



## Nova Scotia Hearing and Speech Centres Clinical Forum 2010

### Amplification Dr. Susan Scollie

October 15, 2010 \* 8:30 - 4:30 PM

**Dr. Susan Scollie** is an Assistant Professor at the National Centre for Audiology at the University of Western Ontario in London, Ontario, Canada. With colleagues, she developed the recently released version 5.0 of the DSL Method for hearing aid fitting. Her current research focuses on the evaluation of DSL5, frequency compression signal processing, and outcomes for infants and children who use hearing aids.



#### **AGENDA:**

Reception/Opening Remarks  
Session 1: The DSL Method Version 5: What's in it and how does it work?  
Break  
Session 2: The DSL Method Version 5: Protocols  
Lunch  
Session 3: Nonlinear Frequency Compression  
Break  
Session 4: Nonlinear Frequency Compression, continued  
End of day

#### **PARTICIPANT OUTCOMES**

- Identify and understand the key features of a new method for prescribing hearing aids (DSL version 5), with specific differences for infants versus children versus adults.
- Interpret the SPLogram as a tool for verifying hearing aid fittings for children, and to recognize key features of high quality versus problematic fittings.
- Understand one rationale for using nonlinear frequency compression signal processing, and a verification strategy for evaluating frequency compression hearing aid fittings for children.

#### **ASSESSMENT QUESTIONS**

1. Is there a strong rationale for using different prescriptions for pediatric versus adult hearing aid fittings?
2. When monitoring infants or young children who use hearing aids, do you think that caregivers are better equipped to detect fittings problems associated with too much gain or problems associated with too little gain?
3. What speech sounds are most affected by the use of nonlinear frequency compression?

#### **PRESENTATION #1: The DSL Method Version 5: Protocols for Fitting and Verification**

The Desired Sensation Level (DSL) prescription was first proposed for use with linear gain instruments and the pediatric population. Since its introduction in the late 1980's, several revisions have been made in order to accommodate the changing faces of technology and clinical practice. The most recent revision produced DSL v5, which includes emphasis on multichannel compression hearing instruments, and clinical procedures for use with infants. This presentation will introduce the evidence and rationale behind DSL v5, and review the clinical protocols recommended for its use.

#### **PRESENTATION #2: Nonlinear Frequency Compression: Fitting Rationale and Outcomes**

New technologies are now available for moving high frequency sound energy to lower frequency regions through digital signal processing in a hearing instrument. These technologies attempt to increase access to high frequency speech cues, over and above the audibility that can be provided with today's conventional processing (i.e., multichannel WDRC). This presentation will review a clinical trial of a multichannel nonlinear frequency compression (NFC) processor. I'll review the development and evaluation of a fitting rationale for NFC, along with the clinical outcomes obtained with both adults and children. Clinical implications for candidacy and fitting will be discussed.