The Oakville Program Treatment Guide

February 2023 (Version 1.3)

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This guide is written in four parts. Part One gives a brief introduction to the Oakville Program, along with information about its origins and for whom the treatment is suitable. Part Two describes and explains in more detail the major components involved in implementation of the program. Part Three describes what typically happens on a week-by-week basis when clinicians implement the program with a parent and child. Part Four summarises the evidence for the program.

PART ONE: INTRODUCTION

Qualified practitioner

This guide is intended as a reference tool for use by speech pathologists (subsequently referred to as clinician throughout this guide) during treatment. It is essential that a clinician trains, guides, and supervises the parent during the Oakville Program. The treatment is not designed to be administered by the parent independent of this specialist support.

A behavioural treatment

The Oakville Program is a treatment for young children that is designed to reduce stuttering. The parent does not change the family lifestyle in any way, apart from (a) encouraging the child to use syllable-timed speech and (b) presenting contingencies for the child's stutter-free and stuttered speech. These activities occur during practice sessions and occasionally throughout the day. The child's parent delivers the treatment in the child's everyday environment. The treatment aim is to achieve no stuttering or nearly no stuttering, and for that to occur with normal speech rate and speech that does not sound unnatural in any way.

Syllable-timed speech (STS)

Syllable-timed speech involves saying each syllable in time to a rhythmic beat. For example, "The chil-dren are play-ing on the tram-po-line.," "The kit-ten is drin-king its milk." Typically, STS produces vowels of similar duration for each syllable. For young children, it can be useful to give STS a name, such as "syllable talking" or "rhythm talking." STS is used only for a short period during this program in order to achieve periods of stutter-free speech. Emphasising this short-term use of STS to the child aids compliance.

Contingencies

The term *contingencies* refers to when a parent gives either verbal or non-verbal speech feedback to a child, either after the child produces a period of stutter-free speech or after a stuttering moment. The contingencies used in the Oakville Program are similar to those used in the Lidcombe Program.[1] However, following a stuttering moment, a request is typically made for the child to repeat the stuttered word (or phrase containing the stuttered word) using STS. For example, a parent may say "Can you say 'He is run-ning' (parent using STS) again?" The parent provides contingencies during practice sessions and during everyday conversations. Praise is used far more frequently than a request to repeat the stuttered word or phrase.

Treatment overview

At the beginning of treatment, the clinician instructs the parent and child how to do STS using demonstration, imitation, and practice. Once the parent and child have learnt how to use STS with the clinician, the child is encouraged to use STS in practice sessions and, later, occasionally during naturally occurring everyday conversations. STS practice sessions are initially encouraged 4–6 times per day for about 5–10 minutes each time.* When this goal has been attained and there has been a drop in stuttering severity, contingencies for stutter-free speech and stuttering are introduced into the practice sessions and the number of practice sessions is reduced. As stuttering reduces further, STS is withdrawn and the number of practice sessions decreases. More details about the specific procedures are given below.

Treatment goals during Stage 1 and Stage 2

The Oakville Program is conducted in two stages. The treatment goal of Stage 1 is for the child to speak with no stuttering or almost no stuttering in everyday conversations, and the goal of Stage 2 is for no stuttering or almost no stuttering to be sustained for a long time.

Measuring stuttering

Regular measurement of the child's stuttering severity occurs throughout the program with a Severity Rating (SR) scale: 0 = *no stuttering,* 1 = *extremely mild stuttering*, and 10 = *extremely severe stuttering*.† The parent, the clinician, and sometimes the child, use the SR scale during the program.

Parent consultations

The parent is responsible for implementing the treatment at home with the child each day. The parent initially consults with the clinician weekly, either in a clinic visit or by webcam. Consultations typically last for around 45 minutes. Consultations reduce to fortnightly when specific criteria have been met. During each consultation, the clinician instructs the parent how to do the treatment and ensures that it is being done properly. Later in this treatment guide, an outline of the specific criteria for reducing the frequency of visits is given, as well as suggestions about what should occur during each consultation and in what order.

Origins of the treatment

According to one model of stuttering causality,[2] the speech motor systems of those who stutter may be susceptible to variations in linguistic stress, and these variations can trigger stuttering moments. Saying each syllable in time to a rhythmic beat reduces these variations and allows the child to produce and practise stutter-free speech. An initial trial of STS with school-age children[3] showed that practising STS could reduce stuttering significantly during the first 6 weeks of treatment. However, practising STS alone was unable to maintain these reductions, and child non-compliance became an issue. Parent contingencies for stutter-free speech, and for stuttering, were added to deal with these two issues.[4]

Indications for using the Oakville Program

The Oakville Program is most suited to children who have more severe stuttering or previous treatment failure with the Lidcombe Program.[1] It is more likely to be used with children over 6 years of age, although some of these children, especially those with mild stuttering, may still respond well to the Lidcombe Program.

Resource materials

On the Australian Stuttering Research Centre website (see *https://www.uts.edu.au/asrc/resources/oakville-program*), there are a number of downloadable resources to help clinicians implement the Oakville Program. These are (a) the *Child Stuttering Severity*

* In some situations, at the discretion of the clinician, fewer than four STS practice sessions a day may be suitable, providing that a reduction of SRs can be attained.

† Similar versions of the scale have been used in previous versions of the treatment.

Chart in eForm and PDF format, (b) a *Syllable-Timed Speech Training Model* of how it should be used throughout the program, (c) four video demonstrations of a clinician teaching STS to a child using imitation, short sentences, long answers, and conversation, and (d) two *Stuttering Treatment Activity Guides* containing lists of activities that can be used with younger and older children to practise syllable talking.

PART TWO: OAKVILLE PROGRAM COMPONENTS

This part of the guide describes and explains the individual components that are taught to the parent and child during the Oakville Program. They are presented in roughly the order they might be used in the clinic, although there is some overlap between all of them. The way they are implemented on a week-by-week basis is presented in Part Three of this guide.

Measurement: The severity rating (SR) scale

Overview

The following section contains general information about stuttering SRs, their importance and use generally, and the training required. *Part Three: Clinic Consultations* contains specific information about how to integrate this training into weekly consultations with the parent.

Purpose of SRs

SRs are used to measure the child's stuttering during each consultation and in the child's everyday speaking situations. The simplicity of SRs makes them a quick and effective way for the clinician and parent to communicate with each other about the child's stuttering severity. They enable treatment goals to be evaluated constantly. If progress is not satisfactory, then SR scores alert the clinician, and efforts can be made to resolve the issue. Such problem solving, and subsequent decision making, is a routine part of the Oakville Program, and much of it centres on SRs. It is useful if the clinician explains the importance of SRs to the parent during the first consultation, and reiterates this throughout the course of the treatment. Taking time each week to discuss and problem-solve around the child's SR scores from the previous week is a major contributor to the parent continuing to collect and report daily SR scores.

Treatment goals determined by SRs

The parent assigns a SR to the child's speech each day, and the clinician and parent assign a SR for a speech sample during each consultation. Long-term treatment goals, weekly treatment decision-making, and progression through the program are all based on these scores.

A flexible measurement

SRs are a flexible way to measure stuttering severity. Each day, the parent records a SR for the whole day to reflect the child's typical stuttering severity for that day. In other words, the parent records the score for the majority of the day. The parent may not always hear the child talking all day. An example is when the child is at pre-school. In such a case, the parent assigns SRs based only on the speech heard during the day.

Variations of the SR procedure can be used, involving more than one SR per day, if the clinician thinks it would be useful. For example, one SR could be used for typical severity and another for highest severity during the day. Additionally, the clinician may wish the parent to use supplementary SRs for a particular speaking situation that occurs each day, such as during dinner, bath time, or shopping. These SRs are recorded in addition to the daily SR. Another option is for the parent to record a highest and lowest SR for each day.

Valid and reliable parent SRs are essential

Research shows that parents are typically able to assign SRs that agree with those of a clinician[5,6] and the general community.[7] It is essential for the clinician to ensure that this agreement occurs, as treatment progression and problem-solving rely on the parent and clinician having a reliable means of communication. However, the clinician also needs to be aware that the child's speech during a

consultation, and, hence, the child's SR during that consultation, may not accord with parent scores from the child's everyday conversations. For various reasons, such as child shyness, reduced amount of conversational speech, or lack of variation in activities during the consultation, this SR may often be different from the parent report of SRs around the home environment.

Parent SR training

The parent is trained to use SRs either at assessment or during the first consultation. Training begins with the clinician explaining the reason for collecting measures and then explaining the scale and its end points. The parent or the clinician, or both, talk with the child for a few minutes until the child displays a reasonably representative amount of speech and stuttering. After a few minutes, the clinician asks the parent to assign a SR to the speech sample. The clinician indicates whether that is an appropriate score and, if necessary, suggests a different score.

This score is documented in the child's file. As noted above, the clinician needs to be aware that this within-clinic score is not necessarily representative of the child's everyday conversational stuttering severity. Also, if the child's stuttering increases significantly during the remainder of the session, possibly due to more representative speech being elicited, the latter score would be documented.

All subsequent consultations begin with a child conversation. The parent then assigns a SR score, and the clinician either confirms that the score is appropriate or provides corrective feedback. The clinician's judgement, based on clinical experience, is used as the yardstick for SR scores. Acceptable agreement is when the parent SR is within one scale value of, or identical to, the clinician SR. It is desirable during the later stages of Oakville Program treatment, however, for parent and clinician SR scores to be identical. This is because, during those later stages of treatment, the child's severity is at the lower end of the range where there is less margin for error with clinical use of the scale.

Another more time-efficient and valid speech sampling method—particularly early in treatment—is for the parent to take an audio or video recording of the child during one or more conversations of everyday life. This provides a much more realistic measure of the child's stuttering severity. In this scenario, the clinician and parent listen to the recording together and consider a SR score at the start of the consultation. This method has the advantage of being able to scan quickly through a long and representative set of recordings of the child's speech.

Discussion of the different types of stuttering in the child's speech is a useful part of a consultation. This is because clinical improvement, in terms of reduced stuttering, is often accompanied by a change in the type of stuttering a child presents with. One method of classifying stuttering behaviours[8] uses three main categories: repeated movements, fixed postures, and extraneous behaviours. A moment of stuttering may comprise one or more of these behaviours.

Documenting SRs

The parent may produce hand-written SRs each week for the consultation or use an e-version of the form accessible from a digital device. The *Child Stuttering Severity Chart* in eForm and PDF format can be found on the Australian Stuttering Research Centre website (see *https://www.uts.edu.au/asrc/resources/oakville-program*). Another option is for the parent to send SRs to the clinician at regular intervals, such as daily or every few days, using a digital device. The key to collecting SR scores is for the parent to do this consistently and accurately. The method that is used to record SRs should be guided by parent preference and convenience.

Training older children

It is useful to train older children (around 9 years of age and older) to collect and document their own SRs. The training is done in the same manner as training for the parent and typically begins during the second consultation. The child and parent document their SRs on separate forms. It can occur that a child's SRs differ from those of their parent. Regardless, the information gained from the child evaluating stuttering severity at school and with friends can add valuable information to discussions about clinical progress. Sometimes, an older child can show interest in, and compliance with, collecting their own SRs at the beginning of treatment, only to later lose interest later. Whether to persist with the child's documentation of SRs is decided on a case by case basis.

The bilingual child

When a child speaks two languages, it is important to ask the parent whether the child stutters more in one language than in the other, and to regularly report SRs for both languages. This information feeds into a decision about whether to include one or both languages in treatment. If the child tends to stutter more in the language of treatment, there is no reason to doubt that gains will generalise to the other language. On the other hand, if the child stutters more in a language other than the language of treatment, it is important to also do treatment in that other language.

STS Practice

This section contains detailed conceptual information about the teaching and practice of STS with the parent and child. However, the way it is introduced to the parent and child on a week-by-week basis is covered in *Part Three: Clinic Consultations*.

Hierarchy of STS teaching

The treatment begins with the clinician teaching the child how to do STS while the parent observes. Age-appropriate books are useful for stimulating speech. Examples are *Where's Wally?* for older children and *Usborne Picture Books* for younger children. STS is spoken like this:

- The dog is run-ning
- The kit-ten is li-cking its paws
- The wo-man is ri-ding a brown horse

STS is introduced initially using imitation, with short sentences and slowed rate. Both imitation and slowed rate assist the child to achieve correct production of the speech pattern and are important teaching techniques. However, it is also important to use and encourage normal volume, pitch, and intonation. Each syllable should be joined to the next one in a smooth flowing manner (*legato*) rather than punched out with each syllable separated from the next one (*staccato)*. On the Australian Stuttering Research Centre website (see *https://www.uts.edu.au/asrc/resources/oakville-program*), there is a *Syllable-Timed Speech Training Model* of how STS should be used throughout the program, and there are four video demonstrations of a clinician teaching STS to a child.

When the child can sustain STS for a number of short utterances, the child moves to simple conversation. Picture books or conversations about play activities can be used as stimulus materials. Some children may need intermediate steps, such as picture description or asking questions, to elicit short answers. These steps reduce the cognitive load and help the child to concentrate on using the new STS pattern more successfully. Some children may also require imitation for much longer than others, especially those with concomitant disorders, such as attention deficit hyperactivity disorder, developmental delay, or autism spectrum disorder. Progression from short utterances to simple conversation may take place quite quickly—within a week, or over several weeks—depending on the child's ability to imitate and maintain use of the technique. Children with issues additional to stuttering typically take longer. No programmed instruction is used when the STS pattern is taught.

It can be useful for the clinician and child to make a recording of them talking together using the STS pattern correctly. This reference model helps to stop the child's or parent's technique from morphing into normal speech or moving towards staccato-sounding speech when practising at home together.

Home STS practice sessions

When the child and the parent demonstrate proficient use of STS with the clinician, practice sessions begin at home. A practice session is when a time is specifically set aside for the parent and child to use STS together. This may be in a naturally occurring conversation if the child is able to do this. However, early in the treatment, it might be a time set aside for imitation or use of STS in short sentences. The goal is for the child to use STS for 5–10 minutes at a time during 4–6 practice sessions spread across the day. Practice can be done anywhere a parent and child are together and able to concentrate on the task. Examples of everyday naturally occurring treatment situations would be talking at the dinner table, reading a book, engaging in a play activity together, preparing meals, hanging out the washing, or travelling in the car. The parent also speaks in STS during these practice times.

During practice sessions, the child should be trying to maintain STS for most of the time. Occasional gentle prompts for STS may be used. An example is "You are doing really well, but see if you can do a little bit more syllable talking." If the child is unable to maintain STS in conversation, then there may be a need to temporarily go back to easier practice tasks, such as imitation or short sentences, as well as for the parent to slow down when modelling STS. Sometimes more focused practice activities may help, such as looking at a book or photos together. Some children may need to rely on imitation for some time, but improvement can still be made in such circumstances. The parent can encourage and reinforce the child's use of STS with praise—"Great syllables, keep talking like that!"—or the parent can request that the child self-evaluate the use of STS. An example of the latter is "Was that syllable talking?"

How STS should sound

STS is initially taught with slowed speech rate, then progresses to a near normal speech rate. However, the child may need to drop back to a slower rate at times if the child finds STS difficult to maintain. When using STS, it is essential to ensure that both parent and child use normal volume, normal pitch, and normal intonation, and to link the syllables together. Each syllable should be evenly stressed.

Be sure the parent is demonstrating and eliciting STS correctly and consistently

The clinician needs to be sure that the parent is demonstrating and eliciting STS correctly, according to instructions. At each consultation, the parent demonstrates how practising STS has been done with the child during the previous week, and the clinician gives feedback. Alternatively, the parent may audio or video record examples of themselves doing STS practice sessions and play them to the clinician during the consultation. The clinician also engages the child in an STS practice session to demonstrate treatment for the parent to observe. The order of parent or clinician demonstration is not critical, but it is determined by discussion and problem-solving and typically changes as the parent and child become more skilled with the STS speech pattern. It is not a static process but a fluid one.

Practice sessions are a positive experience for the child

Practice sessions must be a positive experience for the child. It is essential to identify when they are not a positive experience. Activities need to be varied to avoid boredom. The clinician should also watch out for parent over-correction. Neither STS nor a request for self-evaluation should be used as a correction for stuttering during STS practice sessions.

Prompts

When the child can maintain STS for most of the practice session, and 4–6 practice sessions are being done each day, prompts are introduced. These are used outside of practice sessions. A prompt involves the parent encouraging the child to use STS for a few sentences during a naturally occurring everyday conversation. At other times during the day, it is useful for the parent to speak using STS for a few sentences and allow the child to join in. While there is no requirement for the child to use STS at these times, the child tends to use it unknowingly. It is important that the timing and frequency of prompts are discussed with the parent. Generally, no more than one prompt per hour would be recommended, and only if the child tolerates them. They should also only be provided in "comfortable" environments, such as with the family, but not in the presence of friends or peers. At this stage of the program, prompts for STS should never be used as a response to the child's stuttering.

Contingencies for stutter-free speech and stuttering

The following sections give information about the nature and purpose of contingencies for stutter-free speech and stuttering in the Oakville Program. The timing and the way contingencies are introduced to the parent and child on a week-by-week basis are covered below (see *Hybrid practice sessions*, below).

Overview

The parent is taught to provide contingencies for the child's stutter-free speech and stuttering. These contingencies may be verbal or non-verbal. Contingencies are introduced only when STS has been mastered and the child is routinely using it during STS practice sessions.

Specifically, contingencies are introduced into the practice sessions when (a) the child is compliant with the 4–6 daily STS practice sessions and (b) a significant drop in stuttering severity has been achieved

outside the practice sessions. It is difficult to prescribe a significant drop in severity because it depends on the child's initial stuttering severity. The clinician needs to make a judgment for individual children. The use of contingencies occurs first during structured STS practice sessions with the clinician and parent, and then later during naturally occurring everyday conversations.

The purpose of introducing the contingencies is to help maintain general compliance with treatment and to further reduce stuttering. Some children become bored with STS practice quite quickly, and compliance starts to become an issue, so it is important to try to introduce contingencies before this happens. Once contingencies have been introduced, practice sessions reduce to around three per day, typically around 10–15 minutes in duration.

Contingencies are mostly given in response to stutter-free speech. The assumption is that the use of STS during the practice sessions leads to mostly stutter-free speech during these sessions, and this stutter-free speech is maintained even after STS is used less during the session. Therefore, very few contingencies for stuttering should be required.

Verbal contingencies for stutter-free speech involve praising or acknowledging the response, such as "That was great talking" and "That was smooth." They need to be genuine, varied, and in keeping with individual parent style. Verbal contingencies for stuttering moments involve requesting self-correction by the child using STS, for example, "Can you say [stuttered word or phrase] again?" If it is a single-syllable word, it is appropriate to add the next few words using STS in the request for correction. If the clinician or parent models the use of STS during the request, the child normally also uses STS for the correction. These contingencies should be used sparingly and not in a punitive or evaluative manner. The clinician monitors all aspects of these contingencies during consultations.

Teach contingencies for stutter-free speech first

The clinician doesn't teach the parent how to give all contingencies at once. Normally, the clinician would demonstrate and teach the parent how to give contingencies for stutter-free speech during practice sessions first so that the child can become comfortable with the feedback. Later, the clinician demonstrates and teaches the parent how to give contingencies for stuttered speech when it is clear that the child is ready for it. It makes clinical sense to introduce contingencies for stutter-free speech before contingencies for stuttering.

Be sure parents are using contingencies correctly

The clinician needs to be sure that the parent is using contingencies correctly, according to instructions. At each clinic visit, the parent demonstrates how contingencies have been given to the child during the previous week. The parent may audio or video record examples of themselves providing contingencies during practice sessions, and play them to the clinician during the clinic visit. In either event, the clinician gives constructive feedback and then observes the parent giving contingencies while incorporating that feedback. A parent delivering contingencies incorrectly is a common reason why children do not progress as expected through Stage 1. This problem can persist and undermine the treatment process if the clinician does not detect it by direct observation of the parent.

Contingencies are for unambiguous stuttering moments

Contingencies for stuttering are given infrequently. Contingencies are given only for unambiguous stuttering moments. If the parent has any doubt about whether a disfluency is actually a stuttering moment, then the parent should not use a contingency. Giving contingencies for ambiguous disfluencies normally only becomes an issue towards the end of Stage 1 when a child has SR 0–1; that is, when there is no stuttering or there is only extremely mild stuttering during most days.

Contingencies are a positive experience for the child

All contingencies, whether for stutter-free or stuttered speech, must be a positive experience for the child. They must *not be constant, intensive, or invasive*. The child needs to experience the contingencies as enjoyable and sincere. For some parents, it may be necessary to introduce the contingencies slowly and carefully in order to be sure that the child's experience is supportive and enjoyable. There should always be far more contingencies for stutter-free speech than for stuttering moments.

Have the parent give only as many contingencies as are needed

Contingencies are introduced only after the child has been consistently practising STS during practice sessions for a while (See *Hybrid practice sessions*, below, for details). At this stage, stuttering should already be mostly under control during these sessions, and few stutters are likely to occur during practice sessions. Therefore, there are few, if any, opportunities to give feedback for stutters. Feedback focuses mostly on praise for stutter-free speech, but even this is minimal.

Contingencies are accurate

It is essential that the clinician is satisfied that the parent can present contingencies accurately in the clinic with the clinician before they are attempted at home. The clinician needs to be sure that the parent can distinguish between unambiguous stuttering moments and stutter-free speech. It is also essential that contingencies, when given, are presented immediately after periods of stutter-free speech and stuttering moments. Delayed or inaccurate contingencies are unlikely to be effective. At each clinic visit the clinician needs to observe, either during clinic real time or from recordings, the parent providing immediate and accurate contingencies.

Hybrid practice sessions

This section describes how the contingencies outlined above are first introduced to the parent and child in the Oakville Program. This occurs during hybrid practice sessions. Before introducing the contingencies, an age-appropriate explanation should be given to the child about what is about to change. For example, the child can be told that the practice session has changed and that it is no longer just syllable talking but now also includes natural-sounding speech: "natural," "normal," or "smooth" speaking, according to whichever terminology makes sense to the child).

Instead of a practice session consisting of 5–10 minutes of only STS practice, the session is divided into two halves. The first half consists of the familiar STS practice. During the second half of the practice session, the child is encouraged to talk naturally. The clinician first introduces and demonstrates the transition to natural-sounding speech with the child. The parent then attempts to do the same with the child. Finally, the clinician provides feedback about the parent attempt. Typically, during the second half of the session, the clinician or parent just begins talking without STS, and the child should be allowed to drop out of STS naturally. Sometimes the child continues to use STS after being instructed to use natural speech. It is best to avoid prompting natural speech and just let the child ease out of STS speech as needed.

During the second half of the practice session, the contingencies for stuttered and stutter-free speech described above are introduced. Generalisation of stutter-free speech from the STS practice in the first half of the session usually leads to mostly stutter-free speech in the second half. Therefore, contingencies are infrequent, and mostly praise is directed at reinforcing the stutter-free speech the child produces. The clinician demonstrates this first, then the parent is asked to demonstrate praising the child during the natural talking part of the session. In later sessions, occasional contingencies for stuttering may be given if stuttering moments occur. A contingency for stuttering is usually in the form of a request to repeat the word or phrase using STS (as described above) but may also simply be a request to stop and start again.

Gradually, how much time spent practising STS and how much time spent using natural speech with contingencies changes. Initially, roughly 50% of the time (around 5 minutes) is allocated to each activity. As beyond clinic SRs continue to drop, less time is spent on STS practice and more time is spent using natural speech: 50%, 60%, then 70%, and so on. The ultimate goal is to eliminate the need for STS practice altogether.

The rate of change described above is determined by the child's progress. When the child has high SRs or a slow improvement of them, 50% of the time is allocated to each activity, based on the assumption that the child still needs to use STS to achieve fluency. For some children, generalisation of STS occurs quite quickly, and little time needs to be spent using STS in practice sessions. If stuttering increases in the second part of the session, STS practice is increased to 70–80% of the session. Manipulating the length of the child's utterance, as frequently occurs in the Lidcombe Program, is, therefore, unnecessary.

Contingencies during everyday conversations

What they are

When the clinician feels it to be appropriate, verbal and non-verbal contingencies are introduced into everyday conversations with the child. The natural conversations of everyday childhood life are never modified to optimise the occurrence of stutter-free speech. Instead, the parent takes advantage of naturally occurring periods of reduced stuttering during each day to present contingencies. Everyday conversations with the child, during which the parent typically gives contingencies, occur during food preparation, at meal times, in the bath, on the way to school, in the park, or while shopping. As with contingencies during practice sessions, they can be supplemented with non-verbal contingencies if the clinician thinks that they would be helpful. Examples of non-verbal contingencies are high-fives or token rewards.

When they are introduced

Verbal contingencies during everyday conversations are introduced when the clinician observes that the parent is consistently giving verbal contingencies safely and correctly during practice sessions.

Transitioning from structured practice sessions into everyday conversations

For a period, the parent gives feedback during practice sessions and during everyday conversations. Eventually, feedback during everyday conversations completely replaces feedback during daily practice sessions. However, the withdrawal of practice sessions should be done extremely cautiously, as practising stutter-free speech in sessions assists in the maintenance of stutter-free speech.

The clinician may decide that this transition should not be completed until as late as some time during Stage 2. The transition is a flexible process. During the period when the parent is providing verbal contingencies in practice sessions and everyday conversations, the clinician may recommend several changes to the number and duration of practice sessions. An example would be changing from one practice session each day to one practice session every second day. Similarly, during this transitional period, the clinician may direct many changes to the number and type of verbal contingencies that the parent gives during everyday conversations. At times, it may also be necessary to reintroduce STS practice.

Rewards

Compliance may be an issue for some children. In such a case, it may be appropriate to reward the child specifically for compliance. Rewards are optional and individualised for each child. Sticker charts, tokens earned towards an ultimate goal, or activity-based rewards may be designed to suit the child's age and interests. Praise for the child's use of STS should occur occasionally, both within and outside of practice sessions. Compliance should not be confused with a child's inability to sustain STS use. In such a case, slowed speech rate and praise are more appropriate.

Overview of Stage 1

At the beginning of Stage 1, the parent and child initially consult with the clinician weekly, either in the clinic or by webcam. When the child can maintain STS for the 5–10-minute practice sessions and is complying with practice sessions 4–6 times per day, prompts to use occasional STS sentences in everyday conversations are introduced, and consultations move to fortnightly. When contingencies are introduced into the practice sessions (see *Hybrid practice sessions*, above) the number of these sessions reduces to a minimum of three; however, they are typically 10–15 minutes in duration. During the latter weeks of Stage 1, the parent slowly withdraws the last of the STS practice sessions, providing that it can be done without an increase in stuttering. At this time, STS during naturally occurring everyday conversations continues. As SRs decrease to less than 2, the number of sessions reduce to two per day. Just one practice session per day is required for several weeks before entering Stage 2. STS rarely remains part of the treatment focus at entry into Stage 2. The child moves into Stage 2 when the following two criteria have been met for two consecutive fortnightly consultations:

(1) Clinician SR of 0 or 1 during the consultation

(2) Daily parent typical SRs of 0 or 1 during the week preceding the consultation, with at least four of those seven SRs being 0.

The stuttering of a child with a history of previously unsuccessful treatment often proves more intractable than a child without such a history. In such a case, it is appropriate to continue to work until low levels of stuttering are maintained. A minimum requirement during Stage 2 is for the parent to document SRs during the week preceding the consultation. However, the clinician may request the parent to document SRs more often.

Overview of Stage 2

The purpose of Stage 2

Stage 2 serves three purposes: (a) to withdraw practice sessions, (b) to maintain the absence or low level of stuttering that was attained during Stage 1, and (c) to ensure that the parent understands how to monitor and manage any increase that may occur in the child's stuttering, reintroducing STS practice if needed.

Systematic withdrawal of practice sessions

During Stage 2, the clinician makes suggestions for the rate and timing of the withdrawal of practice sessions, although occasional practice sessions are typically recommended for a few months. Prompting for STS may be used intermittently, and after moments of stuttering if appropriate. This is because stuttering frequency during Stage 2 is very low. Decisions about the timing and rate of withdrawal of practice sessions are based on the child's SRs and after discussion with the parent.

Empowering the parent

The parent should be taught to problem-solve and deal with any increases in stuttering severity in the first instance. If stuttering increases minimally—to SRs of 1 or 2—the parent should be taught to reintroduce a practice session daily until the SRs reach criterion levels again. Practice sessions may need to include a minimal amount of STS practice. An example is 1 minute of STS and 9 minutes of natural-sounding speech with contingencies.

The parent should be encouraged to monitor for such an increase in stuttering severity and to attempt to control it themselves before coming back to treatment consultations. However, if SRs increase substantially, or do not respond to reintroduction of practice sessions, the parent should be encouraged to contact the clinician for advice prior to the next scheduled Stage 2 consultation.

Performance contingent maintenance

A performance-contingent maintenance schedule applied to stuttering treatment, and its potential benefits, have been documented.[9] Performance-contingent maintenance means that the parent and child consult with the clinician less frequently, providing that treatment targets are maintained. For example, four consultations 4 weeks apart, then two consultations 8 weeks apart, and, finally, one or two consultations 16 weeks apart. The schedule normally takes a year or more.

A common Stage 2 problem

When a child completes Stage 1 and there is no stuttering or nearly no stuttering, the parent or clinician, or both, can become complacent and not follow through with the prescribed Stage 2 maintenance program. This creates a serious risk of relapse. It is important for the clinician to ensure that the parent is fully aware of the importance of a performance-contingent maintenance schedule and the risks if it is not followed.

PART THREE: CLINIC CONSULTATIONS

Early Stage 1 consultations: Focus on STS practice

During the first part of Stage 1, the parent and child consult with the clinician once per week. Each consultation is typically around 45 minutes. Once the STS practice is mastered, that is, the child is compliant with 4–6 practice sessions daily, consultations reduce to fortnightly. The following events normally occur during a consultation:

(1) Child conversation

The parent or the clinician, or both, converse with the child until the extent of stuttering, if any, is apparent. Alternatively, the parent and clinician listen to a recording or a selection of recordings of the child conversing during everyday life.

(2) Check parent SR

The clinician and parent discuss a SR using procedures outlined previously (see *Parent SR training*, above). The clinician then documents a SR. The clinician needs to be mindful that a within-clinic SR is not necessarily representative of the child's speech during everyday activities.

(3) Discussion of progress since last consultation

The parent reports the child's SR scores for each day of the previous week and the number, duration, and success of daily STS practice sessions. The clinician then uses this information to focus an in-depth discussion of severity and treatment responsiveness from the previous week. Discussion questions normally include the following:

- When were practice sessions planned, did they occur as planned, and how often did they occur and for how long?
- When during the day did the practice sessions occur?
- What activity was the child and parent involved in during practice sessions?
- Was STS practised in imitation or conversational speech?
- Was the child able to sustain STS throughout the practice session?
- How much was the child using STS during the practice session?
- Did the parent use prompts for STS? How often? With what result?
- Did the parent think anything did or did not work particularly well during the week?
- What was the relationship between stuttering severity and STS practice?
- Did any activities appear to trigger an increase in stuttering?
- Did the child enjoy, and was the child compliant with, the practice sessions?

(4) Clinician and parent demonstrate an STS practice session

It is essential during each consultation for the clinician and the parent to demonstrate STS practice with the child, as each serves a different purpose. The clinician demonstrates with the child in order to reinforce to the parent the correct way to do the treatment. This can reassure less confident parents that what they are doing is correct. It can also model the best procedures for the parent who is having difficulty with the structure of practice sessions. It directs the changes that need to be made. Finally, it empowers the parent with more information.

It is also essential for the parent to demonstrate how the practice sessions have been conducted with the child at home. This may be done during the consultation, or the parent may bring in a recording of a session done at home, or both. This enables the clinician to see how well the parent has interpreted instructions given, and how well the parent has been able to structure and conduct the sessions at home. This information is essential so that the clinician and parent can engage in problem-solving each week.

Whether the clinician or the parent demonstrates first depends on a number of factors, including the stage of treatment, the behaviour and cooperation of the child, the confidence of the parent, and the discussion of progress during the previous week. Regardless of the order of demonstration, the fact that both the clinician and the parent demonstrate allows the child to get more practice using STS.

(5) Parent and clinician discuss issues with the conduct or scheduling of STS practice sessions

During and subsequent to the demonstration of the STS practice sessions, the clinician and parent discuss any issues that become apparent with the scheduling, conduct, or structuring of the practice sessions. If the recommended procedures are not able to be followed, the clinician and parent discuss the reasons for this and the solutions.

(6) Planning treatment changes for the coming week.

The parent and clinician discuss changes to procedures (for example, practice sessions or prompts) for the coming week and activities to use during practice sessions. The clinician may demonstrate to the parent any changes to the treatment procedures for the coming week. The parent may also demonstrate the changed procedures if the child is compliant with this. This, along with points 4 and 5 above, is not prescriptive in terms of the order of the procedures, and often they occur simultaneously. The important point is that the clinician and parent, together, discuss and problem-solve any issues to do with implementation of the STS practice sessions, prompts, or child compliance that are uncovered during the session. The clinician uses opportunities for further teaching and demonstration as required.

(7) Concluding the consultation

The clinician concludes the consultation by summarising the plan for the coming week. The clinician encourages the parent to raise any further matters for discussion.

Later Stage 1 consultations: STS practice and contingencies

Contingencies are introduced into practice sessions when (a) the child is compliant with the 4–6 daily STS practice sessions, and (b) a significant drop in severity has been achieved. See *Contingencies for stutter-free speech and stuttering*, above, for more details. Most often, the decrease in stuttering takes place within about 4–6 weeks of beginning treatment. At this stage, fortnightly sessions in response to compliance with STS practice have probably already begun. Once contingencies are introduced, some of the events that normally occur during a consultation change slightly from those described above. These are outlined below:

(1) Child conversation

As above for *Early Stage 1 consultations: Focus on STS practice*. (2) Check parent SR

As above for *Early Stage 1 consultations: Focus on STS practice*.

(3) Discussion of progress since last consultation

The parent reports the child's SR scores for each day of the previous week. The parent also reports the number of hybrid practice sessions undertaken each day, the ratio of STS to normal speech during the sessions, and the success, in terms of stuttering reduction, of each practice session. The clinician then uses this information to focus an in-depth discussion of severity and treatment responsiveness from the previous week. Discussion questions could include the following:

- When practice sessions were planned, did they occur as planned? How often and for how long?
- Did the child enjoy, and was the child compliant with, the practice sessions?
- What was the ratio of time spent practising STS compared with normal speech using contingencies
- When during the day did the practice sessions occur?
- What activity was the child and parent involved in during practice sessions?
- Was STS practised in imitation or conversational speech?
- Did the parent use prompts for STS? How often? With what result?

- What verbal contingencies were used during practice sessions and/or everyday conversations?
- How frequently did the parent give verbal contingencies during everyday conversations?
- How well did the child tolerate the verbal contingencies?
- What was the child and parent doing at the time of verbal contingencies during everyday conversations?
- Did the parent think anything did or did not work particularly well during the week?
- Did any activities appear to trigger an increase in stuttering?

(4) Clinician and parent demonstrate a hybrid practice session

It is important during each consultation for both the clinician and the parent to demonstrate treatment in a hybrid practice session with the child. Both the parent and the clinician individually conduct STS for the first half of the practice session. The clinician, and then the parent, each demonstrate the giving of contingencies using natural-sounding speech during the second half of the practice session. Gradually, and as the parent becomes more proficient at implementing the treatment, the parent conducts both parts of the treatment while the clinician only demonstrates if needed.

(5) Clinician and Parent discuss issues with the conduct or scheduling of the hybrid practice sessions

During and subsequent to the demonstration of the hybrid practice sessions, the clinician and parent discuss any issues that become apparent with the scheduling, conduct, or structuring of the practice sessions. If the recommended procedures are not able to be followed, the clinician and parent discuss the reasons for this, and the solutions.

(6) Planning treatment changes for the coming week.

As above for *Early Stage 1 consultations: Focus on STS practice*.

(7) Concluding the consultation

As above for *Early Stage 1 consultations: Focus on STS practice*.

Stage 2 consultations

A typical Stage 2 consultation lasts around 30 minutes. The following events normally occur during a consultation:

(1) Child conversation

As above for *Early Stage 1 consultations: Focus on STS practice*.

(2) Check parent SR

As above for *Early Stage 1 consultations: Focus on STS practice*.

(3) Discussion of progress since last consultation

The clinician and parent discuss the extent to which the child's clinic SR and weekly SRs have been typical of all weeks since the last consultation. They then discuss general progress since the last consultation. Discussion topics may include, but are not limited to,

- The stability of the stuttering reduction
- The duration and degree of any fluctuations
- The number of practice sessions or the need to reintroduce any practice sessions
- The use and effectiveness of prompts
- Any activities that prompted more stuttering.

Withdrawal of practice occurs as soon as possible once low SRs are maintained.

The parent continues to collect daily SRs for at least the week prior to each consultation. If the child meets the criterion treatment goals (see *Overview of Stage 1*, above), the clinician arranges progression to the next step in the performance contingent Stage 2 schedule. If the child does not meet those goals, progress is not recommended. Instead, depending on the child's stuttering severity and the parent's ability to deal with stuttering fluctuations, the clinician either (a) schedules a consultation for the next week, or the week after, and makes recommendations regarding management for the child's increased stuttering, (b) schedules a return to an earlier stage of the sequence of Stage 2 consultations, or (c) on rare occasions, returns the child to Stage 1.

Stage 2 continues until the child has sustained minimal stuttering for around a year. Subsequent to the conclusion of Stage 2, the parent is advised to contact the clinician if any relapse occurs that cannot be managed by short-term reintroduction of STS practice.

PART FOUR: THE OAKVILLE PROGRAM EVIDENCE BASE AT FEBRUARY 2023

There are currently only two clinical trials involving the Oakville Program. One trial involved 91 pre-school children up to 5 years 11 months of age.[10] The trial was a three-arm randomised controlled trial with the Lidcombe Program as the control arm, and the Westmead Program and the Oakville Program as the two experimental arms. There were blinded outcome assessments at 9-months post-randomisation. There was no difference in percentage of syllables stuttered (%SS) scores between groups at 9-months post-randomisation. A major limitation of this study, however, was the large drop-out rate of around 43% for both STS treatments.

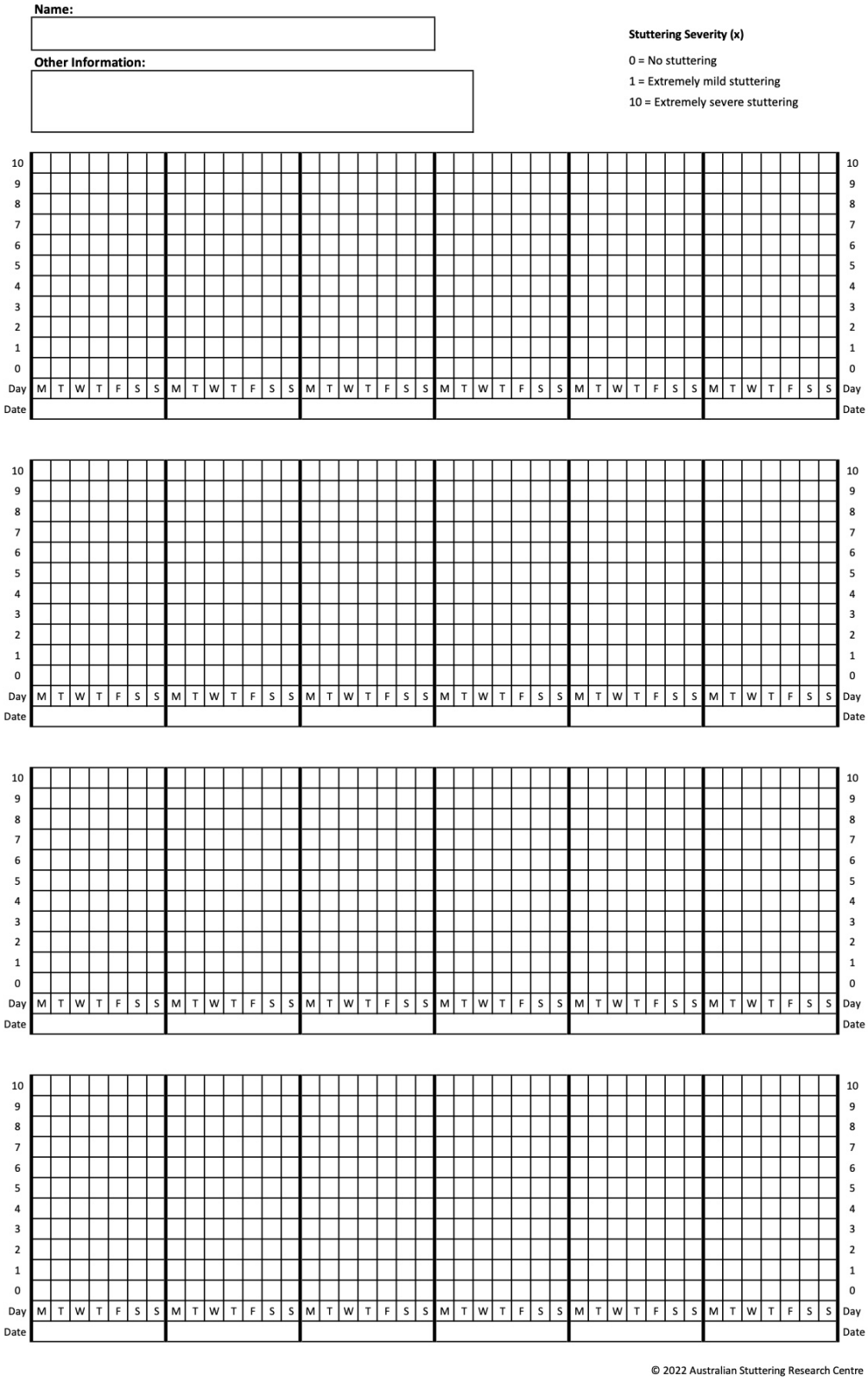
Subsequent to a preliminary trial,[3] a non-randomised trial recruited 22 children 6–11 years of age.[4] Three children withdrew from treatment. Twelve months post-treatment, the remaining 19 children showed a group mean stuttering severity reduction of 77%, although there was considerable variation in response. Many of the children also had comorbid speech and language problems.

ACKNOWLEDGEMENTS

The authors of this guide wish to acknowledge the valuable input of the following people in reading and offering comments on early drafts of this guide: Mark Onslow, Damien Liu-Brennan, Monique Jones, Sarah Byles, Caitlin Richards, and Ann Packman.

Appendix One: Child Stuttering Severity Chart

Downloadable at the Australian Stuttering Research Centre website in eForm and PDF format (*https://www.uts.edu.au/asrc/resources/oakville-program*).



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