IHAFF Unveils Fitting Protocol at Jackson Hole Rendezvous

By Karl E. Strom, *editor*

For years, frontier men and women gathered once a year on a mountain near Jackson Hole, WY, to trade information, wares and celebrate life. With the Grand Teton mountains for a backdrop, the setting made it easy to gain perspective on overcoming large obstacles.

The August Jackson Hole Rendezvous represented an excellent start for the Independent Hearing Aid Fitting Forum (IHAFF) in their unveiling of a comprehensive fitting protocol that was proposed to over 160 hearing care professionals and industry representatives.

For a number of years, modern fitting, selection and verification principals have been described by many experts in the hearing profession. Yet, the technology of hearing instruments progressed so rapidly between 1989-1992 that it outpaced available protocols. In the last few years, even the most dedicated professionals have become frustrated about their ability to keep up with the changes. New developments—especially in programmable instruments—are presenting multitudes of new fitting options. The IHAFF's mission is to establish a foundation from which an effective protocol can evolve and build on itself.

The IHAFF faculty includes (l to r) Mead Killion, Gail Gudmundsen, Larry Revit, Gus Mueller, David Hawkins and Michael Valente. Other members of the IHAFF panel (not shown) include Lu Beck, Ruth Bentler, Robyn Cox, David Fabry, Michael Marion and Dennis Van Vliet.

"We don't want anyone to get the idea that we're presenting this as the final answer in fitting protocols," says IHAFF faculty member Michael Marion, a prime organizer of the Rendezvous and moderator for many of the seminars. "What we're attempting to accomplish is to blend generally accepted principals and theories into a practical approach for hearing care professionals to use in their everyday practices."

The Purpose of the IHAFF Protocol

During the three days of seminars, the IHAFF faculty presented a protocol that was designed to accomplish four key fitting objectives:

- Make soft sounds (including speech) sound soft, with sounds presented in as wide a bandwidth as practically possible.
- Amplify comfortably loud sounds to comfortably loud levels.
- Prevent loud sounds (including speech) from being amplified to exceed comfort levels.
- Hearing instruments should have a minimum of circuit noise and distortion at normal input levels.

Information presented by David Hawkins, PhD, indicated that 80-95% of today's hearing instruments are fit using only pure tone audiograms and approximately 82% of all instruments are of the linear peak clipping variety. Less than 10% of all hearing instruments sold are programmable. (For more information, look for Hawkins' article on the history of protocols in the Nov./Dec. issue of *The Hearing Review*).

Linear hearing aids are still very valuable for many client/patients. However, it's evident that the advanced technology available today is not being utilized by many hearing care professionals. One reason is that, too often, the current fitting methods are little help in fitting non-linear hearing instruments. Thus, finding new fitting strategies for these advanced instruments should be a primary concern in any new protocol.

Protocol Highlights

One of the most unique facets of the new protocol is its reliance on the client/patient's perception of sound. Much of IHAFF's work centers on hearing thresholds and the relative comfort levels that vary from individual to individual. Thus, much of the pre-fitting data centers on loudness perception on a seven-point scale that ranges from "very soft" to "uncomfortably loud," as rated by the patient. These are measured via warble tones which are then related to HA-1 2cc SPL values via the protocol software, VIOLA (Visual Input/Output Locator Algorithm) to help in the selection process and amplification goals.

Another facet of the protocol is the use of the Abbreviated Profile of Hearing Aid Benefit (APHAB), a 24-item test that can be given to the patient either manually or by computer. The test is useful in establishing both aided and unaided audibility for individuals in four different listening environments: easy listening speech; speech in noise; speech in reverberant surroundings (i.e., a gym) and reactions to environmental sounds (annoying/loud noises).

The APHAB test may prove particularly useful when documenting relative benefit in aided vs. unaided situations, or when comparing one hearing instrument to another (after suitable trial periods). The test provides an objective means of measuring the value of a particular instrument. The APHAB test could also become important in light of the current regulatory environment; documentation of user benefit would prove very helpful in justifying a dispenser's decisions and actions.

To assist in the selection process, the VIOLA software calculates the relationship between overall speech input levels for soft, average and loud speech at the hearing aid microphone

(corrected for microphone location) and the user's individual loudness judgements for warble tones. A matrix then allows the dispenser to enter different combinations of overall gain, output and kneepoint/compression characteristics. The instruments input/output curve(s) can then be displayed on the computer screen, compared to the target curve, and manipulated, as needed.

A number of other procedures for fitting and verification were also proposed as part of the protocol, including probe microphone measurements, discomfort checks, and the new FIG6 Hearing Aid Fitting Algorithm software (presented by Mead Killion).

Pros and Cons

Although virtually everyone acknowledged the value of the protocol and were enthusiastic about the overall progress made by IHAFF, it should be made clear that many in the audience expressed reservations about the scope of the protocol and its ease of implementation.

A primary concern was the time needed to perform the protocol (estimated at 1-1.5 hours per individual). Several practitioners said that they simply could not afford to "tack on another 20 minutes" during the testing of each client/patient. IHAFF faculty members acknowledged this concern and offered the possibility that the additional 20 minutes during the testing could save far more time during the post-fitting and counselling period. Additionally, the IHAFF staff said that there will be cases where the professional finds it impractical or unnecessary to implement the entire protocol.

The other primary criticism was that the protocol only addressed sensorineural losses (disregarding conductive and mixed losses) and steered clear of subjects like speech intelligibility in noise and post-fitting counselling. To this, the IHAFF staff said that it purposely avoided some issues out of practicality: there is simply no way that *everything* could be covered in formulating the framework of the protocol in these early stages.

Summary

While the criticisms above may or may not be valid, one thing is clear: IHAFF never intended its protocol to be perfect at this stage in its evolution. The faculty members dedicated themselves to building the *foundation* for a comprehensive and effective protocol that professionals could use.

Several members also cautioned that by no means should any professional think they can now "turn off their brains"—that the protocol will allow *anyone* to perform the complex task of properly fitting an instrument. Experience and knowledge is still the deciding factor to good fitting practices. The protocol is designed as a guideline to apply modern theory and practice in order to accentuate the profession, the performance of the products and—most importantly—the auditory life of the hearing-impaired individual. To that end, few could argue that the Rendezvous made good headway in identifying strategies that were essential for the proper selection, fitting and verification of hearing instruments.

What's Next?

The IHAFF faculty will distribute its fitting software in the near-future at two tutorial seminars. Additionally, they are currently conducting a feasibility study, and will continue to meet periodically for updating and revision of the protocol.

IHAFF Software

Distribution of the software will be conducted through tutorial seminars. Because the IHAFF faculty had developed the software on its own (in their "spare time"), the only support system for the program is through an informal network of the IHAFF members. Currently, two tutorials are planned where the software, orientation and training can be obtained. The first will be held in Jacksonville, FL, sponsored by the American Academy of Audiology (AAA) and the second will be held at the AAA Convention in March-April 1995 in Dallas, TX. Announcements will be made in *The Hearing Review* as soon as the details for these meetings become available.

The 1996 Jackson Hole Rendezvous

The next Jackson Hole Rendezvous will be held at the Jackson Lake Lodge in Grand Teton National Park on September 7-11, 1996. It's a good idea to make your reservations as soon as possible because registration is limited. For further information, write to: *Michael Marion, Professional Hearing Ventures, Inc., 5800 Santa Rosa Rd., Suite 123, Camarillo, CA 93012.* ◆

Bring your brain and your smile...

Wyoming's terrain doesn't beg you to pay attention to the scenery—it demands it. The Jackson Hole Rendezvous operates under the simple premise that fresh air stimulates the mind. The events and outings this year included a Top of the Mountain "Trappers Cache" sponsored by Starkey Labs; Buffalo Burger Barbeque sponsored by Siemens Hearing Instruments; Veranda Social sponsored by Etymotic Research; Joel Wernick Memorial Two-Step Party sponsored by Qualitone; and a scenic raft trip down the Snake River. The events and scenery truly accented the learning experience.

Other sponsors of the Jackson Hole Rendezvous activities and seminars included Audioscan/Etymonic Design, Phonak, ReSound, 3M Hearing Health, Frye Electronics, Beltone Electronics, Maico Hearing Instruments and Unitron Industries.

Helping Ruth Bentler off the bus to the Buffalo Burger Barbeque is Dennis Van Vliet. Gail Gudmundsen and Susan Whichard (foreground l to r) were also among the attendees.

Well, it seemed much braver at the time. Three heroic Rendezvous attendees pose in front of a moose (circled).

Dennis Van Vliet and Michael Marion were recognized for their participation in IHAFF and the organization of the Rendezvous.

Paul Stypulkowski and Bruce Gefvert, 3M Hearing Health and Bob Traynor, Maico.