Evaluating and Treating Adolescents Who Stutter
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Learning Objectives
• Participants will be able to:
  – Understand the theoretical constructs relative to treating adolescents who stutter
  – Design service delivery models for addressing speech fluency issues in adolescents
  – Provide speech fluency services to adolescents with confidence

Introduction
• Feeling comfortable
• Experience
• Knowledge of general speech and language difficulties
• Understanding normal nonfluencies
• Understanding normal disfluencies
• Broad theoretical knowledge base
• Fun
• Exciting
• Hands on
• Frequency

Stuttering Defined
• A disorder of speech-communication
• There is no universal definition
• Researchers have debated this issue for years
• Key words such as rate, rhythm, duration, flow of speech
The Basics About Stuttering:

Onset

TWO-YEARS-OLD

Stuttering begins for most children who stutter between 2 and 4 years of age.

Most SLPS notice closer to 2½ - 3

Most parents notice closer to 4.

The Basics About Stuttering:

General Facts

Prevalence
- % of individuals who stutter at a randomly selected moment in time
- ≈ 1% of school-age population

Lifetime Incidence
- % of the population who have stuttered at any time in their lives
- ≈ 5% of population

Familial Incidence
- For 50% or more of people who stutter, at least one other family member also stutters (this does NOT cause stuttering)

Sex Ratio
- 3 boys: 1 girl (on average)

Spontaneous Recovery
- At least 50 - 70% exhibit improvement without treatment within the first 12-24 months of onset.

Acquired versus Developmental Stuttering

- Developmental
  - Accounts for vast majority of stuttering cases
  - Onset typically before 7 years of age, but can be as late as 12
  - In 70% of cases, onset is gradual, with NO known psychic and/or physical trauma associated with 90% or more of cases

- Acquired
  - Accounts for small percentage of stuttering cases
  - Onset typically later in life
  - Usually follows some psychological or physical trauma (usually the latter) trauma
  - Sudden onset, typically

Stuttering Components

- Disfluencies
- Secondary Mannerisms
- Poor attitude/self concept

Types of Speech Disfluency

- Between-Word Speech Disfluencies
  - Typical/(Non-stuttered)/Other/Supramorphemic
    - Phrase repetitions (PR)
    - Revisions (REV)
    - Interjections (INJ)

- Within-Word Speech Disfluencies
  - Atypical/Stuttered-like/Inframorphemic
    - Monosyllabic whole-word repetitions (WWR)
    - Sound/syllable repetitions (SSR)
    - Audible sound prolongations (ASP)
    - Inaudible sound prolongations (‘blocks’) (ISP)

Nonstuttering-like Disfluencies (nonSLD)
- Phrase repetitions (PR)
- Revisions (REV)
- Interjections (INJ)

Stuttering-like Disfluencies (SLD)
- Whole word Repetitions (WWR)
- Sound/syllable repetitions (SSR)
- Interjections (INJ)

Total Disfluencies (TD)
- # TD = #nonSLD + #SLD

Typically,
- CWS produce ≥ 10 TD per 100 words (10%)
- CWNS produce ≤ 10 TD per 100 words (≈ 8%)
Stuttered-like disfluencies (SLD)

- Typically,
  - CWS produce ≥ 3 SLDs per 100 words (3%)
  - CWNS produce ≤ 2 SLDs per 100 words (2%)

- Yairi (1997), Ambrose & Yairi (1999), and Pellowski & Conture (2002) report that children who stutter (CWS) exhibit, on average, between 66 to 81% SLD per total disfluencies while children who do not stutter (CWNS) exhibit, on average, only between 24 to 42% SLD per total disfluencies.

Overarching Principles

- Multicultural Considerations
- Theoretically Based
- Carryover/Maintenance
- Data Keeping
- Counseling

Multiculturalism

Cultural Considerations

- Cultural Competence
- Cultural Humility
- Use of Language
- Events in the Life Cycle
- Rules for Interaction
- Topic Exchange
- Narrative Discourse
- Acceptance

Theoretical Construct
Summary of Theories

Psychological
• Repressed Need
• Influence of Parents
• Personality Disorders and Stuttering

Learning
• Anticipatory Struggle
• Diagnosogenic
• Continuity Hypothesis
• Operant Conditioning
• Two-Factor

Physiological
• Cerebral Dominance
• Genetics
• Cognitive Linguistic
• Covert Repair
• Cybernetic and Feedback Model

Multifactorial
• Demand and Capacities Model
• Dynamic Multifactorial Model
• Neurophysiological Model

Theories of Stuttering
• You messed me up!
• I think; therefore, I am.
• The system ain’t working.
• Now what could it be?

Factors that Influence Stuttering
• Relatives who stutter
• Variability of the behavior
• Education
• Parents’ expectations
• Second language acquisition
• Language
• Maturation of the brain
• Events in their lives
• Temperament

The Evaluation Process
### Other Communication Disorders
- Voice
- Articulation
- Aphasia
- Oral Motor Dysfunction

### Other Fluency Disorders
- Cluttering
- Spasmodic Dysphonia
- Linguistic Disfluency

### Culture
- Typical Behavior
- Attitude

### Other Disorders or Issues
- Autism
- Psychological
- Traumatic Brain Injury
- Cognitive Impairments
- Aphasia
- Stroke

### Diagnostic Protocol
- Stuttering Severity Instrument (SSI3)
- Speech Samples
  - Conversation
  - Narrative Discourse
  - Interactions

### Other Areas
- Neurogenic
- Psychological
**Trial Therapy**
- Which Strategies work
- What happens when you do this?
- Quick therapy session

**Data Analyses**
- Syllables/minute
- Number of disfluencies/100 words
- Percent of disfluencies
- Number of fluent words
- Types of disfluent words
- Rate of speech

**CALMS**
- Cognitive-(thinking)
- Affective-(feeling)
- Linguistic-(forming the message)
- Motor-(producing speech)
- Social-(normal communication)

**The CALMS Model of Stuttering**
- Cognitive
  - Thoughts
  - Perceptions
  - Awareness
  - Understanding
- Affective
  - Feelings
  - Emotions
  - Attitudes
- Linguistic
  - Language skills
  - Language formulation demands
  - Discourse
- Motor
  - Sensori-motor control of speech movements
- Social
  - Effects of type of listener and speaking situation

**Cognitive: Child's knowledge, understanding and awareness of stuttering**
Thoughts of identity as a person who stutters and how others view them

Therapy Ideas:
- Talk about talking
- Increase Knowledge of stuttering
- Understand Mechanisms of Speech
- Increase Self-Monitoring
- Change Negative Thinking
- Develop Question of the Week Journal
Affective: Feelings and emotions regarding stuttering
• Response to teasing, other people's reactions, and avoidance of stuttering
• Self-image

Therapy Ideas:
1. Playing with Stuttering
2. Teach others how to stutter
3. Use objects to represent stuttering

Linguistic: Level of fluency and how it affects overall language ability, articulation and phonological ability

Therapy Ideas:
1. Select topic or theme
2. Systemically increase linguistic complexity
3. Use linguistic context to support speech modification skills
4. Integrate linguistic level with other CALMS components

Motor: SSI-3 integrated into this section
• Secondary behaviors, frequency and duration of disfluencies
  - types and characteristics of disfluencies
  - frequency of stuttering with different partners

Therapy Ideas:
1. Increase use of speech modification strategies
   The 3 D's (Discuss, Demonstrate, Drill)
2. Create speech “tool box”
3. Contextualize, Conceptualize, Generalize
4. Have child rate performance

Social: avoidance of situations and degree of stuttering in certain situations
• Impact on peer relationships

Therapy Ideas:
1. Don't hide stuttering
2. Homework assignments (short, negotiate)
3. Role play in speaking situations
4. Take therapy on the road in different situations

Rules for Intervention

Things to Consider in Treatment
• Breath Control
• Anatomy and Physiology
• Relaxation
Philosophical Strategies

Fluency Shaping
- Modeling
- Slow and Easy
- Fast and Hard
- Behavioral
- Highly Structured
- Quantitative

Stuttering Modification
- Inserting Purposeful Disfluent Moments
- Self Reflecting
- Modifying Stuttering
- Attention to Attitudes, Fears and Avoidance
- Qualitative

Before designing treatment, you should know...
- Stuttering severity
- Age of the Patient/Student/Client
- Any secondary Behaviors?
- Parental availability?
- Exacerbating factors?
- Recommendations from Dx

Stuttering Severity
- Frequency of stuttering
  - Serves as a baseline for tx
- Duration of stuttering
  - Longer durations = higher severity
- Most common disfluency type
  - WWR vs. ISPs
- SSI-4 score
  - Based on frequency, duration and secondary behaviors

Age of Child
- Age of child determines whether tx is direct or indirect
  - Young children (= 3- to 6- years)
    - Typically indirect because of low/no concern or awareness
  - School-age children (= 7- to 12- years)
    - Typically direct because of some concern and awareness
  - Adolescents
    - May not want to be in tx anyway!

Secondary Behaviors
- Are disfluencies associated with physical behaviors
  - i.e., eye blinking, foot tapping, poor eye contact
- Are there any psychosocial behaviors present
  - Selective mutism, severe anxiety with speaking, Attention Deficit issues
Parental Availability

- How much access do you have to the parent?
  - Consistent weekly face-to-face access?
  - Parental access by phone?
  - Access to grandparents/aunts or uncles?
  - No access at all?

Exacerbating Factors

- We do not know what causes stuttering; only know what exacerbates stuttering
- Dissociations in speech and/or language
- Emotional factors
  - Highly reactive to change?
  - Inhibited?

Recommendations from Dx

- Be aware of what information has already been given to the parent
- How receptive were parents
- Treating SLP can then follow-up with parent on recommendations

Individual Therapy

- Value
- Attention
- Focus
- Scenarios

Group Therapy

- Realistic
- Appropriate grouping
- Dynamics
- Behaviors
- Activities

Carryover/Maintenance
Strategies for Transfer and Maintenance

- Patient/Client/Student becomes the clinician from the beginning
- Decrease the frequency of scheduled treatment
- Maintain regular maintenance checks
- Institute regular, benchmarking
- Deliberately revisit the past
- Reexamine personal construct
- Integrate treatment changes within the communication system

Data Keeping

Treatment Note Example (Preschool Child)

- Scale: (Disfluent) 1-10 (Fluent) or % of fluency
- Probe: Conversation, Narratives
- Therapy Results: Conversation, Narratives
- Self-Correction: Yes, No
- Self-Monitoring: Yes, No
- Tasks/Techniques: _
- Activities: _
- Carryover Activities/Assignments: _
- Value Added Impact: _
- Plans for Next Session: _
- Additional Comments: _

Treatment Note Example (Older Child)

- Scale: (Disfluent) 1-10 (Fluent) or % of fluency
- Probe: Conversation, Narratives, Reading
- Therapy Results: Conversation, Narratives, Reading
- Self-Correction: Yes, No
- Self-Monitoring: Yes, No
- Tasks/Techniques: _
- Activities: _
- Carryover Activities/Assignments: _
- Value Added Impact: _
- Plans for Next Session: _
- Additional Comments: _

Counseling
Counseling

- Counseling is professional guidance of an individual by utilizing psychological methods
- Counseling is an art
- Counseling is a science

Counseling process

- Deal with behaviors
- Address emotions connected to stuttering
- Facilitate child’s self-esteem
- Assure child that it is okay to stutter
- Involve family, teachers, peers
- Change pre-conceived notions

How do we use counseling?

- Gather and convey information
- Prevention
- Help patients/clients adjust emotionally
- Help to correct the CD
- Provide with setting for change
- Help with developing strategies

Key words

- Interpersonal skills
- Trust
- Self-understanding
- Listening
- Indirect and direct leading
- Reflecting
- Summarizing

Key words continue

- Confronting
- Interpreting
- Informing
- Clarifying

Counseling techniques (Luterman 1996)

- Content response
- Counter question
- Affect response
- Reframing
- Sharing self
- Affirmation
Counseling Techniques (Luterman, 1996)

**Counter Question**
- Responding to a question with a question
- Forces the individual to reveal his/her opinion

**Example:** Ask the individual how he or she came to that opinion

**Content Response**
- Used often
- Offer content-based relationships

**Example:** Telling an individual what services are available and offering a directory of resources

**Affect Response**
- Responding to the “faint knocking”
- Empathetic listening
- Putting yourself in the shoes of the individual
- Requires follow-up

**Example:** “That must frighten you when you think about the available services for your child.”

**Reframing**
- Use to force the person to think about the positive side
- Has to be timed correctly
- Pollyanna
- Powerful too

**Example:** “What a wonderful opportunity this presents for you to get involved in establishing suitable programs.”

**Sharing Self**
- Sharing our own doubts and uncertainties with our clients/patients/students so that we don’t seem so in control
- Sharing feelings

**Example:** “My child has a hearing loss too and that is how we ended up in this area.”

**Affirmation**
- Responding as a sounding board
- Using nonverbal behavior

**Example:** “Uh huh.”
Other Luterman Techniques

Silence
• The Embarrassed Silence
• Changing-Topic Silence
• The Reflective Silence
• The Termination Silence

Other Techniques

Listening
• Active listening
• Paraphrasing
• Empathy

Prevention: Parent Counseling

• Parent education
• Parental attitude changes
• Parental behavior changes
• General parenting
• Group parent counseling

Parental Behavior Changes

• Rate of speech
• Language use
• Negative reactions
• Conversational rules
• Daily “special speaking time”
• Modifying home environment
• Monitor speech at home

School Age

School Age Children

• Need for therapy
  – Emotional element
  – Social dynamics
  – New communicative partners
Challenges of School-Based Stuttering Clinical Practice (Yaruss, 2002)

• Large caseload sizes.
• Short, infrequent sessions.
• Groups of children with varying disorders.
• Limitations in budgets & materials.
• Minimal interaction with parents.

Piece together a tx plan that works for you based on your clinical setting and your client

Methods for Intervening

• Slow and easy talking
• Easy onset phonation
• Continuous phonation

Treatment activities

• Pertinent to day-to-day
• Address social needs
• Age appropriate
• Fun/interactive
• Variety of communicative contexts
• Build on a hierarchy

Peer involvement

• Therapy partners
• Progress monitors
• Realism
• Carryover

Observation in the Classroom

• Be non-obtrusive
• Pick a good time to observe
• Observe in a variety of settings
• Coordinate with teacher
• Adjust treatment goals to reflect observations

Adolescents
Treating Adolescents

- Building rapport
- Relationships

Pre-intervention factors

- Motivation
- Conflicts
- Parental involvement

Motivation

- Motivation to attend
- Motivation during
- Motivation outside therapy

Conflicts

- Extracurricular
- Family
- Personal/life

Parental Involvement

- Too much involvement
- Too little involvement
- The right formula

Treatment methods

- ERAS-M
- Continuous phonation
- Stuttering modification
Activities

- Role play
- Classroom activities
- Incorporate lessons
- Outside activities

Activities

- Reading
- Story telling
- Games
- Journaling
- Role play

Therapy goals

- Self-correcting
- Self-monitoring

Dismissal from Treatment

Last Tasks in the Learning Sequence

- The clinician teaches parents how to ask children to self-correct the child stutters during these structured activities.
- Clinician and parent must work closely together to ensure the child is enjoying themselves and has no negative feelings toward treatment.
- If the clinician has to “feel around” to find the correct way to present verbal-contingent stimulation to the child, the parent feels more relaxed about attempting the procedure.
Object of Structure Conversations

- Maintain response rate at an optimal level for the child to learn.
- A rule of thumb -> child’s stuttering rate should stay low when parents are giving response-contingent verbal stimulation in structured conversations.
- An important task to teach parents is to set the task at the correct level of difficulty for the child so that optimal learning occurs.