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Treatment Plans in Audiology

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Audiologists today have a large arsenal of tools available to help patients with hearing loss improve communication. Not only do we have a large number of choices in hearing aid options, we also have accessories such as streamers, Bluetooth devices, telephones, and wireless systems.

Faced with such an array of options available, it is critical that the audiologist of today systematically determine which devices are needed to assist our patients in their activities of daily living. Once the appropriate equipment has been selected, the audiologist should develop a treatment plan that outlines when and how the technology will be introduced.

Unfortunately, the typical manner in which technology is introduced is by way of a series of continual failures. Specifically, the patient is first prescribed a hearing aid. The hearing aid is typically set to levels that are below the required target gain to allow for acclimatization to the sound. After a period of a few weeks, the patient is then seen for one or two follow up appointments for fine tuning. Decisions are also made regarding the number of available automatic and manual programs.

Should the patient continue to have difficulties communicating (failure 1), then the audiologist may introduce a low cost Bluetooth microphone. These microphones work best over distances of about 5–10 meters, are typically omni-directional, but they are not adaptive. They typically provide about a 10 dB signal-to-noise ratio (SNR) improvement. While some client's needs may be met with this technology, others require higher SNR's in order to communicate in noisier environments. This now leads to our second failure.

The patient returns to the audiologist still expressing difficulty communicating. The audiologist could try to make fine tuning adjustments that may also result in further failures. Or they may at this point in time introduce higher performing wireless systems such as an FM or Roger system. However, the patient may now be frustrated by the previous failed attempts to address their communication challenges. Moreover, the audiologist's competence and credibility may come into question.

A better approach would be to determine at the initial assessment what SNR's are required to communicate and therefore what equipment should be selected. This can be accomplished by adding a hearing-in-noise test to the assessment battery. For example, the LiSN-S PGA test developed by the National Acoustics Laboratory in Australia provides the clinician and patient with clear recommendations for equipment needed. In addition, a needs assessment such as the Client Oriented Scale of Improvement (COSI) can be performed to determine the situations the patient finds most challenging and the relative importance this has in the patient's life.

Following this, the audiologist should present these findings and advise the patient of all the equipment needed for effective communication. In other words, the audiologist should provide a treatment plan customized to their communication needs. The patient can now make an informed

decision about equipment they will use.

At this point, the patient now will either consent to the plan or may wish to make modifications. The patient may not necessarily follow all the recommendations; however, it is still every patient's right to make an informed decision.

Experience suggests that fitting both hearing aids and other communication aids such as a Roger or FM system on the same date is not wise. It is simply too much information to absorb during one appointment. However, realistic expectations can be established. For example, if the hearing-in-noise test and the needs assessment indicate that a more advanced wireless solution is required for effective communication in noise, the patient should be made to understand that the hearing instruments alone will not meet all the needs.

Creating a treatment plan and establishing realistic expectations should also prove to save time for the clinical audiologist. While the patient has the right to refuse certain recommendations, the patient does NOT have the right to expect performance from a hearing instrument that is unrealistic. For example, if a patient clearly needs a higher SNR that can only be achieved through an advanced wireless microphone system, the patient cannot ask for continual fine tuning adjustments of the hearing instruments.

Treatment plans based on a complete assessment that includes hearing-in-noise testing should be standard practice in audiology. Both the patient and the clinician benefit from such a systematic approach.