12

Treatment of Older Preschool Children: Beginning Stuttering

Chapter Objectives

After studying this chapter, readers should be able to:

- Describe the characteristics of a child who has beginning stuttering
- Describe the author's beliefs about stuttering, targets in treatment, goals for treatment, how much to involve feelings and attitudes in treatment, and maintenance procedures

- Delineate the procedures involved in the Lidcombe Program, the stages of therapy, and the criteria to complete each stage
- Explain how formal training may be obtained for using the Lidcombe Program
- Outline the components of Sheryl Gottwald's "multidimensional approach"
- Describe a number of different approaches to working on stuttering and concomitant speech or language problems

Key Terms

Concomitant speech and language problems Difficulties with articulation/phonology and/or difficulties with language that sometimes accompany stuttering. When this occurs in some children who stutter, it poses a problem of which disorder to work on first.

Demands and capacities The perspective that the factors associated with the onset and persistence of stuttering are the demands placed on the child by her environments balanced by the child's innate capacity for fluent speech

Lidcombe Program (LP) An operant conditioning–based approach to stuttering treatment, delivered in the home by a parent or other caregiver and guided via weekly meetings with the clinician

Older preschool children Children between 3.5 and 6 years of age

Operant conditioning A type of behavior modification that uses rewards and punishments to increase or decrease the frequency of a behavior

Severity Rating (SR) Scale A scale from 0 to 9 used daily by parents to assess a child's stuttering. May be used by clinician as well during weekly clinic sessions.

Stage 1 (of LP) The initial step of LP in which the child becomes normally fluent. Criteria for completing Stage 1 are 3 consecutive weeks in which (1) the parent's weekly SRs are 0-1 during the week before the clinic visit and 4 of the 7 SRs are 0 and (2) the clinician's SR for the entire session is 0-1.

Stage 2 (of LP) When the child meets the fluency criteria to complete Stage 1, this maintenance stage is begun. Weekly clinic meetings are faded systematically so that the parent and child meet with the clinician in this sequence: 2, 2, 4, 4, 8, 8, and finally 16 weeks apart. The child must continue to meet fluency criteria.

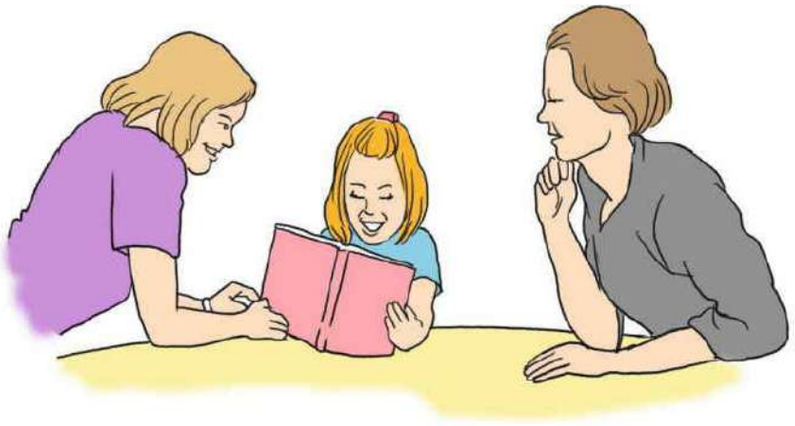
Unambiguous stutter A moment of stuttering that is so clear and evident that the parent or the clinician has no doubt that it should be categorized as a stutter

Verbal contingencies Comments to the child made immediately after an event (e.g., fluent utterance; stutter) that are intended to change the frequency of that event

AN INTEGRATED APPROACH

Children with beginning stuttering are usually between 3.5 and 6 years of age. To distinguish them from children with milder, borderline stuttering, I refer to them as **older preschool children**. They have probably been stuttering for at least several months, and their parents may well be concerned that it is not a transient problem that will disappear on its own. What follows are some details on the core and secondary behaviors of their stuttering, as well as feelings and attitudes that often characterize stuttering in this age group. These children's most common core stuttering behaviors are part-word repetitions that are produced rapidly, usually with irregular rhythm. Some prolongations may also be present. Both the repetitions and prolongations may contain excessive tension, which can be heard as abrupt endings to the repetitions and/or as increases in vocal pitch in repetitions and prolongations. Blocks may also be present, with evidence of tension and struggle. Secondary behaviors are typically escape devices, such as eye blinks, head nods, and increases in pitch as the child tenses her vocal cords trying to get the word out. A few avoidance maneuvers may be observed, such as starting sentences with extra sounds like "uh" or changing words when a stutter is anticipated may be observed. In many cases, when the frequency of stuttering becomes high, these children may put their hands to their mouths to push words out or may momentarily avoid talking. Children with beginning stuttering usually feel frustrated and sometimes panicked with their difficulty in talking but have not yet developed a strong anticipation of stuttering or learned to be ashamed of their speech.

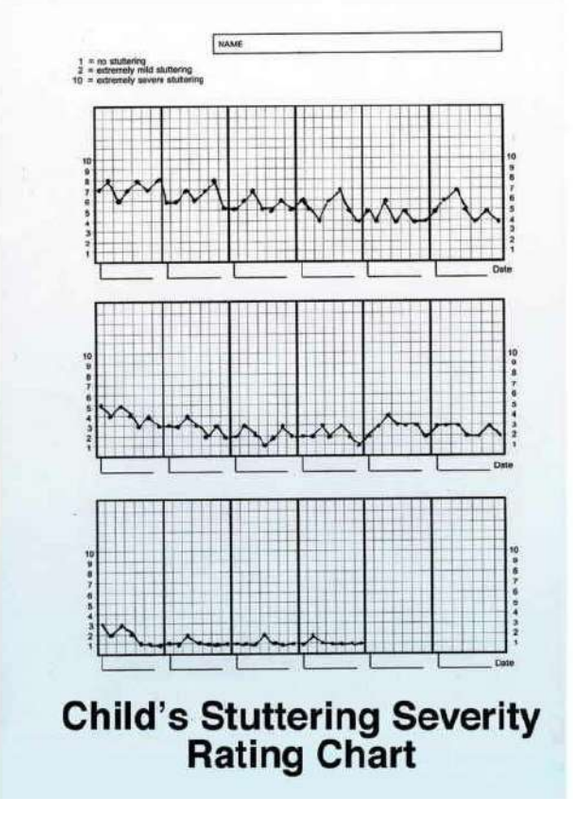
I will illustrate our approach with a description of Katherine's treatment. She is the 3-year-old child I introduced in Chapter 1. The course of her treatment is depicted in Figure 12.1.



Mother and child in clinic session

Mother and child in practice session at home

Mother and child in natural conversation at home



Child's Stuttering Severity Rating Chart

Figure 12.1 An overview of treatment through the Lidcombe Program.

Case Example

Katherine

Katherine's therapy began when she was 3 years old and stuttering severely—on 21 percent of her spoken syllables. As you may remember from our description of her stuttering in Chapter 1, Katherine's pattern was characterized by repetitions, prolongations, and blocks, with a predominance of blocks with much struggle behavior. She had changed from bubbly and talkative to withdrawn and reluctant to engage in conversation.

At the time she came in for an evaluation, two other clinicians and I had just been trained in the Lidcombe approach—the treatment described in this chapter. Several weeks after the evaluation, we began Katherine's therapy by training her mother in using **verbal contingencies** (praise) for Katherine's fluent speech during daily, 15-minute practice sessions at home. We also trained her in making daily ratings of the severity of Katherine's stuttering. During our weekly clinic meetings with Katherine and her mother, we measured the frequency of Katherine's stuttering in conversation at the beginning of each session. The rest of each session was spent on problem-solving any issues that came up during practice sessions and training Katherine's mother in the next steps of treatment. These next steps included using verbal contingencies for stuttering and then using verbal contingencies during natural conversations throughout the day.

After several weeks went by, we saw notable improvement in Katherine's stuttering, shown by both our weekly measures of her stuttering frequency in the clinic and her mother's daily ratings of the severity (SRs) of Katherine's stuttering at home. The steady decline in Katherine's stuttering continued, interrupted by an occasional spike upward when a stressful event occurred, such as a visit by relatives or a family trip. At one point, Katherine's stuttering shot up for several days, and we worked with Katherine's mother to figure out the source of the problem. We discovered that Katherine's father, in his eagerness to help, began to use verbal contingencies without training when he was alone with Katherine and overdosed her with several hours of contingencies each day, instead of the recommended 12 or 15 contingencies per day. Once that was resolved and Katherine's father was trained to use contingencies judiciously, her stuttering continued to decline steadily. Katherine became fluent after about 6 months of treatment. Over the following year, the clinicians continued to stay in touch, but Katherine and her mother came in to the clinic less and less frequently.

Seven years after therapy had been completed, we contacted Katherine and her parents to assess her status. She had been completely fluent ever since treatment ended and today is highly verbal with only dim memories of ever having stuttered. Her parents have become a valuable resource for other parents of children who are beginning to stutter as they contemplate treatment.

Author's Beliefs

Nature of Stuttering

As I've described in chapters in the "Nature of Stuttering" part of this book, I believe that beginning stuttering arises when children's neurodevelopmental sensorimotor difficulties related to speech production interact with their temperament and other developmental and environmental influences to produce or exacerbate repetitions, prolongations, and blocks. This is essentially the position taken by C. S. Bluemel in his book *The Riddle of Stuttering* (1957). It was further articulated by Wendell Johnson and colleagues (1959), who suggested that the problem of stuttering arises as a result of interactions among (1) the amount of the child's disfluency, (2) the reaction of his listeners to the disfluency, and (3) the child's sensitivity to his own disfluency and to listeners' reactions. I would add to Johnson's list of interacting factors any pressures that a child may feel internally (e.g., to speak quickly and in long, relatively complex sentences) and any anxieties the child may experience as the result of moving, the birth of a sibling, or other life events.

In some children, beginning stuttering emerges gradually after they have gone through a period of borderline stuttering as younger preschool children. As these children get older and if stuttering continues, they begin to respond to negative experiences of repetitive disfluencies with increased tension. However, in some children, beginning stuttering appears suddenly, close to the onset of stuttering. They may be easily frustrated or highly distressed when many of their speech attempts result in repetitions or prolongations that feel out of their control. As these children respond, at first nonconsciously, to these core behaviors, they increase tension and develop a variety of escape behaviors that are reinforced. Their eye blinks, head nods, and pitch increases are rewarded because they often result in the release of stutters. Gradually, classical conditioning influences when and where the child's stuttering occurs. Specifically, negative emotional experiences that are associated with stuttering become etched into memory and associated with various contexts, such as the telephone, impatient listeners, or particular sounds and words. As stuttering spreads and becomes more pervasive and more consistently present, these children become aware of their stuttering, although at first they may have little shame of it and do not dread speaking situations. Because of the plasticity of the brain at this age, some children with beginning stuttering develop better sensorimotor control of speech production, and their stuttering goes out the door it entered. Their stutters diminish in frequency and severity and disappear or become a minor nuisance. Other children, perhaps those with more widespread sensorimotor deficits, a more sensitive temperament, or larger doses of other developmental and environmental stresses, continue to stutter and often develop more advanced symptoms.

Like Oliver Bloodstein (1975), I believe that if we can provide a child with beginning stuttering a sufficient number of positive, fluent speaking experiences during treatment, fluency will replace stuttering. Bloodstein, whose 50-year career was focused on the nature and management of childhood stuttering, strongly advised treatment that would ensure that "the child experiences daily successful, pleasant, and rewarding speech with a minimum of

stuttering" and that these daily experiences be created by the parent at home (Bloodstein, 1975, pp. 61–62).

Neurodevelopmentally, the daily, structured practice of fluency, in the approach I often use, reinforces the neural pathways for fluent speech so that they become more robust, more automatic, and more resistant to stress. Echoing Bloodstein, I believe that this may happen best when treatment is administered by the parent at home, where it can be done 7 days a week. It also appears effective if natural fluency is elicited at first in highly structured situations, systematically reinforced, and then carefully transferred to more and more real-life situations in which stuttering has been occurring.

The increased fluency gained through this treatment reduces the opportunities that a child might have to experience stuttering as distressing because most of her speech is fluent and becoming more so every day. Preventing this distress prevents the tension and struggle that would follow, heading off a cycle of increasing tension and struggle begetting more fear speaking leading to even more tension and struggle accompanied by escape and avoidance behaviors. Also important is the aspect of treatment that makes the child aware that she is fluent—explicit reinforcement for fluency. I have more than once heard children undergoing this treatment say, proudly, "I'm a good talker!"

Keeping the child and her family in treatment for an extended period, with carefully phased out maintenance sessions, allows time for the child's neurological system to mature and for typical fluency patterns to become stabilized.

Speech Behaviors Targeted for Therapy

Which speech behaviors are targeted for the child with beginning stuttering? In the approach I advocate in this section, the **Lidcombe Program (LP)**, the clinician teaches the parent to first reinforce the child's fluent speech and then respond, less frequently, to stutters. The parent uses appropriate and varied verbal contingencies immediately after fluent utterances but comments gently on stutters much less frequently or occasionally asks the child to try the word again immediately after she stutters. It is critical that the parent's responses to the child's stutters do not elicit negative emotions (emotions that would trigger defensive tension responses) from the child. Thus, parents must be taught, under the clinician's mindful guidance, to apply contingencies to stutters carefully and to observe the child's response. If the child does appear to resent these contingencies, they should be immediately changed or treatment must use a different approach.

Fluency Goals

Almost all children who are treated with effective therapy for beginning stuttering will gain or regain spontaneous, typical fluency. In most cases, a year or two after treatment ends, the children will have little or no recollection of having stuttered and will not have to monitor their speech or work at being fluent.

Feelings and Attitudes

As noted earlier, a child with beginning stuttering has only occasional frustration and intermittent concern about talking. She has only mildly conditioned fears or avoidances of stuttering. Thus, it is unnecessary to focus directly on feelings and attitudes in therapy—in most cases—for a child with beginning stuttering.

The feelings and attitudes of these children are, however, influenced by the family. The clinician teaches the family member providing the at-home treatment to be matter-of-fact

about the child's "smooth" and "bumpy" speech. The clinician and family member openly discuss the child's stuttering during their weekly meetings when the child is also present. These aspects of treatment are intended to reduce any embarrassment or shame that was associated with stuttering and foster the child's acceptance of stuttering as just a little mistake, like bumping into a table or tipping over her tricycle. This is a far cry from the "conspiracy of silence" that formerly characterized the treatment of children who stutter.

Maintenance Procedures

Systematically fading contact with the child and her family is vital for maintaining fluency. In my experience, if families leave treatment after fluency is achieved without having participated in a maintenance program, stuttering may return. Thus, it is important for clinicians to stress the importance of maintenance procedures at the outset of treatment. Moreover, the clinician and family should continue with careful data collection as contact is faded, so that the family can return to regular weekly meetings and discuss appropriate contingencies for fluency and stuttering if any relapse occurs.

Clinical Methods

Clinical Procedures: Lidcombe Program

For the past 25 years, I have been using the Lidcombe Program (LP) (Onslow, Costa, & Rue, 1990; Onslow, Packman, & Harrison, 2003) to treat preschool children with beginning stuttering. I was initially trained in using this program in a workshop led by Rosalee Shenker of the Montreal Fluency Centre. Subsequently, I developed more expertise through consultation and mentoring from Rosalee and my colleagues, Julie Reville, Melissa Bruce, and Danra Kazenski. Follow-up training with Elisabeth Harrison further sharpened my skills. For readers interested in using this approach, I urge you to obtain formal training at one of the many workshops offered around the world by the Lidcombe Consortium. More information on LP is available at http://www.lidcombeprogram.org. On this Web site, there are links to pages that provide information in the following categories: Families and Caregivers, Speech Language Pathologist, and Teachers and Health Professionals. The information for Speech Language Pathologists includes copies of materials needed for using the Lidcombe Program including the treatment guide that can be found by clicking on the Research and Publications link. An excellent chapter in Guitar and McCauley (2010), written by Harrison and Onslow, gives a detailed description of LP.  Fourteen short video clips on *thePoint* (Chapter 12 videos) show Harrison (a master LP clinician) treating a preschool child using LP.

Overview

The Lidcombe Program uses **operant conditioning** procedures, which are administered by a parent in the home during conversations each day and guided by weekly meetings with the clinician. Treatment begins in structured conversations designed to elicit a maximum of fluent speech by the child so that the child receives mostly positive reinforcement. Approximately every fifth fluent utterance is followed by *praise* (e.g., "That was really good, smooth talking!"), *acknowledgment of fluency* (e.g., a very low-key "That was smooth"), or *request for self-evaluation* (e.g., "Was that smooth?"), which is used only after a fluent utterance. When the child stutters, the parent provides an occasional