

## TIME-BASED EXPECTATIONS AND THE COMMUNICATION NEEDS ASSESSMENT

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An important analogy can be drawn between the surgical experience and the assessment and rehabilitation of hearing health needs. Both should be considered a process, rather than an event. Any mishap along the way can result in failure (or even a disaster in the case of surgery). I recently underwent a surgical procedure. During my recovery period, I thought about how the entire surgical experience, from start to finish, compares to our patients' experience when they receive new hearing aids. The surgical (as well as the hearing health care process) can be divided into four interrelated parts as discussed below.

In the first segment of surgery, diagnostic tests are performed based on the patient's symptoms in order for the surgeon to ascertain the need for and manner of intervention or rehabilitation, such as an operation, physical exercise, or medicine regimen. In our profession, this segment has traditionally consisted of the basic audiologic workup (standard pure tone hearing test and word recognition testing in quiet) performed in order to determine if there is a hearing condition that is medically or surgically correctable; if not, the evaluation will determine the need for hearing aids, assistive listening devices, auditory training, group education or any combination of these. Essential components of this first segment include the counseling of the patient, discussion of the likely prognosis (or establishment of realistic expectations), and a dialogue about the rehabilitation plan.

The second segment is the actual surgery, or in our case, the hearing aid selection and fitting.

The third segment for surgery includes a physical examination to establish the initial result of the surgery, as well as patient education regarding care of the wound and extensive counseling to prepare the patient for the immediate, intermediate, and long-term effects of the surgery. In our hearing health world, this component entails verification and

validation of the fitting, instruction regarding care and maintenance of the devices, and vital counseling concerning what the patient should expect when first experiencing amplification. Counseling at this point might focus on occlusion issues, background noise, overall loudness and quality, etc., and an estimate of time when acclimatization to these unfamiliar acoustic phenomena might occur.

And finally, the fourth segment of surgery is implementation of the follow-up rehabilitation plan which may include exercise and possibly physical therapy. In our hearing health world, we similarly complete the process by implementing the rehabilitation plan we created with the patient during the first section.

If there is a breakdown in any of these segments, regardless of the quality of the other sections, the outcome of the process can be adversely affected. My surgeon did a fine job of diagnosing the need for surgery and of performing the actual operation, but the medical counseling and pre and post procedure instructions were inadequate. As a result, I experienced unnecessary anxiety. In fact, if it weren't for my ability to browse the Internet, some of my post-surgical activities could have produced unfortunate and regrettable conclusions. The surgical team could successfully complete all segments only by collecting thorough and appropriate information about my physical and psychological constitution. In other words, they needed to know what kind of an impatient patient I was likely to be so that they could have helped me to establish realistic, time-based expectations.

Similarly, we need to obtain accurate and complete data about our hearing impaired patient's auditory and personal characteristics. We must recognize that the only way to properly determine prognosis, counsel for realistic expectations or establish the proper therapy plan is to obtain a comprehensive representation of our patient's overall characteristics,

including motivation, emotional factors, cognitive status, confidence, and psychoacoustic abilities. Surgeons are notoriously known for their short attention span and hurried demeanor (outside of the operating room). Similarly, time constraints often complicate our effort to be complete with our patients.

To successfully achieve the desired outcomes, we must first be clear about our objective; and that objective should be to provide our patients with enhanced communication ability. Communication, the ultimate goal for our patients, not only involves hearing, but also requires the incorporation of listening skills, cognitive and linguistic interpretation, and communication strategies. Thus, in order to give our patients the necessary tools, we must recognize that hearing aids, when properly fit, primarily provide access to acoustic information. But the hearing aids themselves do not provide the patient with the necessary additional communication skills, which require better listening, cognition, and strategies.

So once we agree that our ultimate goal is to enhance communication, how do we complete the process? Let's examine each of the four segments outlined above and determine if we are adequately addressing each, and if not, what we might do to alter the process.

## Segment One

The basic audiologic workup (standard pure tone hearing test and word recognition testing in quiet) indicates whether there is a disorder that requires intervention. However, it tells us practically nothing about the patient's motivation, emotional factors, cognitive status, communication confidence, and psychoacoustic abilities. Similarly, word recognition scores have a low correlation with listening skills in complex acoustic environments. Furthermore, in conjunction with aging and reduced auditory acuity, reduced cognitive efficiency, greater susceptibility to background noise, and difficulty understanding rapid speech is common.

To properly ascertain the necessary and essential information requires a more complex set of data collection. The Communication Needs Assessment<sup>1</sup> (CNA) is a *battery* of objective and subjective measures intended to assess residual auditory function beyond that which is determined by pure

tone and monosyllabic word recognition in quiet testing. The CNA should ascertain the practical abilities and needs of the individual patient. The assessment does not require a battery of new tests. Rather, it can be done using existing test procedures that are presently underutilized. Table 1 provides a partial list of some of the practical measures currently available that look beyond the audiogram to define residual auditory function in a clinically appropriate time frame. These particular measures were selected because they generally require less than 5-10 minutes of the clinician's time to administer and score. References for each of these tests are listed at the end of this essay. Obviously it would not be practical to conduct all of these measures on each patient. But there should be a minimum of one or two subjective measures to help determine the patient's needs, and one or two objective measures to help define the patient's functional abilities. In addition, approaches such as the Performance Perceptual Test listed below offer the means to compare individuals' objective performance with their subjective impressions of their own performance. This can lead to important counseling as well as further training considerations.

At the completion of the CNA, the patient should be counseled about the results and our recommendations and given a comprehensive, individualized communication enhancement plan (ICEP) containing any or all of the following: education and extensive instruction, communication strategies, individualized auditory training, hearing aids, assistive listening devices, group education and therapy, and the prognosis for success, including counseling to create realistic expectations. It is essential that the concept of the CNA and ICEP be introduced at the very outset of the patient process. When patients call to request an appointment for a hearing aid evaluation, they should be informed that they can expect to be given a comprehensive interview along with questionnaires to guide the professional to help them establish specific communication needs, a comprehensive battery of hearing and listening tests to assess their ability to hear soft sounds as well as to understand speech in quiet and in noise, and an individualized communication enhancement program.

## Table 1. Possible Components of the Communication Needs Assessment Battery

### Objective Procedures

QuickSIN<sup>2</sup>

Hearing in Noise Test (HINT)<sup>3</sup>

Acceptable Noise Levels (ANL)<sup>4</sup>

A test of binaural interference<sup>5</sup>

Listening span<sup>6</sup>

### Subjective Measures

Hearing Handicap Inventory for the Elderly –

Screening HHIE-S<sup>7</sup>

The Hearing Handicap Inventory for Adults (HHIA)<sup>8</sup>

Communication Scale for Older Adults (CSOA)<sup>9</sup>

Characteristics of Amplification Tool (COAT)<sup>10</sup>

The Client Oriented Scale of Improvement (COSI)<sup>11</sup>

Expected Consequences of Hearing Aid Ownership (ECHO)<sup>12</sup>

Communication Confidence Test<sup>13</sup>

### Combined Method

Performance Perceptual Test (PPT)<sup>14</sup>

## Segment Two

If it is determined that amplification is a component of the ICEP, the selection and fitting of the hearing aids should be initiated and completed. Details of this process are beyond the scope of this paper.

## Segment Three

During and immediately following programming, appropriate validation and verification procedures, including probe microphone measures, should be performed in order to ensure adequate audibility, loudness comfort, and lack of feedback. This segment is also characterized by comprehensive instruction on the use and care of the devices. One of the most vital components here is the discussion of realistic expectations. Specifically, an aspect that is sometimes overlooked is the establishment of expectations that are time based. Patients must be cautioned that initial perception with amplification may not sound “normal.” In fact, I frequently advise patients that, “if it sounds just right, it’s wrong.” I also tell them how much time is likely to pass before their brain adapts to the novel awareness of commonly heard background sounds, occlusion

effects, and physical comfort. When patients understand that these unusual perceptions are expected, they can give themselves permission and time to adapt. If these perceptions come as a surprise, anxiety is raised and the outcomes can be adversely affected.

## Segment Four

Restating and implementing the comprehensive ICEP rehabilitation plan completes the process. Many professionals incorrectly presume that they are providing rehabilitation services merely by supplying amplification and presenting instructions to accompany hearing aid fittings. Others argue that they have insufficient time to conduct rehabilitation because such services may be time-consuming and non-reimbursable. Both of these assumptions are erroneous. There are a number of methods and abundant content material available to provide both group<sup>15, 16</sup> and individual<sup>17</sup> rehabilitation services that do not require significant professional time. Data support the efficacy of such programs in terms of reduced return for credit rates, increased usage, and greater initial patient satisfaction.

## Conclusions

Providing a positive experience for our patients requires an effort that begins with a complete Communication Needs Assessment (rather than the more limited traditional conventional hearing aid evaluation) and culminates in an Individualized Communication Enhancement Plan. The goal is to shift the focus from one that is purely product oriented (i.e., centered around hearing aids), to one that is process oriented (centered around enhancing communication). The reason for this change is straightforward. When the focus is placed on hearing aids, it can inadvertently create an unnecessary restriction on our ability to provide comprehensive care, and this can send the wrong message to patients and other stakeholders.

So, similar to surgery, we must be consistent throughout the entire process. It is not enough to predict the final outcome to the patient. Counseling for realistic expectations must be framed in terms of what to expect and a time-based estimation of when to expect it. Furthermore, we must offer our patients all the tools necessary to complete their journey toward enhanced communication.

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