School-Age Stuttering: Assessment and Treatment

PDH Academy Course # TBD
3 CE HOURS

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This course is offered for .3 ASHA CEUs (Intermediate level, Professional area).

Course Abstract

This intermediate level course walks learners through the assessment and treatment process surrounding school-age stuttering, using the CALMS multifactorial model of stuttering as a template.

NOTE: Links provided within the course material are for informational purposes only. No endorsement of processes or products is intended or implied.

Learning Objectives

By the end of this course, learners will be able to:

- Distinguish between common terminology related to stuttering
- Recognize influences of genetics, neurology, and environment on stuttering
- Recall the CALMS multifactorial model of stuttering, and its importance in assessing and treating childhood stuttering.
- Identify the five steps of an assessment for stuttering, with attention to tools that canbe used and information that should be gathered during each
- Recall the concept of "therapeutic alliance" and its impact on speech therapy for stuttering
- Recognize differences between therapy with elementary-age students, and therapy with middle and high school students, with attention to the specific goals and learning opportunities provided in each

Timed Topic Outline

I. Definitions and Background Information (25 minutes)
II. Assessment (50 minutes)
III. Principles of Treatment (5 minutes)
IV. Therapy with Elementary-Age Students (55 minutes)
V. Differences in Therapy with Middle and High School Students (30 minutes)
VI. Handouts, References, and Exam (15 minutes)

Delivery Method
Correspondence/internet self-study with interactivity, including a provider-graded final exam. *To earn continuing education credit for this course, you must achieve a passing score of 80% on the final exam.*

Accessibility and/or Special Needs Concerns?
Contact customer service by phone at (888)564-9098 or email at pdhacademy@gmail.com.

Course Author Bio and Disclosure
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DISCLOSURES: Financial – Melissa Petersen received a stipend as the author of this course. Nonfinancial – No relevant nonfinancial relationship exists.

Introduction

Stuttering. The word can bring up so many emotions for different people. It can strike fear in the hearts of well-intentioned SLP graduate clinicians, or even veteran SLPs who have had few, if any, stuttering clients. A few SLPs *love* working with stuttering, and many more are nervous to approach stuttering therapy. For children and adults who stutter, as well as for their families, the emotions can be even more varied. Most of us have not received adequate training in treating stuttering, and professional development in the area tends to be focused on either preschoolers or adults. Even when classes do focus on elementary-aged students, the content can still get caught up in definitions, disfluency counts, and pedantic discussions about the difference between stuttering modification and fluency shaping. No wonder SLPs are unsure of how to handle stuttering. We don't want to mess things up!

The good news is that we are not messing things up. Therapy works! Children who stutter are still just children, and they need some help talking. They also need support to see themselves as communicators, not victims; people with a voice who have the power to say what they want. They have loving families, great personalities, and the same hopes and dreams to become an astronaut/teacher/movie star/president as other kids. They just stutter, and need some help with that. And we do know how to help! The choice you made to take this course shows that you want to help, and know that you need to know more. By the end of this course you will have reviewed the basics of stuttering, and have the framework to provide flexible and effective therapy to school-age children. I am writing from the perspective of working within a public school system, but the approach is equally applicable in a private clinic our outpatient therapy setting.

Part I – Definitions & background information

Stuttering definitions

Stuttering is a communication disorder where a person is not able to speak fluently. Specifically, "[S]tuttering involves the repetition, prolongation or blockage of a word or part of a word that a person is trying to say." (Conture et al. p2). We will discuss the different types of disfluencies later in this course, but briefly, they include repetitions (repeating a sound, syllable, word or phrase), prolongations (elongating a consonant or vowel), blocks (where the flow of speech is completely stopped), as well as abnormal breathing patterns, circumlocutions or word avoidances, and interjections. The common thread for all of the ways to stutter is tension that prevents moving forward, or (in the case of interjections and word avoidances) an attempt to avoid an anticipated stutter by not saying the word(s) that the person feels will make them stutter. It is imperative to remember that stuttering is *involuntary*. No child chooses to stutter, and in fact, **a key part of therapy for stuttering involves addressing and ameliorating the feelings of helplessness and frustration that can accompany stuttering.**

Persistent vs. developmental stuttering

"He's going to outgrow it" is a phrase often told to parents when they take their child to a healthcare professional, or by a well-meaning friend or relative. But is it true? Well, perhaps. About 80% of children who stutter during preschool will recover on their own (Conture et al., p57). This is known as "developmental stuttering." Children with developmental stuttering may recover without any intervention, or may benefit from speech therapy (such as the Lidcombe Program, for preschool children who stutter) if their stuttering is particularly frustrating or alarming to them or their families.

The behaviors of persistent stuttering look exactly like developmental stuttering at first. The thing that differentiates persistent stuttering from developmental stuttering is (unsurprisingly) whether it persists. Children who recover from stuttering are more likely to have no relatives who stutter, OR relatives who recovered from stuttering. They are more likely to be female, and may have an earlier onset of stuttering than children who have persistent stuttering. Additionally, a decrease in stuttering within the first 6 months to a year from the onset is more likely in developmental stuttering (Hamilton & Watson). Children with persistent stuttering are more likely to have relatives who stutter, to be male, and to have a slightly later onset of stuttering. Developmental stuttering typically resolves during preschool; it does not persist past 5-6 years old. If you are seeing a school-age child who is stuttering, you are almost definitely dealing with persistent stuttering. The window for spontaneous recovery has passed by the time a child enters kindergarten.

It is important to note that there is no way to determine for sure whether a child will be in the developmental stuttering or persistent stuttering group. There are risk factors which make persistent stuttering more likely, but even experts in the field cannot predict the future. The best we can do is make an educated guess.

Factors associated with developmental stuttering	Factors associated with persistent stuttering
● No relatives who stutter OR relatives who recovered from stuttering ● Female ● Earlier stuttering onset ● Decrease in stuttering during first year ● Spontaneous recovery by age 5	● Relatives who stutter ● Male ● Later stuttering onset ● Still stuttering at age 5

Table 1: Factors associated with developmental vs persistent stuttering, adapted from Hamilton & Watson (2015)

Core and secondary behaviors of stuttering

One of the reasons stuttering is so diverse and complex is the interplay between primary and secondary behaviors of stuttering. Core stuttering behaviors include the actual stutter – blocks, prolongations, repetitions, or abnormal breathing. Some combination of these behaviors are present in all people and children who stutter, and children who are just beginning to stutter typically only have these kinds of stuttering. Core behaviors are unavoidable, but their severity can be managed and their frequency decreased by using fluency strategies (which will be discussed later).

Secondary behaviors are learned responses to the core behaviors – things that the person has learned to do in an attempt to move through a stutter or to prevent a stutter from happening. Secondary behaviors include *escape behaviors* and *avoidance behaviors*. Escape behaviors are physical actions done to try and "get out" of a stutter. Things like eye blinks, twitching or tapping body parts, stamping, facial grimaces, and the like are examples of escape behaviors. Escape behaviors often escalate over time unless a person is receiving speech therapy or intentionally working to decrease these behaviors. Things done to avoid stuttering are also secondary behaviors; circumlocutions to avoid saying a particular word, using filler words, or phrases to get a "running start" at a feared word or phrase, are examples of avoidance behaviors.

Escape behaviors *do not* diminish the impact of stuttering, and are not useful as a tool to enhance fluency or effective communication. They may work as a "distraction" from the stutter in the beginning, which gives the person who stutters the impression that they help, but over time the person becomes desensitized to the behavior and it stops working (or needs to be done on a larger and larger scale to get the same effect). Escape behaviors have a negative impact on overall communication, and do not help to reduce the severity of stuttering.

Similarly, avoidance behaviors prevent the child from saying what she or he wants to say, and can have a very negative effect on self-esteem. Particularly if the feared word is very important to the child – a common example being a child who stutters on their name – avoiding the feared word means that the child's ability to communicate may be severely impaired. Adults who stutter have shared that they may give the wrong name when people ask them, to avoid stuttering on their name. How embarrassing! Avoiding speaking altogether is another kind of avoidance, which can also have a very negative

impact both at home and at school. A child who cannot raise his hand to ask a question, or tell the teacher when she knows the answer, may struggle academically. Worse, the child may feel stupid or angry at himself because he cannot talk like his peers.

In my experience working with elementary-age school children, I have found it is rare for a younger child to have developed secondary behaviors. The few times I have seen children with facial tics or grimaces their stuttering has been quite severe. This seems to be because younger children are in general less aware of the specifics of their stuttering (though they will still notice that they have trouble talking!). Usually, it is not until children reach 4th-6th grades that they will begin to develop avoidance behaviors. Around 3rd-4th grade is developmentally when many children grow in self-awareness, so this is not surprising that their stuttering may change to reflect their developing sense of self.

When working with elementary age students, we want to intervene *before* secondary behaviors develop, or at least before they are firmly entrenched. This gives the best chance to prevent secondary behaviors from becoming permanent, and allows for more useful behaviors to be taught instead. We cannot prevent the core behaviors from happening, but we CAN prevent secondary behaviors.

Incidence

Stuttering occurs in approximately 5% of people during their lifetime (incidence). However, approximately 80% of children who stutter will spontaneously recover within 24 months, leaving slightly less than 1% of the population with persistent stuttering (prevalence) (Yairi 2005). While this may seem like a small number – only 1%! – it is still a large number of people worldwide. People stutter in every language, following the same patterns of onset and recovery. Thinking about my fairly typical elementary school, which has 500 students, I expect to have around five children who stutter in my school each year. Not every child who stutters will need direct speech therapy at the same time, but the 1% rule is a good guide to estimate how many children who stutter are at your school, or in a given population. If you haven't identified the 1% who stutter, you're probably missing a few!

Genetics

It has long been established that stuttering is influenced by genetics. Yairi & Ambrose have identified multiple ways that we can understand this genetic link: through family histories, twin studies, and aggregation studies (Yairi & Ambrose 2005, p290-296). In 2010, researchers with the National Institutes of Health identified 3 genes as a source of stuttering in a large Pakistani family, and found the same 3 gene mutations in some people in the United States and England who also stuttered. This was a major breakthrough, as it was the first time that a specific gene was implicated in causing stuttering for some people. There is continuing research in this area, as the gene mutation implicated in the study of the Pakistani family does not explain all cases of stuttering. Genetic factors are very complicated, and there appear to be multiple

different mutations (or combinations of genetic factors) which might cause stuttering in different families. However, knowing that stuttering is linked with genetic inheritance can be very freeing for many people who stutter and their families. People do not control their genes – it is absolutely not their fault!

Stuttering is more common in boys and men than in girls and women, at a ratio of approximately 3:1. This may be related to the genetic factors that contribute to stuttering, though the exact cause for this disparity is unknown.

Another fascinating fact is that *types* of stuttering tend to run in families, not just stuttering as a whole. There are families where most of the people who stutter recover from their stuttering, families where most of the people who stutter do not recover from stuttering, and families who show both types of stuttering equally (Yairi & Ambrose 2005, p301). Learning about a person's family history can help a clinician, as well as a person who stutters, to understand more about their stuttering, and about their family.

It's important to remember that, though stuttering *can* run in families, sometimes it does not. I have worked with just as many children who have a relative who stutters as children who don't. I always share the facts about the genetics of stuttering with my students, but am careful to not give them the impression that they are weird if they don't have a family member who stutters. Every child who stutters is coming from a unique place, even if they may have some similarities with other children who stutter. We are all more than our genes, after all.

Neurology

There has been a lot of research looking at whether there are differences in brain structure between people who stutter and people who don't. The result of these investigations has been to find that, YES, there are differences! Most of the research has used adult subjects, so it has been difficult to tell whether these differences in adult brains are the *cause* of stuttering, or are *caused by* stuttering. More recent research with children has been possible, due to the decreasing invasiveness of newer MRI technology.

Chang (2011) summarized current research on neurology of children who stutter by saying "The main brain regions that work together to make fluent speech production possible include areas in the frontal cortex of the brain, which controls movement planning and execution, and auditory sensory regions located farther back, in the temporoparietal cortex. Regions deeper within the brain, including the basal ganglia, thalamus, and cerebellum, also support speech movements by providing internal timing and sequencing cues. It is in these brain regions and their connections that researchers have found brain function and anatomy differences between stuttering speakers and fluent speakers."

For treatment purposes, it is not necessary to understand the exact neurological differences between children who stutter and children who are typically fluent. The main

points are that a) there are neurological differences related to stuttering, and b) we can still influence how stuttering presents, in spite of those differences.

Environmental factors and temperament

Although stuttering has both a neurological and genetic basis, how stuttering presents, and possibly whether it presents in individuals who are predisposed by neurological and genetic factors, is influenced by environmental and temperament factors. Zebrowski (2007) estimates that up to 40% of change during therapy results from the characteristics of the client and environment (e.g.: temperament, social support). Anderson, Pellowski, Conture, & Kelly, E. (2003) found that children who stutter are more likely to exhibit hyper vigilant characteristics (being less distractible) than their peers who do not stutter. They stated that this *may* contribute to the exacerbation or maintenance of stuttering. The authors did not say that temperamental factors *caused* stuttering, which is an important distinction.

The primary reason a clinician who works with school age children who stutter is concerned with environmental and temperamental factors in stuttering is because they may influence the way in which stuttering is presenting. If a child who stutters is very anxious about his stuttering, then he may present as more severe than if he were not so anxious. If a child who stutters has to compete with other family members in order to speak, and is sensitive to time pressure, then her stuttering may start to increase, especially when she is at home with her parents and siblings. If a child who stutters comes to speech therapy, and hears his speech therapist speaking very quickly, asking him lots of questions, and expecting him to answer with detailed explanations, then the SLP may become a trigger for an increase in stuttering.

Multifactorial model of stuttering

We know that stuttering is caused by a complicated combination of genetics, neurology, and environmental factors. The elusiveness of the disorder is also apparent when we look at what causes stuttering to maintain, increase, or decrease in severity. In 2004, Healey, Trautman & Susca described a model that they developed to reflect the multidimensional factors which influence the way stuttering presents and is experienced by people who stutter. They called this model the CALMS model, with the letters in CALMS being an acronym for the components they identified: Cognitive, Affective, Linguistic, Motor, and Social (see figure 1).

Cognitive refers to what a person knows about stuttering – their awareness of their stuttering, their knowledge about stuttering as a disorder and their knowledge of techniques to manage stuttering. *Affective* refers to how a person feels about their stuttering and communication. Emotions about stuttering, about talking, or about themselves as communicators fall under the affective component. The *linguistic* component contains a person's innate speech and language abilities, and is particularly relevant when evaluating and treating school-age children who stutter. The *motor* component is the best-understood component for many SLPs; it involves the speech

movements and observable stuttering that we hear in the speech of a person who stutters. Stuttering types, frequency, length, and overall severity are included in the motor component. The last component, *social*, considers what impact stuttering is having on a person in relation to other people. The impact of different speaking situations, different listeners, and the impact (or perceived impact) stuttering is having on a person's relationships is considered when looking at the social component.

Of course, any individual person's stuttering may include more elements than these five, and the impact of each of these five elements is going to be different for each individual. The CALMS model gives a manageable way to look at stuttering as a whole, and consider each person's strengths and needs in a therapeutic setting. In my personal practice, I use the CALMS model for both assessment and treatment, as a way to comprehensively view stuttering in each child, design appropriate therapy activities and materials, and also monitor progress made in therapy (as mandated by federal education law). Appropriate use of the CALMS model meets the legal requirements for assessing and treating children who stutter, as well as being research-based and meeting standards of assessment and treatment set forth by the American Speech Hearing Association (ASHA).

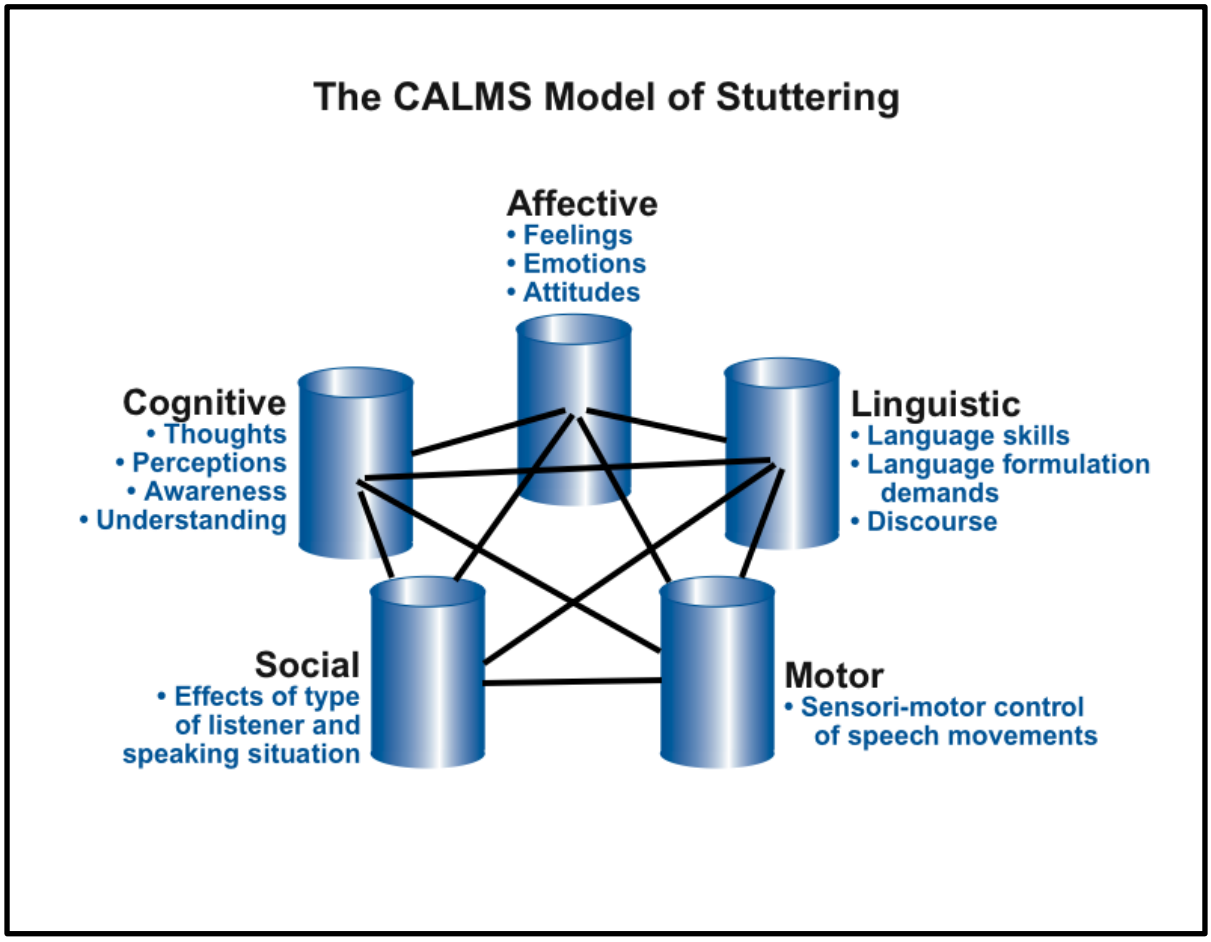

Figure 1: Healey, Trautman & Susca

Is there a cure?

There is no cure for persistent stuttering. As discussed earlier, approximately 80% of preschool age children who stutter will spontaneously recover from their stuttering and not stutter past preschool. For the children who do not recover from stuttering in preschool, their stuttering is permanent.

This is common knowledge, but I say it again because this fact is foundational to appropriately assessing and treating stuttering in school age children. Whether or not we expect our treatment to fully "fix" an issue has a transformative impact on the type of therapy we will provide. If we expect our treatment to completely resolve stuttering for school age children, then we will fail. We doom our school age clients to fail if we give them the impression that speaking 100% fluently all of the time is their goal. I have not yet worked with any school age child who could achieve 100% fluency 100% of the time. We are not going to get our children to stop stuttering. We need to communicate this fact to them, and to their families, to prevent heartache and despair later on. There may be a rare person who stutters who can use fluency strategies 100% of the time, and maintain 100% fluency. However, even for those people, fluency may come at the cost of constantly monitoring their speech, thinking about their strategies, and worrying that they might slip-up and stutter. To set reasonable, attainable goals, we need to give up on the goal of curing stuttering. In order to help our children who stutter and their families accept stuttering, we need to start by accepting stuttering ourselves.

So why provide therapy?

The last paragraph may have sounded pessimistic, but it is not the end of the story. We may not be able to prevent our clients from continuing to stutter, but we can definitely help them improve their communication. Stuttering is permanent, but the expression of stuttering is incredibly flexible. We can help our clients to control their stuttering. They can learn to manage their tension, and change stuttering moments to be shorter, easier, and less intrusive. Through effective counseling around stuttering, we can model and encourage healthy attitudes and emotions around stuttering, and reduce the negative spiral of frustration and helplessness that many people who stutter experience. We can work with a child whose stuttering is severe and help them reduce it to mild or barely noticeable. We can support children who stutter in finding confidence in themselves as speakers, which can dramatically reduce the impact of stuttering in a child's life.

The goal for stuttering therapy with school age children is to make talking easier, not to prevent stuttering from happening. We can do that.

Types of stuttering

There are different types of disfluencies, and different causes for each.

- Repetition: Repeating a sound, syllable, word or phrase.
  Examples: I, I, I, I want a hamburger. I wa-wa-wa-want a hamburger. I want a ham-b-b-b-burger. I want a, I want a, I want a hamburger.
- Prolongation: Elongating a sound.
  Examples: I wwwwwwwant a hamburger. Iiiiiii want a hamburger. I want a hhhhhhamburger.
- Block: Total stop. May happen at the beginning of a sentence or word, or in the middle of speech.
  Examples: I…. want a hamburger. I want a ha……mburger.
- Combo: Some combination of the above three types.
- Interjection ("filler"): Adding in extra words, either to get a "running start" at a feared word, or to avoid stuttering on a feared word.
  Examples: like, um, whatever, actually, literally, so, yeah…
- Revision/circumlocution: Changing words to avoid stuttering.
  Examples: I want a ha… [block] pepperoni pizza.

(See Handout 1 – Types of Stuttering).

Disfluencies: SLD & nSLD

In this course I will be using the term "disfluency" to refer to any break in the forward flow of speech. Both typically fluent speakers and people who stutter produce disfluencies, though they differ in type and frequency. To differentiate between typical and atypical disfluencies, I use the terms "stutter-like disfluency" (SLD) and "non-stutter-like disfluency" (nSLD). Some clinicians and researchers use the term "dysfluency" to refer to SLDs and "disfluency" to refer to nSLDs, but I find that distinction to be less precise, as well as impossible to distinguish when the terms are used orally. SLD and nSLD are well-established terms, which have extremely practical implications for assessing and treating school-age children who stutter.

On the list above, prolongations, syllable repetitions, word repetitions and blocks are SLDs, and phrase repetitions, revisions and interjections are nSLDs. SLDs are types of disfluencies that are rarely, if ever, observed in the speech of typically fluent speakers. nSLDs are often observed in the speech of both people who stutter and typically fluent people. However, people who stutter will have *more* stuttering, even of the nSLD types, than a person who is typically fluent. You can find normative data in the motor component section of Part II – Assessment.

Part II – Assessment

Step One: Referral

The first step to assessing school age children who stutter is to find them. You may think that is easy, but it is not always. As I stated earlier, approximately 1% of school age children have persistent stuttering – one out of every 100 kids. If you work in a typical elementary, middle, or high school, check your caseload. Do you have close to 1% of the student body on your caseload for stuttering? If not, you may be missing some children.

The most common way I find students who stutter is through referrals from a teacher or parent. Those referrals tend to be for moderate to severe stuttering that has been occurring for a significant amount of time. More severe stuttering is more noticeable, and more likely to raise the concern of parents and teachers. But even for more intrusive stuttering, it can be a while before I am notified by school staff. Why? Because not every teacher knows what stuttering is, or that speech language pathologists are trained to treat stuttering. Not every family is knowledgeable about stuttering, and many are told by family, friends or medical professionals that they should wait for their child to "grow out of it." Other families may have stigma around stuttering, especially if other family members stutter and are ashamed of not being able to speak fluently. Stuttering is a "dirty secret" in some families, which may prevent them from making a proactive referral or seeking out medically accurate information about the disorder.

The most effective strategy I use to encourage teachers give me appropriate referrals is providing education about stuttering. I have led professional development sessions for classroom staff in my school district, giving information about stuttering and when to refer a child to an SLP. At the beginning of each year I send out information to the teachers at my school with a list of things they should watch for – articulation, language, and fluency – so they can feel confident bringing students to my attention *(See Handout 2 – Teacher Brochure)*. I also follow the siblings of students already on my caseload, as there is a much higher chance that they will have a fluency disorder if they have an immediate family member who stutters. During the school year I try to visit classrooms of children who stutter and give a presentation about stuttering to their whole class (with the permission of the child who stutters, of course). I have received several excellent referrals from children on my caseload who stutter, when I ask them the question "Does anyone else at this school stutter like you?" The kids always know when other kids stutter, and are very excited when they discover someone who is like themselves.

Step Two: Screening

When I get a referral from a teacher or parent about a child who stutters, I screen the child to see if there is need for a full evaluation. Because many people do not know very much about stuttering, it is common to have students referred for stuttering who do not actually stutter – students who have abnormal breathing patterns or medical issues which interfere with breath control, students who have difficulty with reading/decoding,

or students with language organization difficulties may all be referred to an SLP for "stuttering." A few of those students may qualify for other kinds of speech/language therapy, but many of them will not.

The key to determining which children are truly stuttering and need to be evaluated for stuttering is to remember two key elements of stuttering: it is *involuntary* disruption of the forward flow of speech, and it involves *tension*. With those two elements in mind, I can determine with one question whether or not a fluency evaluation is needed.

The question I ask the child is: "*Do you stutter?*" For younger children I ask "*Do your words ever get stuck when you talk?*" as some children may not know the word "stutter." I have never met a child who truly stuttered who was unaware of their difficulty with speaking. In my experience, this question has been predictive of whether or not a child stutters. (Qualification: a student who has intellectual disabilities, or another disorder or syndrome which impacts their cognitive skills, may be the exception to this rule). Every question after the screening question is to get more information about what kind of stuttering, how often the stuttering is occurring, and initial impressions about how the child feels about their stuttering in order to guide an evaluation. I also ask questions about a child's interests and family life in order to hear her/his connected speech. Talking with a stranger is often a trigger for stuttering, so these questions allow me a chance to hear a child's stuttering in an authentic context.

Questions for a stuttering screening	***Purpose***
● General interest: What is your name? Who lives in your house with you? Do you have any pets? What do you like to do with your friends? Do you play any sports?	● *Rapport building, as well as an informal speech sample. Listen for any disfluencies, as well as interjections or obvious pauses which may indicate covert stuttering.*
● "Do you stutter?" or "Do your words ever get stuck when you talk?"	● *A child who stutters will be aware that she/he stutters. If they answer 'yes' to this question you should proceed with a fluency evaluation.* ● *If the child answers 'no', it is unlikely that they are stuttering. Continue probing to determine whether there are any other communication difficulties which may need attention (e.g.: reading problems, language organization, cluttering).*
● How often do your words get stuck? ● What does it feel like when you stutter? ● What helps you to get out of a stutter? ● Does anyone in your family stutter?	● *Gather more information about the child's stuttering, as well as their knowledge about stuttering and speech strategies, to guide your evaluation.*

Table 2: Screening for stuttering

Step Three: Background information

After screening, the next step in a fluency evaluation is to gather background information about the student and her/his family. In a school setting I typically send home a questionnaire focused on stuttering, but in a clinic you may have the advantage of meeting with the parent(s) in person. Either way, make sure to gather as much background information as you can. Questions should include (but are not limited to):

- How long has your child been stuttering?
- Does anyone else in the family stutter?
- What makes your child's speech better? What makes it worse?
- How do you feel about your child's stuttering?
- How does your child feel about his/her stuttering? Is he/she aware of it?
- What do you think caused your child to stutter?
- Have you talked about stuttering with your child?
- Do you do anything to help your child when she/he stutters? What helps?
- Have there been any stressful changes in your family recently? Have these changes impacted your child's stuttering?
- Are there any other health or learning concerns for your child?
- What does your child's stuttering sound like? (repetitions, blocks, etc)
- Are there situations/people which make your child is more likely to stutter?

These questions are a baseline; you may need to ask follow-up questions based on the answers you receive. *(See Handout 3 – Questionnaire for Parents)*

For a school age child, it is very important to include the child's classroom teacher(s) in the evaluation, especially when gathering background information. Children spent a lot of their lives at school, so you cannot neglect this important source of information. If you work in a school this will be easy; if you are in a private setting you will need to get permission to exchange information from the parent before you call/email the teachers. Questions for the teacher should include (but are not limited to):

- What situations are most likely to trigger this student to stutter?
- How often do you notice this student stuttering?
- Do you do anything to help the student when they stutter? What helps?
- Does this student avoid talking in your class?
- Do other students notice that this student stutters? How do they react? Is this student aware of the reactions?
- Does the fluency problem distract from what the student is trying to say?
- What does the stuttering sound like in class?
- What are this student's overall academic levels? (screening for a concomitant language/learning disorder)

(See Handout 4 – Questionnaire for Teachers)

Step Four: "Standardized" tests

From day one of graduate school, speech language pathologists are conditioned to look for “objective” measures to use to evaluate our clients. We are also taught about criterion referenced and informal measures, but the (usually) unspoken message is that these measures are supposed to supplement the standardized assessments and are not sufficient on their own. State and federal laws reinforce this message, frequently requiring students to score below a particular standard score in order to qualify for special education services or disability-based healthcare.

Stuttering assessment is different. There are only a few commercially available measures that assess stuttering, and each has limitations. The most standardized measures for assessing stuttering, such as the Stuttering Severity Instrument, Fourth Edition (SSI-4) are the most restricted in scope, and arguably the least useful when developing a stuttering therapy program or measuring change before, during, and after therapy. The bulk of a stuttering assessment will be subjective, sometimes criterion-referenced, with the norms and objective measures supplementing what the client and their family share with you. Standardized measures support your clinical judgment in a stuttering evaluation, not the other way around.

With that said, there are some very useful tests which can provide a starting point for a fluency evaluation. Using a commercial product can support your clinical judgment, as well as providing justification for a student to qualify for stuttering therapy at school, or to increase the chance of insurance reimbursement for a fluency evaluation or speech therapy in a private or hospital setting.

Stuttering Severity Instrument, Fourth Edition (SSI-4)

The Stuttering Severity Instrument, Fourth Edition (SSI-4) by Glyndon Riley is the most well-known of the commercially available assessment tools for stuttering. The SSI-4 uses multiple (2-3) speech samples of at least 200 syllables each, and provides normative information about the frequency, length, and severity of stuttering moments. (Note: the normative information was developed using a group of people who stutter; it does NOT provide normative data that compares a person who stutters to typically fluent peers). The SSI-4 can be used with children two years old and up, and gives a severity rating and standard score.

Strengths of the SSI-4 include increased objectivity in an assessment, as well as providing “numbers” – scores that can be more easily understood by insurance claims processors and school administrators.

Weaknesses of the SSI-4 are that it only assesses the motor component of speaking. The more personal and subjective aspects of stuttering are not assessed at all. This can contribute to misleading severity ratings. For example, a student may score in mild range on the SSI-4, but have attitudes and emotions around stuttering that are extreme, and limiting the student’s communication. That student’s overall stuttering may be moderate or even severe, even though their motor severity is only rated as mild.

The SSI-4 provides one measure of severity, but should be understood as one part of the whole picture. It should not be used without other measures that consider the impact of stuttering as a whole.

Overall Assessment of the Speaker’s Experience of Stuttering (OASES)

The Overall Assessment of the Speaker’s Experience of Stuttering (OASES) by Yaruss and Quesal consists of four subtest questionnaires that look at the subjective

experience of a person who stutters. The subtests cover general information, reactions to stuttering, communication in daily situations, and quality of life. The OASES provides criterion referenced scores for each subtest, as well as severity ratings. There are three different protocols, depending on whether you are working with a child (7-12, OASES-S), a teenager (13-17, OASES-T), or an adult (18+, OASES-A).

Strengths of the OASES are that it focuses explicitly on the experience of stuttering – the feelings and social impact that stuttering may have on an individual. Weaknesses are that it is limited in scope, only looking at the feelings and attitudes, and not providing guidance on the motor patterns involved in stuttering.

The OASES is an excellent tool to use in conjunction with other complementary measures.

Behavior Assessment Battery for School-Age Children Who Stutter (BAB)

The Behavior Assessment Battery for School-Age Children Who Stutter (BAB) by Gene Brutten and Martine Vanryckeghem is another assessment tool which uses self-report to examine speech situations (two checklists), behavior responses that a child may use to cope with stuttering (one checklist) and attitudes about communication (one checklist, the Communication Attitudes Test).

The BAB looks at the experience of stuttering, similar to the OASES. It yields information about cognitive, affective and social areas of stuttering. It does not give information about the motor component of stuttering, or linguistic abilities which may interact with stuttering.

CALMS assessment (CALMS)

The most comprehensive fluency assessment for children I have found is the CALMS assessment, developed by Healey (2012). It is based on the CALMS multifactorial model I referenced in the introduction. The CALMS assessment was developed for school age children. It includes 23 items which assess the five domains of stuttering (cognitive, affective, linguistic, motor, and social). The CALMS assessment does not give normed scores; rather, it rates each area on a severity scale of 1-5 (1 = low concern, 5 = high concern), and compares a student's strengths, while highlighting their needs. For an example of a CALMS profile, see Figure 2. In this example, the student has some knowledge about stuttering (cognitive area), but is feeling a significant amount of negative emotions around stuttering (affective area). Linguistic skills are a strength for this student, but motor patterns are concerning. This student is not experiencing a significant social impact of stuttering at this time.

Strengths of the CALMS assessment are that it is comprehensive and clearly identifies therapy targets. However, it does not provide any criterion scores or norms for stuttering. It is a tool to compare the areas of stuttering impact within an individual; it does not compare a student to other students. The CALMS assessment can be used by itself, but can also be supplemented with tests such as the SSI-4 to provide more standardized information.

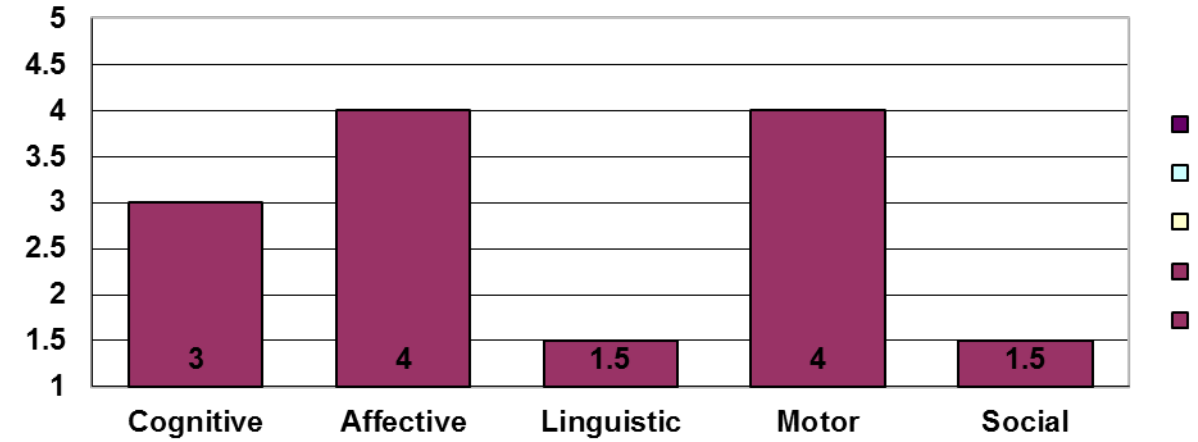

Figure 2: Example CALMS profile

Step Five: Informal and additional measures

After administering any standardized or commercially available assessments, you will need to administer additional informal measures to build a complete picture of the student's stuttering and the impact stuttering is having on the student. Remembering the CALMS multifactorial model, you will need to have information about each of the areas: cognitive, affective, linguistic, motor, and social. If you do not have all the information you need from your standardized measures, you need to supplement your testing using informal measures.

Cognitive

The cognitive component encompasses what a student knows about stuttering in general (facts) as well as what they know about their own stuttering (identification, strategies). Consider giving a stuttering facts quiz as part of an evaluation (such as this one on the Quia website: http://www.quia.com/cb/2807.html). A stuttering quiz easily gives objective data (e.g.: X/10 questions answered correctly), and can be used to identify appropriate therapy targets or IEP goals.

To determine a student's knowledge about their own stuttering, you need to determine how aware they are of the individual stuttering moments (stuttering identification). Have the student talk about something (retelling a favorite movie or book plot, or describing their most recent birthday party are common topics). Ask the student to tap the table or tell you every time she stutters. This measure gives a percentage (# IDed / total stuttered moments). If a student is unable to identify their own stuttering moments, repeat the same procedure but have them listen to you talking, or watch a video of another child who stutters talking, and ask the student to identify every time they hear stuttering.

The last question to answer is how many useful strategies the student knows to manage their stuttering. This information is gathered through interview – ask the student "What

do you do to get out of a stutter?" or "What helps when you stutter?" Note whether the student can describe any useful strategies, as well as whether they can demonstrate how to use the strategy. Also note if the student tells you any "strategies" that are counterproductive, or actually secondary behaviors. Many students tell me during an initial evaluation that they "push it out"; other students have said "I just give up" when they get stuck. Students may report that they try to say it again, stamp their feet (secondary behavior) or blink their eyes (another secondary behavior). If a student does not have useful strategies to manage his/her stuttering, this is a key area for education and intervention in the future.

Assessment Questions for Cognitive Component
● What facts does the student know about stuttering? ● Can the student identify their own stuttering? ● Can the student identify stuttering in someone else? ● How many fluency strategies does the student know?

Table 3: Assessment Questions for Cognitive Component

Affective

If you use the CALMS, BAB, or OASES, you will already have administered several checklists and/or rating scales which look at how a student feels about her stuttering. If you are not using one of these measures, you will want to develop your own list of questions to ask about a child's feelings about stuttering. It is important that, whatever measures you use, you ask the child *directly* about her/his feelings about stuttering. Research has shown that parents of children who stutter are not reliable informants about how their children feel about stuttering. Parents tend to underestimate how anxious or concerned their children feel about stuttering (Vanryckeghem 1995).

Examples of affective questions (adapted from the BAB):

- Do people worry about how you talk?
- Do you like the way you talk?
- Do your parents like the way you talk?
- Is it hard or easy for you to talk to people?
- Do you like to talk to other children?
- Do you worry about how you talk?
- Do your words come out easily?
- Would you rather talk or write?
- Do you talk better than your friends, or do they talk better than you?
- Do you let other people talk for you?
- Do you worry about talking on the phone?
- How hard is it to read out loud in class?

Some students may not feel comfortable sharing how they feel about their stuttering during an initial evaluation. It can be a lot to ask a kid to trust a new adult, and talk about something openly that may have been bothering them for a long time. There are other ways to assess how students feel about their stuttering when students are not forthcoming about their feelings. Look for signs that a student is hiding their stuttering, such as circumlocutions in their speech, a high number of interjections or pausing, or

more stuttering when they read aloud than when they speak. Also ask teachers and parents if the student is unwilling to talk in class, or reluctant to speak in social situations. Especially in this area, consider whether you can take student's answers at face value or whether there are other interpretations that fit the data.

One of my more memorable fluency evaluations was with a 2nd grade girl who had a severe stutter. From her behavior I could see that stuttering bothered her very much – she had extremely high tension, spoke very quickly, and she almost cried when she heard a recording of herself speaking. However, she answered all of my questions about how she felt about stuttering positively – she said she did not mind stuttering, she liked the way she talked, she always said what she wanted to say, etc. Looking at her behavior and the information shared by her parents and teacher led me to the conclusion that stuttering was bothering her ***so much*** that she was not able to talk about it at all. When I asked her point blank whether she stuttered she denied it completely, and even got stuck in a long block as she was telling me that she didn't stutter! If I had taken her answers literally, without cross checking them against her behavior around stuttering, I would have missed a very important factor for her evaluation and subsequent treatment. Her assessment showed a very high concern in the affective area, even though her answers to my questions sounded positive.

A question that I make sure to ask clients during every fluency evaluation is "Why do you think you stutter?" I started asking this question after one of my clients, a 6th grade boy I had been working with for a whole year, told me that he stuttered because when he was 4 years old he started copying the way his cousin talked, and then could not stop. I realized I had neglected a very important part of therapy – this student believed it was his fault that he stuttered! Other students have told me that they stuttered because they had teeth pulled, because they moved to a new school, because of a "vaccine injury", or that they have no idea why they stutter. Knowing a student's "origin story" for their stuttering is key to appropriately addressing feelings students may have about their stuttering. It all starts at the beginning, so finding out where your student perceives their "beginning" of stuttering to be is important.

Assessment Questions for Affective Component
• How does the student feel about his/her stuttering? • Is the student hiding her/his stuttering, or not talking because of her/his stuttering? • Why does the student believe they stutter?

Table 4: Assessment Questions for Affective Component

Linguistic

The linguistic area is the most straightforward for many SLPs to assess. Using formal or informal measures, check in on the student's speech sound and language development. I usually use an informal articulation screening and a curriculum-based measure for language aligned with the student's grade. If informal measures show reason for concern, I proceed with more in depth formal speech or language testing. Areas to monitor include articulation and language organization. While most of the students I have worked with have not had any concomitant speech or language disorders, the few who did have had either a speech sound disorder (usually /r/) or needed to work on

language organization (related to cluttering, a fluency disorder characterized by a rapid and/or irregular speaking rate, excessive disfluencies, and often other symptoms such as language or phonological errors).

Because linguistic complexity is related to stuttering frequency for some children, you will also want to determine where in the linguistic hierarchy the student begins to show more stuttering. This is more a measure of severity than of linguistic capacity, though the two are often linked. Start with very easy linguistic tasks like counting 1-10 or saying the alphabet, and move up through more and more complex linguistic tasks – repeating sentences, describing a picture, talking on a familiar topic, and talking on an unfamiliar topic. If a child is stuttering on easier linguistic items, it may be a sign either that their stuttering is more severe, or that they have underlying language difficulties which are adding to their struggle.

For a school-based SLP, you will want to also check with the teacher or school team to rule-in/rule-out any other learning concerns. If the teacher or parents are concerned about the student's learning, the evaluation should include the full multidisciplinary team to ensure that all areas of need are addressed.

Assessment Questions for Linguistic Component
● Does the student have a speech sound disorder? ● Does the student have a language disorder? ● Are there any other communication or educational issues which need to be addressed? ● At what linguistic level does the student begin to show a high frequency of stuttering?

Table 5: Assessment Questions for Linguistic Component

Motor

Assessing the motor component is the most familiar to most SLPs, as it is the most "objective" part of a stuttering evaluation, and is regularly taught in graduate programs. However, that does not mean it is easy! Obtaining and analyzing a good fluency sample can take some time, but it is worth the effort to get quality baseline data.

<u>Fluency sample guidelines</u>

A fluency sample should be at least 100 words, or 200 syllables. You can measure either words or syllables. Both are reliable ways to measure the frequency of stuttering, though syllables are slightly more reliable for older children, and are more often used in stuttering research. I typically use words because they are easier to count. Whichever measure you chose – words or syllables – be consistent. If you prefer to count words, do that all the time. Do not switch back and forth between counting words and counting syllables, especially when working with the same child. Pick one method and stay with it.

You will need at least two samples – either two speaking samples (if assessing a non-reading child) or a speaking and a reading sample (for a child who is a reader). If you are using two speaking samples, try to get them in different speaking situations (e.g.: speaking with you, and speaking with their classroom teacher or parent). Record the

samples to ensure accuracy when you are transcribing and analyzing. Audio recording is fine, but video recording is even better. You will want to notice signs of tension, secondary movements, how many repetitions of a syllable a child uses, and the length of any blocks. I often notice things when viewing a recording that I did not see in the moment with the child because I was focusing on other parts of the assessment. I also save these recordings to use for comparison later on. It is amazing to look back and see how far a child who stutters can come, often in a short time!

Once you obtain your samples, transcribe them. This will be fairly easy for a reading sample, as you already have the target text written down. It is more challenging for a speaking sample, but do your best. Try to write out *exactly* what the child says, including all syllables of repetitions, blocks, false starts, etc. Transcribing a fluency sample precisely takes time, but once you are done there is so much you can do with it!

When you count the number of total words, count *only the words/syllables in the intended utterance.* Do not count repeated words, phrase repetitions, or words in revisions in your total word count. Also, count each stuttered moment only once. It is possible for a stutter to have components of multiple types of disfluency, but it should count as only one "stutter", no matter how complex.

For example, the sentence "*I wa-wa-wa-wwwwwwwant… I need a hammmburger*" has 4 total words (I want a hamburger) and 3 total stutters (repetition/prolongation on "I want", revision to "I need" and prolongation on "hamburger").

Analyzing a fluency sample

After obtaining and transcribing your fluency samples, you need to analyze them. You will need to determine:

a) the percentage of disfluent words/syllables while speaking
b) the percentage of disfluent words/syllables while reading (readers only)
c) the percentage of each type of disfluency

Please refer to *Handout 5 – Fluency Speech Sample Analysis* for a chart version of this information. I find it much easier to fill out a chart than to list each computation separately. I use a highlighter to mark up the transcription of the fluency sample, and put the numbers into the chart. After crunching all of your numbers, you will have a lot of objective information about how precisely your student is stuttering. In particular, pay attention to the frequency of stuttering, as well as the most common type(s) of stuttering. If your student is using a lot of low tension stuttering (such as easy repetitions or phrase repetitions) that is indicative of more mild stuttering. If your student is showing more high tension stuttering (prolongations, blocks, fast/irregular repetitions) that signals more severe stuttering.

Also pay attention to the normative information on *Handout 5*. On average, students who stutter will produce 10% or more disfluent words in their speech. They will produce 3% or more SLDs as well. Children who do not stutter will produce less than 10% disfluencies in their speech overall, and will have 2% or fewer SLDs in their speech.

If you have given the SSI-4, you will have already done a great deal of this analysis, and will have a severity rating from that instrument. If you do not have the SSI-4, you will need to determine the severity of the student's stutter, based on your speech samples and clinical judgment. The Fluency Friday website (http://www.fluencyfriday.org) has an excellent severity rating scale based on normative data (Gaines). It is an excellent tool if you do not use the SSI-4. On the Fluency Friday scale, you can look at the frequency of SLDs (ranging from a mild 2-5% to a severe 25% or more), the duration of blocks (mild = 1 second or less, severe = 16 seconds or more) or secondary characteristics (none = mild, obvious secondary characteristics = severe). Keep in mind that a student may score differently on these different measures, and use your best judgment, along with the scale, to determine where the student is functioning *overall*.

Stuttering Severity Ratings (adapted from www.fluencyfriday.org)					
	Mild (1)	Mild/moderate (2)	Moderate (3)	Moderate/severe (4)	Severe (5)
Frequency of SLDs	2-5%	6-10%	11-18%	19-24%	25% or more
Duration of longest 3 blocks	Up to 1 sec.	2-4 secs.	5-9 secs.	10-15 secs.	16+ secs.
Secondary characteristics: sounds, head moves, facial grimaces, audible breathing, etc.	Not noticed by average person.		Distracts from content of communication.		Obvious, severe secondary characteristics.

Table 6: Stuttering Severity ratings

Assessment Questions for Motor Component
• What is the percentage of stuttered words/syllables during speech? • What is the percentage of stuttered words/syllables during reading? • What types of disfluencies are occurring? (SLDs and nSLDs) • What is the most common type of disfluency? • How severe is the stuttering?

Table 7: Assessment Questions for Motor Component

Social

Assessing the social impact of stuttering is primarily done by interviewing the child, and if appropriate, teachers and parents as well. The CALMS, OASES, and BAB all look at the social impact of stuttering, asking questions about whether students avoid talking in particular situations, or if stuttering stops them from participating in social interactions.

Examples of social impact questions (adapted from the CALMS):

- How often do you use another word to avoid stuttering?
- How often do you avoid talking with people you don't know?
- How often do you avoid talking with your teacher because you know you'll stutter?
- How often do you stutter when you talk on the phone?

- How often do you stutter when you talk to other kids at recess?
- How often do you stutter when you tell a story or joke?
- How often does your stuttering keep you from hanging out with other kids?
- How often does your stuttering keep you from inviting someone to play at your house?
- How often does your stuttering keep you from joining a club or team?

I often find that, for younger students, there is very little social impact around stuttering. Social impact tends to grow over time, and can be exacerbated by the way a family or teacher responds to stuttering, and the child's own feelings about stuttering. But never take for granted that a student does or does not experience a social impact of stuttering. Ask them!

Assessment Questions for Social Component
● Is the child experiencing social barriers because of stuttering at school, home, or in the community? ● Is the child being teased or bullied about his/her speech? ● Is the child comfortable communicating at home, school, and in the community?

Table 8: Assessment Questions for Social Component

Part III –Principles of Treatment

You have completed a stellar, comprehensive, multidimensional stuttering assessment of a school age child. Good job! Now it is time for the more important part – treatment. The treatment phase of working with a child who stutters lasts much longer, and is focused on making changes in the way the child communicates to make stuttering easier. Assessment identifies areas where change is needed; treatment creates those changes.

Therapeutic alliance

I will start with the most important part of stuttering treatment – a therapeutic alliance. This phrase was never taught in my graduate courses on stuttering, or in my university clinic. I first heard the term in a professional development seminar lead by Dr. Charles Healey in 2012. He told the seminar attendees that the therapeutic alliance was the basis of all progress in therapy. I was shocked by this statement, but have come to understand and affirm it myself.

The term "therapeutic alliance" is borrowed from psychotherapy, and describes the bond between the therapist and the client. According to Lambert & Barley (2001), *"Decades of research indicate that the provision of therapy is an interpersonal process in which a main curative component is the nature of the therapeutic relationship. Clinicians must remember that this is the foundation of our efforts to help others. The improvement of psychotherapy may best be accomplished by learning to improve one's ability to relate to clients and tailoring that relationship to individual clients."* According to the SupportingSafeTherapy.org website, the therapeutic alliance consists of three components:

1. The emotional bond and partnership
2. The cognitive consensus on goals and tasks, and
3. The relationship history of the partnership

For SLPs working with children who stutter, this translates into whether our clients believe we respect them and want to work with them (emotional bond), our clients understanding and agreeing with the goals of therapy (reducing stuttering, lowering tension, using stuttering modification, etc), and whether they trust the SLP based on their previous interactions with her/him (e.g.: their experience of the SLP during the assessment).

In 1994, Hugo Gregory said "*It is essential that clinicians become special people in the experience of children or adults in therapy. They must have positive feelings towards each other. I have come more and more to think of this as the first requisite of therapy."* (Hamilton & Watson 2015). Dr. Gregory was correct in his statement – the therapeutic alliance has been validated in research on stuttering. A survey of studies on the efficacy of stuttering therapy found that different techniques account for about 15% of the change observed during stuttering therapy, extra-therapeutic factors (characteristics of client, environmental changes) accounts for about 40% of the change, the therapeutic relationship accounts for about 30% of the change, and expectancy (hope) accounts for

about 15% of change (Zebrowski 2007). Our relationship with our clients, combined with our belief that change is possible, can account for approximately 45% of the therapy outcome! These components are so important! Without trust, belief that the therapist can and will help, and an understanding of the purpose of therapy, change cannot happen. When there is a strong therapeutic alliance, therapy can work wonders.

Model an open, matter-of-fact attitude about stuttering

Open communication is a key factor which impacts the therapeutic alliance, but is also an independent issue. Stuttering can be an emotional topic for many children, and may be associated with feelings of shame, guilt, or avoidance. It is essential that speech therapy be a place where students can discuss stuttering frankly. SLPs need to model open, matter-of-fact communication about stuttering. Students pick up on our own attitudes about stuttering, even when they are unsaid. Are you uncomfortable talking about stuttering? Are you uncomfortable stuttering in public? Do you feel unsure about what to say, or how to react when your students stutter? If you do, then they will be uncomfortable and unsure also. But if you model open stuttering, acceptance of stuttering, and are unworried to address stuttering, your students will follow your lead. Be open; be honest, be kind. Be willing to tackle stuttering head-on, and invite your students to come with you. Honest, open communication about stuttering is an essential part of the therapeutic alliance.

Always give a rationale

Stuttering therapy with school-age students is different from other kinds of articulation or language therapy in the amount of meta-awareness our clients need to be successful. In articulation therapy we are teaching new motor patterns, which eventually become habitualized and the child stops needing to think about them. Language skills require more cognitive awareness, but again, once they become normalized the child stops needing to think about them all of the time. Because stuttering will not go away, the child will always need to think about their speech. They will need to know exactly what they are doing, and why they are doing it. Using fluency strategies can become more "natural" with time, but they do not override the stuttering moments completely, and continue to need to be consciously used and practiced.

Because of this, it is very important to give a rationale for every step of therapy. Students should know their overall therapy goals, as well as the purpose of each exercise, strategy, or activity. Stuttering therapy depends on client "buy-in" – whether or not they believe that what you are presenting will help them – and whether they like using it in real life. With a clear rationale, the child has the chance to understand what she/he is doing, and why, and how it will benefit her/him. It puts responsibility on the child to own her/his therapy process, which improves therapy outcomes. In the end, whether or not therapy is successful rests primarily on whether the child decides to invest energy in the therapy process, and use the skills you have presented. Children who stutter need to know that they can be in charge of their stuttering, and that their parents, teachers, or other adults cannot do it for them. Presenting a clear rationale for

every step of therapy is an important part of helping students take ownership of their stuttering, and gain the knowledge and skills to manage stuttering themselves.

Part IV – Therapy with elementary-age students

As stated before, speech therapy for stuttering with a school age child begins with the recognition that we are treating persistent stuttering; our school age clients are past the age of "growing out of it." Our goals for therapy should reflect this fact. Our goals should also reflect a broad understanding of the multifactorial nature of stuttering – we should not just have goals focused on motor skills! We should have goals addressing all areas of concern that we identified in our assessment.

Goals (IEP or otherwise)

Every fluency client should have specific goals identified for their therapy. If you work with children at a public school, your goals will be formalized in an Individual Education Program (IEP) for that child; if you work in private practice your goals will have more flexibility in their format. A good therapy goal is a) focused, b) attainable, and c) measurable.

To determine your goals, review your assessment report. Look at each area, and identify the two or three most concerning. For an elementary age student, the two most common areas that need attention are cognitive and motor. If you are the child's first speech therapist, they may not know much of anything about stuttering. They also probably haven't yet learned any effective motor strategies to manage their stuttering. Let your assessment guide your goals. Set 1-2 goals for each area of high concern. Make sure that the goal is focused, attainable, and measurable.

Here are some examples of goals in each of the CALMS areas. There may be overlap between some of the areas, as many goals will address more than one component of stuttering.

Examples of Cognitive area goals:

- Student will score at least 80% correct on a quiz about stuttering facts.
- Student will describe the parts of their speech machine, and how each part works.
- Student will list and describe the different kinds of stuttering, as well as which kinds of stuttering they do the most often.
- Student will develop a presentation about stuttering to present to their class.

Examples of Affective area goals:

- Student will use voluntary stuttering in 3 feared speaking situations.
- Student will keep a daily/weekly log of their stuttering (frequency, severity, trigger situations), along with feelings they have about their stuttering.
- Student will research about 5 famous people who stutter, their challenges, and what made them successful.
- Student will make a poster about their favorite famous person who stutters for display in their classroom, hallway, or speech therapy office.

Examples of Linguistic area goals:

- Improve articulation and language skills as needed.

Examples of Motor area goals:

- Student will explain and demonstrate their two favorite strategies.
- Student will use their favorite speech strategy during a 5 minute conversation with the SLP (or other person), improving oral fluency from X% stuttered words to X% stuttered words.
- Student will use their favorite speech strategy in 3 different situations at school (e.g.: lunch room, office, classroom) for two consecutive weeks.
- Student will use their favorite speech strategy in 3 different situations in their community (e.g.: at daycare, at home, at a friend's house) for two consecutive weeks.
- Student will use their favorite speech strategy while reading a grade level passage, improving speech fluency while reading from X% stuttered words while reading to X% stuttered words while reading.
- Student will use their favorite strategy while leaving a voicemail (for the SLP or family member).

Examples of Social area goals:

- Student will develop a plan for dealing with teasing about their stuttering.
- Student will role play asking a teacher for accommodations for their stuttering (extra time, small-group sharing, etc).
- Student will identify 3 feared social situations for stuttering, and role play how to manage each situation.
- Student will role play making phone calls to order food at their favorite restaurant.

Set-up: scheduling and groups

When I was in graduate school, we spent a significant amount of time talking about how to handle group therapy at the elementary level. At the time it was assumed that we would group students by age, even when they had widely differing communication goals or needs. We dutifully role-played scenarios where we had a group of second grade students, one working on /r/, one working on listening skills, and one working on stuttering. It seemed strange back then, and experience has only made that scenario seem stranger. Who were we kidding?

I do not group students by age. I group my students who stutter together, and not with students dealing with other communication needs. Why? Because stuttering therapy is fundamentally different than therapy for other kinds of communication disorders. Students who stutter will *not* "beat their stuttering." They will stutter (either audibly or covertly, severely or mildly) their whole lives, in a way that students working on speech or language skills will not. Also, students who stutter need to meet other students who stutter. Realizing that they are not the only kid who stutters is a very powerful thing, and

the dynamic of a stuttering group is hard to beat. Grouping students who stutter together is best practice, when it is possible. If you only have one student who stutters, or have multiple students with a wide age gap, it may still be possible to group them together for some sessions (such as a mentorship/buddy set-up), and use videos, Skype or YouTube to connect with other kids who stutter in other places for students who are isolated from other kids who stutter. I find it is more important to see students who stutter in a stutter-exclusive environment (not in a group with typically fluent kids), even if I need to see them for a shorter amount of time each week. Stuttering is tricky and needs your full attention during each session. Teaching a strategy can combine with articulation or language drill, but all of the other elements of stuttering (desensitization, role play, feelings and attitudes, building community, social impact) are very difficult to address in a mixed group. The bottom line is this: group students who stutter with other students who stutter, or see them individually, in order to comprehensively address their communication needs.

Basic knowledge about speech production

Before teaching any strategies for managing stuttering, students need to know how speech is produced. This baseline knowledge is needed because you will be asking your students to manipulate the way they talk in order to be more fluent. Children need to have the vocabulary and understanding of how normal speech is produced, before they can be expected to change their speaking!

“The Speech Machine” is a term often used to describe speech production to elementary age children, framing the different parts of your body as a machine that makes speech, and each of the different anatomical structures as a part of that machine. The machine analogy works well with elementary students. Another common term is “Speech Helpers”, describing the same structures, but leaving out the machine analogy.

The speech machine includes lips, tongue, teeth, trachea, larynx, lungs, and brain. Sometimes you may also include the palate and the diaphragm. With elementary children I usually use kid-friendly words – *breathing pipes* instead of trachea, *voice box* instead of larynx, *roof of the mouth* instead of palate. Some children will be ready for the anatomical terms, others will do better with simplified language. Use your best judgment for which terms will suit your clients.

Children should be able to identify the parts of the speech machine, either on themselves or on a diagram. They also need to be able to explain how each part works to create talking. If a child is already familiar with the concept this may take only a session; if this is new information it may take longer. Children need to know what “normal speech” looks like before we can start to talk about what is happening in their speech that is different from normal.

There are speech machine diagrams available for free on the internet (such as this one: http://erikxraj.com/blog/are-you-talking-about-speech-helpers-in-speech-therapy-free-

download) or you can draw your own. I have my diagram laminated and bound into a book with other frequently-used stuttering materials. I use my copy with dry-erase markers during speech sessions, and have students fill out their own copy to take home and show their parents. Other SLPs start with a blank piece of paper and draw the speech machine as they explain each part. This method ends up a bit messier than the coloring book version, but has the benefit of adding each part as you introduce it, instead of having all the parts already on the paper. Students can draw their own speech machines, which helps boost retention and understanding. A good homework assignment is to have the child explain the speech machine to another child or family member. If she can explain it to another person, then you know she has learned it for herself.

Parts of the Speech Machine (Speech Helpers)
• Lips • Teeth • Tongue • Roof of mouth (palate) • Breathing pipes (trachea) • Voice box (larynx) • Lungs • Brain

Table 9: Speech Machine

More basic knowledge: types of stuttering

Once students have a grasp on how speech is produced, it's time to introduce stuttering. Students will already know that something is different about their speech, but they may not have more specific knowledge than that.

This is where you pull out your list of the types of stuttering *(Handout 1).* Students need a basic understanding of all of the types of disfluencies, even the types that they do not usually produce. Students need both the cognitive knowledge about what each kind of stuttering sounds like, but also the experiential knowledge of what each kind feels like in their body. Because it can be hard to "catch" enough real stuttering during a therapy session to experience each kind of stutter, I use voluntary stuttering (sometimes we call this "fake stuttering") to have students practice each type of stuttering.

Here is the key to teaching the kinds of stuttering – you must be willing to demonstrate each type of disfluency many times, in a range of ways. YOU need to be comfortable with voluntary stuttering, and good at manipulating your fluency in order to demonstrate the different kinds of disfluencies. If you are not yet comfortable doing this, then you must practice voluntary stuttering until you are good at it. Do it in the mirror, do it with your family at home, do it in front of your dog, and do it in the car on the way to work. *We cannot ask our students to do things that we ourselves are not willing to do ourselves, and voluntary stuttering is no exception*. Feel what stuttering is like in your own body. Then you will be able to help a student gain that same awareness.

Activities for teaching types of stuttering:

- Teach Handout 1, or make your own list of types of stuttering with the student based on what they know.
- Voluntary stuttering using articulation word or sentence cards
- Voluntary stuttering while reading (trade off paragraphs)
- Bump Tag: Students get a point every time they use a disfluency in their speech, and also a point every time they catch another student or the SLP using a stutter.
- Watch a video of someone stuttering, and try to count/classify the stuttering that you hear (The Stuttering Foundation has some great videos on YouTube featuring kids who stutter: https://www.youtube.com/user/stutteringfdn)

Homework ideas for teaching types of stuttering:

- Practice fake stuttering at home in the mirror 3 times this week.
- Pick a kind of stutter and do it on purpose at lunch/dinner/breakfast.
- Pick a kind of stutter and do it on purpose with your mom/sibling/teacher.
- Pick a kind of stutter and do it on purpose at soccer practice/girl scouts/daycare.
- Keep track of which kinds of stuttering you do at (pick a time or activity during the day).

Self-exploration: how do I stutter?

While almost all children who stutter will be able to tell you that they have trouble talking, many will not be fully aware of what is happening when they stutter, or even exactly when they are stuttering. Exploring their own stuttering dovetails with learning about disfluency types, and should be done simultaneously or immediately following learning about the different types of disfluencies. If students are already self-aware about their stuttering this may be a short process; if they are less aware this process will take longer. Activities to explore stuttering might include filming or audio recording the student and analyzing any stutters that happen, “catching” stutters as they happen and categorizing them by type, playing bump tag (described above), or keeping a journal of the kinds of stuttering that the student experiences during a week. (Some students will not be ready to journal about their stuttering until they are older and have stronger literacy skills). The goal is for students to be able to notice when and how they are stuttering, so they can use that knowledge to change their communication.

Stuttering desensitization and acceptance

Working on stuttering desensitization and acceptance of stuttering is a long-term goal for therapy, but you set the tone for the work from the very beginning. By treating stuttering matter-of-factly, accepting your clients’ stuttering, and not being upset or uncomfortable about stuttering, you lay the groundwork for your students to become desensitized and accept their own stuttering when they are ready. I do not typically have separate desensitization or acceptance goals for my students, but I work on both

throughout almost every session. We do a lot of voluntary stuttering during activities in therapy, which helps to desensitize students to their own stuttering. I highlight the lives of famous and successful people who stutter to normalize stuttering as not a big deal. (Lists of famous people who stutter can be found on the internet, such as this list on Wikipedia at https://en.wikipedia.org/wiki/List_of_stutterers). I encourage students to share their honest feelings about stuttering, even when those feelings may be negative or scary. I stutter myself, regularly, during therapy sessions. (I am not a person who stutters, so I always share with my students that I am practicing my stutter, and do it in a respectful way).

With elementary students, a powerful way to support stuttering acceptance is to expose children to other kids who also stutter. Watching videos of other children who stutter, or even better, meeting another child who stutters in person, can help a child to not feel isolated or alone. They know for certain that they are not the only kid who has a hard time talking!

Stuttering facts: refute the myths

Working in a public school with elementary age children, I am usually the first speech therapist to work with a child. I love being the first person to help a child understand their stuttering and take charge of their communication. Because I am usually the first professional the child talks with about stuttering, the child typically does not have accurate background knowledge about stuttering facts. I talked before about the need to learn what the child believes about the cause of his/her stuttering. It is very important for children to have accurate information about stuttering because there are a lot of stuttering myths that children and their families may hear and believe.

According to the National Stuttering Association, here are a few of the most common myths:

- ***People stutter because they are nervous.*** *Because fluent speakers occasionally become more disfluent when they are nervous or under stress, some people assume that people who stutter do so for the same reason. While people who stutter may be nervous because they stutter, nervousness is not the cause.*
- ***People who stutter are shy and self-conscious.*** *Children and adults who stutter often are hesitant to speak up, but they are not otherwise shy by nature. Once they come to terms with stuttering, people who stutter can be assertive and outspoken. Many have succeeded in leadership positions that require talking*
- ***Stuttering is a psychological disorder.*** *Emotional factors often accompany stuttering but it is not primarily a psychological condition. Stuttering treatment often includes counseling to help people who stutter deal with attitudes and fears that may be the result of stuttering.*
- ***People who stutter are less intelligent or capable.*** *People who stutter are disproving this every day. The stuttering community has its share of*

scientists, writers, and college professors. People who stutter have achieved success in every profession imaginable.

- ***Stuttering is caused by emotional trauma.*** *Some have suggested that a traumatic episode may trigger stuttering in a child who already is predisposed to it, but the general scientific consensus is that this is not usually the root cause of the disorder.*
- ***Stuttering is caused by bad parenting.*** *When a child stutters, it is not the parents' fault. Stress in a child's environment child can exacerbate stuttering, but is not the cause.*
- ***Stuttering is just a habit that people can break if they want to.*** *Although the manner in which people stutter may develop in certain patterns, the cause of stuttering itself is not due to a habit. Because stuttering is a neurological condition, many, if not most, people who stutter as older children or adults will continue to do so—in some fashion—even when they work very hard at changing their speech.*
- ***Children who stutter are imitating a stuttering parent or relative.*** *Stuttering is not contagious. Since stuttering often runs in families, however, children who have a parent or close relative who stutters may be at risk for stuttering themselves. This is due to shared genes, not imitation.*
- ***Forcing a left-handed child to become right-handed causes stuttering.*** *This was widely believed early in the 20th century but has been disproven in most studies since 1940. Although attempts to change handedness do not cause stuttering, the stress that resulted when a child was forced to switch hands may have exacerbated stuttering for some individuals.*
- ***Identifying or labeling a child as a stutterer results in chronic stuttering.*** *This was the premise of a famous study in 1939. The study was discredited decades ago, but this outdated theory still crops up occasionally. Today, we know that talking about stuttering does not cause a child to stutter.*
- *(Source: National Stuttering Association, n.d.)*

This list is not exhaustive, but covers the main myths I have encountered in my work. I always make sure to cover each of these misconceptions with children, providing factual information in place of the myth. My students may not have heard these myths yet in elementary school, but I want to make sure that if they do hear them later in life, they already know that they are false. Knowledge is power!

Teaching strategies

Now we come to the skill which many people begin with in therapy – fluency strategies. At the elementary level I do not differentiate between fluency shaping (techniques to maintain fluency) and stuttering modification (techniques to move through a stutter). They are different, but at an elementary level I find the distinction to be without relevance. Students of this age are still developing their ability to self-monitor. Because

of this, I just teach “speech strategies.” If students use a strategy before a stutter to stay fluent, they are doing fluency shaping. If they use a strategy in the middle of a stutter, they are doing stuttering modification. In either case, the same strategy will work. It is less complicated for younger students to just teach strategies, and allow them the freedom to use the strategies however works best for them in the moment.

I introduce speech strategies one at a time. (See Handout 6: Speech Strategies). I choose which strategy to target based on what kind of stuttering the student is presenting, and the reasons for those kinds of stuttering. If a student is using lots of repetitions (caused by going too fast through speech) I will choose a strategy that targets rate, such as the phrasing strategy. If a student is blocking (caused by too much tension) I will choose a strategy which targets tension, such as easy stuttering or breathy speech. For each strategy, I first give the rationale for using that specific strategy. I explain what the strategy does and why it would be a good fit for the student. I always base strategy choice on individual characteristics of a student’s stuttering. Then I model the strategy for them to hear how it works. The next several steps involve practicing the strategy in increasingly complex ways. Including role-play with the strategy is important, because without realistic practice, it is very unlikely that students will generalize a particular strategy into their everyday communication. If possible, also have students practice using their strategies in real situations around their school, at home, or in their communities. This stage of therapy may last several weeks, as we practice and refine a new strategy until students are able to use it independently.

The last step of teaching a strategy is evaluation – how well is the strategy working? For this step, it is essential to recognize WHO is doing the evaluation. It is not the job of the SLP to decide whether a strategy is working! Ask the child to evaluate the effectiveness of the strategy. Is the strategy easy to use? Do you like using it? Does it help you? Do you think you will use this strategy in real life? If you would like a second opinion, ask the child’s parent or teacher about the effectiveness of the strategy. If a child says that the strategy is effective, then that’s great! They have a good strategy. If they say they don’t like it/it doesn’t work/it feels weird/it’s too complicated/they always forget to use it, then you need to try a different strategy. The child is the expert on whether or not a strategy is a good fit; listen to them!

To give more structure to the child’s rating of a strategy, I use a 10-point scale and ask them where they would place the strategy (1=never use it, 10=use it all the time). Once the child tells me their number, I ask the follow-up question “Why did you choose that number?” Their answers give very important information for planning future therapy targets, and help students to get better at self-evaluation.

I have had several situations where I chose a strategy based on student needs, but my choice of strategy was not a good fit. One girl I worked with spoke very fast, and had many repetitions and blocks in her speech. Her speed was causing her to stutter, so I chose the *speed scale* strategy (see Handout 6). We worked on the speed scale for several weeks, and when she was using it, she was highly fluent. When we got to the evaluation step, however, she confessed that she hated using the strategy! She was

willing to humor me and try it out during speech therapy, but would *never* use the strategy in public. In the end she decided that her favorite strategy was breathy speech, and she used it constantly. Her fluency improved from severe to mild/moderate, and she was happy with her speech.

Another time I worked with a 6th grade boy, and chose easy stuttering as a good strategy to work on. Again, after several weeks I checked in with him about how he felt about the strategy. He was very averse to letting other people hear his stuttering, and was too embarrassed to use the strategy even with his best friends. We decided to try phrasing instead, and it became his best strategy. He was willing to use phrasing, and he liked how it gave his voice more expression when he was reading out loud in class. Again, he was the expert on what would work in his speech. Because I work to have a trust-based relationship with my students, they are willing to give each strategy an honest shake, even if it is tricky or feels strange to them at first. To respect their openness I make sure they know that in the end, they are in charge of whether to use a strategy outside of the therapy room. We will continue to try out strategies until they have at least **two strategies** that they like to use.

Why two strategies? It is typical for a younger student who stutters to find one strategy that works for them, and use that strategy exclusively. However, children are constantly growing and changing. Stuttering normally changes over time, and especially is likely to change as children get older. I tell my students this, because I want them to be prepared for the probability that their stuttering will morph, and perhaps their favorite strategy will not work as well as it did before. When that happens they need to have a backup strategy to use, to prevent them from just being stuck. Even though the majority of my students will consistently use only their favorite strategy, we always keep working until we also have a "back pocket strategy" to pull out if the first strategy doesn't work.

Steps to teach speech strategies

1. Choose a strategy based on specific characteristics of the student's stuttering
2. Give rationale for the strategy
3. Model the strategy
4. Student practices the strategy in words/phrases
5. Student practices the strategy while reading
6. Student practices the strategy in conversation, or while playing a game
7. Role play with the student using the strategy in real-life situations
8. Student uses the strategy in real-life situations
9. Student evaluates the effectiveness of the strategy
10. Continue until the student has at least two strong strategies

Self-advocacy and handling social situations

Teaching self-advocacy begins when therapy begins. Students need to be able to explain their needs to teachers, friends, and community members. They may need to advocate for themselves to family members who do not understand about stuttering. For

general knowledge about stuttering, developing an informational presentation about stuttering is a strong activity. The student can present it themselves, or can help with the creation of the presentation and then answer questions after the SLP presents it to their class. Being in the role of teacher or expert can be fun for the student, and can raise awareness of their peers to fend off some of the questions or teasing that might happen if stuttering is not understood. Even if the student decides not to share their presentation, the process of creating it can reinforce facts about stuttering and help the student to feel more confident in what they know about their own stuttering.

Role play is another essential tool for addressing self-advocacy and social situations (Hamilton & Watson 2015). Any situation that may be tricky should be role-played by both the SLP and the child to figure out good and bad ways to respond in each situation. To determine what scenarios to use for role-play, you will need to be talking with your student about what difficulties they are experiencing in their daily life, or what things they are afraid might happen. Check-in about any teasing or bullying that has happened in the past, or what the student thinks might happen in the future. Ask about interactions with family members (especially siblings or extended family, who may like to tease). Any situation which has happened, or might happen, is worth role-playing to practice a response that the child can feel confident using.

Activities for building self-advocacy skills:

- Create a classroom presentation to teach kids about stuttering (either student or SLP can present to the class)
- Role play how to handle teasing (specific scenarios based on what your student has experienced or is afraid of)
- Role play what to say to a friend who asks why the student talks funny.
- Role play how to ask a teacher for extra time to give an answer in class.
- Role play ANY situation that is causing difficulty!

Family counseling

Children who stutter need to have accurate knowledge about stuttering, and support to develop positive attitudes and ways to cope with social situations around stuttering. Their families will also need this kind of support. As you are teaching your students about stuttering, its causes, and strategies to manage stuttering, think about ways to include families in this process. Parents may only have read internet articles about stuttering (which vary WIDELY in their accuracy!). They may have heard and believed many of the common myths about stuttering, or even believe that they did something that caused their child to stutter. It is very common for parents to feel guilty about their child's stuttering. It is also common for parents to be in denial about the stuttering – believing that the child will "grow out of it" or that it is just a phase. Or, that the child needs to "just concentrate and breathe properly" and then they will speak fluently. Denial is part of the grieving process, which may occur also. Be prepared to help guide your parents to handle guilt or grief if they arise.

Evaluation or IEP/treatment meetings are good times to share factual information about stuttering, both with parents and teachers. They are looking to you to be the expert, so be ready! Share common myths and the reasons that they are incorrect. Tell parents and teachers the things they can do to help their child so they can take an active role in addressing stuttering. Most importantly, remember to share both that there is no cure for stuttering, AND that stuttering treatment is very effective at helping people who stutter to lead normal, happy lives. I have worked with several families who did not know until they worked with me that stuttering was not going to go away. They thought that I was going to cure their child of stuttering, and were shocked when I told them that persistent stuttering is permanent. Families need to have realistic expectations about what stuttering therapy can, and cannot, accomplish. They also need hope that their child will be able to live a normal and happy life. Make sure to share this information clearly and frequently.

Another avenue to help parents learn more about stuttering is through speech homework between sessions. Did your student finish learning about the speech machine? Have them retell how the speech machine works to their parents at home during the week. Is your student learning stuttering facts? Have them make a quiz to give to their parents at home. Including parents in the therapy process both keeps them in the loop, and gives you an opportunity to support them with the same knowledge that you are teaching to their child.

Collaboration with families and other professionals

SLPs are the experts on stuttering, but because it is multifaceted, there are many situations where we need to collaborate with other people. The families of our students are our most common collaborators, to help students remember to use speech strategies, and support positive attitudes and responses to stuttering. If there is any bullying or teasing happening you may also want to collaborate with the school psychologist or principal (if the teasing is happening at school) or with families if the teasing is happening at home or in the community. A child's teacher is another frequent collaborator, as the child may need classroom accommodations in order to feel confident communicating at school. In a few situations you may suggest that families seek family counseling if there are other family issues that are stressful to the child. Issues such as divorce, moving, having a new baby, or any family trauma may trigger an increase in stuttering for the child, which is best treated by addressing the issue causing the stress. Never be afraid to suggest family counseling if the things a family is experiencing are beyond your ability to advise.

The last collaborator is the most important – the student. I view students as the experts on their own speech. They will live with their stuttering their whole lives, and have already lived with it for a significant amount of time by the time they are in elementary school. If you are in doubt about what to do next in therapy, whether a strategy is working, or what should be the priority issue for treatment for your student, ask the student directly. She or he is your best source of information about their stuttering. Trust your students, and they will trust you.

Progress monitoring

Progress monitoring is a continual process. You should always have a general idea of your goals in stuttering therapy, and how your clients are progressing to meet those goals. I typically have 2-3 goals for each child, focusing on knowledge about stuttering, using strategies to increase fluency (while speaking and/or reading), and self-advocacy/social factors if they are a particular concern for the child. I do not take objective data every session, but at least every other session I take an informal disfluency count while the student is talking or reading. I keep track of 100 words, marking an "X" for each disfluency, which gives me a running percentage of disfluent words from session to session. (You could do the same with 100 syllables, but you'd probably have to record it in order to be accurate. I find 100-word samples much easier to obtain and accurately record.) I give a "stuttering facts quiz" about once per semester to help review stuttering facts and makes sure students are retaining the facts we learn during therapy sessions. My data is a combination of objective measures (percent disfluent, percent correct on a stuttering quiz) combined with subjective descriptions of what we discussed in therapy and the student's comments or reactions about their stuttering. Paying attention to the objective data is important, but it is just as important to record more subjective reactions to stuttering (e.g.: "Student said he stuttered at lunch yesterday, but it didn't bother him.")

When to dismiss?

Stuttering therapy for school age children should be limited in length. The first time a child receives therapy it may take some time to establish the background knowledge and help a child learn to use fluency strategies effectively. It may also take their family some time to accept stuttering in their child, and adjust to different ways of communicating. Once that is established, I am guided by the child for when they are ready to manage stuttering on their own. The child should have at least two speech strategies that work, and be able to use them independently. The child should have a solid knowledge about stuttering and their own speech production. The child should feel confident talking in a variety of situations, and be able to explain stuttering and advocate for themselves if they need. Once those factors are there, a child is ready to take a break from speech therapy.

Realistically, a child may need more than one stint of speech therapy during their life. Stuttering as a child is different than stuttering as a teenager, which is different than stuttering as an adult. However, I do not recommend that a child stay continuously in therapy until adulthood! It would be boring for the child, and difficult for the therapist, to continue to provide therapy during the plateau times. I recommend that children stay in therapy until they feel they are in control of their speech, and then "take a break" until something changes. Coming back to therapy later on is likely to take less time than the initial treatment, and can focus on addressing whatever changes have happened since the child was last in therapy.

Another reason to exit a child from therapy for stuttering is if the child has plateaued and is no longer motivated or making progress. Ideally they will have strong management skills by the time this happens, but for some students they may get bored of therapy before you (or their parents) feel that they are ready to manage their stuttering on their own. If this happens, it is probably best to take a break from therapy, even if there are still skills to be developed. Good therapy for stuttering depends on the student being motivated to change their speaking. If a student is no longer motivated, the amount of progress you can make will be limited. It is better to take the pressure off and wait until the child is internally motivated to change.

When exiting children from therapy, I take the opportunity to reinforce important knowledge about stuttering. I remind students and their families that stuttering is permanent, but that the student has the skills to manage their stuttering and be in charge of their speech. We talk about how stuttering can go up and down in cycles, and look forward to any triggers that may be happening in their life in the next few years. (The beginning of middle- or high-school is a very common trigger for an increase in stuttering). We review the student's favorite strategies, and I let them know that they can always come back to therapy for a "refresher" to help them adjust to any changes if they have problems in the future. Then they graduate from speech therapy and go off to manage their fluency on their own.

Part V – Differences in therapy with middle and high school students

Middle and high school students are in a unique place in life. Social expectations are changing, school expectations are changing, bodies are changing, and emotions can be crazy for a time. Students in grades 6-12 are in between being children and adults. Because of this, therapy for middle and high school students who stutter will be a hybrid between therapy appropriate for a younger child and the therapy that would be appropriate for an adult. The language you use to talk about stuttering should become more precise, and the activities more mature. Students in middle and high school may feel that they are "almost adults", but they are still children. Walking the line between childhood and adulthood is something that you will need to do with your older students who stutter, to provide appropriate and effective therapy for stuttering.

Previous therapy

In grades 6-12, you will see a mix of students who have previously received speech therapy, students who are continuing therapy, and students who previously received therapy and are coming back. If you are the first therapist to work with an older student, you will start at the beginning just as you do with a younger student – understanding the speech mechanism (the term I use instead of "speech machine" with older students), learning about stuttering, and establishing at least two speech strategies for managing fluency. For other older students you will not be the first speech therapist to work with them, so it will be important in your evaluation to identify the student's existing skills for managing stuttering. You will need to find where students are currently at, to ensure that you are working on relevant skills.

Motivation

The motivation for receiving speech therapy becomes more important as students age. An 8-year-old child may not want to go to speech therapy, but if you and his parents tell him he should, and it is reasonably fun, he will probably put up with it. Tell a 14-year-old the same thing and you may get a very different response! For older children, it is not enough for you or another adult to think that they should be in therapy. Therapy with teenagers is very similar to therapy with adults in this respect. The student needs to *want* to change their speech in order for therapy to be effective. If a middle or high school student does not want to work on their speech, I will recommend to their parents that they wait until later.

If a student does not want speech therapy, it is worth probing to find out *why* they feel that way. Sometimes it is possible to change something to eliminate the barrier. For example, I once had a student who told me he did not want to come to speech anymore. When I asked him why, I found out that it was because he had to leave school early to come and see me, and he did not like missing the end of the school day with his friends every week. In his case, I was able to work out a deal between him and his parents that he only came twice a month instead of every week, but he had to commit to work hard during the times he came. For other students it may be that they are tired of

working on their speech, they feel comfortable with their speech and don't feel like they need to change it, or that they want to focus on other things in their life. If students express these kind of reasons for not wanting to be in therapy, please respect their choice. It is not useful to force a middle or high school student into speech therapy if they do not want to come. They can always come back later if their motivation changes.

Therapeutic Alliance

I stressed the importance of the therapeutic alliance when talking about therapy with elementary aged students, but I must repeat the importance of it here. The older a student gets, the more important it is for them to trust you as their therapist, and believe that you a) care about them, and b) are able to help them. Older students expect to be treated with respect, and are able partners with you in the therapy process.

This does not mean that you as a therapist need to present yourself as "cool" or become buddies with your middle and high school students. Adolescents are very good at identifying a fake, and do not appreciate adults who try to manipulate them. It is much better to be yourself. You are a professional, and you have the tools to help middle and high school students become better communicators. For a student who is bothered by their stuttering that is a powerful motivator. Let them know that you are able to help them become more fluent, and that you care whether they succeed. Focus on identifying the things about their stuttering that are worrying them the most. When students know that you are competent, that you care, and that you are focused on their personal needs, you will be able to establish a strong therapeutic alliance.

Setting therapy goals

Growing older means that students will have different life pressures and communication demands. Middle and high school students rely less and less on their parents as they interact with teachers and peers, so focusing on self-advocacy around stuttering is often needed. Increasing stress during adolescence can trigger an increase in stuttering, so students may need to refresh their speech strategies, or learn new strategies if their previous strategies are no longer working. Social connections are particularly important in the lives of middle and high school students, which can make stuttering become a much bigger issue than when students are younger. And of course, intense teenage emotions can exacerbate any negative feelings that a student has about themselves as a person who stutters. Almost anything might change during adolescence, so be prepared to be flexible and comprehensive in your goal setting.

<u>Cognitive area</u>

- **Update terminology**
  Students in middle and high school are ready for anatomical terms when they are learning about stuttering. *Trachea* should replace *breathing pipes*, *larynx* should replace *voice box*, etc. Use clear and accurate terminology when talking about stuttering with this age, making sure to explain any terms which they do not yet know.

- **Review triggers for stuttering**
  One issue that frequently changes as students grow is stuttering triggers. Stuttering can be triggered by situations, emotions, particular people, or particular words, and all of these triggers may change in adolescence. Even if a student knew their triggers before, it is important to check back on them and notice if any have changed. This knowledge about their own stuttering can help students to understand their stuttering, and feel prepared when they meet one of their triggers. Many students experience a spike in their stuttering when they enter middle or high school, which can feel alarming and out of control. Helping students understand how their stuttering can change is an important part of therapy in middle and high school.

- **Keep a stuttering journal**
  Older students have stronger literacy skills, as well as greater ability to self-analyze. As part of self-exploration, it can be very useful to have the student keep a stuttering log to help them learn about their stuttering. A stuttering journal or log can take many forms. It could be in narrative form, writing a few sentences about each day. It could be a rating scale showing how much difficulty the student had each day on a scale of 1-10. It could be a list of every hard block the student had during the week. Adolescent students are often very interested in learning about themselves, so use that interest to help them figure out their stuttering by keeping a journal or log.

<u>Affective area</u>

- **Network with other people who stutter**
  Social connections become more and more important as students get older. This is true in their lives, and also in their therapy. Grouping students who stutter together for therapy is ideal, but may not be possible if a student is the only person who stutters at their school. If students do not have access to other people who stutter in person, use the internet to find connections virtually. YouTube has many videos made by people who stutter, and many of them are vlogs (video blogs) where young adults who stutter describe their stuttering, problems they are having, and how they feel about stuttering. It is common for people to comment on videos and have conversations with the author of the video about stuttering.

  “It gets better” is a slogan used within the LGBTQ community to help teenagers struggling with their sexual identity to understand that the difficulties they feel while they are teenagers are temporary, and will improve in the future. This is also true about stuttering. Struggling with stuttering can make normal teenage angst even more poignant. Keep this in mind as you work with thoughts and feelings about stuttering with

teenagers. They need to hear from us, and also from other people who stutter, that things will get better.

The FRIENDS Association (http://www.friendswhostutter.org/) is a national group that sponsors an annual 3-day conference, as well as local 1-day events. The National Stuttering Association also hosts stuttering groups for adults, families and teens (http://www.westutter.org/find-an-nsa-meeting-near-you/). There may be additional stuttering groups hosted through your local university or hospital, depending on your area. There are also several summer camp programs for children and teens who stutter, such as Camp Say (http://say.org/camp/), which can help teenagers to make friends with other teens who stutter, share stories, and support each other. Take advantage of as many of these sorts of resources as you can, particularly for teenage students.

- **Collaborate to support positive feelings and attitudes**
  As the student's SLP, you will be checking in about their feelings about stuttering regularly. Always respect the privacy of your students, and do not share their personal feelings with other people without their permission. But, do encourage *them* to share their feelings with their families and friends. Also, if you begin hearing lots of negative feelings around stuttering (*I just hate the way I talk! I can't stand my stuttering. I wish I could just stop talking…*) it may be appropriate to bring in other professionals such as the school counselor or a mental health counselor.

- **Journaling**
  As previously mentioned, journaling can increase awareness of stuttering; it can also help students to understand their feelings about stuttering. Some students may enjoy journaling, blogging, or vlogging (video blogging) about their stuttering as a way to express their feelings about stuttering. This can be done during therapy sessions, but often works best as "homework" to do in between sessions. Keep in mind that a journal may be a very private document, and respect the privacy of your students if they chose to journal but don't want to share their journal with other people afterwards.

Linguistic area

The main difference in the linguistic area for older students is that teenagers use more complicated language than younger children. Teenagers use more multisyllable words, more technical terms, and more complex grammar than elementary aged kids. This may trigger increased stuttering, if the stuttering is influenced by linguistic complexity. The treatment approach would likely remain the same, but it is important for students to be aware of their triggers, and understand the reasons why they are experiencing more stuttering as they grow.

Motor area

- **Tension identification**
  One way teenagers differ from elementary age students is a significant increase in self-awareness and ability to self-monitor. Younger students typically do not have this ability, but older students are developing self-awareness at a rapid rate. This allows middle and high school students to focus more closely on their own bodies, and become more aware of how they stutter.

  Teenagers who stutter are ready to focus on tension identification as part of stuttering therapy. Start with exercises where you tense a specific body part –hands or arms are an easy place to begin – and practice tensing and relaxing each body part. When students can reliably tense and relax different body parts, move to tensing and relaxing different parts of their speech mechanism (lips, tongue, throat, lungs). Then explore the student's actual stuttering (either in the moment or using video) and identify where the student may be feeling tension. These exercises are particularly useful for students who experience lots of blocking in their speech. Work towards a point where a student can "pause" in the middle of a stutter, notice where in their body they have tension, and then intentionally relax that portion of their body.

- **Resisting time pressure**
  Time pressure is a very common trigger for stuttering. Time pressure is when a student feels like they need to say something quickly. It happens when people ask questions quickly, when there are lots of interruptions or a chaotic situation, or when the listener becomes impatient. It can also happen when a conversation partner speaks quickly in general; it is natural to match the speed of the person you are speaking with, so a fast speaker will pressure a child who stutters to speak more quickly without intending to.

  When students are younger, my primary way to address time pressure is to work with their parents and teachers to slow down their own speech so that the child can feel more relaxed. Elementary age students are usually not aware enough of the pressure to analyze it. But older students are gaining that awareness, so working on recognizing and resisting time pressure is a great activity. Work on a strategy that targets rate (such as the speed scale or stretchy words in Handout 6), and then have the student practice using it when you are putting on some time pressure. Try using the strategy while playing a timed game (e.g. Taboo or Blurt), or while you are interrupting the student. Time pressure comes up a lot in real life, and being aware of it and able to resist it is a very important skill for an older student to learn.

- **Video recording**

Teenagers are often lamented to be “glued to their screens,” meaning that they spend more time with their tablets and smartphones than with people. This can be an advantage in therapy with middle and high school students if you can harness their technology to increase their awareness of their own stuttering. Video recording, both during sessions to practice and evaluate strategies, and in between sessions to help generalize and practice new skills, is a great therapy aid. Use the camera on the student’s smartphone to record themselves making a #selfiemovie! You should be willing to record yourself and analyze your own speech during a session if you are asking your students to do the same. Some students will not like to see themselves on video, but the benefits of video recording are hard to overstate. Increased awareness, ability to analyze stuttered moments and the effectiveness of strategies, and decreased sensitivity around stuttering are only a few of the benefits. For students who are particularly averse to video recording, it is sometimes possible to compromise on audio recording instead.

Social area

- **Advertising**
  “Advertising” stuttering is when a person who stutters lets people know that they stutter. A student can advertise their stuttering in several ways. One way is to simply tell another person that they stutter. This can be useful with friends and teachers who will interact with the student many times. It gives others a chance to ask the student about stuttering, and have a brief conversation about what to do if the student starts stuttering during a conversation. Use role play during therapy sessions to practice this kind of advertising. Have the student choose who they want to tell about their stuttering, and practice scripts of how the conversation might go.

  Another way to advertise is to put in some stuttering on purpose early in a conversation. The student might pick an easy word and put in some re-re-repetitions in a spot that she or he feels comfortable. This kind of advertising is more subtle, but still very effective. If a person is worried about “messing up” and stuttering, then the fastest way to relieve the anxiety is to get the stuttering out of the way! This kind of advertising also needs to be role played so that students are comfortable using it, and know when they may want to stutter on purpose.

- **Advocating for accommodations with teachers**
  Middle and high school students are increasingly independent in their interactions with their teachers. This means that they will need to learn skills for advocating for accommodations in class for themselves. Common accommodations include giving oral reports in a small group or 1:1 with the teacher, having more time to answer oral questions, being called on in a specific order to answer questions (some students find it

easier to be called on first, others prefer to be called on later), or simply having a conversation with the teacher so that she/he understands about stuttering and will not put pressure on a student to “spit it out.” Again, these skills should be practiced through role play in therapy before the student is asked to use these skills with one of their teachers.

- **Community interactions: phone calls, making appointments, ordering food**
  Older students make many more phone calls than younger students, and as they get older they make more and more phone calls for to strangers (getting a pizza delivered, calling a business to ask a question, making appointments, etc.). Using the telephone is a difficult skill for many people who stutter, because without the visual cues, the listener may not realize that the caller is stuttering. Many people who stutter have stories about their listener hanging up the phone because they thought it was a bad connection or a prank call, when the person calling was simply stuttering!

  Because of this anxiety, it is important to practice phone skills. Identify which phone calls are the hardest, and practice them. Practice calling family, friends, and even local business to ask questions. Desensitization and practice are the keys to conquering the telephone. Don’t let your students be stuck using only text messaging to communicate!

  Ordering food is another thing that older students will encounter more often than younger students. It is normal for the father of an 8-year-old to order for him; it is not normal for the same father to order for his 17-year-old daughter! Anxiety is common around ordering food in restaurants, and unless the student plans to eat at home for the rest of their life, or have their friends and family order for them, will need to be tackled. I had one 6th grade boy tell me that he was ordering something in a Mexican restaurant, and he blocked on the word in English. Fortunately for him both he and the server also spoke Spanish, so he simply switched languages in order to get his food. Other students have told me that they order something else if they get stuck in a stutter while ordering food. Students need to have skills for ordering the food they want, both at a sit-down restaurant and in a drive-through. This requires… can you guess?... role play. Look up menus on the internet, and practice ordering.

- **Job interviews**
  Job interviews require special attention, as they are particularly important in the future of most of our students. Interviews are also particularly stressful and likely to trigger stuttering. To have a successful interview, students will need to be comfortable with advertising their stutter, resisting time pressure, using their strategies, AND giving thoughtful answers to interviewer questions. That’s a tall order! Rehearsing for a job interview is a great way to help your students succeed in therapy and in life. Role play

possible questions the interviewer might ask, role play whether the student wants to let the interviewer know that they stutter, and review which strategy (or strategies) would work best if a big stutter comes up unexpectedly. Invite other teachers or adults in to your session to play the role of interviewer, if your student agrees. The best way to be good at interviewing is to practice; this is no different for a teenager who stutters.

- **Dating**
  Dating and relationships are another expanding area for older students. Depending on the student, you may want to include role play situations in therapy around asking someone out, telling someone you like that you stutter, or trouble-shooting specific situations. Some students will appreciate this; others may not. Use your best judgment about what will be appropriate in your setting, but be aware that this is an area with a large impact on the social well-being of many teenagers.

When to dismiss?

The criteria for dismissal with older students is the same as for younger students. A student should have a comprehensive knowledge about stuttering in general, and their stuttering in particular. They should feel confident in their communication skills. They should know at least two strategies to manage their fluency, and be good at using those strategies in different situations. They should be able to navigate social situations in their life independently. When a middle or high school student can do these things, they are ready to exit therapy.

Additionally, if a student is no longer motivated to change their speech, or not bothered by their stuttering, it is time to take a break from therapy. Remind students that they can always come back in the future if something changes in their life that makes them want or need more therapy. Celebrate the gains they have made, and the control they have over their own speech!

REFERENCES/BIBLIOGRAPHY

Ambrose, N., & Yairi, E. (1999). Normative Disfluency Data for Early Childhood Stuttering. *Journal of Speech Language and Hearing Research,* 895-895.

Anderson, J., Pellowski, M., Conture, E., Kelly, E. (2003). Temperamental Characteristics of Young Children Who Stutter. *Journal of Speech, Language, and Hearing Research,* 1221-1233.

Brutten, G., & Vanryckeghem, M. (2007). BAB: Behavior Assessment Battery for School-Age Children Who Stutter. San Diego, CA: Plural Publishing.

Chang, S. (2011, August 23). Using Brain Imaging to Unravel the Mysteries of Stuttering. The Dana Foundation. Retrieved June 29, 2015, from http://dana.org/Cerebrum/2011/Using_Brain_Imaging_to_Unravel_the_Mysteries_of_Stuttering/

Conture, E., Curlee, R., Gregory, H., Guitar, B., Nelson, L., Perkins, W., Williams, D. (2010). Stuttering and your child: Questions and answers (4th ed.). Memphis, Tenn.: Stuttering Foundation of America.

Games, D. (Ed.). (n.d.). Fluency Friday Diagnostic Tools. Retrieved July 22, 2015, from http://www.fluencyfriday.org/diagnostic.html

Hamilton, S., & Watson, J. (2015, June). Diagnosis and Treatment of Children and Adolescents Who Stutter: Practical Strategies. *The Western Workshop*. Lecture sponsored by The Stuttering Foundation, hosted by Pacific University, Forest Grove, Oregon.

Healey, E., Trautman, L., & Susca, M. (2004). Clinical Applications of a Multidimensional Approach for the Assessment and Treatment of Stuttering. *Contemporary Issues in Communication Sciences and Disorders, 31*, 40-48.

Healey, E. (2012). The Cognitive, Affective, Linguistic, Motor, and Social (CALMS) Assessment for School-Age Children Who Stutter: Clinician's Manual. Lincoln, Nebraska: The Board of Regents of the University of Nebraska.

Lambert, M., & Barley, D. (2001). Research summary on the therapeutic relationship and psychotherapy outcome. *Psychotherapy: Theory, Research, Practice, Training, 38*(4), 357-361.

National Institutes of Health. (2010). Researchers Discover First Genes for Stuttering. Retrieved June 25, 2015, from http://www.nih.gov/news/health/feb2010/nidcd-10.htm

National Stuttering Association (n.d.). Common Myths about Stuttering. Retrieved July 30, 2015, from http://www.westutter.org/who-we-help/common-myths-about-stuttering/

Raj, E. (2013, May 27). Are You Talking About Speech Helpers in Speech Therapy? Retrieved July 26, 2015, from http://erikxraj.com/blog/are-you-talking-about-speech-helpers-in-speech-therapy-free-download

Riley, G. (2009). Stuttering Severity Instrument (Fourth ed.). Austin, Texas: Pro-Ed.

The Therapeutic Alliance. (n.d.). Retrieved July 22, 2015, from http://www.supportingsafetherapy.org/therapists/therapeutic-relationship/the-therapeutic-alliance

Vanryckeghem, M. (1995). The Communication Attitude Test: A concordancy investigation of stuttering and nonstuttering children and their parents. *Journal of Fluency Disorders, 20*(2), 191-203.

Yairi, E., & Ambrose, N. (2005). Early Childhood Stuttering: For Clinicians By Clinicians. Austin, Texas: Pro-Ed.

Yairi, E. (2005). Research on Incidence and Prevalence of Stuttering. Retrieved June 24, 2015 from www.stutteringhelp.org.

Yaruss, J., & Quesal, R. (2010). OASES: Overall assessment of the speaker's experience of stuttering manual ; OASES-S, for ages 7-12, OASES-T, for ages 13-17, OASES-A, for ages 18 and above. Bloomington, Minn: Pearson.

Zebrowski, P., & Kelly, E. (2002). Manual of stuttering intervention. Clifton Park, N.Y.: Singular.

Zebrowski, P. (2007). Treatment factors that influence therapy outcomes of children who stutter. In Conture, E., & Curlee, R. (Eds) *Stuttering and Related Disorders of Fluency*, 3rd edition, Thieme, N.Y. (pp. 23-38).

School-Age Stuttering: Assessment and Treatment

PDH Academy Course # TBD
3 CE HOURS

FINAL EXAM

1. Eye blinks, twitching or tapping body parts, stamping, facial grimaces, and the like are examples of _____.
   - **a. Escape behaviors**
   - b. Core stuttering behaviors
   - c. Avoidance behaviors
   - d. Fluency strategies

2. In 2010, researchers with the National Institutes of Health identified _____ genes as a source of stuttering in a large Pakistani family, and found the same _____ gene mutations in some people in the United States and England who also stuttered.
   - a. 2
   - **b. 3**
   - c. 4
   - d. 5

3. Under Healey, Trautman & Susca's CALMS model, "A," or "Affective," refers to _____.
   - a. The impact stuttering is having on a person in relation to other people
   - b. What a person knows about stuttering
   - **c. How a person feels about their stuttering and communication**
   - d. A person's innate speech and language abilities

4. In considering types of stuttering, elongating a sound ("I wwwwwwwant a hamburger. Iiiiiii want a hamburger. I want a hhhhhhamburger.") is called _____.
   - a. Interjection
   - **b. Prolongation**
   - c. Repetition
   - d. Block

5. Questions such as "Do you stutter?" or "Do your words ever get stuck when you talk?" are asked during _____of a stuttering assessment.
   - a. Step Five: Informal and additional measures
   - b. Step Four: Standardized tests
   - c. Step Three: Background information

d. Step Two: Screening

6. Questions such as “Does anyone else in the family stutter?" and "Does this student avoid talking in your class?” are asked during _____of a stuttering assessment.

a. Step Five: Informal and additional measures
b. Step Four: Standardized tests
c. Step Three: Background information
d. Step Two: Screening

7. “Strengths are that it focuses explicitly on the experience of stuttering – the feelings and social impact that stuttering may have on an individual. Weaknesses are that it is limited in scope, only looking at the feelings and attitudes, and not providing guidance on the motor patterns involved in stuttering.” This statement evaluates which standardized measure of stuttering?

a. Overall Assessment of the Speaker’s Experience of Stuttering (OASES)
b. Stuttering Severity Instrument, Fourth Edition (SSI-4)
c. CALMS assessment (CALMS)
d. Behavior Assessment Battery for School-Age Children Who Stutter (BAB)

8. When using the CALMS multifactorial model as a guideline for building a complete picture of the student’s stuttering and the impact stuttering is having on the student, the _____ component encompasses what a student knows about stuttering in general (facts) as well as what they know about their own stuttering (identification, strategies).

a. Linguistic
b. Motor
c. Cognitive
d. Social

9. A fluency sample should be _____.

a. Exactly 250 syllables
b. A maximum of 50 words
c. At least 300 words
d. At least 100 words, or 200 syllables

10. A survey of studies on the efficacy of stuttering therapy found that the therapeutic relationship accounts for about _____ of the change observed during stuttering therapy (Zebrowski 2007).

a. 30%
b. 25%
c. 20%
d. 15%

11. Every fluency client should have specific goals identified for their therapy. When using the CALMS model, an example of a _____ area goal is “Student will use their favorite strategy while leaving a voicemail (for the SLP or family member).”

a. Social
b. Motor
c. Affective
d. Linguistic

12. “_____” is a term often used to describe speech production to elementary age children, framing the different parts of your body as a machine that makes speech, and each of the different anatomical structures as a part of that machine.

a. Buy-In
b. The Speech Machine
c. Individual Education Program
d. Stuttering Group

13. By treating stuttering matter-of-factly, accepting clients’ stuttering, and not being upset or uncomfortable about stuttering, the SLP is conveying _____.

a. Basic knowledge about speech production
b. fluency strategies
c. Self-exploration
d. Stuttering desensitization and acceptance

14. The myth: “Stuttering is just a habit that people can break if they want to.” A rebuttal: _____.

a. A traumatic episode may trigger stuttering in a child who already is predisposed to it
b. The manner in which people stutter may develop in certain patterns, so the cause of stuttering itself is almost certainly due to a habit
c. Because stuttering is a neurological condition, many, if not most, people who stutter as older children or adults will continue to do so - in some fashion - even when they work very hard at changing their speech
d. Children and adults who stutter are shy by nature and often are hesitant to speak up

15. When introducing fluency strategies, role-play is important because _____.

a. Without realistic practice, it is very unlikely that students will generalize a particular strategy into their everyday communication
b. Stuttering normally changes over time, and especially is likely to change as

children get older
c. Talking about stuttering may cause a child's stutter to intensify
d. Stress in a child's environment causes stuttering

16. SLPs are the experts on stuttering, but because it is multifaceted, there are many situations where we need to collaborate with other people. Collaborators _____.
a. Should only be professionals, such as other SLPs and family counselors
b. Are ineffective if bullying and teasing are occurring
c. Include the child's family, teachers, and the child him/herself
d. Should disregard information provided by the child

17. Therapy with teenagers is very similar to therapy with adults in that _____.
a. If you tell them they should be in therapy, they will probably put up with it
b. Nothing can be done to eliminate the barrier if they do not want therapy
c. It is enough for an SLP or another adult to think that they should be in therapy
d. The student needs to *want* to change their speech in order for therapy to be effective

18. "Older students have stronger literacy skills, as well as greater ability to self-analyze. As part of self-exploration, it can be very useful to have the student keep a stuttering log to help them learn about their stuttering." This is an example of goal-setting in the _____area.
a. Linguistic
b. Cognitive
c. Motor
d. Social

19. Teenagers use more multisyllable words, more technical terms, and more complex grammar than elementary aged kids. This may trigger increased stuttering, if the stuttering is influenced by _____ complexity.
a. Motor
b. Linguistic
c. Affective
d. Cognitive

20. Middle and high school students are increasingly independent in their interactions with their teachers. This means that they will need to learn skills for advocating for accommodations in class for themselves. Common accommodations include _____.
a. Giving oral reports in a small group or 1:1 with the teacher
b. Requesting that the teacher not call on the student
c. Eliminating the need to answer oral questions

d. Making phone calls