Simple & Effective Therapy

Common Ground: Start at the Beginning

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Why This Beginning?

Although this is a publication devoted to therapy for APD, I think that we should start with the basics and build up. If we get too far along and did not clarify the earlier steps we will suffer the conse-quences. So this issue will focus on the Buffalo Model tests and categories so we are all on the same page.

The Buffalo Battery

Let's start with the 3-test Buffalo Battery. Of course, prior to these tests we must determine the person's hearing sensitiv-ity (puretone AC and if needed BC), tympanometry (to determine if the middle ears are functioning normally) and acoustic reflexes (to see what is happening across the auditory system from the outer ear to the brainstem).

By the way, I send out a case history form and questionnaire to be filled out in advance. I also include a form that will help me to anticipate any behavior or other problems that might interfere with the evaluation. Armed with all of this I determine if the evaluation will be pretty much standard or if modifications should be made.

I use the Central Test Battery CD for the 3 tests and the PS-Picture test for the very young children. The first APD tests that I do are speech in quiet and speech in noise. Although the lists have just 25 words per ear, that gives me a good idea if noise is a special problem for the person. If you feel that you need more words to get a stable score you can give the next track with another 50 words. The speech in noise test tells mostly about the Tolerance-Fading Memory (TFM) category but also you can see Decoding (DEC) errors on the speech in quiet. DEC can also increase the errors on the noise portion. We look at right and left ear scores but if there is a significant difference between them based on the interaural difference norms there is a very good chance that the binaural advantage is reduced as well.

The next test is the SSW, a dichotic measure and much more. This test has a complex presentation that provides many challenges to the listener with APD (but it's easy for the normal listener who is generally unaware that the words are competing; whereas those with APD are often painfully aware of the compet-ition). Together these minor

challenges often confound those with APD. The SSW has 23 signs of APD and most provide insight into what categories are affected. Each of the 4 categories can be identified with this test.

The third test is Phonemic Synthesis (PS). It is a sound blending procedure and is an excellent test of DEC. Because those who have had speech therapy, intensive phonics training etc. have a major advantage over the normative population these individuals might not look so bad on the test or even pass it. So we have a Qualitative score that works very well in most cases that have this advantage. The Qual-itative score takes off points for signs of compensation on items that were considered correct. In addition to DEC signs the PS test also provides signs of Tolerance-Fading Memory (TFM) and Organization (ORG).

Together this is an excellent battery that is highly successful in identifying APD and categorizing what issues the person is dealing with. When in doubt indicate your concern because if it is significant it may not get better without help.

There are 37 indicators of APD on this brief battery. We can expect by chance alone 1.15 positive SSW signs (of course in APD cases there are many more), .55 on PS and .15 on speech in noise. So if you see only 2 positive factors on the test battery this is very likely normal performance. Those of you who use this battery know that we generally get 10 or more positive signs, so these are not chance findings.

Categorizing APD

As you may know there are four cate-gories in the Buffalo Model. They are DEC, TFM, ORG and Integration (INT). They represent important parts of the central auditory nervous system (CANS) as well as important auditory functions for communication, education and more. They are shown in tabular form below.

Cat.   Description --- Problems
DEC Quickly and accurately understand-ing speech
            ----
        phonics, reading word accuracy, articulation, delays
TFM Understanding speech in noise; short-term memory & others
            ----
        Understanding in noise, recent memory, reading comprehension
ORG Maintaining proper sequence of auditory information
            ----
        sequencing, organization
 INT Bringing together information: importantly auditory & visual inform-ation (e.g., for reading & spelling)

        Severe reading/spelling, dyslexia
DEC is likely the most common category of those most audiologists see because it is associated with such important academic issues as well as speech and language. DEC

is also the most basic AP function because everything that we hear must be decoded first in order to learn or act on it.

TFM is the next most likely category and in some populations it is the most likely (e.g., ADHD/ADD). TFM is associated with important functions. Of course, short-term memory is vital in education and communication. In addition, TFM is associated with inattention and anxiety. The common denominator of the TFM components are their relationship to anterior temporal and/or frontal lobe functions.

ORG is not as powerful an issue for education and communication. But the major challenge that it poses is that it is labor intensive. Thus, I believe it takes away important brain potential in order to monitor what comes in and goes out to be sure that they are understood and expressed in the correct order.

INT it is the least likely category, in perhaps 18-20% of APD cases. But it is the most severe category. It is asso-ciated with the most profound reading and spelling issues (they are often diag-nosed with dyslexia) and it is the most challenging APD problem to remediate.

The mean number of categories for the children in my practice is 2.2. Almost all have had both DEC and TFM. This is not a good combination because delays are a great compensation for DEC; but if you have also TFM you may not have the luxury of the needed time.

<p style="text-align:center">Some General Principles</p>

The purpose of the Buffalo Model therapies is to improve basic auditory functions so that reading and other auditory issues can be improved. This auditory training is much like physical therapy. In videos we see the therapist walking the patient painfully slowly e.g., after a car accident or stroke. A week later the person has gradually improved so he or she is able to walk more quickly and smoothly and the patient is not so bent over. One month after therapy begins the person is walking almost normally and unaided.

Working from easy to a little bit harder we are able to help the patient develop important auditory skills that they never had or that they lost for various reasons.
We are careful to vary the tasks during a session and to avoid too much work in one session. For further discussion of all of these topics see my therapy book.

<p style="text-align:center">How Do Categories Relate to Therapy?</p>

One or more procedures are recom-mended for each category of APD.   They are, very briefly, listed below, but will be discussed in greater detail in later issues of TSE.

 Cat.   Buffalo Model Therapies
 DEC 1. Phonemic Training Program (PTP) teach the sounds of English individually
         2. Phonemic Synthesis (PS) a sound blending type program

TFM 1. Words in Noise Training (WINT) a speech in noise program
2. Short-Term Auditory Memory (STAM) short-term memory training for digits, words & working memory
ORG Follows the same procedures as STAM but focusing on sequencing
INT Dichotic Offset Measure (DOT) gradually increasing overlap of right and left competing words

Website
Katie Teague is the Website Master for Simple and Effective. Please check it out. If you have not been invited or have lost your invitation please get in touch with Katie at
katie.teague@gmail.com.
We have had interesting questions and more are on their way.

Odds and Ends
Audiology Online
Some of you may have noticed that I have given the first two installments of a three-part series about the SSW test on Audiology Online.

I will present the last one this Friday, August 14, 2009. They are 2 hours each and previous weeks' sessions are archived.

The first topic was *Scoring SSW Items: Plugging in the Best Information*.

The second program was *Scoring the SSW Test: Using All of the Elements*.

The final program is *Diagnosing APD and Checking it Twice*. This program covers the other Buffalo Battery tests and shows how to combine all 3 and then to check the results with the Buffalo Model Questionnaire (BMQ).

If any of you would like a copy of the BMQ please email me and I'll be happy to send it.

EAA Conference in July
It was quite a conference for APD as it began with Frank Musiek, then Teri Bellis and then I presented twice and finally Bob Keith.

It is looking like training for APD is catching on. About one-third of those attending purchased my therapy book in advance! And others bought the book at the conference. I couldn't believe that so many are doing therapy. It looks like most of them are doing therapy or are planning to get into it soon. Others purchased it so they could inform others how to do the therapy.