6. TERMS USED IN MANUAL

Adjusted SSW (A-SSW) Scores – In the Original Analysis, when C-SSW scores indicate a moderate or severe TEC, the A-SSW scores are calculated to be sure it is an Auditory Reception problem. A-SSW uses the Least Biased Errors (LBE) of the significant Ear and/or Order Effects. It shows the person's scores in their best light, by using the half-test with the fewest errors for TEC.

Are You Ready? (AYR) - This question introduces each item. When the person repeats it, this shows difficulty in saying one thing they hear while suppressing the other. It involves frontal function, at least, executive function.

Auditory Processing Disorder (APD) (aka, CAPD) - What we do with what we hear.

Back-to-Back (BTB) – Giving the same word twice in a row in their response. This is a, new Qualifier that was first noted in adults with intellectual deficits, and then noted sometimes in those with, perhaps, severe DEC issues.

Buffalo Model Categories - Four categories of APD. They were based on decades of work, with patients who were seen for neurological site-of-lesion. Those error patterns primarily on the SSW the test, were then found in those with APD. See Decoding, Tolerance-Fading Memory, Integration and Organization.

Buffalo Model Questionnaire (BMQ) - The original BMQ by Katz, ~2003, was later revised by Katz and Zalewski (2011). (see **Buffalo Model Questionnaire-Revised (BMQ-R))**

Buffalo Model Questionnaire-Revised (BMQ-R) - Katz and Zalewski (2011, 2013) revised earlier version to be more user friendly for both parents and professionals.

Buffalo Model tests – Three basic tests are the SSW, Phonemic Synthesis and Speech-in-Noise. Some others are: Dichotic Offset Measure (DOM), Localization Clock, Phonemic Recognition Test (PRT), and even Competing Environmental Sounds (CES).

Categories – see Buffalo Model Categories, as well as, Decoding (DEC), Tolerance-Fading Memory (TFM), Integration (INT) and Organization (ORG).

Central Auditory Processing Disorder (CAPD) (aka, APD) – What we do with what we hear.

Competing word - On the SSW: right competing (RC) and left competing (LC) words.

Corrected SSW (C-SSW) Score – Used in the Traditional (and Original) Analysis. The C-SSW is the percent of errors that are corrected for WRS percent of error.

Decoding (DEC) – Inability to quickly and accurately process speech that is heard. DEC is a very basic B-M category.

Delay (X) - Response took somewhat longer than expected following the end of the item.

Dichotic - Different words presented to opposite ears at approximately the same time.

Ear Effect (EE) – Comparison of errors for Right Ear First (REF) minus Left Ear First (LEF) items.

Ear (Effect) – High/Low, more errors REF (DEC sign), Low/High, more errors LEF (DEC sign).

Extreme Delay (XX) – Roughly twice as long, or longer, than a delayed response. Originally, I thought it was just a sign of INT. Then we saw people struggling to figure out what was said, rather than waiting to be able to repeat the words. So, XX is likely an INT sign, but in a small number of cases, it can be a DEC sign, if the person is working on the response, rather than waiting to say it (see Integration Delay).

Instruction (I-??) – When a person is reminded to avoid a certain response pattern (e.g., I-Q, I-AYR).

Integration (INT) – A Buffalo-Model Category, that is associated with getting information from one place to another. Especially, combining information from one hemisphere with the other. Significant INT requires both strong signs (i.e., Type-A and SIR), or one strong sign and at least one support sign (i.e., Type-A or SIR plus at least IX/XX or 2B3.

Integration Delay (IX) – An extreme delay when the person has not affect or appears to be waiting to answer, rather than trying to puzzle out the response. Often spoken matter-of-factly or in monotone. This is not as common a Qualifier as XX, but the category is very clear. IX has been added as a new Qualifier, because it is surely not a DEC sign (see Extreme Delay).

Intrusive Word (IW) - A new Qualifier that was noted in intellectually challenged adults. It can also be seen, infrequently, in those with APD. It is adding a word that appears to be automatic speech (e.g., 'upstairs **going** downtown').

Left-Ear-First (LEF) – Items that begin in the left ear and end in the right ear.

Least Biased Errors (LBE) – Used in the Original Analysis, when TEC is MO/S suggesting an Auditory Reception (AR) disorder. If, Ear and/or Order Effect is significant, we use an Adjusted SSW TEC. We take the half-test with the fewest errors (e.g., Ear 6/12, Order 13/5, so 5 is the LBE). When we check its 4 Conditions we see 0 1 3 1. Multiply by 5 to get percent of error (for half a test) and subtract WRSs percent error. These A-SSW scores are analyzed by TEC to see if it is still likely to be AR.

Multidimensional Scoring – Most central tests have one or 2 scores (e.g., one for each ear). The SSW has 25 scores (e.g., 4 Conditions and Total score, Ear/Order Effects, Reversals, Type-A and SIR as well as 12 Qualifiers).

NOE – See Number of Errors Analysis.

Non-Competing (NC) word - On the SSW items, right non-competing (RNC) and left non-competing (LNC) words are not overlapped with words in the other ear.

Number Box – Box on the SSW form that has the item number and where we put various Qualifiers.

Number of Errors Analysis (NOE) – SSW analysis used to evaluate individuals for CAPD who have essentially normal hearing. (The two other analyses are Original and Traditional).

Order Effect (OE) – Comparison of errors on the first spondees vs. second spondees.

Order (Effect) – High/Low, more errors on first spondees (TFM sign), Low/High, more errors on second spondees (DEC sign)

Original Analysis (OA) – OA is used for site-of-lesion assessments involving central (or even peripheral) regions. It uses the TEC analysis based on the C-SSW and possibly A-SSW scores.

Organization (ORG) – A B-M category with difficulty organizing and sequencing auditory information.

Perseveration (P) - Repeating a word the person already gave (correctly or not) in a previous item.

Phonemic Error Analysis (PEA) – This is an analysis of the phonemic errors (substitutions, omissions and additions) on the 3 B-M tests that can be analyzed for organizing the Phonemic Training Program (PTP).

Phonemic Training Program (PTP) – This therapy program is for those with Decoding (DEC) challenges. It teaches individual speech-sounds using an auditory-visual+ system. It also has variations when the person hits bumps in the road.

Qualifiers - 12 notable test behaviors that may be observed (e.g., quick responses, smushes, delays).

Quartile Analysis - To determine if a person shows evidence of learning or fatigue/inattention. If, there is a difference of $\geq$4 errors between the first quartile (items 1-10) and the third quartile (items 21-30). Fewer errors are a sign of learning and more errors a sign of fatigue or inattention.

Quick (Q) - Rapid response to item provided before typical/expected (memory or impulsive).

Quiet Rehearsal (QR) - Whispering or mouthing the perceived word before giving response (DEC).

Right-Ear-First (REF) – The SSW test item started in the right ear.

Response Bias (RB) - Response patterns originally noted in patients with CNS lesions and associated with certain cortical areas (i.e., Ear/ Order Effects, Reversals and later on Type-A). SIR was recently added. Important indicators for understanding CAP as well.

Reversal (REV) - Words of item presented out-of-sequence and no more than one error. An omission does not produce a reversal.

SIR – Standard Integration Ratio – This is the newest INT sign. It is a comparison of the RC and LC errors. If the LC errors are $\geq$1 SD greater than the RC errors, SIR is significant. This is a powerful INT sign along with Type-A.

Smush (Sm) – When a person 'smushes' together the 2 competing words in some way. For example, for 'bed spread mush room' the person says, 'bed smush room'. (A Canadian audiologist called it a 'smush'.

We immediately stopped calling it a Blending Error and called it a Smush). Sometimes one of the 2 competing words is correct (e.g., 'bed smush mush room'), so there is only one error.

Smush-2 (Sm-2) – This 'smush' combines the 2 words of the same spondee (e.g., corn bread = cread, or sun day = stay). This would suggest a severe DEC problem. If one cannot separate 2 separate words to the same ear, this seems like DEC, but in the SSW the 2 words also have a significant pause between the 2 monosyllables.

SSW-Max – The sensation level (SL) range at which you can expect a maximum score on the SSW. 25-50 dB is considered SSW-Max. Higher levels were not tested. Surely, the upper limit would be at least 60 dB. Higher SLs are rarely needed.

Standard Integration Ratio (SIR) – See SIR.

TEC – This is for the Original Analysis (site-of-lesion testing) results of the SSW. It is based on an assessment of the 4 **C**onditions to determine the largest positive score, and if there is a significant negative score. If there is a significant negative score, this automatically becomes one-half of the final TEC finding. The positive scores are N(ormal), Mi(ld), Mo(derate) or S(evere). This abbreviation goes into the C(ondition)-box on page one of the SSW form (normal scores can be positive or negative). The abbreviation for the average of the 2 right-ear Conditions is assessed in the same way (N, Mi etc,), which goes into the E(ar) box. Then the same procedure for the average of the 2 ear-scores goes into the T(otal) box. We then take the median of the T, E and C measures. E.g., C=S, E=Mo T=Mo would be TEC= Mo. However, if there are 2 Os and one positive score, then use the one positive score.

If there was a significantly over-corrected score for either Ear, Condition or Total score then the Total TEC will show that (normal results are never included in the Total TEC unless all 3 are N). If there is an over corrected score and positive results the Total CET will be O-N, O-Mi etc.

Tolerance-Fading Memory (TFM) – A Buffalo-Model category that involves speech-in-noise and short-term auditory memory. It is often accompanied by problems with anxiety and/or inattention.

Tongue Twister (TTW) – A Qualifier that shows the person did not produce a smooth response. This is not a sign of articulation difficulty. Examples of TTW are, 'u-up stairs' or 'she shore' when the person was obviously trying to say 'sea shore'.

Traditional Analysis – This is the SSW APD analysis for those with hearing loss in one or both ears.

Two-By-Three (2B3) – A new supportive sign for the Integration category. It indicates that at least 2 of 9 important SSW signs (Total NOE and 4 Conditions, PS Quant/Qualitative and SN RE/LE Noise) were significant by 3 or more SDs. It taps into the severity of the INT category. It requires at least one INT strong sign (Type-A or SIR) plus one support sign to identify the INT category. Of course, both strong signs would indicate significance as well.

Type-A – The original Integration sign on the SSW and Buffalo Model. Type-A is one of the 2 strong signs for the INT category (along with SIR).

Yes (Y) – When a person responds to the introductory phrase, “Are you ready?” with ‘Yes’, or some other affirmative statement. If the person continues to attend to that phrase, even saying ‘No”, it might still be scored as ‘Yes’. Also see, “Are you ready?” (After a dozen items, one person responded, ‘Would it matter?’.)