Preface

The process of selecting and fitting hearing aids occupies a significant amount of time for thousands of audiologists each day. Decisions need to be made concerning: the style of the hearing aids (BTE versus ITE versus ITC versus CIC) and/or earmolds; type of signal processing (analog versus digital; linear versus nonlinear), method of output limiting (input versus output compression; compression limiting versus peak clipping, etc.), electroacoustic characteristics (frequency response and bandwidth, overall gain and output, input/output characteristics, etc.), telecoil sensitivity for coupling to telephones and assistive listening devices, directionality of the microphone(s), availability of direct audio input (DAI), presence or absence of a volume control, etc. The catalogue of decisions required by audiologists as a “starting point” for providing successful hearing aid fittings goes on and on.

As mentioned earlier, as part of the initial step in selecting the appropriate hearing aids to compensate for the patient’s hearing loss, audiologists must make decisions concerning the required electroacoustic performance of the hearing aids. Audiologists could enter the patient’s audiometric data (threshold and LDL in dB HL) into several commercially available software programs or real ear and hearing aid analyzers to convert these data into dB SPL measured in a 2 cc coupler to help select the appropriate frequency-gain and output responses to “match” a selected prescriptive formula (NAL-R, POGO, Libby 1/3-2/3, DSL, etc.). The audiologist could then use this information to “communicate” with hearing aid manufacturers, via specification sheets or matrix books, to select the hearing aid(s) which best “match” the “prescribed” electroacoustic characteristics. For a number of reasons (to be explained in this issue), this method works reasonably well when the ordered hearing aid utilizes linear signal processing, but does not work as well when audiologists order hearing aids incorporating nonlinear signal processing.

This first issue of Volume 2 of *Trends in Amplification* is dedicated to providing the reader with a better understanding of the IHAF protocol. This comprehensive protocol was developed to help clinicians appropriately select and fit hearing aids incorporating linear and nonlinear signal processing. The need for the IHAF protocol became apparent as audiologists began to be aware that the “traditional” prescriptive formulas did not address the performance characteristics of hearing aids utilizing nonlinear signal processing.

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