousie University, Halifax, NS

Traditionally, language and symbolic play have been considered related domains of symbolic functioning. Contemporary research has demonstrated a temporal correlation between the development of these domains. Symbolic play development is a hierarchically arranged sequence of events, progressing from the investigative use of objects to sociodramatic play. This sequence has been documented in both normal hearing and hearing impaired singletons. Heating impaired singletons follow the same sequence of development but at a slower rate than normal hearing singletons. Unfortunately, studies comparing hearing impaired and normal hearing subjects often lack adequate controls. To control for these factors, this study examined the development of symbolic play in a set of twins differing in auditory function.

In order to control for the twin situation, a third child, a hearing singleton was also studied. Longitudinal data was collected over a 12 month period by videotape for all three subjects between the ages of 20 and 36 months. Results will be discussed in terms of the importance of hearing impairment and the twin situation upon the development of symbolic play.

- **Maternal Input and Language Development in Twins Differing in Auditory Function**
  Sonya Gale and Elizabeth Skarakis-Doyle
  School of Human Communication Disorders
  Dalhousie University, Halifax, NS

The linguistic environment has been shown to be an important factor in language acquisition. Past studies have shown that mothers' speech to normal hearing singletons is qualitatively different than mothers' speech to normal hearing singletons. Higher percentages of directives and task-related speech were observed for normal hearing singletons than for hearing impaired singletons. Since the presence of hearing impaired siblings may influence the speech of hearing impaired children, the speech of a third, normal hearing sibling was also examined. The mothers of the twins were videotaped every four to six weeks and orthographically transcribed. Results from three years of this developmental period will be discussed in terms of the characteristics of maternal input.
and expressive. The role of written language learning in helping this child to compensate for her profound auditory deficit was clearly identified and will be discussed. This child's marked improvement in auditory processing correlated with changes in her neurological status and development of linguistic knowledge.

- Recognizing Treatment Needs for the Closed Head Injured Child Ages Two to Eight

Lorna J. Rankin
University of Alberta, Edmonton, AB
Kenston L. Yockey
Madigan Army Medical Center, Tacoma, WA

Animals medical centers are treating children with closed head injury raised by a number of factors. Like their adult counterparts they may be admitted in varying degrees of coma on the Glasgow Index, but as they emerge from deep coma, to coma vigilance, the ability to recognize familiar faces and distinctive features within the environment, their behavior and required treatment needs will be dissimilar to adults requirements. This paper describes distinctive features that may affect assessment and treatment needs for the closed head injured child, including (1) the effect of pre-accident developmental milestones; (2) the extent of brain damage and the induced learning skills; (3) the impact of so called cortical plasticity; and (4) the elimination of many family support and social-verbal stimulation. All of the above features affect post traumatic development in children with closed head injury. The authors propose a multidisciplinary treatment model. The importance of combined and aggressive monitoring of the cognitive and learning outcome of these children during and after rehabilitation will be discussed, and the resultant implications for special educational needs will be stressed.

- Component Skills in Reading in Orally-Trained Hearing Impaired Children

Gloria S. Waters
School of Human Communication Disorders
McGill University, Montreal, PQ

Individuals born severely or profoundly deaf have great difficulty achieving adequate levels of literacy. Furthermore, little is known about how deaf children process written language and with which aspects of the reading process they have most difficulty. To determine those elements which account for reading achievement in orally-trained hearing impaired individuals, 56 severe to profound pre-lingually hearing impaired children were tested on a battery of levels. Results showed a significant positive relationship between those factors which account for reading achievement in orally-trained hearing impaired children and their oral and written language skills at a number of levels. Of the tasks which assessed reading skills, single word decoding ability was among the best predictors of reading achievement. However, words were recognized in a qualitatively different manner than in hearing children. Results suggest that while similar factors may account for reading ability in deaf and hearing children, deaf children may accomplish some aspects of the reading task in a different manner than do hearing children.

- The Communication Profile: A Classification System for Assessing Intervention Needs

Julie A. Diamond and Robin S. Springer
Rankin Mackay Center, Mackay, PQ

The Early Communication Scale examines three areas of communication: interaction, comprehension, expression, and play. It is designed for use by speech-language pathologists in the assessment and program planning of early functional communication. It is particularly useful in the evaluation of infants and children from birth to 24 months and of older language delayed or disordered children whose mental abilities are evaluated to be within this range. Two methods of assessment are combined direct testing and parental report. This ensures testing under standardized conditions, as well as consideration of the caregiver's report of a child's typical behavior at home. The scale is based on a developmental model. Skills and behaviors relevant to communication that are normally present in the early stages of language development are examined. In a pilot study, it was conducted as a stand-alone test procedure, determined reliability, and analyze correlations. This paper will describe the Early Communication Scale in detail and examine the procedures and results of the pilot study

- Early Communication Scale: Assessing Functional Communication in Infants

Lorraine Purvis
Children's Hospital of Eastern Ontario, Ottawa, ON
Susan M. Glaser and Anuick Reumont
Children's Hospital of Eastern Ontario, Ottawa, ON
Ron H. Smyth
Carleton University, Ottawa, ON

The Early Communication Scale examines three areas of communication: interaction, comprehension, expression, and play. It is designed for use by speech-language pathologists in the assessment and program planning of early functional communication. It is particularly useful in the evaluation of infants and children from birth to 24 months and of older language delayed or disordered children whose mental abilities are evaluated to be within this range. Two methods of assessment are combined direct testing and parental report. This ensures testing under standardized conditions, as well as consideration of the caregiver's report of a child's typical behavior at home. The scale is based on a developmental model. Skills and behaviors relevant to communication that are normally present in the early stages of language development are examined. In a pilot study, it was conducted as a stand-alone test procedure, determined reliability, and analyze correlations. This paper will describe the Early Communication Scale in detail and examine the procedures and results of the pilot study.

- Recognizing Treatment Needs for the Closed Head Injured Child

Mackay: Communication Profile was developed in 1984 at the Mackay Center, a facility for neurologically impaired children. It is used as a classification system to assess the speech, language, and communication needs of individuals and groups, and to assist in the clinical decision-making process. The Profile consists of an initial comprehensive, secondary and tertiary deficits. Since its inception, the usefulness of the Profile has expanded significantly into both intervention and administrative areas and, in fact, has become a cross-disciplinary method of communication. The design of the system is based on simplicity and adaptability, factors which have allowed for its evolution into a new and dynamic clinical and management tool. The Profile, in its clinical and management applications, and three case studies will be presented.

- The Communication Profile: A Classification System for Assessing Intervention Needs

Judy A. Diamond and Robin S. Springer
Rankin Mackay Center, Mackay, PQ

The Early Communication Scale examines three areas of communication: interaction, comprehension, expression, and play. It is designed for use by speech-language pathologists in the assessment and program planning of early functional communication. It is particularly useful in the evaluation of infants and children from birth to 24 months and of older language delayed or disordered children whose mental abilities are evaluated to be within this range. Two methods of assessment are combined direct testing and parental report. This ensures testing under standardized conditions, as well as consideration of the caregiver's report of a child's typical behavior at home. The scale is based on a developmental model. Skills and behaviors relevant to communication that are normally present in the early stages of language development are examined. In a pilot study, it was conducted as a stand-alone test procedure, determined reliability, and analyze correlations. This paper will describe the Early Communication Scale in detail and examine the procedures and results of the pilot study.

- A Validity Study of Six Kindergarten Language Screening Measures

Suzanne King
Cornwall General Hospital, Cornwall, ON
Genevieve A. Warn-Legger
University of Western Ontario, London, ON
Christine L. Lay
Toronto, ON
Carol-Anne Ryan
Kingston, ON

The Early Communication Scale examines three areas of communication: interaction, comprehension, expression, and play. It is designed for use by speech-language pathologists in the assessment and program planning of early functional communication. It is particularly useful in the evaluation of infants and children from birth to 24 months and of older language delayed or disordered children whose mental abilities are evaluated to be within this range. Two methods of assessment are combined direct testing and parental report. This ensures testing under standardized conditions, as well as consideration of the caregiver's report of a child's typical behavior at home. The scale is based on a developmental model. Skills and behaviors relevant to communication that are normally present in the early stages of language development are examined. In a pilot study, it was conducted as a stand-alone test procedure, determined reliability, and analyze correlations. This paper will describe the Early Communication Scale in detail and examine the procedures and results of the pilot study.
The performance of 103 children ages four to six years on six language screening measures was compared with their performance on a diagnostic language test to determine the effectiveness of the screening measures. Untrained teacher judgment and the Language Identification Screening Test for Kindergarten were found to have a higher strength of agreement based on Kappa analysis that did the Let's Talk About Talking checklist, the Kindergarten Language Screening Test, the Preschool Speech/Language Screening Tool, and the Structured Photographic Expressive Language Test Pre-School. It was determined that the untrained teacher judgment was the most valid, simple, cost-effective, and time-efficient measure for the identification of language-impaired children.

- Mothers' Predictions of Infants' Development and Professional Evaluation: A Comparison
  Myrna L. MinKenzie and Candace K. Gant
  Western Washington University, Bellingham, WA
  Although parent reports are frequently used during infant evaluations, there is a perception that these reports are inaccurate. The current study looked at variables that might affect parent report data, so that testers might answer the question: With which parent-infant dyad will parent reports yield reliable information? Ten infants ages 12-34 months were given the Bayley Scales of Infant Development. Independently, each infant's mother was given an interview version of the Bayley Scales. Both the test and the interview were scored to yield a total score and over-all developmental indices. Results indicated that while the parent/professional agreement levels found in this study substantiated earlier studies, the parents in this study tended to underestimate their children's development rather than overestimate. Specific types of test items were less reliably reported by parents. Clinical and research implications will be discussed.

- Social-Communicative Interaction in Normal and Language-Impaired Preschool Children
  Amy Finch and Ronald Fahey
  Hotel Dieu Hospital, Kingston, ON
  Several studies involving normally-developing preschool children have indicated that they use a variety of verbal and nonverbal behaviors to establish social relationships among their peers during free play. However, the literature is limited in regard to language impaired children's ability to establish these relationships. This study compared the initiations and responses to initiations of language impaired and normally-developing children. In addition, the level of social participation in free play was compared. Eight children identified as language impaired and eight normally-developing children were matched on the basis of chronological age and sex and observed in two different settings. Each child was videotaped during dyadic interaction in a special playroom with three other children from their classroom. In addition, each child was observed during four free play periods in the natural preschool classroom. Data will be presented and implications for clinical intervention and additional research will be discussed.

- Story Formulation as a Measure of Oral Language Performance
  Karen S. Markovich, Sharon Rambachan, and Gene A. Warr-Leeper
  University of Western Ontario, London, ON
  This study investigated the language abilities of students in grades seven and nine by means of a story formulation task. Its purpose was to collect normative data on a number of language measures and to identify measures that distinguish grade levels. Forty students at each grade level, meeting several criteria to ensure normal language functioning, were selected to participate in the study. Subjects did a story based on the three sequenced story pictures contained in the Test of Written Language. The narratives were analyzed for story flow, grammar, text cohesion, text coherence, and vocabulary measures. Results for most story measures within grade levels were highly variable. Although most students remained in the same or higher range in their narratives, the number of main events included differed greatly. The number of words and sentences used also varied widely within grade levels. Several differences were found between students in grades seven and nine, with students in grade nine demonstrating better language skills on many of the measures analyzed. Implications will be discussed.

Session 4: 3:30 to 5:00
- Tracheoesophageal Puncture 1: A Rating Scale of Success
  Jill Harrison and Judith R. Shultz
  Montreal General Hospital, Montreal, PQ
  This paper describes a clinical scale for determining the success of the tracheoesophageal puncture procedure for voice restoration of laryngectomy patients. The literature includes reports of success rates ranging from 54% to 95%, with variation in part due to different definitions of success. Our experience suggests that success is not an all or none phenomenon, but rather a continuum with varying degrees of success or lack thereof. Moreover, a definition of success should include more than the dimension of fluency, the ability to produce sound post puncture. Thus, three aspects of behavior degree of use, quality of speech, and ability to care for the prosthesis are independently measured, then weighted to produce an overall rating of success on a fifteen point scale. Inter- and intrajudge reliability scores were found to be over 90% on each measure. Scores for functional, marginal, and non-functional speakers are suggested. The nature of the tracheoesophageal puncture rating scale suggests a more realistic description of outcome. Its scoring system allows for measures of progress, and its reliability permits more meaningful comparisons between series of patients.

- Tracheoesophageal Puncture 2: Factors That Predict Success
  Judith R. Shultz and Jill Harrison
  Montreal General Hospital, Montreal, PQ
  There has been considerable variability in reported success rates of tracheoesophageal puncture, ranging from 50% to over 95%. This variability most likely has been due to too few existing guidelines regarding factors which affect success, lack of statistical analyses, and ill-defined descriptions of what constitutes success. This study predicted with stepwise multiple regression the effects on tracheoesophageal puncture success of patient health, pre-procedure voice proficiency, one of a tracheostoma vent, extent of cancer, timing of surgical procedure, and prosthesis type, pros-
Laryngeal Airway Resistance Measures in an Older Population

Herbert A. Lepper
University of Western Ontario, London, ON

This study examined laryngeal airway resistance (R\text{law}) in an older population. Subjects were ten males and ten females in three age groups (55;0–64;11 years, 65;0–74;11 years, and 75;0+ years). A non-invasive procedure (Smitheran et al., 1981) was used to investigate R\text{law} in four intensity conditions (25th, 50th, 75th percentile). Values in the oldest group were found to be higher at each intensity than those of the younger groups. For males, however, the R\text{law} values of the oldest group differed from the values of the younger groups only at the 75th percentile of intensity. Values for R\text{law} were found to be higher females than males, and a significant gender/equity interaction was observed. Fundamental frequency and R\text{law} increased as intensity increased. Comparison with R\text{law} data obtained from young adults (Leese & Graves, 1984; Wilson, 1984) revealed few significant differences, although different air flow/inspiration pressure patterns were observed. Study results can be used to develop norms for this population; normative values are useful both in identification and monitoring of voice changes.

• Nasometer versus Perceptual Ratings of Nasality Post-Uvulopalatopharyngoplasty

Caroline J. Bredeon, Linda J. Garcia, and Jean Grévin-Lajoie
Ottawa General Hospital, Ottawa, ON

The posterior nasal fricative was described by Trout (1981). This sound is characterized by audible friction with associated nasal air emission and is typically used as a substitution for /N/, /NH/ or "uh." Several mechanisms have been identified in the production of the posterior nasal fricative including partial closure of the velopharyngeal (VP) valve by incomplete VP movement or the tongue tipping up the soft palate; and enlargement or ballooning of the VP port. This sound substitution may occur in patients with or without cleft palate and may be one of many errors or the child's only error. In order to define more clearly the characteristics of the posterior nasal fricative and to determine whether sound-specific VPI could occur in patients with or without cleft palate, 22 patients were reviewed. All patients had evidence of the posterior nasal fricative on speech assessment and each patient had assessment of VP function by multi-view videofluoroscopy, nasopharyngoscopy, or both. Our findings indicated that sound-specific VPI occurs both in the cleft and non-cleft speaker. In the cleft speaker, sound-specific VPI is often one of multiple articulation errors and appears to be one of the last articulation difficulties to be resolved. In both cleft and non-cleft speakers, speech therapy is the recommended form of management.
Invited Presentations

Audiology
9:00 to 12:00

Factors to Consider in Prescribing Real-Ear Gain with Conventional and Digital Hearing Aids
Margaret W. Skinner
Washington University, St. Louis, MO

A major goal in prescribing real-ear gain for aids is to amplify sound, particularly speech, within an individual's area of residual hearing. Factors to be considered include (1) sounds and listening situations encountered in everyday life; (2) real-ear frequency-gain characteristics associated with (a) maximum speech recognition and (b) providing acceptable sound quality; (3) ways in which conventional and digital hearing aids can be adjusted to provide the prescribed real-ear gain; and (4) further adjustments to provide greater benefit for the individual. A discussion of these factors will be based on results of research and clinical application from many centers and laboratories. In addition, the flexibility with which the desired frequency-gain characteristics can be achieved with conventional, quasi-digital and fully digital hearing aids will be described.

Speech-Language Pathology
9:00 to 12:00

Spasmodic Dysphonia 1989: Research Findings and Treatment Options
Frances Freeman
University of Texas at Dallas, Dallas, TX

Eight years of behavioral and brain-imaging studies lead to the conclusion that spasmodic dysphonia (SD) is a non-paralytic, supranuclear movement disorder, primarily, but not exclusively, affecting the larynx. Findings from Magnetic Resonance Imaging (MRI), topographic electrophysiologic brain mapping (BEAM), and regional cerebral bloodflow (SPECT) studies define cortical and subcortical lesions in 85% of SD patients. As a group, SD patients exhibit multifocal, electrophysiologic, and metabolic dysfunction in three cortical regions. For individuals and for sub-groups, brain imaging findings correlate with behavioral measures of language, cognition, and speech and non-speech motor control. The full implications of the research and clinical application from many centers and laboratories. In addition, the flexibility with which the desired frequency-gain characteristics can be achieved with conventional, quasi-digital and fully digital hearing aids will be described.

Contributed Presentations

Audiology

Miniseminars
8:30 to 10:00

Teaching the Meaningfulness of Verbal Language to the Very Young Cochlear-Implant Patient
Ross W. Adams
House Ear Institute, Center for Deaf Children, Los Angeles, CA

This miniseminar will expose the participant to an auditory habilitation program designed to facilitate the very young, prelingually deaf, cochlear-implant patient's understanding of the meaningfulness of verbal language symbols. The program is based upon a principle of determining the extent of speech information electro-acoustically available to the individual child, and subsequently assigning linguistic meanings to this limited information in small, carefully-selected units. The participant will receive an outline of suggested speech units and attachable meanings as well as the formula used in determining the meaningfulness of the limited information. The program will be utilized to demonstrate implementation of this habilitative approach and facilitate the participant's ability to apply this program to pediatric hearing aids as well as cochlear implant patients.

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The first part of this seminar will introduce Student Centered Programming by briefly summarizing the population of students served and discussing how an individual student’s program is developed through: (1) program consideration; (2) the classroom teacher; and (3) multi-disciplinary assessment consultation, and in-service. In the second part, a discussion of historical information about the development of the service delivery approach will lead to a presentation of that approach, which will outline the following characteristics: (1) school/community based; (2) emphasis on least restrictive environment; (3) responsive to changing needs; and (4) interactive and collaborative. Finally, information will be supplemented by the use of case studies including services = rural mainstreamed students, urban mainstreamed students, and urban center-based, self-contained classrooms.

10:30 to 12:00

Intervention with the Pediatric, Post-Lingually Deafened, Cochlear-Implant Patient

Ross W. Adams
House Ear Institute, Center for Deaf Children
Los Angeles, CA

This mini-seminar will provide the participant with strategies for developing an auditory rehabilitation program aimed at enhancing the pediatric, post-lingually deafened cochlear-implant patient’s ability to comprehend verbal language symbols. Acoustic information made available by both the single channel and twenty-two channel devices will be discussed as it relates to goal setting in speech-language intervention. Similarly, an auditorially monitored, feed back approach will be presented as it relates to the facilitation of the child’s ability to maintain verbal language production skills which are intelligible in the majority of situational and listener contexts. Practica demonstration will be provided, and participation in group discussions and brainstorming activities regarding implementation techniques will be encouraged.

1:30 to 3:00

FM and Hearing Aid, Interaction and Optimization

Marshall L. Chasin
Thornhill, ON
Carolyn Edwards
Toronto, ON

The characteristics of the interaction between a personal FM system and a hearing aid will be shown in terms of 2cc coupler data. Probe tube measurement data will also be shown based on experience with over 200 children from the Metropolitan Toronto Board of Education. A probe tube microphone based protocol will be introduced and discussed which is both clinically expedient and theoretically valid. Hypotheses will be tested to determine whether the user prefers a “similar gain” (between the hearing aid alone condition and the hearing aid/FM condition), a “similar output” or a “modified gain” based on the improved signal to noise ratio when an FM system is utilized. Results of the theoretical analysis indicate that when using the hearing aid/FM combination, the preferred level is a “modified gain” which is roughly equal to the gain used by the hearing aid alone minus 5-8 dB. A “similar gain” approach will tend to be judged as too loud by the user, and a “similar output” approach will yield a poor signal to noise ratio when the environmental microphone is turned on.

1:30 to 3:00

KEMAR: Past and Present Uses of the Acoustic Manikin

Larry K. Henrickson and Michael G. Comeau
School of Human Communication Disorders
Dalhousie University, Halifax, NS

When the Knowles Electronics Manikin for Acoustic Research (KEMAR) was first discussed it was proposed as an acoustic simulation of the average adult. A second manikin has been developed by Bruel and Kjaer. The first part of the seminar will describe the history, development, and traditional uses of the manikin to characterize hearing aids and ear mold acoustics. The second part will describe the acoustic and instrumentation considerations in setting up a KEMAR laboratory. The third part will highlight contemporary uses for KEMAR, and the more recent B&K acoustic manikin. These uses include: (1) Discussion of calibration; (2) The characterization of hearing aids; (3) A discussion of studies attempting to characterize the attenuation of various HPDs; and (4) the use of manikins to characterize telephone systems.

Paper Presentations

Session 1: 1:30 to 3:00

- A Canadian Test to Assess Visual-Consonant Recognition Abilities
  Jean-Pierre Gagné and Richard C. Seewald
  University of Nottawas Ontario, London, ON
  Rajaa Hassan
  University Hospital, London, ON

Investigations have been conducted to standardize a Canadian version of a visual consonant recognition test. The test consists of a colour videotape recording of 18 English consonant sounds produced in a /a/ /b/ /c/ format. The test material is presented by a Canadian female talker experienced in monitored live-voice speech production. One token of each of the 18 target sounds was included in the final version of the test. The selection of each of the 18 tokens was based on the naturalness of the vocal production and accuracy of the VU level acoustic production. The same token was used to generate five test items which were presented randomly throughout the test. An eight second response-interval was inserted between each test item. The edited 90 item test was presented visually-only to a group of 78 normal-hearing adults with normal vision, as well as to a group of adults with an acquired hearing loss. The results obtained were used to establish distinct viseme categories for the test stimulus. The mean percent correct scores for visual consonant recognition and viseme recognition were computed. The results obtained were consistent with previous investigations and indicate that the test forms developed with a Canadian talker are appropriate for assessing visual consonant recognition abilities.

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In developing rehabilitation services for adults with acquired hearing loss we came to the conclusion that a speechreading screening test was needed. For a variety of reasons, we chose to develop a test involving two lists of 50 visually identical sentences which we then evaluated for internal consistency and equivalence (Lalonde et al., 1988). This validation allowed us to arrive at two equivalent sets of statements which must now be used for predictability and stability. We will discuss the experimental procedure used in carrying out this validation, and present our preliminary data, if available.

**Assessment of an Interactive Video System in Train Speechreading**

Jean-Pierre Gagné, Diana A. Dixon, and Joanne M. Parsons
University of Western Ontario, London, ON

CAST, a computer-assisted speechreading training program, was designed to optimize speech-perception abilities among adults with acquired hearing loss. The CAST program consists of eight training lessons, each focusing on a specific viseme category, and each including: (1) a review of previously taught visemes; (2) the introduction of a new viseme category; and (3) practice of new and old viseme categories. An investigation was undertaken to assess the effectiveness of the CAST program in improving speechreading ability. Two groups of eight normal-hearing adults participated in the investigation. All the subjects completed a pre-training assessment protocol which consisted of: (1) a visual-occlusion recognition task; (2) a test of visual-sentence identification with context; and (3) a test of visual-sentence recognition without context. Analyses of the CAST program, all the subjects underwent a series of speechreading tests which consisted of equivalent forms of the pre-training test protocol. The results of the investigation will be presented and the clinical applications will be discussed.

**The Effectiveness of Three Repair Strategies on the Visual-Recognition of Misperceived Words**

Jean-Pierre Gagné
University of Western Ontario, London, ON

E.C. Drury School Milton, ON

Experimetal videotapes were used to assess the effectiveness of three different repair strategies: (1) repetition of the stimulus; (2) provision of a synonym; and (3) provision of a paraphrase. Three groups of normal-hearing adults viewed one of three experimental videotapes which incorporated one of the repair strategies under investigation. There were 50 test items in each videotape. Each test item consisted of three stimuli: (1) the test word; (2) a stimulus that incorporated the repair strategy under investigation; and (3) a repetition of the initial test word. The same 50 test words were used in each of the three videotapes. The subjects were required to identify the test words that were presented in a visual-only mode. When the response to the initial stimulus (i.e. the test word) was incorrect, the other two stimuli for that test item were presented, and the subject was given a second opportunity to identify the test word. An analysis of covariance revealed that simple repetition did not improve the ability of the subjects to identify the test word. A replication of the results under the simple repetition of the misperceived stimulus was observed when the repair strategy consisted of a synonym or a paraphrase, indicating that the use of substitute-stimuli may be more effective than the simple repetition of the misperceived stimulus.

**Counselling Role of Audiologists: Perception of Parents of Hearing Impaired Children**

Judith DeLorenzi and Edward Y. Yang
School of Human Communication Disorders
Dalhousie University, Halifax, NS

It is recognized that parents of hearing impaired children benefit from counselling at the time of diagnosis (Williams & Darbyshire, 1982). Some researchers (Stream & Stream, 1978) suggest that the audiologist's role includes providing parents with information as well as enhancing their understanding and acceptance of the disorder. Another investigator (Mitchell, 1981), however, recommends that counselling be done by trained therapists if possible with the audiologist providing only information to parents. This study evaluated how parents perceived the counselling role of the audiologist and the extent of counselling satisfaction at the time of hearing impairment diagnosis. A modified version of Client-Satisfaction Questionnaire (Larson, Attkinson, Hargreaves, & Nguyen, 1979), consisting of multiple choice and open-ended questions, was distributed to the parents to obtain information regarding parents' perception of the counselling they received. Findings were analyzed using descriptive statistics and recommendations were made.

**The Project for Inuit Hearing-Impaired: Beginning the Third Phase**

Anne Marie Hurteau and Martha Crego
McGill University, Montreal, PQ

The Project for Hearing Impaired Inuit of Northern Quebec was implemented four years ago. This innovative approach has become a model for outreach programs serving the Inuit children of Northern Quebec. Our presentation will describe the latest results and modifications in the development of the project's attempts to meet the specific needs and cultural differences of this northern population. The presentation will begin with a brief history of the program, the actual needs of the population and the present organization of the Project. Next, the services being offered to school-aged children as well as adults and preschoolers will be documented with specific cases that illustrate the program's diagnostic and rehabilitative approach. Following that, results of the different aspects of the intervention will be discussed. The focus will be on the need for continuing adjustment and re-evaluation in such an outreach program. The presentation will conclude with recommendations for the development of future audiological programs for Canadian Inuit.
The search for biological effects of ultrasound exposure has been in progress for many years and may justifiably continue far into the documentation of progress. These factors, in part, have led to increases in consistent patient referral, ineffective treatment planning, and poor outcomes of hearing problems. A perspective on counselling will outline the model program.

Berger (1986) has suggested that data for the attenuation of hearing protection devices (HPDs) have most commonly been measured by testing sound field thresholds which occur at relatively low sound pressure levels (SPLs). Berger further indicated that at very high intensities, both air and bone conduction pathways contribute to sound transmission reaching the inner ear. Since, at lower frequencies, bone conduction is known to be enhanced when the ears are occluded, the use of HPDs may produce a measurable occlusion effect. The attenuation of these HPDs may be less efficient than expected when used in the presence of high SPLs where the bone conduction pathway is involved. This study describes measurements of the occlusion effect for different types of HPDs using a forehead-placed bone vibrator. The study also compares the real ear attenuation at threshold and the insertion loss characterized by probe microphone measurements in the external ear canal. The results of these measurements are discussed in terms of the relationship between the occlusion effect and the effectiveness of HPDs at high intensities.

A Model for Adult Aural Rehabilitation

It has been suggested that hearing impairment represents one of the largest chronic disabilities in North America today. Inexplicability can be traced to both exogenous and endogenous factors. Adult aural rehabilitation programs have been plagued by inconsistent patient referral, ineffective treatment planning, and poor documentation of progress. These factors, in part, have led audiologists to question the remediation process as a whole. The screening, identification, and assessment of hearing impairment/handicap will be discussed as it relates to age, audiometric profile, and handicap. Several measures of frequency selectivity or tuning of the auditory system are potentially have important clinical applications. Most routine tests used in clinical audiology today provide little or no information on the selectivity of the ear. Several measures of frequency selectivity are presently available but are not in wide use clinically. In a group of normal hearing subjects, frequency selectivity was determined using both psychoacoustic and electrophysiologic procedures. Measures include the psychoacoustic tuning curve, speed of masking, ABR tuning curve, and extratympanic ECochG tuning curve. The effectiveness of HPDs at high intensities, both air and bone conduction pathways contribute to sound transmission reaching the inner ear. Since, at lower frequencies, bone conduction is known to be enhanced when the ears are occluded, the use of HPDs may produce a measurable occlusion effect. The attenuation of these HPDs may be less efficient than expected when used in the presence of high SPLs where the bone conduction pathway is involved. This study describes measurements of the occlusion effect for different types of HPDs using a forehead-placed bone vibrator. The study also compares the real ear attenuation at threshold and the insertion loss characterized by probe microphone measurements in the external ear canal. The results of these measurements are discussed in terms of the relationship between the occlusion effect and the effectiveness of HPDs at high intensities.

• Comparing the Occlusion Effect and Attenuation of Earplugs and Earmuffs

Michael G. Comeau, Larry K. Herrickstein, and Edward Yang
School of Human Communication Disorders
Dalhousie University, Halifax, NS
Gordon L. Whitehead
Nova Scotia's Hearing and Speech Clinic, Halifax, NS

• Industrial Ultrasound Exposure and Noise Induced Hearing Loss

Kim M. Lawson and Edward Y. Yang
School of Human Communication Disorders
Dalhousie University, Halifax, NS
Gordon L. Whitehead
Nova Scotia's Hearing and Speech Clinic, Halifax, NS

The search for biological effects of ultrasound exposure has been in progress for many years and may justifiably continue far into the future (Christensen, 1987). Many of the studies have dealt with the effects on somatic and visceral tissues of patients receiving medical and dental procedures involving ultrasound. There are some studies concerning possible hearing damage due to ultrasonic dental procedures (Waldenau et al., 1988; Miller et al., 1976). These studies did not probe the professionals who are exposed to ultrasound of greater duration. The present study examined the possible correlation between industrial ultrasound exposure and permanent change of hearing sensitivity. The subjects were volunteers from ultrasound research and development laboratories. A comprehensive case history questionnaire was employed and analyzed to exclude those with previous noise exposure. Subjects were then evaluated using otoscopy, audiometric testing, and pure tone audiometry. Findings were analyzed using inferential statistics and recommendations were discussed.

• Case Study of Biotinidase Deficiency: Auditory and Visual Sequelae

Kathy J. Packford and Margery Mosma
Glenrose Rehabilitation Hospital, Edmonton, AB

This poster session documents a case study of a child with biotinidase deficiency. This unusual recessive metabolic disorder initially manifests itself with seizures and hypotonia. The literature reports sensorineural hearing loss, most of which is high frequency in nature, in 40% of the cases. Visual problems are evident in about half of the children with the disorder. Background information will be provided on biotinidase deficiency. Technical information will include the results of audiometric findings including auditory brainstem response testing and visual evoked potentials.

• Utilizing Auditory Brainstem Responses in Management of Patients with Neurofibromatosis

Daniel C. Paccorrotti
Glenrose Rehabilitation Hospital, Edmonton, AB

Case studies will be presented on patients suffering from neurofibromatosis in order to point out the need for the utilization of Auditory Brainstem Responses (ABR). In the management of this patient population, Auditory and ABR test results will be presented to illustrate that the auditory testing alone is not sufficient to detect the present or absence of retrocochlear involvement in neurofibromatosis patients.

• Comparison of Psychophysical and Electrophysiologic Measures of Frequency Selectivity

John C. Booth
University of Western Ontario, London, ON

Measures of frequency selectivity or tuning of the auditory system potentially have important clinical applications. Most routine tests used in clinical audiology today provide little or no information on the selectivity of the ear. Several measures of frequency selectivity are presently available but are not in wide use clinically. In a group of normal hearing subjects, frequency selectivity was determined using both psychoacoustic and electrophysiologic procedures. Measures include the psychoacoustic tuning curve, speed of masking, ABR tuning curve, and extratympanic ECochG tuning curve. The

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Poster Presentations

1:30 to 3:00

• Comparing the Occlusion Effect and Attenuation of Earplugs and Earmuffs

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Speech-Language Pathology

Seminar
9:00 to 12:00

Volunteers as Service Providers for the Profoundly Handicapped Preschooler
Allison J. Baril and J. Lois Turner
St. Amant Centre, Winnipeg, MB

St. Amant Centre is a haven for approximately 250 individuals with severe to profound mental and physical handicaps. In an attempt to provide an adequate service to these individuals, the Speech Pathology Department has developed a program which uses community volunteers. In its current form, the program provides a very cost-effective means of one-to-one individualized service for preschoolers who reside at the Centre. The presentation will outline information on the following: (1) a general overview of United States and Canadian guidelines for the use of supportive personnel; (2) a literature review on the use and effectiveness of supportive personnel; and (3) a description of the Volunteer Program at St. Amant Centre. This program has application where the consistency and householdness of programming and the relationship between client and peer-volunteer have a more significant impact on progress than the expertise, clinical involvement, or ongoing decision making of a paid professional. In addition, it will be of interest to those professionals employed by Centres or Agencies where funding issues present as critical concerns.

Miniseminars
8:30 to 11:00

An Interdisciplinary Assessment of Students with Language/Learning Problems
Margaret Johnson, Carol Barlow, and Marion Parkinson
The Hospital for Sick Children, Toronto, ON

School age students are referred to the Learning Evaluation Unit, Child Development Clinic at the Hospital for Sick Children for evaluation of their learning strengths and weaknesses. From this assessment recommendations are made for teaching and management. Cases are screened by the Medical Director and the Psychologist- Director and a decision made as to whether the student receives an intensive (one week) or an intermediate (two day) assessment. Many of the students referred have a language component so the speech-language pathologist carries out assessments as a team member and also consults with other teams when a full speech and language assessment is not required. The team usually consists of a pediatrician, a psycho-education consultant, a teacher, and frequently the speech-language pathologist. The advantages and disadvantages of the clinical assessment also will be addressed.

8:30 to 11:00

Language, Learning, and Thinking: The Bloom Explosion!
Mark D. Barrett
LinguiSystems, Inc., Moline, IL

The speech-language pathology is employed in today's school setting is charged with a myriad of responsibilities and duties. Among the most important of the roles the clinician must fill is that of teaching language to the language disordered child both directly and through the supportive instruction of the child's classroom teachers. The language realm confronting the clinician has expanded beyond grammar and syntax to vocabulary, problem solving, and even strategies for learning in the classroom. This miniseminar presents a language and learning framework that can be used not only in individual and small group therapy, but also in classroom language and academic goals. It is based on Bloom's Taxonomy of Educational Objectives and enables the instructor to classify the language demands of specific tasks and question types place on the student. Using the taxonomy, the clinician can determine the language demands of the classroom and curricula and can suggest modifications of these language requirements to enhance the academic performance of language disordered students.

8:30 to 11:00

Normal Dysfluency in Stutterers and Implications for Treatment and Research
Ann Bratzer
National Defence Medical Centre, Ottawa, ON

Jo MacKay
University of Ottawa, ON

Clinical research and management of stuttering have focused mainly on two parameters fluent speech and stuttering with relatively little attention to normal dysfluency. Previous studies have indicated that all types of dysfluency are more common in stutterers. Current screening criteria, however, do not appear to differentiate between the dysfluency arising from cognitive and linguistic processing, and the dysfluency associated with stuttering caused by a disruption in the motor production of speech. In this study, spontaneous speech was analyzed in ten adult stutterers prior to treatment. Stuttering and normal dysfluency were identified independently. Normal dysfluency also was analyzed in a control group of ten non-stutterers. Results indicated that stutterers had less normal dysfluency than non-stutterers and that the frequency of normal dysfluency varied inversely with the severity of the stuttering. These findings have implications for research methodology, the management of stuttering, post-therapy evaluation, and the persistent problem of maintenance of fluent speech.
Pragmatic language models (Austin, 1962; Searle, 1969; Bates, 1976) have had a profound impact on our thinking about language, and clinicians have embraced them in a remarkably short period of time. The apparent face validity of the functional language perspective that was the core assumption of these various models was accepted by a large number of clinicians who were working with language disordered children and adults. This acceptance was due probably to two major factors. One was our growing frustration with the limitations of an almost exclusively syntactic characterization of language behaviors and the other was an intuitive recognition that there was something basically right about the field’s earliest characterization of speech-language pathologists had for pragmatically based clinical practice, and that those expectations have not been realized. Several hypotheses will be discussed regarding why the literature has evolved as it has. Critical limitations in our conceptualization about pragmatic language models will be identified and discussed. The miniseminar will also address the implications of what we have learned for the development and use of functional language assessment and intervention procedures. Proposals and future directions will be discussed.

Paper Presentations
Session 5: 1:30 to 3:00

• Phonetic and Acoustic Analysis of Intelligibility in Amyotrophic Lateral Sclerosis

Ray D. Kreu, Gary Wexner, and Ruth E. Martin
University of Wisconsin-Madison, Madison, WI

This paper presents results from a research program, whose aim is to develop an explanatory assessment of the intelligibility of dysarthric speech. Exploratory refers to the ability of the test to identify the phonetic and acoustic underpinnings of various intelligibility deficits. To this end, a word-level intelligibility test is proposed wherein 19 phonetic contrasts are incorporated into minimal pair sets. This test was administered to 25 male speakers with amyotrophic lateral sclerosis (ALS), 25 female ALS speakers, and a control group of 15 male and 15 female normal geriatric speakers. Preliminary results indicate that, for the male ALS speakers, the phonetic contrasts most often associated with unintelligibility are related to velopharyngeal articulation and laryngeal configuration. Further, in terms of acoustic underpinnings, it appears that the scope of the second formant (F2) transition is highly correlated with overall intelligibility, as measured by the proposed test. Results are discussed in terms of their theoretical and clinical implications. This work is supported in part by P.H.S. Research Grant NS22458 from NINCDS.

• Alterations in the Acoustic Characteristics of the Speech of ALS Patients

Jane E. Grits
Thames Valley Children’s Centre, London ON

Herbert A. Leeper, Jr.
University of Western Ontario, London, ON

Donna Bandar and Arthur J. Hudson
University Hospital, London, ON

This study assesses the changes in selected acoustic speech characteristics of patients with amyotrophic lateral sclerosis (ALS) over a nine-month period. A protocol of several stimuli targeting the respiratory, laryngeal, resonatory, and articulatory levels of speech production was administered to five bulbar ALS subjects and seven nonbulbar ALS subjects during two testing sessions. Results of acoustic analyses for the bulbar ALS subjects indicated that significant changes occurred over time for disfluent/empty rate and sentence duration. No significant changes over time were found for maximum phonation time, the degree of nasalization on oral sounds, voice onset time, vowel duration, duration of frication in nasalized stimuli, and speech segment durations in sentence stimuli. The nonbulbar ALS subjects did not demonstrate significant deterioration over time. Results also indicated several significant differences between the bulbar and nonbulbar ALS subjects. Possible explanations regarding the present findings are discussed.

• Oral Stimulation for Selective Comatose Closed-Head Injured Patients

Karen L. Vockey
Madigan Army Medical Center, Tacoma, WA

It has been recognized that patients who are in coma will begin to masticate when orally stimulated. Often a rooting or positive per-oral reflex can be elicited by any stimulation on or around the lips. These reflexes are brain stem triggered reflexes that, albeit reliant on cortical influence, are certainly not dependent on cortical control. Therefore, the disinabition factors of bilateral frontal lobe injury as incurred in many closed head injuries may cause reflexes to reemerge appearing similar to the normal reflexes observed in the developing infant. The medical specialist who understands the importance of these basic neurologic reflexes may be able to provide an early oral swallowing and mastication stimulation program to selective closed head injured patients in coma. This presentation describes a structured oral stimulation program using ice chips which led to coma patients’ increased awareness and emergence from coma. The evaluative protocols and procedures used in five closed head injured patients in coma will be discussed. The interactive role of rehabilitative and nutritional support will be described.

Awards Banquet
Friday, May 12
7:30 - 9:30 pm
Toronto I/II/III
• Influence of Production and Discrimination Training on Phonemic Production and Discrimination
James C. McNair
McGill University, Montreal, PQ
Chantal E. Larue
Sudbury-Algoma Hospital, Sudbury, ON
Speed-sound discrimination training has frequently been advised for children with phonological disorders (Powers, 1971; VanRiper, 1978). However, past research has not examined the effects of training perception upon production (and the reverse) in children who present errors for both production and perception. Data from three children who had production and perception problems affecting the "th" sound were examined within a single-subject reversal design that included multiple-baseline measures for both production and discrimination training. Data for individual children will be presented and implications for therapy will be discussed.

• Evaluating Self-Monitoring Judgments of Children with Phonological Disorders
James C. McNair
McGill University, Montreal, PQ
Dianne T. Snow
The Dr. Charles A. Jareway Health Center, St. John's, NF
Relationships between self-monitoring judgments made by children with phonological errors regarding the correctness of their productions and the number of their phoneme errors have been found by some investigators (Aungst & Frick, 1964; Laspa & Bankston, 1975; Wolfe & Irwin, 1972) but not by others (Wolf & Pilberg, 1971; Shelton, Johnson & Arndt, 1977; Snow & McNair, 1987). Lack of agreement among research findings may be due to the performance on tasks used to evaluate self-monitoring judgments in children. Re-examination of some published data indicates that the scores obtained from the self-monitoring judgments may be at a chance level. Testing procedures, problems, and a standard protocol for use in examining the self-monitoring judgments of children with phonological errors will be discussed. Data from children will be reported.

Session 6: 1:30 to 4:00

• Patterns of Morphosyntactic Impairment in Children with Severe Phonological Problems
Carolyn Cronk, Dominique Moquin, Lambert Desehene, and Michele Bergeron
Ecole d'Orthophonie et d'Audiologie
University of Montreal, Montreal, PQ
Detailed analysis was made of spontaneous language samples from a total of 31 children presenting with severely delayed phonological development. Ages ranged from 4 to 7 years for the majority, with three subjects at eight to nine and one-half years. For 13 children, the study covered only those errors showing an influence of phonological difficulties on morphological deficits. For 18 others, it was extended to include an analysis of all forms of morphological error, including omissions. These levels of morphological impairment clearly emerged in both sets. Utterances produced by Group 1 children were marked by immature forms entirely predictable from phonological processes. Group 2 children's production contained multiple possibilities (either immature or atypical), for a given morpheme, and of Group 3 demonstrated a free variation among erroneous forms and omissions, suggesting the presence of any strategy for choosing one in particular. All the Group 3 subjects showed syntactic disturbance of some kind, while in Group 1 sentence structure appeared entirely normal. Within Group 2, some children used essentially intact syntax, while others appeared to have difficulty at the sentence level. These data raise interesting questions as to the nature of expressive language problems in children and the type of clinical intervention useful in their remission.

• Conversational Assertiveness and Responsiveness of Language Disordered Children During a Comprehension Monitoring Task
Lisa McCarthy, Elizabeth Skarzut-Doyle, and Kathleen Mullin
School of Human Communication Disorders
Dalhousie University, Halifax, NS
Comprehension-monitoring involves the evaluation and regulation of one's ongoing comprehension abilities. The result of monitoring is the knowledge that one has either understood the message or not. It is considered critical for successful participation in conversation and other communicative situations, and in the acquisition of reading and problem-solving abilities, and of particular importance for the language-disordered child who often finds himself as highly communicative interactive. Literature to date suggests that language-disordered children have difficulty with a variety of metalinguistic tasks, including comprehension-monitoring. Fey has suggested that a lack of communicative assertiveness may contribute to the language-disordered child's poor performance on comprehension-monitoring tasks. The present study investigated the effect of level of communicative assertiveness upon performance in a comprehension-monitoring task. Language samples obtained prior to participation in an ambiguity detection task were analyzed according to Fey's taxonomy of communicative assertiveness and responsiveness. Social communication of language-disordered children was compared to two groups of matched normal children. Results will be discussed and clinical implications will be addressed.

• Training Teachers to Facilitate Language: Why Didn't It Work?
Catherine E. Renfrew
C. Hess and Associates, Hamilton, ON
Geneva A. Warr-Leepes
University of Western Ontario, London, ON
Interest in the role of the teacher and the classroom in the facilitation of children's language has been escalating as researchers continue to advocate movement towards the use of more naturalistic approaches to language remediation. Three junior kindergarten teachers were videotaped in their classrooms as they taught. Following this they attended a one-day workshop in the use of language facilitation techniques for the classroom. Training consisted of presentation of the techniques through handouts, discussion, role plays, and videotaped examples. Following the workshop, the teachers were videotaped again in the classroom, and were asked to complete a questionnaire regarding their perceptions of the workshop and their use of the facilitation techniques. Results revealed that while the teachers felt it was informative, the workshop was ineffective in promoting the use of the facilitation techniques.
Subjects’ accuracy for identification of active and passive sentences was measured across baseline and experimental phases. Inversion involved a contrast training phase (active vs. passive structures) and a meta-cognitive approach to cue application. In these phases, subjects learned when they needed to apply a cue and how to use the cue strategy to improve their comprehension of passive sentences.

Language-impaired and normal children, when first exposed to passive constructions in a non-experimental setting, demonstrated difficulty processing reversible passive structures. However, it was extremely time consuming and failed to reveal meaningful problem areas. Conducting chart audits was viewed by staff as a dreaded academic exercise with little or no payoff. Retrospectively, quality assurance and its Structure-Process-Outcome model. Resources such as patient satisfaction, efficiency, effectiveness, and risk reduction. As an initial project, departmental members chose to determine the treatment outcomes for a large patient population by means of ongoing stimulation opportunities in the home. Formal parent training groups have been implemented for early language stimulation and could assist in the treatment of articulation disorders. This presentation will discuss the rationale for parent workshops on sound stimulation: the philosophy, general content, activities, and the results of ongoing stimulation opportunities in the home. Formal parent training groups have been implemented for early language stimulation and could assist in the treatment of articulation disorders. This presentation will discuss the rationale for parent workshops on sound stimulation: the philosophy, general content, activities, and the results of ongoing stimulation opportunities in the home.

Children whose parents attended a remediation therapy program demonstrated significant gains over those children who received treatment involving limited parental participation (Fundala et al., 1972; Costello & Potter, 1983). However, many parents may lack the necessary knowledge or skills to take advantage of ongoing stimulation opportunities in the home. Formal parent training groups have been implemented for early language stimulation and could assist in the treatment of articulation disorders. This presentation will discuss the rationale for parent workshops on sound stimulation: the philosophy, general content, activities, and the results of ongoing stimulation opportunities in the home.

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One of the five children made significant gains with parent training alone, while the other three required both parent training and direct intervention to achieve and maintain fluency. The use of a dual approach to treatment may provide more efficient and effective treatment for the beginning stutterer.

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to help remediate the deficits. This paper will present the results of research that examined the efficacy of such training with a larger group of children and generalized the work to include both perception and production of /u/s/, /r/, /l/, /l/, and /g/.

- Designing Effective Workshops for Preschool Teachers
  Susan A. Elms and Usula R. Theimer
  B.C. Elks Auditory Rehabilitation Centre, Surrey, BC

Speech-language pathologists are frequently asked to present workshops for parents of regular and special needs preschools. These workshops typically consist of lectures, films, and hand-outs. Adult learning research indicates that this approach may not result in optimal learning by the workshop participants. This poster will outline workshops for preschool teachers designed by the B.C. Elks Auditory Rehabilitation Centre staff. The design of these workshops is based on adult learning principles. Experimental learning activities such as group problem solving, nám projects, role playing, and simulated experiences are used to teach workshop participants skills such as: identifying children with possible communication disorders, using circle time for language stimulation, selecting and reading appropriate storytime books for children with speech/language disorders, and using speech/language stimulation techniques during snacktime and freeplay.

- The School Articulation Program
  Evelyn Levine, Lois Bredo, Jennifer Pavies, Talya Shen, Marilyn Kempel-Friesen, and Barry Luthi
  Edmonton Public Schools, Edmonton, AB

The School Articulation Program was conceived and developed by consultants serving on a School Aides Committee for the speech-language pathologists of the Edmonton Public Schools. It was designed for use by school program aides in an attempt to meet the needs of students exhibiting mild articulation problems. Consultants were responding to the changing role of speech-language pathologists within Edmonton Public Schools. Speech-language pathologists were adopting a more intensive consultation role and therefore finding less time to provide direct therapy to children. The program provides detailed lesson plans, twelve hours of training time, and an accompanying videotape. Currently the SAP is being piloted by several EPS consultants, and feedback is being collected and documented.

- Verbal and Nonverbal Aspects of Comprehension Monitoring
  Kathleen Mullin, Nancy MacLellan, and Elizabeth Starvats-Doyle
  School of Human Communication Disorders
  Dalhousie University, Halifax, NS

Comprehension monitoring is one of a constellation of cognitive abilities that deal with an individual's awareness of his or her mental activities; in this case, knowing that one has or has not understood what has been said. Clearly, the ability to monitor one's comprehension is essential to successful communicative interactions, particularly when faced with an inadequate or ambiguous message. This poster session will present results from two investigations into the comprehension monitoring abilities of language-disordered children matched to a group of younger language-matched subjects and a group of chronological age/cognitive-matched subjects. The children in these studies were given a task that required them to respond to directions which varied in degree of informativeness. Specifically, we were interested in their ability to indicate their awareness of the ambiguity in the directions they were given. The first study analyzed the differences in each group's ability to respond correctly. The second study examined the patterns of nonverbal responses as indices of noncomprehension. Specific clinical implications pertaining to the complexity of messages and tasks used in treatment programs will be addressed.

- Baby Talk: Encouraging Communication Between Parents and High-Risk Infants
  Irene Ushycky and Luigi Girolametto
  The Hospital for Sick Children, Toronto, ON

Prematurity and respiratory distress syndrome are high-risk indicators for disturbed interactions and subsequent communication delay. It has been hypothesized that high-risk infants provide fewer distinctive and "readable" signals for their parents (Dunn, 1985; Goldberg, 1977). In turn, Field (1983) noted that the mothers tended to oversimplify their infants, with negative results. This poster will present the content and outcome of an education service offered to parents of high-risk infants. The participants in this pilot project were five parents and their high-risk infants. The program consisted of six weekly two-hour sessions held in the morning. Following each session, parental feedback was elicited using evaluation forms. Parental questionnaires were readministered at post-program and one month later during home visits with a non-program interviewer. The results of the questionnaires will be discussed.

Session 2: 1:30 to 3:00

Sex Recognition of Electroaryngeal Voices Produced by Normal Speakers
  Sandra L. Dengie and Philip C. Doyle
  School of Human Communication Disorders
  Dalhousie University, Halifax, NS

Research on the psychosocial adjustment of female esophageal speakers has documented a concern related to the "masculine" sound of their voices. Although one study has shown that naive listeners distinguish the sex of esophageal speakers (Weinberg & Bennett, 1971), other studies of specific esophageal speech parameters reiterate the lack of differentiation between male and female voices. The failure to separate male and female laryngectomies into two distinct speaker groups presents an important clinical problem. Hence, the present project investigated sex recognition of normal speakers who were trained to use several electroaryngeal devices. The following questions were addressed: (1) can listeners accurately and reliably identify the sex of electroaryngeal speakers? and (2) do the acoustic features of three different types of electroaryngeal devices influence sex recognition?

Canadian Universities Alumni Party
  Friday, May 12
  9:30 pm - 12:00 am
  Carmichael Jackson
The value of audio recording as part of the clinical voice evaluation has become well established. Although recordings should be obtained using relatively standard procedures, this goal is frequently a problem for a variety of reasons. This report will present the use of a recording apparatus which facilitates consistent audio recordings (e.g., mouth to microphone distance, etc.). Additionally, this apparatus permits simultaneous recordings of up to four microphones for comparative purposes. This device, which we have termed Quadravoc, was designed, developed, and is in current use in the Voice Function Laboratory, School of Human Communication Disorders. The clinical utility of Quadravoc in our facility, as well as schematic representations and photographs of the apparatus, will be presented.

Training New Phonemic Contrasts in Adults

April E. Moore and Donald G. Jamieson
University of Western Ontario, London, ON

Recent research has shown that a carefully structured training program, using synthetic speech stimuli, can be particularly effective in helping adult second language learners acquire new, non-native speech contrasts. Using a perceptual fading technique, Jamieson and Morosan (1986) demonstrated significant improvements in identification and discrimination of the voiced and voiceless English "th" sounds by francophone subjects and showed that under some conditions such training might be quite robust (Morosan & Jamieson, 1989). The present study investigates the extent to which such improvements in identification generalize to speech in contexts other than those used in the training. Listeners' abilities to identify the English phonemes /t/, /θ/, and the voiced and voiceless "th" in the context of synthetic and natural speech were measured using natural speech real word minimal pairs, over which vowel context and consonant position (initial, medial, final) varied, were measured before and after training. Findings of the study will be discussed as well as their implications for training and acquisition of new phonemic contrasts. This work was supported by grants from the Natural Sciences and Engineering Research Council of Canada.

Reliability and Validity of an Aphasia Group Assessment Scale

Caroline Brederoom and Chantel Desmarais
Ottawa General Hospital, Ottawa, ON

Aphasia treatment groups are a common and popular practice. However, objective evaluations commensurate with group activities are infrequent as few appropriate tools exist. In order to capture the communicative behaviors which comprised our group sessions, a pragmatic behavior tally form was designed. A pilot study was conducted to measure the reliability and validity of this form. One fluent and one non-fluent participant were rated once weekly during our patient group sessions. Ratings were made on line and videotaped to allow for a second rating. Percentage of agreement was calculated between two clinicians' ratings of both patients under three assessment conditions. The feasibility of objectively capturing the communicative behaviors of the participants in group treatment using the tally system will be discussed.

An Introduction to the FLUEN SEE Program

Sylvia A. Whiteside, Tessa Menez, Angela M. Hill, Amie Gaddes, and Rodney Everett
University of Western Ontario, London, ON

Children who stutter often find it hard to grasp the abstract concepts and terminology used in fluency shaping programs. The FLUEN SEE Program was developed in an attempt to alleviate this problem. Simple, fun visual representations for specific fluency shaping targets were employed in a transfer and maintenance program with eight elementary school children. The targets were adapted from the Comprehensive Stuttering Program (Boberg & Kully, 1985). This poster presentation will introduce the FLUEN SEE Program and discuss its use in the classroom.
This study was designed to investigate the physiological characteristics of speech in profoundly hearing impaired individuals undergoing cochlear implant. Three adults, each with an acquired, profound, sensorineural hearing loss of more than 10 years duration, were seen as part of a larger project dealing with acoustic, perceptual, and aural rehabilitation therapy pre- and post-cochlear implantation.

Eight patients who received a vertical hemilaryngectomy following a going cochlear implant. Three adults, each with an acquired, and aural rehabilitation therapy post-implantation.

Eight patients who received a vertical hemilaryngectomy following a going cochlear implant. Three adults, each with an acquired, profound, sensorineural hearing loss of more than 10 years duration, were seen as part of a larger project dealing with acoustic, perceptual, and aural rehabilitation therapy pre- and post-cochlear implantation.

A vertical hemilaryngectomy was used as the instrumental device. Each person was tested before implantation, and three and six months post-implantation. An aeromechanical protocol designed to assess the respiratory, laryngeal, velopharyngeal, and oral articulatory functions was employed for the study. Results will be discussed in terms of each individual’s monitoring of the physiological subsystems serving coordinated aspects of speech production.

Vocal Function Following Radiotherapy and Vertical Hemilaryngectomy: A Preliminary Investigation
Herbert A. Leeper, Jr., Jean-Pierre Gagne, and Silvia Vidas
University of Western Ontario, London, ON

Previous work on acquired dysgraphia classifies impairments as reductions in speed, spelling, or visual knowledge by R.M., a left hemisphere stroke patient. R.M. spelled words requiring linguistic knowledge, those that could be generated using sound-spelling correspondences were easier than those dependent upon orthographic and morphologic knowledge. The observed pattern supports the notion that spelling ability involves a number of critical component skills.
A Neurolinguistic Approach to Speech and Language Disorders in Children
H. J. Darwiche and Patrycja spaces
Ontario Children's Hospital, Calgary, AB
This videotaped presentation outlines a rationale and approach to collaborative efforts between the speech-language pathologist and pediatric neurologist in the clinical setting. A neurolinguistic model is presented which identifies correlations between the neuroanatomic substrate, the behavioral process, and speech and language pathology for the encoding and decoding of auditory and verbal information. Case presentations illustrate the behavioral features of each disorder.

Together We Can Know the World: Sharing Books, Creating Together, Playing Games, and Making Music
M. Ayala Manolson
The Hanen Early Language Program, Toronto, ON
This set of four teaching tapes inspires, motivates, and trains parents actively involved in the learning process as the tapes include specific collaborative efforts between the speech-language pathologist and

A Computer-Assisted Implementation of the Desired Sensation Level Approach
Richard C. Seewald, Donald G. Jamieson, Richard T. Schmidt, and K. Shane Ayala
University of Western Ontario, London, ON
A computer-assisted hearing aid prescription and fitting system was developed to implement the current version of the Desired Sensation Level (DSL) approach to hearing aid selection for children (Seewald & Roum, 1988) in the clinical setting. The DSL approach has evolved from a general goal to provide hearing-impaired children with an amplified speech signal which is audible, comfortable, and undistorted across the broadest relevant frequency range possible. This IBM/XT or AT-compatible microcomputer-assisted version accepts detection threshold data for a given child, generates a prescription specified by the selection model, and allows goodness of fit to be confirmed by the audiologist. Pull-down menus are employed with optional mouse or keyboard control to provide a user-friendly environment. Results generated by the program include desired real-ear gain, full-on 2cc coupler gain, real-ear SSPL, 2cc coupler SSPL-90, and target aided thresholds in dB HL. After performing the calculations, the program displays results to eight candidate hearing aids from a database. The prescription, real-ear verification results, and list of candidate aids may be displayed on the monitor, saved in a permanent patient database, or directed to a printer.

A General-Purpose Hearing Aid Simulation and Testing System
Donald G. Jamieson, Emmer Raftery, and Ketan Ramji
University of Western Ontario, London, ON
We will demonstrate a comprehensive, integrated, microcomputer-based facility for research on hearing aid fitting and for clinical use. The system interfaces with that described by Seewald et al. to permit the clinician: (1) to use the forms of formal hearing aid prescription rules to design and implement a digital filter running on a digital-signal-processing (DSP) board; (2) to use this DSP system to simulate the specified amplification for an individual patient; and (3) to assess speech intelligibility directly, with the prescribed hearing aid gain function, using computer-based testing procedures. The system requires an IBMAT clone (e.g., Zenith Model 386 or 248, with math coprocessor and EGA or VGA graphics), an ARIEL DSP-16 digital signal processing board, filters and associated analog audio equipment, and a mouse. This work is being supported by Unison Industries Ltd., by the Premier's Council Technology Fund, and by the University Research Incentive Fund. Previous work on the project was supported by Health and Welfare Canada through the National Health Research Development Program.

CSRE: The Canadian Speech Research Environment
Donald G. Jamieson and Ketan Ramji
University of Western Ontario, London, ON
Terrance M. Naugay
University of Alberta, Edmonton, AB
CSRE, the Canadian Speech Research Environment, is a comprehensive, integrated, microcomputer-based facility to support speech research. One of the largest computer programs ever developed in TurboPascal, CSRE includes facilities: (1) to record and edit natural speech; (2) to analyze and/or compare speech samples; (3) to parameterize and simulate speech sounds; (4) to create and test experiments which require the presentation of speech signals for perceptual testing. The system requires an IBM/AT clone (e.g., Zenith Model 386 or 248, with math coprocessor and EGA or VGA graphics), a data acquisition system (e.g., ARIEL DSP-16, or Data Translation DT2852/2851A plus filters), and a mouse. The software package is being made available as a research resource to university and hospital-based researchers, for a nominal fee. This session will provide an overview and demonstration of CSRE, together with an opportunity for hands on use of the facility. The development of CSRE is being supported by grants from the Strategic Program of the Natural Sciences and Engineering Research Council of Canada, and from Bell Northern Research.

Pragmatic Activities for Stroke Patients and Their Families
Isabelle A. Robarge
Centre Hospitalier Regional de l'Ouest-Quebec, Hull, PQ
Julie Sementier
Ecole d’Orthophonie et d’Audiologie, Montreal, PQ
Clinicians are concerned about therapy carry over into family life while relatives of stroke patients express the need for information, emotional support, and help with social activities. Over the past year the CHRO Speech Therapy Department has developed pragmatic group activities designed to address these needs and to counteract patients' and families' reciprocal avoidance of social contact. Activities were designed (1) to correspond with real life experiences; (2) to create a need for speech while enabling communication through non-verbal channels; (3) to provide built-in turn taking opportunities; and (4) to stimulate communicative interaction that encourages laughter. Videotaping of activities with family members, patients, and clinician was followed by tape reviewing and discussion with participants. The families were able to recognize the effectiveness of non-verbal communication and to discuss feelings associated with and strategies for social reintegration. They suggested modifications and other activities formerly enjoyed by the patient. Two kinds of clinical tools will be exhibited: one is based on a popular adult game and uses material of increasing linguistic complexity; the other adapts existing games according to the design criteria and user feedback.

Call for Research Proposals

VOICE for Hearing-Impaired Children is inviting applications for funding of research proposals that have relevance in promoting the development of language, the development of speech-based skills and the identification, diagnosis and aural habilitation of children with significant (severe to profound) hearing impairment.

Of particular interest at this time would be comprehensive study of physicians' attitudes to the diagnosis and habilitation of children with hearing impairment.

Additional areas of research which would be considered for funding include: phonetics and phonology, diagnostic and habilitative audiology, speech-language pathology, psycholinguistics, developmental psychology, sociolinguistics, special education, medical anthropology, epidemiology, genetics, and counselling.

Please describe the proposed research in no greater than ten double-spaced typed pages using the following headings:

- Statement of Objective
- Background and Literature Review
- Statement of hypothesis to be tested
- Methods (experimental design, procedures and proposed data analysis procedures)
- Relevance of the proposed project
- Description of the responsibilities and duties of all personnel involved in the research
- Consent forms and ethical approval from the relevant institution
- References
- Budget (*VOICE is unable to provide funds for purchase of equipment)

VOICE for Hearing-Impaired Children is a province-wide organization of professionals and parents of hearing-impaired children who provide mutual support and information on hearing impairment. VOICE support for research is made possible through a grant from the Trillium Foundation.

Submissions must be received by April 15, 1988. For more information contact: VOICE for Hearing Impaired Children, 271 Spadina Road, Toronto, ON M5R 2V3 (416) 925-1006.
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Invited Presentations

Audiology

8:30 to 10:00
Developmental Changes in Auditory Brainstem Responses from 33 Weeks Conceptional Age through the First 3 Years of Life
Michael P. Gorga
Boys Town National Institute for Communication Disorders in Children, Omaha, NE

Although reports vary widely, hearing loss appears to occur in 5% to 15% of the graduates of intensive care nurseries. An additional 0.05% of all babies may have hearing loss associated with such risk factors as family history of hearing loss or maternal history of infection, drug or alcohol abuse. The auditory brainstem response is the best available tool to identify hearing loss in these patients, as well as other difficult-to-test patients. However, there are special methodological considerations when the ABR is applied with neonates and very young children. This presentation will be divided between a practical discussion of how we assess infants followed by a more detailed discussion of the techniques we used to establish ABR norms for children ranging in age from 33 weeks conceptional to 3 years of age. Specifically, we will describe our criteria for determining whether wave V thresholds, wave V latencies, interpeak latency differences, and intracranial symmetry fall within the age-appropriate normal range.

10:30 to 12:00
Behavioral Research on Auditory Development Applied to Clinical Audiology
Robert J. Neoga
Children’s Hospital of Pittsburg, Pittsburg, PA

The behavioral assessment of infant hearing took a great step forward in the 1970’s with the development and refinement of visual reinforcement audiometry (VRA). From early clinical studies, VRA developed into a tool that is commonly used in studies of development and refinement of developmental psycholinguistics and speech perception. We now have a better understanding of the normal development of auditory, frequency and intensity discrimination, binaural function, masking effects, and speech sound discrimination and categorization as a result of the head-turn with reinforcement paradigm. While VRA is used routinely in the clinic to obtain minimum response levels in infants and young children, little of the basic research that has been done using experimental adaptations of the procedure has been applied, either directly or indirectly, back to clinical issues such as those that motivated its development. This presentation will include a review of several recent studies that were done using an experimental VRA procedure and will consider how such research might improve our ability to assess infants in the clinic and/or influence our understanding of the effects of clinical or environmental conditions on infant auditory function.

1:30 to 3:00
Tactile Aids for Speech Perception and Production by the Hearing-Impaired
Janet M. Weisenberger
Central Institute for the Deaf, St. Louis, MO

Recent developments in the design of tactile aids have shown considerable promise in transmitting information about speech to profoundly hearing-impaired persons. This success has led to the availability of several commercially-produced, wearable devices, which may be viable options for persons who do not benefit from conventional amplification. In laboratory and educational evaluations of a number of experimental and commercial devices over the last several years, it has been found that the kind and degree of benefit provided by tactile aids varies across devices, as a function of such variables as the number of tactile transducers, type of tactile stimulation, and type of stimulus processing. The results of these evaluations suggest that tactile aids, particularly multi-channel devices that employ a number of tactile transducers and convey information about the spectral content of the speech signal, can be of significant benefit in speech perception. Studies with profoundly hearing-impaired children indicate that aspects of speech production also can be improved through the use of a multi-channel tactile aid, suggesting that even a relatively brief period of training with a tactile aid can lead to improvements in speech production by deaf children. The implications of both speech perception and production evaluations for developing training procedures and curricula for tactile aids are discussed.

3:00 to 5:00
An Aural Rehabilitation Program For Adults With Acquired Hearing Loss
Nadia Sosidko and Dana Storm
Mount Sinai Hospital/Toronto General Hospital, Toronto, ON

Aural rehabilitation is not an event, it is a process. Optimally, this process is individualized and interactive. Its goal is to assist the hearing-impaired individual to achieve their communication potential. The main components of a comprehensive aural rehabilitation program include: assessment of communication function, education regarding hearing impairment and its effects, selection of and orientation to hearing aids and assistive listening devices, speechreading, auditory training, support groups, coping strategies, and referral to other disciplines. Within this process the emphasis is on the hearing-impaired person to direct their course of rehabilitation. In this presentation our program for adults with acquired hearing loss will be presented with case examples.

Speech-Language Pathology

9:00 to 12:00
A Model for Orofacial-Sensorimotor Examination by Ray Kev
University of Wisconsin, Madison, WI

Particularly for clients with known or suspected neurologic disorders of speech and language, a functional picture of the orofacial system must be obtained. A model for orofacial-sensorimotor examination
Current definitions of the syndrome of autism emphasize impairments of language and communication as primary features. Therefore, the role of the speech-language pathologist is becoming increasingly important in the educational process of children with autism. The purpose of this presentation is to provide an overview of the communication problems characteristic of autism, with an emphasis on preverbal and emerging language levels. Informal procedures to facilitate spontaneous communication will be presented, with a discussion of specific strategies for moving from echolalia to creative communicative function. Intervention strategies to address language and communication problems characteristic of autism, with an emphasis on preverbal and emerging language levels. Informal procedures to facilitate spontaneous communication will be presented, with a discussion of specific strategies for moving from echolalia to creative communicative function.
A number of investigators have concluded that a positive correlation exists between language delay and recurrent otitis media in children. Critics of this theory (Paradise, 1983, Ventry, 1976) point out that many of the supporting studies are riddled with flaws of experimental design and that the statistical analyses applied to the data cannot be used to demonstrate causal relationships. In the present study, typanometric and audiometric data also was obtained on children attending a daycare centre in urban Toronto. Results indicated that there is no significant difference between the two groups.

The overall purpose of this panel presentation is to identify and promote discussion on issues relevant to service development in underserviced areas. This in turn is expected to allow individual service providers, administrators, advocates and others to develop strategies which will increase the likelihood of success of further attempts to develop services in their particular situations. Since identification and discussion of issues are the primary objectives of the presentation, a broad strategy of inviting input from a number of different sources has been adopted.

Contributed Papers

Audiology

Miniseminars

8:30 to 10:00

Language Impairment and Otitis Media

Wendy Keene
Surry Place Centre, Toronto, ON

Mary Beth Jennings
The Canadian Hearing Society, Toronto, ON

A number of investigator have concluded that a positive correlation exists between language delay and recurrent otitis media in children (Berko Gleason, 1986; Holme & Kunar, 1989; Hassenstaab, 1987). These investigations suggest that recurrent bouts of otitis media during the language learning years may cause language delay. Critics of this theory (Paradise, 1983, Ventry, 1976) point out that many of the supporting studies are riddled with flaws of experimental design and that the statistical analyses applied to the data cannot be used to demonstrate causal relationships. In the present study, typanometric and audiometric data was obtained on children attending the Bell Canadian Speech & Language Centre, Speech Foundation of Ontario, Typonometric and audiometric data also was obtained on children attending a daycare centre in urban Toronto. Results indicated that the incidence of abnormal typanograms did not vary significantly between the two groups.

8:30 to 10:00

The Musician and the Audiologist

Marshall Chase
Canadian Centre for Performing Arts, Thornhill, ON

The musician as patient provides a challenge since his problems tend to be job threatening. A musician cannot remove himself from a noisy musical environment; this is his vocation. This miniseminar is an overview of the general principles of audiological care for the musician with examples of the work performed by the presenter with members of the Canadian Centre for Performing Arts Medicine. Data will be presented relative to alternative forms of hearing protection that allow the musician to hear the important harmonic structure of his music and those instruments around him, but with all or part of the range lowered in intensity. The importance of completely symmetrical hearing for musicians will be discussed. The miniseminar will provide the clinical audiologist with tools and information to help the musician hear and continue to hear effectively in his unique vocational environment.

1:30 to 3:00

Sign Language for Parents: A Supplemental, Interactive Model

Ross W. Adams
House Ear Institute, House Ear Institute

This miniseminar will expose the participant to a modified version of the original Sign Language for Parents curriculum, presented to CASLPA in May, 1988. While the original curriculum provided lessons sequenced to meet the communicative needs of parents of hearing-impaired young children at various stages of language development, this supplemental version offers a more eclectic approach to sign language instruction. It incorporates indepth language stimulation information and provides the student with extensive interactive expressive sign language practice. The target population of this curriculum includes parents, professionals, and paraprofessionals who possess basic sign language knowledge but desire input on stimulating conceptual development in the hearing-impaired preschooler. Participants in the miniseminar will receive an outline of the four, concept-based units targeted in the curriculum as well as suggestions for other targetable concept areas. Selected aspects of one concept-based unit will be demonstrated in a group-participatory manner.

3:30 to 5:00

Occupational Deafness: A Public Health Approach to its Rehabilitation

Louise Garty and Raymond Heta
Universite de Montreal, Montreal, PQ

Occupational deafness is the most prevalent disability in the workplace. A recent study in Quebec showed that more than 40% of workers in the industrial sector had a significant hearing loss due to noise. The hearing loss produces communication problems which can be
interpersonal in nature. The disability is a source of problems for the hearing impaired person and also for everyone with whom he/she interacts. The consequence of this is that rehabilitative help must reach everyone involved in the adjustments to be made. Based on this approach a paradigm for a rehabilitation program was developed. The consequences of these disabilities are examined in the workplace, leisure activities, social interaction, family relationships, and individual well-being and self esteem and appropriate interventions are then developed. A detailed report on seven groups will be given. The planning of such groups will also be discussed.

Paper Presentations
Session: 1:30 to 3:00

• Critical Differences (in decibels) for Aided Sound Field Thresholds in Young Children
Andrew Stuart, André Daviau-Smith, and Robert Stenstrom
Children's Hospital of Eastern Ontario, Ottawa, ON

Many current hearing aid prescription schemes are audiogram based. Hearing aid gain is prescribed according to degree of hearing loss. Probe-tube systems are available, although most audiologists continue to utilize functional gain for verification of real ear hearing aid performance. Modification of amplification and/or ear conoid configuration is usually assessed by repeating aided sound field threshold testing, then evaluating measured performance against a desired goal. It is essential to know if differences obtained are real or the result of measurement error. Variability in test-retest sound field measures has been examined in adults, but not in the more difficult task of young children. Confidence intervals for different probability levels will be presented for evaluating differences between aided sound field thresholds.

• Probe-tube Microphone Determined Measures of Loudness Discomfort Levels in Young Children
Andrew Stuart, André Daviau-Smith, and Robert Stenstrom
Children's Hospital of Eastern Ontario, Ottawa, ON

Traditionally, loudness discomfort level (LDL) measures are assessed in individuals as a prerequisite to selecting the SSPL90 setting of a hearing aid. Although predicting LDLs on the basis of hearing loss has proven to be poor at best, Kawell, Kopun, and Stelmachowicz (1988) have recently developed a procedure to measure LDLs in children. LDL results with this selection and fitting procedure. Recommendations aimed at easing these difficulties and making amplified speech more intelligible includes the nature of the amplified speech signal the child is receiving in backgrounds of noise, distance, and reverberation on speech perception within the learning environment. The output characteristics of the child's personal hearing aids must be determined in the FM condition if the child is to receive a consistent amplified speech signal. A major difficulty in accomplishing this is the difference in the speech spectrum input to the two systems which varies both in its overall level and relative intensity as a function of frequency. Furthermore, the means by which the output from the FM system is truncated and coupled can influence the nature of the amplified speech signal the child is receiving. The final analysis, the resultant real ear output characteristics of the FM system may resemble the prescribed frequency/gain characteristics of the child's personal hearing aids. The ratio and procedures for an electroacoustic approach to FM system selection and real ear verification will be described. Inherent difficulties and potential problems in coupling FM systems to personal hearing aids will be discussed. Case examples will be used to illustrate fitting difficulties and electroacoustic tests with this selection and fitting procedure.

• Central Auditory Processing and Amplification: A Case Study
Anita S. Down
Hotel Dieu Hospital, Kingston, ON

Recommendations aimed at aiding an individual's compensation for an identified central auditory processing problem have been widely published, but tend to be vague. More controversial are the therapies aimed at strengthening the skills necessary for auditory processing. Changes in neurological integrity have been demonstrated and not supported scientifically. This case study will attempt to deconstruct improved central auditory test scores when stimuli are presented in an altered frequency response pattern to a subject with normal peripheral hearing and a central auditory processing disorder. The male patient, aged 51 years, complained of a long-standing difficulty discriminating speech in backgrounds of noise. Testing revealed his peripheral hearing was normal and failed to suggest a retrocochlear lesion, though a central auditory...
Thirty patients referred for suspected Central Auditory Processing Disorder were studied using two experimental tasks: (1) the frequency response of the external auditory meatus unaltered, and (2) the frequency response of the stimulus unaltered for the left ear and the same response, altered in a manner equal to that provided by the patient’s hearing aid, for the right ear. The results will be discussed.

**Clinical Experiences with the Xomed Audiant(TM) Bone Conduction Implant**

Sandra K. Toffis
The Canadian Hearing Society, Toronto, ON

Sixteen patients were implanted with the Xomed Audiant(TM) Bone Conductors(TM) between January 15, 1988 and November 30, 1988. Twelve of these patients have received audiological follow-up at the Canadian Hearing Society in the form of evaluation and fitting of the external sound processor and careful monitoring of patients’ adaptation to the device for four to six months post-operatively. Preliminary results with the implant for aided soundfield warble tone thresholds within normal limits for 500–8 kHz when patients fit very similar audiologic and otologic criteria for implant candidacy. Speech discrimination scores for the aided (implanted) condition were 80% @ 50 dBHL for patients fitting the proper criteria. Areas presently being investigated include bone conduction implant benefit vs. hearing aid benefit, hearing aid modification, and a comparison of aided benefit with Xomed’s two styles of processors for use with the implant. The presentation will cover the results obtained through April 1989. Criteria for appropriate implant candidate selection also will be presented. Patient’s reactions and impressions of the implant will be discussed.

**Session 2: 3:30 to 5:00**

**Central Processing Disorder: Hearing and Language**

M. Wayne Maclean and Cindy MacKay
Mount Sinai Research Institute, Toronto, ON

The present study investigated bone conduc torsioneimplant benefit vs. hearing aid benefit, hearing aid modification, and a comparison of aided benefit with Xomed’s two styles of processors for use with the implant. The presentation will cover the results obtained through April 1989. Criteria for appropriate implant candidate selection also will be presented. Patient’s reactions and impressions of the implant will be discussed.

**The Effects of Acoustic Neuromas on Auditory Processing**

Curtis W. Ponton, Jos J. Eggermont, and Stuart G. Down
Baycrest Centre for Geriatric Care, Toronto, ON

The present study investigated bone conduction implant benefit vs. hearing aid benefit, hearing aid modification, and a comparison of aided benefit with Xomed’s two styles of processors for use with the implant. The presentation will cover the results obtained through April 1989. Criteria for appropriate implant candidate selection also will be presented. Patient’s reactions and impressions of the implant will be discussed.

**Session 2: 3:30 to 5:00**

**Central Processing Disorder: Hearing and Language**

M. Wayne Maclean and Cindy McCuaig
Ottawa Rehabilitation Hospital, Edmonton, AB

Thirty patients referred for suspected Central Auditory Processing Disorder received a battery of tests including: Dichotic Digits, Pitch Pattern Sequencing, Competing Sentences, ABR and MLR. Two patient profiles are reviewed. One whose audition was questioned and the other was the subject of a patient’s speech perception. The characteristics of the individuals are discussed. Reference, test and management practices receive comment.

**The Effects of Acoustic Neuromas on Auditory Processing**

Mary-Kees De Boer and Sharon N. Abel
Mount Sinai Research Institute, Toronto, ON

The present study investigated bone conduction implant benefit vs. hearing aid benefit, hearing aid modification, and a comparison of aided benefit with Xomed’s two styles of processors for use with the implant. The presentation will cover the results obtained through April 1989. Criteria for appropriate implant candidate selection also will be presented. Patient’s reactions and impressions of the implant will be discussed.

**Drug Otoxicity**

Douglas B. Down
Kingston Psychiatric Hospital, Kingston, ON

This presentation will review pharmacological ototoxic agents, the pathological findings subsequent to their use where such findings are available, and the clinical manifestations associated with these agents. Otoxicity has been defined as the tendency of certain therapeutic agents and other chemicals to cause functional impairment and cellular degeneration of the tissues of the inner ear’ (Hawkins, 1975). As early as 1696 (Morton, 1979) the occurrence of temporary deafness was noted among patients being treated with cinchona bark for fevers. Since that time, antibiotics, salicylates, anti-malarial agents and diuretics have been identified along with other important sources of ototoxicity. If prepuberty, the most prevalent forms of hearing impairment, is not the inevitable concomitant of age, but is due to the accumulation of factors such as drug ototoxicity (Downs, 1987), then the thorough knowledge of this subject area could be an important first step in the prevention of hearing impairment.

**Frequency Specific Maturational Changes in the Derived ABR’s of Premature and Fullterm Newborn Infants**

Curtis W. Ponton, Jere J. Eggermont, and Stuart G. Down
University of Calgary, Calgary, AB

Richard Winkelske
Foothills Hospital Calgary, AB

We have previously reported on frequency specific changes found in the I-V interval in a group of newborn infants (Ponton et al., 1987). This investigation demonstrated that low frequency channels mature earlier than high frequency channels. Specifically, it was found that the duration of the I-V interval in I-V intervals obtained for low frequency channels and for the high-pass noise masker. As early as 1696 (Morton, 1979) the occurrence of temporary deafness was noted among patients being treated with cinchona bark for fevers. Since that time, antibiotics, salicylates, anti-malarial agents and diuretics have been identified along with other important sources of ototoxicity. If prepuberty, the most prevalent forms of hearing impairment, is not the inevitable concomitant of age, but is due to the accumulation of factors such as drug ototoxicity (Downs, 1987), then the thorough knowledge of this subject area could be an important first step in the prevention of hearing impairment.
The second stage of a pilot study examining the efficacy of the Hodson Phonology Treatment Program: Pilot Study, showed differences over time, but there were no significant differences between the groups. The second part of this pilot study involved cycle I treatment of the waiting list group, and a three month generalization period for the experimental group. Differences in the experimental group prior to and following a generalization period were analyzed using a repeated measures design. Similarly the waiting list group was tested prior to and following direct treatment of cycle I. Both groups showed differences over time, but there were no significant differences between the two groups. This suggests the generalization period did not produce the expected carryover for the experimental group. Some of the issues arising from this research are discussed.

8:30 to 10:00
The Clinical Voice Laboratory: Cooperative Efforts in Appraisal and Diagnosis
Philip C. Doyle and Gerald P. Martin
Dalhousie University, Halifax, NS
Herbert A. Leeper
University of Western Ontario, London, ON
Hans Hemeert
Victoria Hospital, London, ON

Interest in the clinical appraisal of voice disorders has grown substantially in recent years. In particular, emphasis on the cooperative effort between the speech-language pathologist and laryngologist has become an important aspect of the clinical diagnostic process. The purpose of this miniseminar is to present an overview of this clinical cooperation in two facilities, the vocal function laboratories at Dalhousie and Halifax Infirmary in Halifax, Nova Scotia and the University of Western Ontario and Victoria Hospital in London, Ontario. Specifically, this presentation will address issues pertaining to the joint, comprehensive clinical appraisal of voice pathology. This will include the physical examination of the patient, simple methods for gathering reliable objective measures of voice (frequency, intensity, etc.), as well as measures of aerodynamic support (airflows and pressures). Additionally, the value of videolaryngoscopic documentation and perceptual assessment will be presented. The value of this cooperative effort in these two laboratories will be addressed as it relates to clinical outcomes.

8:30 to 10:00
Theoretical and Practical Bases for Software Selection in Language Treatment: Child and Adult Populations
Nancy L. Thomas-Stonell
Hugh MacMillan Medical Centre, Toronto, ON
Elaine S. Haydon
Baycrest Centre for Geriatric Care, Toronto, ON

This miniseminar will focus on the therapeutic uses of the computer in speech-language pathology. Over the past few years a number of clinics have purchased hardware and software in the Apple lIe line. Although new technologies continue to appear, the clinical issues inherent in the computer as a therapy medium do not change and have not received adequate emphasis. The benefits and limitations of computer rehabilitation are only beginning to be explored. Software programs need to be carefully analyzed to determine whether they provide advantages over traditional therapy techniques and address treatment issues such as the modality of stimulus presentation. Computer rehabilitation also has some disadvantages. Most currently available software programs do not utilize the unique features of the computer. For example, tachistoscopic programs do not provide enough flexibility for clinicians to specify time features. While the computer can be a powerful therapy tool, it is important that programs specifically address the patient’s needs. Techniques for evaluating the efficacy of currently available software will be reviewed.
demonstration of how programs can be authored to suit individual client needs will also be provided.

8:30 to 10:00
Cognitive-Linguistic Management of the Head-Injured Adult
S. Carol Harper
Hamilton General Hospital, Hamilton, ON

The survival rate of individuals with head injuries has shown a steady increase in the last few years due to improved medical care at the scene of the accident, in emergency, and in the trauma unit. With this increase in numbers comes a need for speech-language pathology intervention at an early stage of recovery and greater cognitive-linguistic management throughout the recovery. Late is available in the literature that gives practical suggestions or therapeutic approaches. The Hamilton General Hospital is a Regional Trauma Unit. For the past nine years the Head Injury Team has worked with approximately 600 adults with acquired head injuries that resulted in serious to moderate impairment. Over the years we have developed a cognitive-linguistic evaluation and therapeutic program based on the Rancho Los Amigos Behaviour Rating Scale, the Brain Trauma Hospital’s Traumatic Head Injury Cognitive Recovery Model, and the Maryland Institute for Emergency Medical Services System’s Cognitive-Linguistic Evaluation. This miniseminar will describe the evaluation and intervention approaches used by this team.

10:30 to 12:00
Strategy Based Intervention for the Language-Learning Disabled Child
Barbara H. Gainers
Alberta Children’s Hospital, Calgary, AB

Many school age children with language-learning disabilities experience difficulties coping with the oral discourse and written language contexts of the classroom. These children may display underlying semantic, syntactic, or phonologic processing problems and may be limited in their application of meta-linguistic or meta-cognitive problem-solving. In order for language-learning disabled children to learn from their linguistic environments, development of compensatory learning strategies is necessary. In this miniseminar, a model for teaching compensatory learning strategies will be presented. The intervention model includes five components of instruction: which have been derived both from clinical experience and frequent literature on meta-linguistic and meta-cognition: (1) strategy awareness; (2) strategy definition; (3) instruction in strategy use; (4) practice in strategy use; and (5) generalization. The characteristics of the language-learning disabled child for whom this approach to strategy learning is best suited will be described. Specific examples of how the model can be used effectively to assist children with deficits be demonstrated. Videotaped presentation of strategy intervention for children seen on a one-to-one therapy basis, in small language groups, or through consultation with classroom teachers will be shown.

10:30 to 12:00
Cognitive-Language Assessment of the Head Injured Patient
Jennifer A. Biskup, Julie Hugger, and Roy Saudersson
Parkwood Hospital, London, ON

The speech-language pathologist has had an ever increasing role over the past decade in assessing the cognitive-language functioning of adults with closed head injuries. At one Rehabilitation Unit at a Southwestern Ontario Hospital, the speech-language pathologists have developed the Cognitive-Language Evaluation Protocol (CLEP) to assist in the diagnosis of cognitive-language impairments. The Protocol incorporates standard language assessment of auditory comprehension: oral expression from a grammatical, articulatory, and pragmatic perspective; graphic expression for spelling; content, and grammar; and reading comprehension. In addition, in the cognitive domain CLEP examines the processes of attending, from attentive attending to attending and discriminating auditory and visual stimuli; memory, as measured across short- and long-term modal for learning and with the effects of delay and distraction variables; organizational thought, which includes categorization, sequencing, associating, and synthesizing stimuli; and integrative thought processing to determine reasoning, processing of abstract information, problem solving, and decision making. A cognitive-language assessment should be as comprehensive as possible in order to ascertain the degree of influence that cognition has on language, and conversely, how language influences cognition. CLEP is one tool that can be used as a comprehensive evaluation.

10:30 to 12:00
Informal Testing and Language Sampling Procedures and Analyses
Sharon G. Halderson
Child Guidance Clinic, Winnipeg, MB

The first section of this miniseminar will outline informal diagnostic procedures including game-oriented informal tests, language behavior checklists, clinician-designed tests, clinician-adapted tests, and behavior observation checklists, as important parts of a diagnostic test battery. The second part of the miniseminar will outline language sampling procedures for obtaining a variety of sample types, in particular, referential description; story description; process description; concept explanation; relationship explanation; and situational analysis. Transcription and analysis procedures will be described, including the Analysis of Spoken Discourse Checklist (unpublished), with application to a particular case study. This checklist analyzes lexical, topical, and cohesive features of language, fluency, and the clarification manoeuvres/role of both the client and the clinician. Several other well-known language sampling analyses also are presented including: the Main Length of Utterance; Fourteen Morpheme Analyses (Brown, 1973), and Developmental Sentence Scoring (Lee, 1979). Informal assessment and analysis of a variety of language sample types provides an important supplement to a traditional standardized test battery (Leonard et al., 1980).
Communication Board Use by Aphasic Individuals

Anne Godden, Sandy H. Fey, and Rawi B. Fisher
University of Western Ontario, London, ON

The nature of the supervisory relationship can "make or break" a student practitioner experience. Unfortunately, conflict is an all-too-frequent component. A major source of conflict appears to be poor communication between the supervisor and supervisee concerning differing expectations. A number of sources (e.g., Chen, Colacci, & Wiggins, 1975; Smith, & Wiggins, 1982) have demonstrated that supervisors and supervisees have very different perceptions of the supervisory process. These studies have investigated supervisory-student interactions; however, similar conflict situations can arise between working professionals or pre-professionals. Given the importance of the supervisory relationship to a variety of settings, it is imperative to plan for how communication between supervisors and supervisees can be enhanced. One model of the supervisory process which addresses the issue of differing expectations is that proposed by Anderson (1988).

The model can be applied to the analysis of conflict in supervision and can, in our opinion, be used to facilitate understanding of the conflicting situations. These studies have investigated supervisory-student interactions; however, similar conflict situations can arise between working professionals or pre-professionals. Given the importance of the supervisory relationship to a variety of settings, it is imperative to plan for how communication between supervisors and supervisees can be enhanced. One model of the supervisory process which addresses the issue of differing expectations is that proposed by Anderson (1988). This model can be applied to the analysis of conflict in supervision and can, in our opinion, be used to facilitate understanding of the conflicting situations. These studies have investigated supervisory-student interactions; however, similar conflict situations can arise between working professionals or pre-professionals. Given the importance of the supervisory relationship to a variety of settings, it is imperative to plan for how communication between supervisors and supervisees can be enhanced. One model of the supervisory process which addresses the issue of differing expectations is that proposed by Anderson (1988).
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**JSLPAROA (HCC)** Vo. 13, No. 1, March '89