Components of the process:

Focusing on patient's needs

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In 1995, Oticon entered into an agreement with the National Acoustics Laboratory (NAL) of Australia to distribute printed and electronic versions of the Client Oriented Scale of Improvement (COSI). At that time, we recognized how the COSI helped the professional focus the hearing aid fitting process on the expressed needs of the patient. Although the COSI was not the first tool to structure the hearing aid fitting process around specific needs, it provided a simple, yet elegant tool, for the professional, patient and family members to agree on the agenda. Effective professionals have always recognized the importance of discussing and recognizing the patient's specific listening needs.

When the patient and professional commit to the agenda as recorded by the COSI, and when the COSI becomes the centerpiece of their discussions about product and feature selection, as well as programming and adjustments and follow-up, the true value of the COSI emerges. The value of the COSI is not merely as a bookkeeping tool. Rather, the value lies in the patient seeing tangible evidence that the professional is treating the hearing aid fitting on a personal, individualized basis. The COSI strategy is designed to help create a bond between the patient and professional, while improving the patient's personal "investment" in the hearing aid fitting process.

In the example given in Figure 1, the needs are expressed in very specific terms. That is an important part of the COSI strategy: focusing in on key, specific situations in order to solve general problems that the patient is experiencing. The patient is better able to recognize and acknowledge the benefits of amplification when performance is evaluated in these same key, specific situations.

The COSI form is available in the Genie fitting software, with the goals also viewable in eCaps.

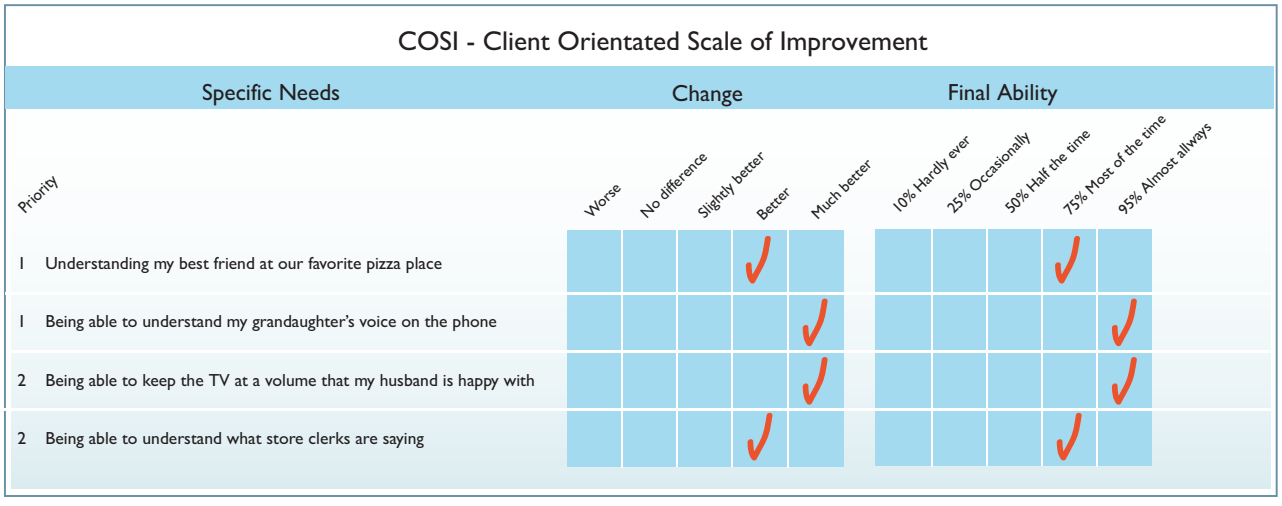

Figure 1: The specific goals from a typical patient.

Case Study

Patient: G.J. 42 yr. old female

Many of the most important functions of the auditory system are based on binaural processing. Our field has a long history of emphasizing bilateral hearing aid fittings in order to capitalize on these natural abilities. However, when the patient's auditory disorder has different effects on the two ears, there may be times when an alternative fitting approach makes sense.

Background & Presentation:
G.J. was diagnosed and has been medically treated for Meniere's disease for the past 18 months. She initially presented with severe vertigo with hearing loss and tinnitus in the left ear. Approximately 1 year ago, her hearing thresholds declined in the right ear. Her vestibular symptoms have been under control for the past 6 months. Her hearing thresholds and word recognition scores have been stable for the past two months. The patient delayed amplification until she was sure the vestibular symptoms were under control. Now that balance is no longer her primary concern, she is ready for hearing aid amplification.

The patient owns a boutique-clothing store. Since the onset of her Meniere's disease she minimized her personal contact with customers. Now that her balance issues have abated, she desires a return to the more satisfying part of the job, direct contact with customers. Hearing aid cost is not an issue for G.J. Her goal at this time is to hear and understand, especially in the work environment, as well as is possible.

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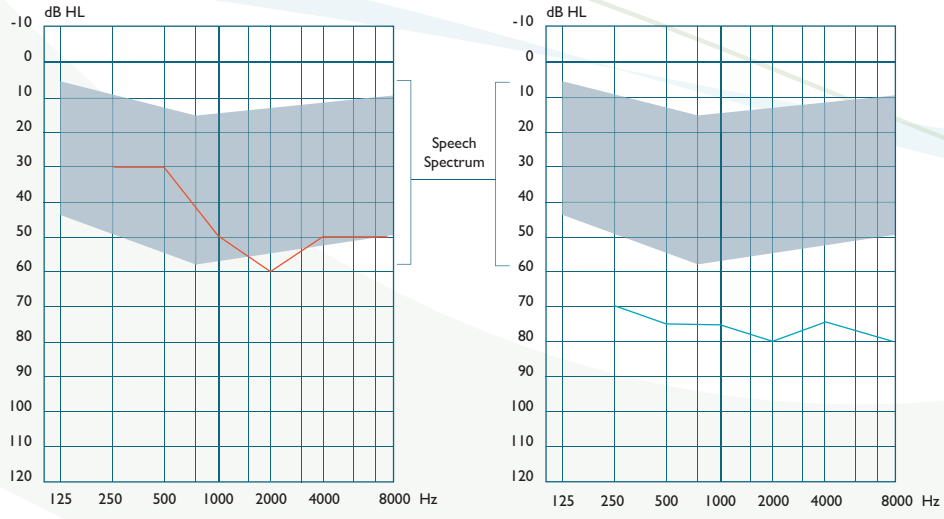

Figure 1:
The audiogram for G.J.

Question:
Based on the asymmetric thresholds and speech understanding, How should this fitting be approached?

Answer:
Some clinicians may avoid the poorer ear entirely, opting for a monaural or perhaps a Bi-CROS fitting. Although one can make those arguments, we prefer an alternative strategy (Note - There is no conclusive test which determines if an ear can make use of acoustic amplification. Often, the best protocol is to fit the ear and see if the patient achieves benefit). Although the word recognition score in the poorer ear is significantly reduced, hearing remains and some amount of suprathreshold processing ability is apparent.

Althoug it is typical to fit bilateral hearing loss with binaural amplification, there are times when the hearing aid fitting process may be better served by fitting one ear at a time. Therefore, one strategy is to treat this case as two monaural fittings.

Given the asymmetry, one can assume if the hearing remains stable, the patient will primarily rely on her right ear. Assuming that's true, the right ear fitting must be as effective as possible. Once a maximal right ear fitting has been attained, the left ear can be fitted to see if it adds to the overall auditory performance of the patient.

Fitting the left ear may prove useful, but it is unlikely to be the dominant ear for the patient. Obtaining loudness balance or similar sound quality goals will probably not be relevant in a case like this. Rather, the goal may be to achieve a solution in which the right ear is fit optimally while the left ear provides additional assistance without competing with or distracting from the right. Further, the prescribed gain values for the left ear may not be relevant as full restoration (based on the threshold hearing loss in the left ear) may compete with or reduce the word recognition of the right ear.

In this case, the professional started with a Syncro Power BTE in the right ear. The Power device was not required based on current thresholds (see audiogram), however, extra gain and output may be needed if the hearing thresholds drop. After two months of adjustments and adaptation, the hearing care professional added another Syncro Power BTE on the left. The Sumo DM was considered based on the left ear's threshold hearing loss, however, it was assumed the full power of Sumo DM would not be needed given the etiology, and the philosophical approach that the left was the "secondary" ear. The patient went through three follow-up sessions to fine-tune the left hearing aid.

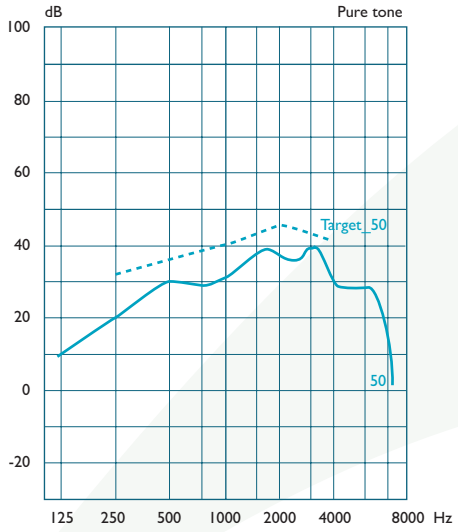

Figure 2: The prescribed (dotted line) and use (solid line) insertion gain for the Syncro Power BTE on the left ear of G.J.

The hearing aid on the right ear has been worn on settings approximating the Voice Aligned Compression prescription. As indicated in figure one, the patient has been using the Syncro Power at settings with between 5 and 10 dB less than the prescribed gain on the left.

G.J. reports a clear but unspecific advantage for using both hearing aids, as compared to just using the right. She uses both devices while at work, although at home she will occasionally use just the right device. The hearing aid fitting has been stable for the past four months.

Conclusion:
Significant asymmetrical SNHL may be seen as two different fittings, with a dominant ear and a secondary ear. Achieving the best possible fitting on the dominant ear should occur first, with intentional and cautious addition of the secondary ear, in a step-wise and evaluative manner.