

ONE OF THE BEST KEPT SECRETS FOR PATIENT SATISFACTION

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Biography:

Kenneth E. Smith, Ph.D. has been in private practice in the Kansas City area for more than 30 years. A past president of the Academy of Dispensing Audiologists, he teaches Basic Business Skills in Pennsylvania College of Optometry's Au.D. program. Smith has also functioned many years as a consultant to industry, through his company, Industry Consulting Services. In that capacity, he evaluates new products and works to develop a business model for their application.



Abstract:

Speech mapping is not new technology, its impact on the clinical process and on business has been well documented. Speech mapping can have a dramatic effect on patient satisfaction, the number of return visits for technology adjustment, returns for credit, patient and family involvement in the fitting process and the financial health of the business. This article reports on the new type of speech mapping, called the AURICAL Visible Speech system. Using Bluetooth technology, this wireless system is designed to be used with NOAHlink and provide binaural real time data using a variety of recorded and live acoustic stimuli. It requires a minimum amount of time in the clinic and features both counseling and simulation components and user friendly software.

The 'Satisfied' Patient

Patient satisfaction, by definition, implies that the patient is satisfied with the amplification we have provided during the evaluation and treatment process. The term also implies that the patient is wearing the amplification system as prescribed and that our treatment results in an improvement in the patient's quality of life.

In practical, business terms, patient satisfaction also means that the hearing aid system was NOT returned for credit at the end of a 'trial', 'adjustment' or 'evaluation' period and that they would refer other patients to us for services. Assuming that we have excellent professional skills, that we have pre-qualified the patient, that we understand what they expect from the treatment and that we send them out of the fitting session with the 'right' fit the first time, we should expect no (or very few) returns for credit.

The Ideal World

In the world of perfect evaluation, pre-qualification and treatment, the modern clinician should be able to expect and accomplish:

- Verification of the first fit, making sure that we are fitting amplification characteristics that we THINK we are fitting. This, of course is irrelevant if one believes that manufacturer's algorithms are exact and that there are no significant differences between human ears and hearing losses.
- Direct involvement of the patient in the treatment process. This implies that the clinician is able to provide an understanding of the hearing loss and its affects on speech intelligibility in quiet and noise and that the patient is able to both visualize and 'hear' the results of treatment with speech and sounds that he/she will encounter in real life.
- Direct involvement of the family or significant others in the evaluation and treatment process while providing them with a practical experience with the patient's hearing loss. Ideally, that experience should be both visual and auditory, using voice and sounds that the patient will encounter in the real world.
- Presentation of a high-tech image to the patient and family that reinforces confidence in the treatment process and the sophisticated nature of our services.
- Cost effective treatment with a reduction in patient visits to solve fitting problems and creation of charges to pay for the equipment used in the treatment process. Patients are willing to pay for a service that is seen as high-tech and as having value, even when it is not covered by health insurance.
- Efficient problem solving that involves real world stimuli and sophisticated treatment technology.

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So, How do Most Clinicians Verify Treatment Now?

In the Basic Business Skills class I teach, my 'students' are practicing clinicians with experience in the dispensing world. It is relatively easy to cause a defensive response by asking them how they verify their treatment.

In many, cases, the answer is simple: they don't!

Others, being more practical, look at verification as being a function of whether or not the patient returned the amplification system for credit.

Most who DO verify their fittings immediately state that they use sound field tests or traditional real ear measurement (REM). This is all well and good until I then ask them if they fit digital hearing aids. If the student fits a high percentage of digital technology, I then ask them what they "turn off" to complete the measurements.

If one treats only with analog technology, then sound field and REM tests are appropriate and useful. This is not true of digital amplification, where one must turn off noise reduction, use an artificial signal, etc.

Besides the fallacy of using these procedures for verification of treatment, patients and family members rarely understand what they are seeing and experiencing. In fact, their clinical experience (a best fit REM) may be useless in the real world.

Furthermore, sound field and REM measurements are less than useful in closing sales, problem solving and creation of a partnership between the clinician and patient.

The Secret

Not to be overlooked, there is a growing percentage of my students who know one of the best kept secrets to patient satisfaction as defined above....speech mapping. I and my students who use the technique know that it is the 'gold standard' in treatment verification as a powerful and useful business tool.

Speech mapping first had an impact on the verification process thanks to the article by Cunningham, et al (2002) describing a reduction in patient visits and other positive benefits of using this technique as a clinical standard. Ross and Smith (2005) and Bonta and Smith (2004) added to the information base by describing the clinical applications of speech mapping. A specific protocol for use of the procedure was outlined.

At the time these articles were written, speech mapping systems offered only monaural measurement options. It was necessary to measure each ear separately and results for both ears could not be displayed on top of the fitting screen. This increased the time and inconvenience of making a complete measurement in a limited amount of time.

At this writing, the AURICAL Visible Speech system is tailor-made for patient counseling, hearing loss and amplification simulation and speech mapping. This system can work in both the full-service, clinical environment as well as retail environments where the dispenser may not have access to surround sound or NOAHlink. The system is ideal for service delivery in the home or residential care facility, where the patient cannot be transported to the clinic or office.



Fig. 1: The AURICAL Visible Speech is easier, faster and more intuitive to use thanks to new, dynamic features.

If Speech Mapping is so Good, What are Clinicians Afraid of?

Sampling hundreds of practicing clinicians who DON'T use speech mapping, their rationale for non-use can be broken down into three primary issues:

1. It takes too much time. This is especially true for clinicians working in busy medical practices, where treatment time is at a premium.
2. Inserting a probe microphone to the tympanic membrane is uncomfortable or painful for the patient.
3. The equipment is expensive, and the cost is not justified.

New speech mapping (AURICAL Visible Speech) equipment and the innovative use of it in the treatment process provides solutions to each of these objections.

1. Since AURICAL Visible Speech (AVS) is truly binaural, with little time needed for calibration and since it is intended for use with NOAHlink and a sound system, the verification process can be accomplished in less than 5 minutes in the majority of cases. The added time is justified since it allows for increased satisfaction, fewer return visits for trouble shooting, first fit accuracy and a significant reduction in returns for credit. The efficiency and impact of AVS can be improved even further with a surround sound system like GN ReSound's RAVE.



Fig. 2: The modern probe tubes are easy to insert and remain in place.

2. Modern probe tubes are easy to insert and remain in place. Placement of the tube in the ear canal can be observed using the OTOCam II and it is now the rare patient who experiences any type of pain or discomfort. It is not necessary to 'bump' the tympanic membrane, only to achieve tube placement beyond the second bend in the ear canal.
3. Reduction in the number of return for credit fittings, sales closure through use of the hearing loss simulation feature of the software, up-selling to higher technology through demonstration of performance in noise and collection of fees for use of AVS when the patient is past their complimentary service time period or presenting with an aid not fit by the clinician leads not only to equipment cost recovery, but profitability. The financial investment in AVS is recovered quickly since it is both easy and effective to use in the treatment process.

AURICAL Visible Speech: Premier Speech Mapping

The 'setup' of the equipment is critical if the clinician wants to maximize the impact of the procedure. I would recommend the use of a flat screen monitor in the examination area, so that the process is readily visible to the patient and family. A surround sound system like the GN ReSound RAVE is also recommended, because of the huge sound library available and because it is easy to demonstrate the features of high end technology, noise reduction capabilities and directionality.

Features of AVS include the following:

- Wireless, Bluetooth® technology.



Fig. 3: Wireless technology is less cumbersome and can make the patient feel more relaxed.

- A light weight, comfortable harness which can be coupled to the also wireless NOAHlink. While this may seem to be a small issue, the physical arrangement of the equipment encourages the clinician to use speech mapping more often since its use is very time efficient.



Fig. 4: The patient wears a lightweight measurement unit which can be conveniently coupled to NOAHlink.

How and When to use AVS in the Clinical Process

Remembering the components of patient satisfaction and other elements that contribute to a successful clinical process, I consider the following to be important applications of AURICAL Visible Speech:

1. Fit amplification correctly the FIRST time by using AVS during all first fitting sessions.
2. Demonstrate the effects of the hearing loss for the family or significant other through the use of the Hearing Loss Simulator. This process leads to improved understanding and support from the family, which is critical to success.
3. Use AVS to involve the patient in the amplification adjustment process. The patient can now "See" and "Hear" the effects of adjustment, leading to more patient confidence in the process and technology.
4. ALWAYS use AVS for evaluation of hearing aids that were delivered to the patient through another source. Use of the procedure leads to patient confidence since the clinician and patient now have an objective and 'real life' tool for making decisions about the appropriateness of the fit that is independent of the often perceived goal of simply selling a new hearing aid.
5. Closing sales is facilitated using the high-tech, real world AVS system, where benefit can be both seen and heard during the demonstration process.
6. Troubleshooting efficiency goes up when AVS is used as part of the process. For example, for those of us who are older (seasoned) audiologists, both internal and external feedback can be visualized when it may not be heard.
7. Documentation of special programs. For example, instead of simply asking the patient to listen to the office phone to determine the audibility of the dial tone and speech, AVS can be used to determine whether or not those signals are audible. Adjustments can then be made in real time, making the fitting 'right' the first time.
8. Staff training is another important application of AVS. By using this technology in a 'demonstration', new products and benefits can be 'seen' and 'heard' by office staff who are so critical in the pre-qualification of new instrument sales and treatment.
9. Evaluation of new products and product features is another important function of AVS. In short, this process is critical to determining what is real and what is 'hype'.

- State-of-the-art Hearing Loss Simulator and Hearing Instrument Simulator, provide an effective and efficient means for involving the family or significant other in the treatment process. These features are displayed rapidly and the software is intuitive. This provides an efficient and effective presentation useful in closing sales, and involving family ...a technique that can 'make or break' the treatment process.

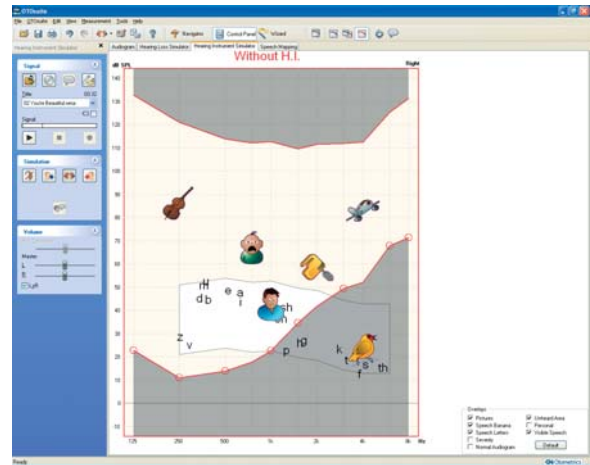


Fig. 5: The simulators allow patients and relatives to better understand the hearing loss.

- True binaural performance, with easy application and no need for individual (and time consuming) separate calibration of microphones.
- Time efficient setup allowing the clinician to spend more time in counseling and less time in equipment manipulation.

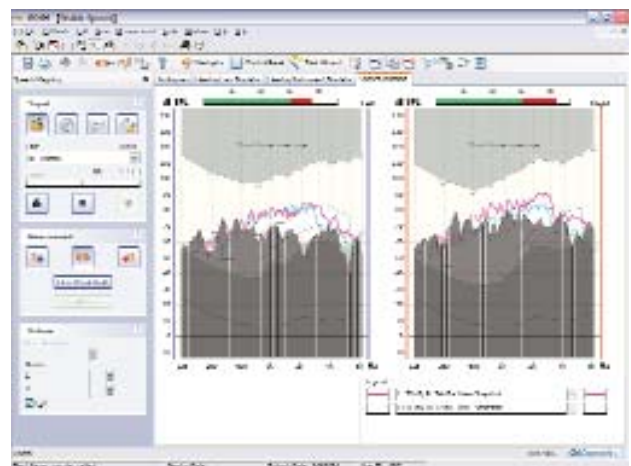


Fig. 6: Speech Mapping module with binaural performance and a snapshot feature for capturing the curves.

- Intuitive, easy-to-use software. I trained an audiology assistant to perform the procedure with comfort and efficiency in less than an hour.
- Standard sound files with a wide range of real life sounds to generate and measure.
- The ability to record a significant other's voice (looped) or other sounds that are critical to the success of the treatment.
- The ability to make changes in the hearing instrument programming software while AVS is active in the "on-top" mode. We have learned from many patient fittings that what is 'supposed' to be happening to programming is not always 'happening'. AVS provides an objective tool for measuring and visualizing what is actually occurring at the tympanic membrane, increasing the effectiveness of adjustments and involving the patient directly in the process.

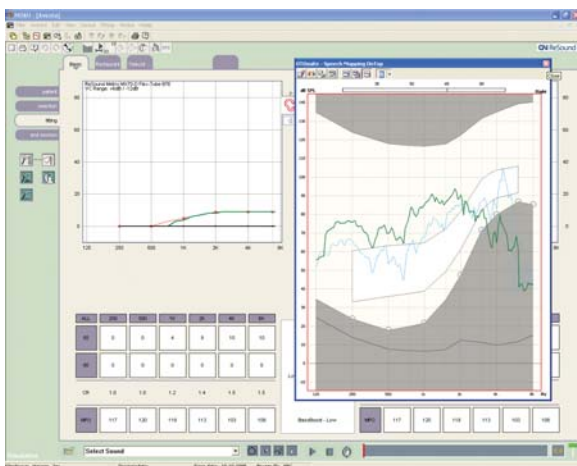


Fig. 7: The on-top mode allows clinicians to make real-time fitting adjustments while viewing the speech signals.

A Critical Side Note on using this Equipment and Process

Clinicians fall into patterns of behavior with patients and their families that may restrict the use of new technology. Most of us are conditioned to having a sound room or table between us and the patient, preventing close contact and efficient use of time.

That said, consider the following:

1. Physical setup is important. It must be easy for the clinician to touch the ears, adjust probe microphones, connect the hearing aid and see that both the NOAHlink and AVS are, in fact, turned on. Too much movement between patient and computer and the process quickly becomes tiring and inefficient.

2. Use a wall mounted, flat screen TV for projecting results and involving everyone in the room.
3. Make sure that the entire treatment/adjustment process can take place in one space with maximum efficiency. Height-adjustable chairs on rollers are probably the most efficient way to move the patient and for the clinician to move to the patient.

Too many new systems (REM, sound systems, etc.) sit on clinician's shelves because they did not fit easily into the clinical process or did not allow the clinician to move out of their comfort zone.

This equipment and process is too critical to allow that to happen, considering its impact on sales, patient confidence, return for credits and the financial health of the business.

The Financial or Business Impact of AURICAL Visible Speech

I always try to buy equipment that has a significant impact on the financial health of the business. As a manager, I am interested in not only covering my costs, but creating new profit centers that have a positive and critical affect on patient care.

The financial and quality of care issues involved with speech mapping have been well documented by those of us who have used it. With the introduction of AURICAL Visible Speech, representing a significant improvement in the ease of clinical use and the impact on the patient, the financial impact of this process can be readily apparent.

That impact includes the following:

- Fewer unpaid office visits for adjustments to the amplification system.
- Significant reduction in returns for credit when the patient is pre-qualified during the intake and fitting process.
- An increase in sales closures, where multi-sensory demonstration of benefit to the patient and family is a significant issue.
- An increase in sale closures to patients who appear with inadequate hearing instruments NOT provided by the clinician.
- An increase in sales closures where a clear demonstration of improvement in technology can be experienced by the patient through a demonstration process using AVS.

- Generation of charges for the procedure after services associated with the hearing aid sale are no longer included. The vast majority of patients readily see the value of the procedure, and this process should eventually replace the Hearing Aid Evaluation that many clinicians don't do, or complete using sound field or traditional REM.
- The AVS is a very effective marketing tool, where patients with existing hearing aids are exposed to activities like consumer seminars and/or open houses. Both the hearing loss and effects of amplification can be demonstrated through the Hearing Loss Simulator and Hearing Instrument Simulator.

In Conclusion

This description of one of the best kept secrets to patient satisfaction should make a significant, valuable and measurable addition to the clinical process.

The AURICAL Visible Speech system is a hardware and software system that makes it easy to incorporate speech mapping and simulation into the every day clinical process.

It is the first and only system on the market that fulfills the requirements for speed, clinical efficiency, involvement of the family or significant other in the treatment process, positive financial impact and first fit accuracy.

References:

Ross, T. and Smith, K., "How to Use Live Speech Mapping as Part of a Hearing Instrument Fitting and Verification Protocol", Tech Topic, The Hearing Review, June 2005, 40-46.

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Cunningham, D., Lao-Davila, R., Eisenmenger, B. and Lazich, R., "Study Finds Use of Live Speech Mapping Reduces Follow-up Visits and Saves Money", The Hearing Journal, Feb 2002, Vol 55, No. 2, 43-46.

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Based in Copenhagen, Denmark, we maintain marketing and development centers in both the United States and Germany. GN Otometrics is part of the GN Resound Group.

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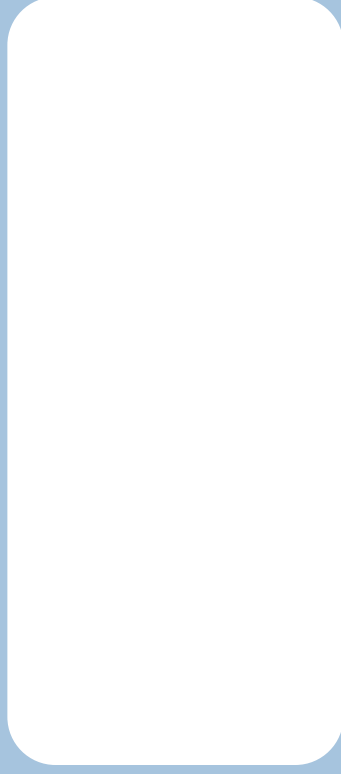
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