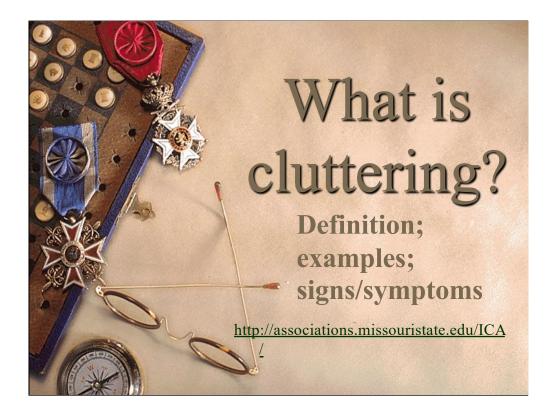
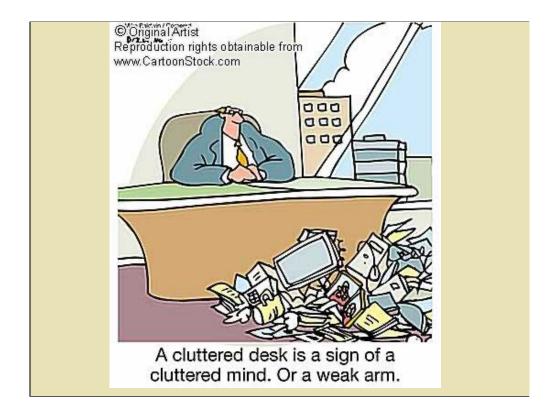


Hello, welcome to the International Stuttering Awareness Day online conference. I'm Lisa LaSalle and my talk is on therapy for those who clutter. I'm privileged to be able to add some audio to this particular presentation, simply because to listen to some of the samples of cluttering makes some of the clinical work we do with people who clutter that much clearer. That is especially true for differential diagnosis and helping people to slow rate, and listening to what samples sound like at baseline levels.



In terms of what is cluttering, we will go through a few definitions, and examples...



But first let's note what cluttering is not :~) It's not a cluttered desk. We're talking about fluency disorders of course and so will move right into speech.



Lay definition of cluttering

"Cluttering is a speech problem in which a person's speech is either too fast, too jerky, or both. Most people who clutter seem to run their words or sentences together, and they often have many more fillers, hesitations, revisions, or other breaks in their speech than normal speakers do. Their speech sounds 'cluttered' as though they do not have a clear idea of what they want to say, and they are often not aware that they have a speech problem."

St. Louis, Reichel, Scaler-Scott, Van Borsel, Ward, Leahy, Sonsterud, Adams, van Zaalen, Ademola & Arulogon (2009)

We'll begin with a lay definition of cluttering. In August of 2009 there was a seminar held at the sixth world Congress of the International Fluency Association, and at that time Ken St. Louis and colleagues presented a very helpful lay definition of cluttering when they presented about the global perspectives on cluttering. The questionnaire that they used to do this particular study included the lay definition that you see here, for "cluttering" and another one for "stuttering," definitions that are very useful for us in terms of being clear with the public and the clients and family members we work with. [read slide]



Diagnostic definition of cluttering "Cluttering is a fluency disorder wherein segments of conversation in the speaker's native language typically are perceived as too fast overall, too irregular, or both. The segments of rapid and/or irregular speech rate must further be accompanied by one or more of the following: (a) excessive "normal" disfluencies; (b) excessive collapsing or deletion of syllables; and/or (c) abnormal pauses, syllable stress, or speech rhythm." (St. Louis & Schulte, in press)

Whereas the diagnostic definition of cluttering is what Ken St. Louis has referred to as the "lowest common denominator of cluttering," because it's pulling from the consensus of criteria thus far for what needs to be observed in order to diagnose cluttering. [read slide] A couple important things to point out about this definition is the use of the term "native language." Because this is an international online conference, it is important to recognize that for multilingual speakers it is difficult, if not inappropriate, to diagnose cluttering when a second or non-native language is not yet well learned. And the second part of this definition that is important beyond the native language is the idea of "normal disfluencies." (part 'a' of this definition). Normal disfluencies are so-called excessive when they exceed about 8 to 10 per hundred words, simply because within word disfluencies exceeding two per hundred words could be considered stuttering. Ten or more overall disfluency types tends to make a person sound highly normally disfluent. This is what we often hear with cluttering.



Lay definition of stuttering

Stuttering is a speech problem in which a speaker typically repeats or prolongs (draws out) parts of words, or gets stuck or blocked on words. Sometimes stuttering consists of strategies that try to reduce or avoid repeating, prolonging, or blocking. Stuttering is often associated with psychological stress or unpleasant feelings. Finally, the person who stutters often experiences a loss of voluntary control in saying certain words (St. Louis et al., 2009)."

Then the lay definition of stuttering, just very briefly, is useful for differential diagnosis purposes, or for diagnosing the concomitant disorder of "stutteringcluttering." [read slide]

Again I find this useful to include simple language when we describe the problem to our clients.

St. Louis et al. found, when asking respondents to identify if they knew anyone who stutters or clutters, given these lay definitions, that cluttering may be more prevalent than the literature suggests (e.g., St. Louis et al., 2003). So with combined categories of cluttering and stuttering-cluttering almost as prevalent as stuttering. So likely this underestimation of the prevalence of stuttering over the years is in line with the experience many of us have had, that relatively few clients who clutter will cross our clinic doorstep. That is, people who clutter exist, maybe as many as 1 per 100 or 1 per 200, but they often don't pursue help for their speech. So it's difficult to get a true estimate of the prevalence of cluttering.



Peer-reviewed research on cluttering

- Clinical recommendations (Daly, 1986; Georgieva, 2000; St. Louis, Hinzman & Hull, 1985; St. Louis & Hinzman, 1986; St. Louis & Myers, 2005; St. Louis et al., 1996; 1997; 2003; 2004; 2007; Vinther, 2000).
- Reviews and summaries (Bakker, 1996; Daly, 1993; Myers, 1996; Theys, van Wieringen & De Nil, 2008; Van Borsel & Tetnowski, 2007; Yairi, 2007)
- A *Journal of Fluency Disorders* issue devoted to cluttering in 1996
- The <u>International Cluttering Association's</u> research/academic committee (2008-2009)

There has been considerable peer-reviewed research on cluttering in the last couple decades. This has been true in terms of clinical recommendations such as those by David Daly, D. Georgieva, St. Louis et al., etc. There have been reviews and summaries out there as well [read slide] There has been a DVD produced by Florence Myers and Ken St. Louis that is just excellent in terms of providing a lot of examples of real people who clutter, and ideas on what to do about assessment and treatment. So we've come a long way. Note the resources available from the International Cluttering Association, where Kathy Scott-Scaler is the coordinator of ICA, and the ICA website has been very helpful to our clinical work, as well.

Note:

ICA Research and Academic Committee: <u>a mission statement and preliminary plans for future endeavors</u>

The International Cluttering Association's research/academic committee comprises of clinicians from the USA, the Russian Federation and the UK, all of whom have an extensive background in the investigation of cluttering.

The basic objectives of this branch of the site are:

1) to disseminate scientific information about all aspects of research related to cluttering;

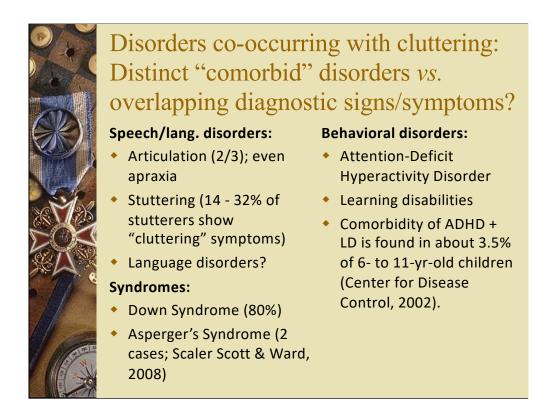
2) to foster research partnerships between investigators, clinicians and consumers in the area of cluttering;

3) to develop guidelines for teaching students about cluttering at a tertiary level



So the best way to summarize cluttering at this point is to have you listen to an example. Peter "K" (His last name is hard to pronounce) as a person who clutters, and he has provided an excellent set of audio and video clips on the ICA website. We will now listen to a sample of him, describing his speech disorder known as cluttering. [play Peter K clip = classic cluttering] So you just heard an example of cluttered speech from Peter K. And he's from the UK so he has a British dialect. And you can really hear the telescoping or weak syllable deletion of many words such as the word 'concerted.' you also get a sense of intelligibility declining due to the festinating rate and the dropping out of the weak syllables. Not very many so-called "mazing" examples in this sample, however. He is really just telling you very basic information about the cluttering (and so collecting a different sample / topic / situation might allow you to hear more mazing, as I'll discuss later).

So for now, [read remainder of slide, beginning with "tachyphemia"]



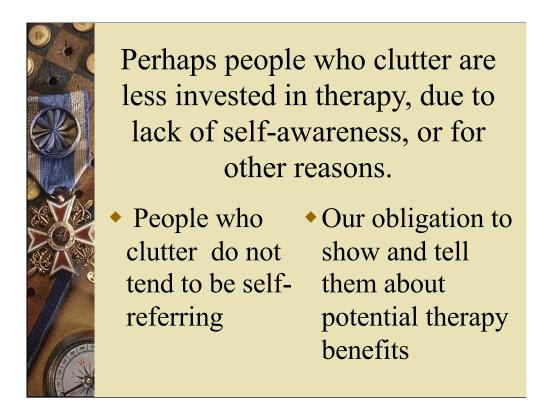
Read slide – Source = p. 304 of St. Louis et al. 2007

Language disorders is a big question mark, because there're so many areas of language to look into, everything from lexical retrieval to syntactic and pragmatic disorders.

If you think back to good ol' Van Riper's so-called "Track II" (whereby 32% of people who stutter have a concomitant disorder, esp. articulation) it is not really new to think about this comorbidity issue.



[Read slide] NOTE: van Zaalen (2009) makes the point that when you excise the phrase repetitions, interjections, revisions, etc, a person who clutters often can show good sentence structure, and so these would be clients who clutter who DO NOT have a language disorder. It is helpful to do close transcripts of samples of speech of people who clutter for research purposes but also for clinical purposes as well. This helps us understand whether there is a language disorder or not.



[read slide] Charley Adams (2009) stated that "Clutterers are not often self-referred. I've had others refer them to me." I've had the same experience. The implication is that these are individuals who may not have ever considered therapy, let alone sought it out.

And yet, if they attend an evaluation, therapy might be a recommendation that we present to them. Here's where I think at the time of the evaluation we need to communicate a therapy plan with a solid rationale that underlies the client's specific diagnostic profile. For example, "you don't pause at phrase boundaries and that makes it harder for people to understanding the 'running jumbled speech,' so I would train you and you would practice how and where to pause, first in utterances in structured activities and then in real conversations varying people and speaking situations." I just think I need to do a better "sales job," so to speak, of the next client who clutters that I evaluate, because many of them are not interested in pursuing therapy, but they could often stand to benefit from therapy. I also think it is our obligation to honestly lay out the "work" that needs to be done to reach this goal.

How do we motivate the presumably unmotivated client who clutters? Does he/she have to really want better speech in order for the therapy process to be effective? That's debatable, of course. (Any of us parents of school-age kids who are supposed to be practicing a musical instrument or a sport 5-7 times a week? The passion for playing comes with realizing that one is finally playing in a new and improved manner, an experience which only comes with practice, so it's a cycle of practice-makes perfect and then the more the practiced musician or athlete enjoys playing). This analogy might help us to understand people who clutter. They don't enjoys being asked to repeat, they know that they haven't practiced good fluent intelligible speech, and yet they need to be told that if they did so (i.e., practice good fluent intelligible speaking), they would enjoy speaking more.

Suffice it to say that it would be worthwhile to underscore the areas of the problem that probably exist but may not have been adequately expressed. So you might ask, "About how often do people ask you to repeat yourself – 'Run that by me again' type requests -- across a typical day? ... Is that a problem for you? ... What are your job / career / educational aspirations, etc? Do you think your speech 'problems' are throwing in any roadblocks along those paths?" etc.

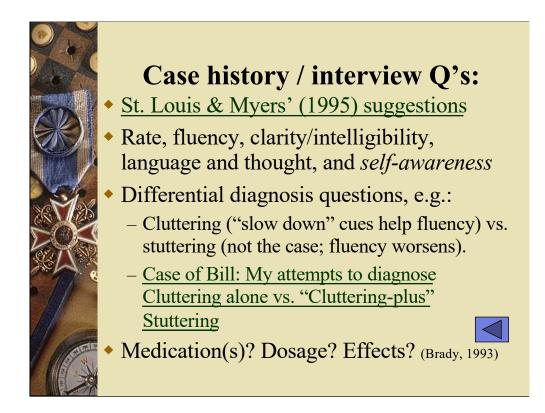
If we are clear about the nature of the communication problem or potential problems, verified by the client, and we are clear about our early individualized Tx plan, perhaps we work with clients who clutter for a short time (say 10-12 sessions) and then assign him/her to do a lot of his/her own homework when the motivation is naturally there. For example, after ten sessions with you the client knows how to digitally record themselves, wants to interview for a new job, and practices the previously learned skills on his/her own, perhaps with consultation as in booster sessions. That is a model that has worked well, in my experience working with a few people who clutter.



Assessment of cluttering and co-occurring disorders

- <u>Case history/interview questions</u>
- <u>Criterion-referenced measures</u> (many of them for cluttering assessment)
- Standardized measures (more for the concomitant disorders, inc. DDK)

[read slide]



[read slide] Esp. "self-awareness," the client's awareness of whether the listeners are getting it or not, is also important. One differential diagnosis question that is very important is to ask, "If someone tells you to slow down, does that tend to help you to be more fluent, or does that tend to make the problem worse?" If the person answers "Yeah, when someone asks me to slow down, I often will try to do that, and it generally helps my fluency," that is often the response of a more mature client who clutters. Versus, most of the time for people who stutter, being told to slow down will worsen the problem. In this second case, a lot of attention is being brought to the nature of their speech, and for most individuals who stutter their speech fluency will worsen with the "slow down" instruction. You can listen now to my attempts to diagnose cluttering alone versus cluttering plus stuttering in client, Bill. We'll listen to that clip now. [play clip] [Note: Bill responds to my clarification Q that the word "just gets stuck. I guess the answer is it's just not coming out." Seconds? Split seconds of getting stuck ? "Occasionally it's longer" "But I llearned, I just stop." "And I just s-start again." "Yeah, and it always fixes it." "Even if I start getting stuck, I just stop talking." Stuttering in addition to the cluttering? (The cluttering is a given) "I think sometimes – I think it's sort of a blurry line between the stuttering and the cluttering. And people always tell me, 'You're stuttering.' So it's just one of those things where I think I'm stuttering because people tell me. And people who don't know what I'm talking about tell me that. Just because stuttering is so common. Or mmmore

common than cluttering." I verify this. (?) When people tell you that, what happens to your speech after they tell you that? "Oh it slows way down." So it gets better? He verifies this. So I'm able to inform him that that's "a key feature of cluttering. In other words, when others draw your attention to the problem, it often helps you to be a more fluent slower or clearer speaker. So while we hear features of stuttering in Bill's speech and he tells us that he "gets stuck" – has the involuntary experiences, he also may have more cluttering symptomatology than stuttering. But we have to diagnose him with both disorders, if you return to the (lay) definition of stuttering. [the remainder of the clip is a demo of the use of tape-playback with a client like Bill – "lots of-lots of" versus "a-a-and at"]

I should mention that Bill was on a medication for ADHD at the time we evaluated him when he was a college student. He had been diagnosed with that and was on Ritalin. We always ask questions about the medication, the dosage, the effects on speech rate and fluency, etc. It's of course important to pay attention to the pharmacological effects on speech that any given medication might have. Again in this clip, cluttering and stuttering appeared to both be a problem for Bill. So we ended up diagnosing him with both stuttering and cluttering.

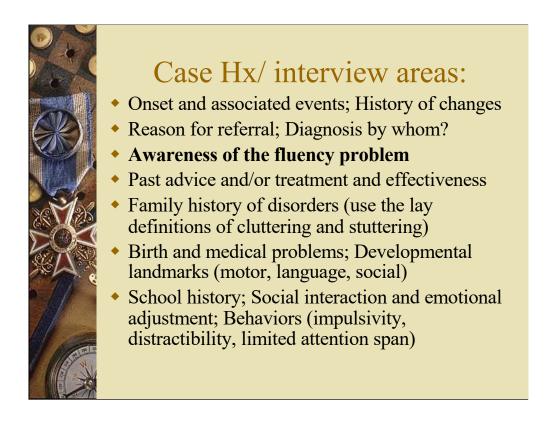


Case of Bill:

A 22-year old who graduated from the University of Wisconsin-Eau Claire and currently works as a photographer. He was treated our UWEC clinic as a school-aged client for an articulation disorder. In his sophomore year at UWEC, Bill was diagnosed with Attention Deficit Disorder, and prescribed 40 mg of Ritalin daily. He no longer takes this medication, stating that because he is no longer in school, he feels he does not need it. Bill was referred twice to the UWEC clinic by friends who were speech-language pathology graduate students.

Client B (22-yr-old) indicates that when his friends tell him to "slow down," this helps him to increase his fluency, at least for a little while. This is a classic symptom of cluttering.

His rate averaged 410 spm, above average range, which is 162-230 spm (Peters & Guitar, 1991).



[read slide] Evan as therapy is progressing, because you don't always have this info when you begin Tx...

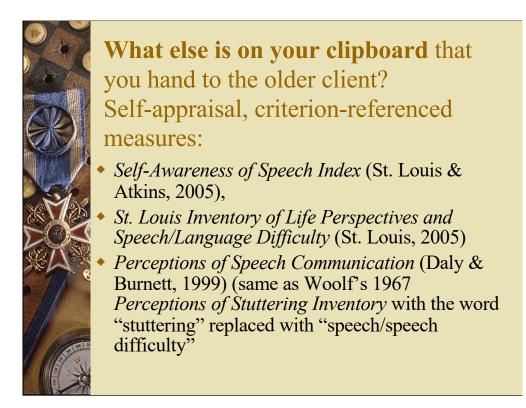
Steen et al. (2009) reported that the order of heritability is speech disorders (specific language impairment), then stuttering, and then cluttering. They suggested that stronger effects of the environment may be present in cluttering as opposed to stuttering, suggesting that we could do more prevention of the progression of cluttering than we currently do. It brings up the question of how early cluttering can be diagnosed?



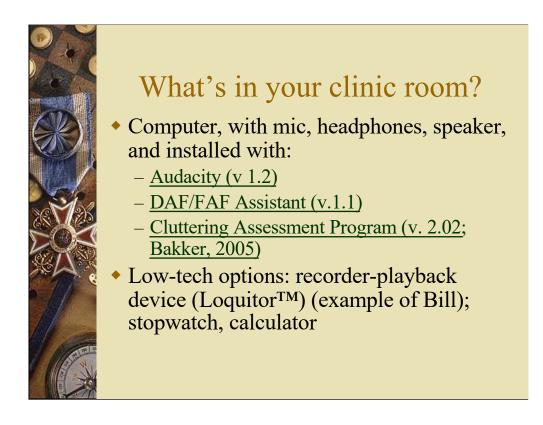
What's on your clipboard?

- Daly (2006) *Predictive Cluttering Inventory*. Free download from <u>http://associations.missouristate.edu/ICA/</u> and <u>supplemental info about its use</u>.
 - Allows you to document as you sample dialog, monolog, and phone calls of spontaneous, connected speech.
- Quick assessment tools for measuring disfluencies per 100 words; we use a grid based off of Conture (2001):
 - Between-word disfluencies: "Phrase repetitions, Revisions; Interjections; Other" [common in cluttering]
 - Within-word disfluencies: "Whole-word repetitions, Sound-syllable repetitions, Audible prolongations, Blocks" [less common in cluttering]

[read slide]



[read slide] As cited in St. Louis et al. 2007



[read slide] Praat is another software program available.

Cluttering software will allow you to assess number of inappropriate sounds inserted per 100 words; Count unfinished or "cut-off" words per 100 words. Count disfluencies per 100 words and determine proportion of between-word types vs. within-word types per total disfluencies.

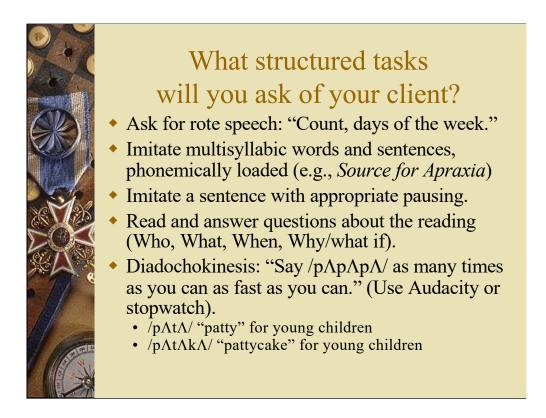
Audio-recording and playback is almost a necessity when working with individuals who clutter because they are often are not able to identify speech errors online, while speaking, but they can be taught to identify errors offline, and then generalize that back to doing online error prevention and pause-filled self-corrections.



What will you do with recorded speech samples?

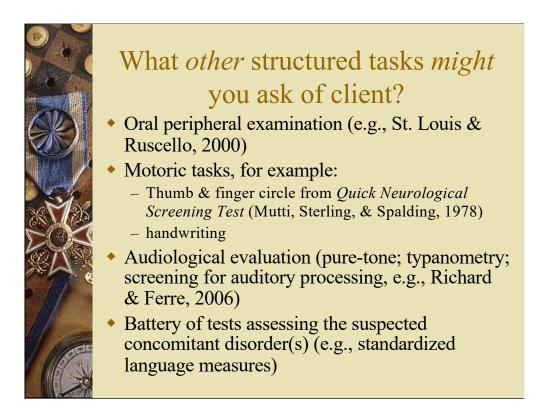
- Count disfluencies per 100 words and determine proportion of between-word types vs. withinword types per total disfluencies.
- Use as play-back to determine client's selfawareness and/or assessment of problems in speaking (trial therapy).
- Determine relative fluency response to a "speak slower and more carefully" instruction.

[read slide] If the client is showing signs of cluttering he or she will show more BWDs than WWDs, so no use trying to sample duration of three longest blocks as you would for a stuttering evaluation.



[read slide] Ask them to imitate words like "aluminum" and "anemone"

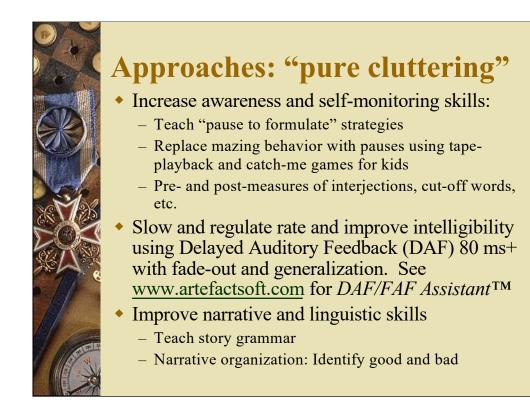
"Who/What" Questions bring on more fluency, whereas "Why/what if" might bring on more disfluent speech.



[read slide]



Read slide



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Also Scaler-Scott & Ward (2008) Use self-regulatory speech.

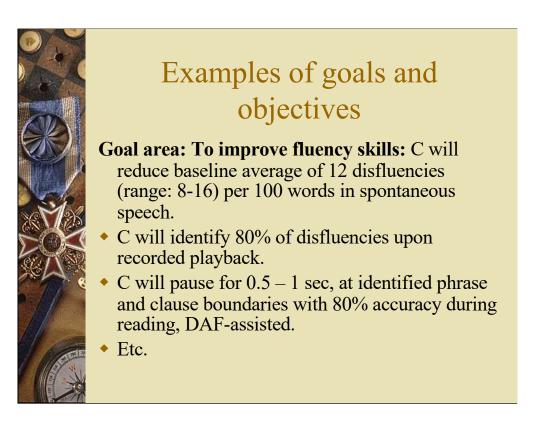
Re: "catch-me" games for younger kids. Sometimes I'll play around with the difference between saying, "I'm g-I'm go-um-I'm gonna go to the store now." Did I use good pausing behaviors? and the kids can say "no…" (negative practice) versus "I'm going / to the / store now." So, have the kids catch you when you are using mazing behaviors. It helps increase that awareness. With older clients, you can certainly get creative with other ways to do this such as interview situations, etc.



Approaches "cluttering-plus"

- Concomitant disorder treatment plan for Impairment1 & 2 (Logan & LaSalle, 2003):
 - Concurrent (both/all impairments)
 - Cyclic (activity, time, or criterion)
 - Sequential (until Impairment1 or 2 is resolved)

[read slide]



[read slide]



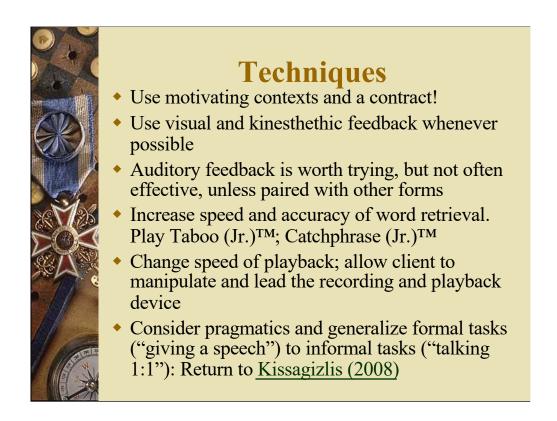
Examples of goals and objectives

Goal area: To improve intelligibility: C will improve baseline intelligibility to an unfamiliar listener in an unfamiliar context from an average of 70% (range: 60-80%) to 90-95%.

- C will articulate all syllables in multisyllabic words with appropriate syllabic stress with 80% accuracy in imitation, using visual feedback, at the word/phrase/sentence/monolog/dialog level.
- C will self-correct based on listener feedback that conveys non-comprehension on 4 out of 5 occasions. Etc.

[read slide]

Yvonne van Zaalen (2009) suggested that it might be useful to return to Lieberman's subgroups of sensory or motor-based cluttering. One person who clutters showing a high frequency of revisions and phrase repetitions could have processing or perhaps lexical retrieval problems (sensory), whereas the person who clutters who has more phonological errors, including weak syllable deletions (WSD) negatively impacting intelligibility could have a more production-based problem (motor). While we await or participate in collecting more evidence related to this idea, it behooves us as clinicians to describe diagnostic profiles of individuals who clutter (e.g., test word finding, measure the percent opportunity that WSD applies in various speaking samples).



[read slide]

Hartinger and Mooshammer (2008) have discussed the importance of over exaggerated articulatory gestures, so that if it sounds really precise and almost overly precise to the person who clutters, it's often much improved for the listener. And again that might be part of a sensory deficit for people who clutter, in addition to the motoric. We honestly just don't know if this point in the field.

[read remainder of the slide – explain the two commercially available games]

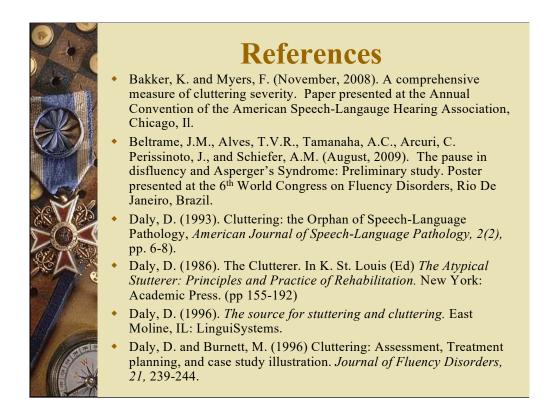
Return to client Bill (2 yrs plus after Tx) in this clip that you'll hear - it's a short two-minute clip [run the Reference slides at this time]

So just listen for a few things – there's still some residual errors, short disfluencies, such as the word "officially" become "ficially" and there's other times where there are some awkward pauses, but he's using pauses. Notice the (1-2) times he decelerates. I think the really positive point is that Bill only had a short period of therapy, less than 10 sessions, and it was over two years ago prior to the time this was recorded. So he has matured with some long-term changes in his speech. He slows his rate down, especially when speech therapists are around ;~), and he seems to slow his rate when he needs to do so. You'll hear him describe his job (in this clip here), and it's fairly

demanding and he does have a lot of talking to do across the day, so tends to use the strategies as a necessary means by which to be intelligible, get his point across and feel pretty good about himself as a speaker. Right now he's not interested in returning to therapy, but he does come to talk to my classes about the problem of cluttering, so I appreciate his participation.

I look forward to your posts about my presentation!

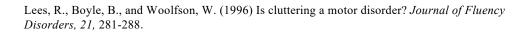
And the rest of the ISAD online conference for ISAD on October 22, 2009!



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