

**Stuttering Therapy Workshop**

Ashlen Thomason, Ph.D., CCC-SLP

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**Objectives today:**

- Fluency Shaping
- Stuttering Modification
- Counseling components
- Goal-writing
- Data collection
- Ideas for therapy activities

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**Holistic Treatment**

- Stuttering does not exist in a vacuum.
- “You can’t treat the head and hope the heart will follow.” – Dr. Robert Logan
- Changing speech behaviors cannot be done without addressing the emotional components of stuttering

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## Goals of Treatment

- **Speech:**
  - Reduce frequency of stuttering
  - Reduce the abnormality of stuttering
  - Increase communication abilities
- **Emotions:**
  - Reduce negative feelings, thoughts, and attitudes
  - Reduce avoidance
  - Increase knowledge
  - Create fluency-facilitating environment

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## Affective Components

- **Educating**
  - Self-advocacy
  - Reduces shame and guilt
- **Stuttering in the media**
  - Not alone
  - Successful PWS
- **Highs & Lows**
  - Accountability
  - Platform for sharing
  - Exploring bullying and avoidance without shame

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## Becoming the SLP

- Recall strategies
- Accountability
- Self-ratings with performance
- Keeping up with cycles
- Reporting back on homework
- Teaching family members

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## Counseling

- Mental rehearsal
- Talking through preparation
- Exploring worst case scenarios
- Teaching positive self-talk
- Slow fear system vs. fast fear system
- Adversity
  - Fortune-telling, mind-reading, catastrophizing
  - Examine the evidence for and against

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## Caregiver Counseling

- Education
  - Address guilt and self-blame
- Home programming
- Family-centered goal planning
- Caregiver updates
  - Cycling
  - Practice
  - Challenges
  - Progress

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## Two Main Approaches for Addressing Speech

- **Fluency-enhancing techniques**
  - Easy onset of phonation
  - Slowed rate
  - Continuous phonation
- **Stuttering modification**
  - Preparatory set
  - Pull-outs/ slides
  - Cancellations

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### Fluency-Enhancing vs. Stuttering Modification

#### Fluency Enhancing Techniques

- Goal: Speak more fluently by eliminating opportunities for stuttering events to arise
- Alter 100% of speech
- Can be taught directly or picked up through modeling
- Easy for young patients and parents to learn
- Patients often complain about speech sounding less natural

#### Stuttering Modification

- Goal: Stuttering more fluently by modifying stuttering events to increase the "flow" of speech
- Alter stuttering events only
- Must be taught directly
- Difficult for young patients and parents to learn
- Perceptually, most observers will notice that the patient stutters

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### Fluency Enhancing Techniques: **Easy Onset**

- Start a stream of air through the vocal folds before beginning phonation.
- Gradually make the audible /h/ more subtle and quiet without sacrificing fluency.
- Cues:
  - Use a whispered "h" to begin your utterances
  - Don't talk at the top of your air
  - Start with the /h/ sound

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### Fluency Enhancing Techniques: **Slowed Rate**

- Most people speak at 4-5 words per second.
- Yairi recommends that the speech of preschoolers be reduced to 1-2 words per second in the beginning stages of therapy.
- Start at a very slow rate. Gradually increase rate to a rate that sounds more natural that does not sacrifice the patient's fluency.

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### Fluency Enhancing Techniques: Continuous Phonation

- A little bit of a misnomer, because we produce voiceless consonants.
- More like “continuous stream of airflow through the vocal folds.”
- Cues:
  - Hand on the throat to monitor the “voice motor”
  - Running a hand across a table, taking animals across a bridge, making a line with a crayon, etc.
  - “Keep your voice on like you’re singing.”
  - “Don’t leave spaces between your words.”
  - “Don’t chop up your words.”
  - Contrast with choppy speech

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### Fluency-Shaping Demonstration

- Look at this book with us. It’s a story about a zoo. That is where bears go. Today, it’s very cold out of doors, but we see a cloud overhead that’s a pretty, white, fluffy shape. We hear that straw covers the floor of cages to keep the chill away. Yet a deer walks through the trees with her head high. They feed seeds to birds so they’re able to fly.

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### Continuous Phonation Evidence

- Proposed to be bypassing dysfunctional basal ganglia
- Dual Premotor Systems Theory of Stuttering
  - Alm, 2004; Alm, 2005
- Internal/External Control Hypothesis
  - Goldberg, 1980; Goldberg, 1991
  - Giraud et al., 2008
- Corrects right-hemisphere over activity, shifts toward more activity in the left hemisphere regions that support planning, execution, and auditory feedback for speech
  - Neumann et al., 2003; Neumann et al., 2005; Kell et al., 2009

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### Stuttering Modification

- **Preparatory set:** Employ fluency-enhancing techniques when you begin to anticipate an upcoming dysfluency. (Before)
- **Pull-out/ Slide:** Employ fluency-enhancing techniques during a dysfluency, taking voluntary control during the involuntary tension of a stuttering event. (During)
- **Cancellation:** After a dysfluency (or cutting a dysfluency short), say the word again using fluency-enhancing techniques. (After)

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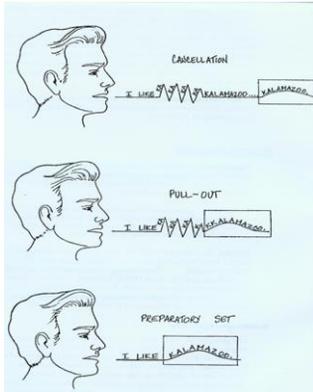
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### Stuttering Modification Demo

- Look at this **book** with us. **It's** a story about a zoo. That is where **bears** go. **Today**, it's very cold out of doors, but we see a cloud overhead that's a **pretty**, white, fluffy shape. **We** hear that straw covers the floor of cages to **keep** the chill away. **Yet** a deer walks through the trees with her head high. They feed **seeds** to birds so they're able to fly.

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### Stuttering Modification Evidence

- People who stutter consistently rate themselves as having improved, despite little change in stuttering frequency
  - Bloemgren, Roy, Callister, & Merrill, 2005
- Some reduction in stuttering severity
  - Bloemgren, 2007
- Long-term attitude changes but skills with speech usually decrease over time without maintenance courses
  - Eichstaedt Girson, 1998
  - Bloemgren, 2007

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### Teaching Stuttering Modification

- **Explore the Stuttering:** Start with pseudo stuttering. Instruct the client to try to re-create the exact tension and movements that happen during stuttering events. It's helpful to describe and determine the loci of the tension.
- **Key concept:** Even though the stuttering event is involuntary, one can still create a new motor plan to take voluntary control of those muscles with the "spared" parts of the brain.

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### Teaching Stuttering Modification: Continued

- **Tension and Release:** Have the client pseudo stutter, doing his/her best to re-create the stuttering event then voluntarily release the tension and relax the speech muscles.
- **Cancellations:** Using reading passages, pre-select words on which to pseudo stutter. During these stuttering events, re-create the tension then practice releasing it, then saying the word over using fluency-enhancing techniques. Some real stuttering events will hopefully arise. Use these as good practice controlling the tension of real dysfluencies.

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### Stuttering Modification: Continued

- **Slides (Pull-outs):** Again, pre-select words on which to pseudo stutter. In the middle of the stuttering event, release the tension and finish the word fluently with easy onset into the next sounds, slowed rate, and continuous phonation. The best practice comes from when real stuttering events arise.

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### Stuttering Modification: Continued

- **Preparatory Set:** Have the client pre-select words in which he/she thinks that they would typically stutter from a passage. Instruct the client to build up tension in anticipation of these words then employing fluency-enhancing techniques just before arriving at the word to avoid the stuttering event.

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### False Fluency

- Beware of "false fluency" from increased comfort level. Make sure that you are rewarding your patient for using techniques, not just speaking fluently.
- Many clients leave therapy without any skills in fluency-enhancing techniques because they were not using them in therapy.

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### Fear:



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### Hierarchy (potential recovery)

- Fluency-enhancing methods should be taught and mastered in a hierarchy of speaking situations that tax the patient's *language* system.
- Example hierarchy:
  - Single words
  - Two-word utterances
  - Carrier phrases (last word changes-- "I see a \_\_\_\_." "The monkey is \_\_\_\_.")
  - Rote phrases (same things over and over-- "I rolled a five. It's your turn.")
  - Self-creates sentences (Prompt, "Tell me something about \_\_\_\_\_.")
  - Story-telling (imitatively, then with less support)
  - Conversation (fading cues and modeling)

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### Hierarchy (persistent)

- Fluency-enhancing methods and stuttering modification should be taught and mastered in a hierarchy of speaking situations that tax the patient's *limbic* system.
- Example hierarchy:
  - Reading
  - Conversation with examiner
  - Conversation with unfamiliar listener
  - Asking strangers for directions
  - Ordering food
  - Giving a short speech in front of a small group
  - Making phone calls to familiar listeners
  - Making phone calls to unfamiliar listeners
  - Giving a longer speech in front of a larger group

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### Setting Goals

- What goal/s will most impact the speaker's effectiveness as a communicator?
- With what goal(s) can the client expect to be the most effective?
- What goal(s) are most appropriate to the client's individual background & needs?

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### Data Collection

- Quantify
  - Use of techniques\*\*\*\*\*
  - Stuttering events/fluency
    - Recommended for pre-post testing with persistent clients
    - Recommended in monthly intervals to track non-persistent clients
  - Knowledge
  - Cues and self-monitoring
  - Affective Scale scores across time

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### Data Collection: Use of Techniques

- Percentage of times that techniques were used
- Number of utterances in which techniques were employed vs. not used
- Number of dysfluencies that were modified vs. not modified

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### Data Collection: Stuttering vs. Fluency

- **Per utterance**
  - Make a mark for each utterance (during the whole session or during a sampling) of if an utterance contained a dysfluency or was produced fluently.
- **Syllable counts**
  - Cannot reasonably do this for all speech during a therapy session
  - Can use a set speech sample (e.g. "Tell me about the last movie that you watched").
  - Can take a sampling of a set number of minutes or syllables from a speech sample.
  - Can track monthly progress

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- [ThomasonAE@archildrens.com](mailto:ThomasonAE@archildrens.com)
- (501) 364-1643

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