Assessment and treatment of preschool children who stutter

Anu Subramanian, Ph.D., CCC-SLP
Purdue University

Picture this...

- You are an SLP working for the local school system and you have a 40 month-old child coming in for an assessment of stuttering.
- What do you do? What happens next?

Questions to Ask

1. Does the child exhibit stuttering?
2. Is the stuttering likely to persist?
3. Is treatment appropriate at this time?

Frequency of Stuttering-Like Dysfluencies

- Based on 300 words
- Best to have two samples or a 600-word sample – 15-20 minutes of talking time
- Can you get a sample from home or a different situation
- Dysfluencies divided into
  - Stuttering-like disfluencies (SLD)
    - Part word repetitions (PWR), whole word repetitions (WWR), Disrhythmic phonation (DP)
  - Other dysfluencies
    - Phrase repetitions (PR), interjections (INT), revisions (REV)

Information from the Disfluency Count

- Frequency of stuttering
- % of total words disfluent
- % of total words stuttered or % of SLD
- % of disfluences stuttered
- Quality of disfluences
  - Type most commonly produced
  - Duration of stuttering instances

Concerned if...

- 10% or higher
- 3% or higher
- 66 to 81% or higher
Severity Ratings

- SSI – Stuttering Severity Instrument (Riley, 1972)
- Illinois Clinician Stuttering Severity Scale (Yairi & Ambroze, 2004)
- Take into consideration SLD, duration or iterations, tension, secondary behaviors (or physical concomitants)
  - For SSI – Total Score calculated by Percent of stuttering + Duration score + Physical Concomitants score
  - For ICSSS – Total Score = SLD+Duration+Tension divided by 3 + Secondary Characteristics

Additional components of diagnostic

- Language assessment (CELF-P2, SPELT)
- Phonological assessment (BBTOP)
- Assess child’s awareness and concern about talking (parent interview and Kiddy-CAT).
- Assess how the stuttering is affecting the child’s ability to function in educational and social settings
- Assess the child’s temperament (e.g., Temperament Characteristics Scale; Oyler, 1996)

Guidelines for Evaluation of Stuttering (from IDEA 2004)

- Use a “variety of assessment tools” to gather relevant functional, developmental, and academic information about the child, including information provided by the parent...” (IDEA 2004, 300.304 b1).
- No single procedure as “sole criterion” for determining child has a disability...” (IDEA 2004, 300.304 b2)

Guidelines for Assessment of Stuttering

- Assessments “administered by trained and knowledgeable personnel” (IDEA 2004, 300.304 c1 iv).
- SLPs must keep abreast of current evaluation and treatment practices.
Guidelines for Evaluation of Stuttering

- Evaluation should assess how stuttering impacts the child’s participation in “appropriate activities,” not just academic activities (IDEA 2004, 300.304 b1ii).
- Educational performance “should include nonacademic as well as academic areas” (Department of Education, 1990). This would include both curricular and social activities.

Questions to Ask

1. Does the child exhibit stuttering?
2. Is the stuttering likely to persist?
3. Is treatment appropriate at this time?

Factors predicting recovery

- Family history
- Time since onset
- Disfluency trend
- Age of onset
- Sex
- Phonology
- Language

Parent Interview

Time Since Onset

- Task: Split into pairs and ask your neighbor when he/she got his/her current cell phone (or computer, if no cell phone).

Parent Interview: Time Since Onset:
Bracketing procedure (from Yairi & Ambrose, 1992)

Examiner: When did the child begin stuttering?
Parent: Last winter
Examiner: When during winter?
Parent: During Christmas.
Examiner: Before or after Christmas?
Parent: I am sure it was after.
Examiner: Before or after New Year’s Day?
Parent: After. He did not stutter on New Year’s Day.
Examiner: Was it a few days or weeks later?
Parent: It was a day or two after we returned from vacation and just before I went back to my job at school. I remember this very clearly.
Examiner: When did you go back to work?
Parent: January 5th.
Examiner: So, we are pretty close to pinning it down.
Parent: It must have been between January 3rd and 5th (p. 785)
Now try again

- Ask your neighbor again about when he/she got the cell phone (or computer) using bracketing procedure.

Parent Interview:
Child awareness and concern as well as ability to function in educational and social settings.

- Does the child ever express frustration about talking? For example: “Why can’t I talk?”
- Does the child avoid talking in any situation?
- Do peers tease the child regarding his/her speech?
- Is there difficulty asking questions of preschool teachers or other children?
- Does the child do anything special to make talking easier?

Parent Interview: Child’s Temperament

- There is evidence that CNS and CWNS differ on components of temperament as well as in emotional factors (Anderson, Pellowski, Conture, & Kelly, 2003; Karrass, et al., 2006)
- For this reason, temperament assessment can be a helpful addition to a diagnostic for stuttering.

Parent Interview: Other important questions

- Has the child had treatment before? What was it like?
- What does the parent do when the child stutters? Example: Ask the child to stop, slow down, take a deep breath, etc.

Child Assessment:
Speech and Language Skills

- Vocabulary & Language (for example):
  - Clinical Evaluation of Language Fundamentals- Preschool 2 (Rec. & Exp. lang.)
  - Test of Early Lang. Dev. III (Rec. & Exp. lang.)
  - Peabody Picture Vocabulary Test III (Receptive vocab.)
  - Expressive Vocabulary Test (Expressive vocab.)
- Speech (for example):
  - Bankson Bernthal Test of Phonology (BHTOP)
  - Goldman-Fristoe Test of Articulation-II
Child Assessment:
Child awareness and concern:
Kiddy-CAT

- Communication Attitude Test for Preschool and Kindergarten Children who Stutter (Vanryckeghem and Brutten, 2007)
- Includes yes/no questions such as
  - Do you think that words get stuck in your mouth?
  - Do you think that talking is easy for you?

Conversational Sample

- CA: 40 months
- Gender: male
- TSO: 10 months
- GFTA: SS: 98, %tile: 30
- PPVT: III: SS: 107, %tile: 68
- EVT: SS: 105, %tile: 63
- TELD
  - RL: Quo: 118, %tile: 88
  - EI: Quo: 85, %tile: 16
- Kiddy Cat: 3/12
- No Family hx of stuttering
- Temperament (BSQ)
  - All dimensions were midrange
  - Manageability Index: “Somewhat easy”
- Parent reports
  - Does well in school, outgoing, very friendly, not shy, very talkative
  - Sometimes inattentive, impulsive or hyperactive

What is progress in therapy for preschoolers?

- Increased fluency
- Parental anxiety
- Increased comfort and confidence communicating
- Child’s personality and willingness to talk
- Conversations about stuttering

What is ‘Success’ in therapy?

- Peter Reitzes of ‘Stutter Talk’ podcast – I don’t measure my stuttering severity by how much I stutter, I measure severity by how much I am silent.

Recommendations?

What do you think?

Parent Counseling

- Share results and recommendations (speech disfluencies typical, plan for re-evaluation, or plan to begin treatment).
- Recommend Stuttering Foundation (SF) materials (can request catalogues from www.stutteringhelp.org)
- Help parent understand that the child’s stuttering is not his/her fault.

Supporters early intervention for all children who stutter believe

- The recovery rate without treatment is MUCH lower than 65-80%
- Those who stop stuttering without treatment are actually assisted by self-directed parent intervention
- Once stuttering begins, the child who is not treated is at risk for persistent stuttering
- Clinical treatment for preschool children who stutter is highly effective
- Early treatment does no harm
Those who favor a monitoring period believe

- Most children stop stuttering on their own without treatment within the first two years of onset
- More children after that get better without treatment
- Remission and persistent stuttering are related to a child’s family history
- Effects of self-directed efforts by parents and caregivers to reduce stuttering are unknown
- There is no evidence that waiting for intervention makes treatment goals more difficult to achieve

Efficacy of early treatment

- No studies on children receiving no treatment or for whom treatment is delayed
- Data do not include family history of stuttering, age of children, sex of children, so confounding factor of spontaneous recovery
- No reports of adverse responses to any intervention procedure
- Some studies included children assessed at 15+ months after onset

Arguments for early intervention

- Parent correction, advice to speak slowly is therapy
- Andrews and Harris (1964) visited children once a year after the age of 7
- Analogy that “overtreatment” is valid in the medical profession

Arguments for a waiting period

- “All parents naturally want to help their children”
- More girls recover than boys
- Different therapies have similar effects
- No empirical support that there are dangers in delaying treatment
- Is a treatment a treatment if it is ineffective?

Why Indirect?

- Dominant method of treatment in 1940s to 1960s
- If changes can be made without making the child more aware or concerned about the stuttering, isn’t that preferable?
- This is particularly the case if there is still a chance the child is recovering spontaneously (some may still end up on your caseload).

Three issues

- Differing views on the course of stuttering
- What constitutes therapy or intervention?
- What are the risks of waiting to initiate therapy?
Parent Involvement

- Parents spend far more time with child than the SLP – more likely to make an impact
- Much of what we do as SLPs can be taught to parents
- For various reasons, typically economic, parents may not be able to involve themselves in treatment.
- Other caregivers can be involved (grandparents, child care providers, etc.)

Levels of Parental Involvement (Ramig, 1993)

1) Educational counseling
2) Facilitating communicative interaction
3) Involving parents as observers and participants

Educational Counseling

- Begins when sharing results and recommendations from evaluation
- Deal with myths or misconceptions – primarily helping them to understand they did not cause the problem, are not alone (groups)
- As a group, parents of children who stutter are no different than those of fluent counterparts (Bernstein Ratner, 1993)

Open Discussion of Stuttering

Parents have a natural tendency to avoid talking about stuttering around the child
- Based on the typically false assumption that the child is not aware of fluency breaks
- Not talking about it, spelling out s-t-u-t-t-e-r, ends up making it into that big, bad thing no one acknowledges.
- Just as if the child had asthma, diabetes, etc...the topic can be discussed with and around the child in a matter-of-fact way
- Adults who stutter can testify to how the hush-hush treatment of stuttering increased feelings of shame

Facilitation of Communicative Interaction (Ramig, 1993)

- Model communication that facilitates fluency with the child
- Slow the rate of speech and lessen complexity of language (Mr. Rogers)
- Modify verbal and nonverbal responses to fluency breaks
- Reduce interruptions, increase turn taking, and response-time latency (pausing after child's talking)

Involving parents as observers and participants

- Parent observes the clinician's interaction with the child
- Use of techniques to improve communication, enhance fluency
- Parent then uses these strategies with the child
- Opportunities for evaluation of strategy use
**Example of Indirect Treatment: Parent-Child Fluency Groups**  
(Yarrus, Coleman & Hammer, 2006)

- Parents receive counseling about how the environment can be changed to enhance fluency.
- Incidence and Risk factors for stuttering.
- Information about stuttering and people who stutter.
- Normal disfluency versus stuttering like disfluencies.
- Causes of stuttering – Bucket analogy; Demands and capacities.

**Helping parents understand how they can help** (from Conture, 2001):

Indirect Therapy – Demands and Capacities

- Within the child: Genetics, Development, Temperament
- Within the communicative environment: Limited response time, Interruptions, Simultaneous talking, Negative reactions.
- Within the general environment: Time pressure, Inconsistency, Unpredictability, Relational issues, Conflict, Daily Stress.

**Indirect Therapy** (Yairi & Ambrose, 2007)

- General Home Environment
  - Reduce undue pressure
  - Slowing down pace of life
  - Slow speech
- Handling Moments of Stuttering
  - Wait
  - Direct instruction (say it together slowly)
  - Show Empathy

**Palin PCIT** (Millard, Nicholas & Cook, 2008)

- Key principle – parent involvement
- Parents of CWS are not different from parents of CWNS (Kelly & Conture, 1992; Kloth et al, 1995; Yaruss & Conture, 1995; Miles & Bernstein Ratner, 2001)
- Parental interaction styles may influence a child's fluency (Stephenson-Opsal & Bernstein Ratner, 1988; Newman & Smit, 1989; Guitar et al, 1992; Winslow and Guitar, 1994)
- Interaction styles can be modified – change in one may influence many others (Bernstein Ratner, 1992)
PCI (contd)

- Focus on strengths, what parents are already doing
- Collaborative, therapist facilitates, supports, reinforces
- Stuttering openly acknowledged and discussed
- Therapy – 6 clinic sessions and 6 weeks of home maintenance

PCI (contd)

- Video recording of ‘special time’ is analyzed
- Parent identifies target and rationale
- Family strategies (like increasing turn taking, establishing routines, praise etc)
- Interaction strategies (following child’s lead, reducing speech rate, reducing questions and increasing comments, increasing pause time)
- Results showed 4 out of 6 children reduced stuttering and it was maintained.

Example of Direct Treatment: Lidcombe Program

(Harrison & Onslow, 1999)

- Typically geared toward children
- Based on operant conditioning or response contingencies
- Conducted by parent, not SLP
- Parents are positive and supportive of children; not interfere with child’s communication
- Parental feedback is not constant, intensive or invasive
- Stutter free speech responses
  - Acknowledge or praise
  - Request self evaluation (was that smooth?)
- Stuttered speech
  - Acknowledge stuttering
  - Request self correction

Practice giving contingent feedback

Lidcombe (contd)

- Speech measurement is conducted consistently to identify improvement
- Both, Davidow, Bramlett & Ingham (2006) – systematic review found that Lidcombe has the best evidence for this age group for managing stuttering, including reduction in negative feelings and attitudes.

Other therapy ideas

- Parent-child groups (Conture, 2001).
- Several different approaches to treatment.
- The method chosen will depend on client characteristics
- Thorough assessment is key.
What can we do

• First, DO NO HARM
• Understand rationale for therapy programs
• Teach concepts, rather than therapies
• Dismantle therapies to find out what works (Bernstein-Ratner, 2005)
  • Lidcombe method
  • Talking about stuttering openly
  • Less linguistic demand
  • Counseling to reduce parental stress
  • Special time between parent and child
  • Focusing on strengths that child has
  • Strengthening ties between child and parent
  • Generalization

What can we do?

• Eclectic treatment, while making sure that the treatment is working
• Look for evidence within sessions
• Ask the client
• Collect data within the session
• Choose what you want to measure
• Graph the data
• Share
• Clinician is a VERY important factor in treatment effectiveness

“Common Factors” in treatment responsiveness

Zebrowski, 2010

Therapist-Client alliance

• Alliance’ defined as (Bordin, 1979)
  • Relational bond between client and therapist
  • Agreement on the goals of therapy
  • Agreement on the tasks of therapy

Strategies to build therapist-client alliance

• Empathy – understanding and feeling with the client
• Self-congruence – the clinician is genuine and open; comfortable with self-awareness of abilities/limitations
• Unconditional positive regard – unfailing warmth, respect, and good faith in the client
• Active listening
• Nonverbal communication

Clinician is a key component

• Work to understand yourself
• Express feelings openly
• Be curious
• Have a broad focus
• Reflect, rather than direct feelings
• Be open-minded and not judgmental
• Find unique outcomes
• Share responsibility with client
What is progress in therapy for preschoolers?

- Increased fluency
- Parental anxiety
- Increased comfort and confidence communicating
- Child's personality and willingness to talk
- Conversations about stuttering

What is ‘Success’ in therapy?

- Peter Reitzes of ‘Stutter Talk’ podcast – I don’t measure my stuttering severity by how much I stutter, I measure severity by how much I am silent.