

***THE LIDCOMBE PROGRAM OF EARLY STUTTERING INTERVENTION
TREATMENT GUIDE***

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PART ONE

OVERVIEW OF THE LIDCOMBE PROGRAM

Background

The Lidcombe Program is a behavioural treatment developed for stuttering children younger than 6 years. However, there are research reports showing that it may be efficacious during the school years. During the treatment, parents or significant others (hereafter referred to as parents) present the treatment in the child's everyday environments. They learn how to do this during weekly visits with their child to a clinician. Throughout we use the term clinician to refer to qualified professionals who are known by various terms including, but not limited to, speech pathologist (Australia), speech-language pathologist (North America), speech-language therapist (United Kingdom), logopæde (German), orthophoniste (French), logopædagog (Danish) and logopedist (Dutch).

Important Note

It is essential that a professionally qualified clinician trains, guides, and supervises parents who use the Lidcombe Program. This guide is intended as a reference tool for use by clinicians and parents during that process. The treatment is not for administration by parents independently of clinicians. Neither this guide, nor any other written material about the treatment, can replace professional Lidcombe Program training.

Lidcombe Program Training

We recommend that, to be proficient with the program, that clinicians receive training from the Lidcombe Program Trainers Consortium.¹ Genuine Consortium training can be identified by the logo at the right.



We advise clinicians who are considering administering the Lidcombe Program to add to their knowledge of the program by reading publications that provide more detailed information about the treatment and the research that underpins it. The Lidcombe Program has been written about and researched extensively, beginning with Phase I clinical trials during the 1990s and with Phase III randomised controlled trials being published during subsequent decades.. A summary statement of the efficacy evidence about the Lidcombe Program was presented recently in the *British Medical Journal*.²

The forgoing data show that for preschool children the Lidcombe Program reduces stuttering more quickly than natural recovery. While it could be that the treatment simply speeds this natural process, at the very least it shortens the exposure of these children to negative effects of early stuttering. However, the Lidcombe Program may control stuttering with mechanisms independent of natural recovery. There are studies that support this possibility by showing reduced stuttering for school age children who receive this treatment when natural recovery is unlikely

Many publications, including clinical trials and other clinical research dealing with the program, are listed at the Publications page of the website of the Australian Stuttering Research Centre.³ Although there are many sources of treatment efficacy data for the Lidcombe Program, at the time of writing no treatment effectiveness data have been published. In contrast to efficacy, treatment effectiveness refers to how well a treatment works when presented by communities of clinicians. A effectiveness study is currently in review for a journal, and this guide will overview its results in the event of its publication.

The Lidcombe Program of Early Stuttering Intervention: A Clinician's Guide outlines the treatment in detail. This book can be ordered from the ASRC website.

¹ http://sydney.edu.au/health_sciences/asrc/health_professionals/lptc.shtml

² O'Brian, S., & Onslow, M. (in press). Clinical Review: Management of Stuttering Children and Adults. *British Medical Journal*.

³ http://sydney.edu.au/health_sciences/asrc/research/publications.shtml

What Happens During the Lidcombe Program

During weekly clinic visits, the clinician trains the parent to do the treatment and to record daily measurements of the child's stuttering severity. These parent measures guide the conduct of the program. At these weekly visits the clinician monitors and adjusts the treatment as needed and ensures that it is a positive and enjoyable experience for the child and family.

The Lidcombe Program has a number of essential components. However, the implementation of these components is individualised for each child. The program is based on operant methods. Children are not taught to use a different speech pattern, such as slowing down. Nor are parents instructed to alter the child's environment to control stuttering as occurs with indirect treatments such as those based on the Demands and Capacities model.

Stage 1 and Stage 2

The treatment is conducted with two stages. During Stage 1 parents do the treatment each day in the child's everyday environment and child and parents visit the clinic once each week. When the child's stuttering stops or reaches a very low level, Stage 2 begins. During Stage 2, the parent does the treatment with decreasing frequency. The child and parent attend the clinic with decreasing frequency, over a period of months or years, providing that no stuttering or a very low level of stuttering is maintained. During Stage 2 the clinician supports the parent to ensure that treatment is withdrawn carefully and systematically, and that an appropriate parent response occurs in the event of any re-appearance of stuttering.



PART TWO OVERVIEW OF LIDCOMBE PROGRAM COMPONENTS

Parent Verbal Contingencies

When delivering the treatment, the parent comments after periods of stutter-free speech and after instances of unambiguous stuttering. These comments are known as *verbal contingencies*. It is crucial

to the success of the Lidcombe Program that the verbal contingencies are presented in a manner that is not constant or intrusive, and that the child enjoys them. A common error with the Lidcombe Program is to use verbal contingencies too often. It is not safe to do so, because the child may react adversely to such a clinical error.

Verbal Contingencies After Stutter-Free Speech

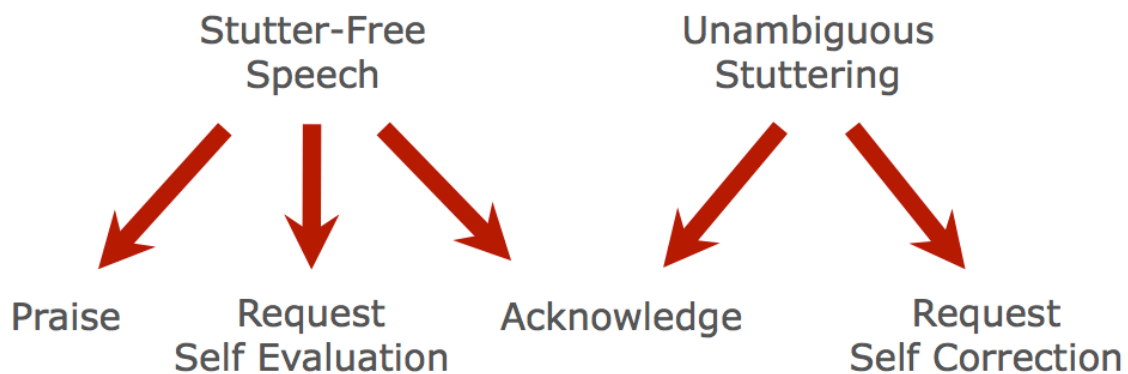
After *stutter-free speech*, the parent may (1) acknowledge it (for example, *that was smooth*), or (2) praise it (for example, *that was good talking*), or (3) request the child to evaluate it (for example, *was that smooth?*).

Verbal Contingencies After Unambiguous Stuttering

After *unambiguous stuttering*, the parent may (1) acknowledge it (for example, *that was a bit bumpy*) or (2) request the child to correct (for example, *can you try that again?*).

Verbal contingencies are given as soon as possible after the two responses of stutter-free speech and unambiguous stuttering occur. In the case of acknowledging unambiguous stuttering, the parent speaks with a neutral and non-punitive tone. The clinician and parent, as appropriate for each individual child, determine the ratio of verbal contingencies for stutter-free speech to verbal contingencies for stuttering. However, in order to ensure that the Lidcombe Program is a positive experience for the child, most of the parent verbal contingencies are for the child's stutter-free speech.

The parent verbal contingencies described above are examples only and parents need to vary the phrases they use. It is important, also, that type and frequency of verbal contingencies are individualised for each child (see *Part Four*). The child's responses and the corresponding parent verbal contingencies that are essential in the Lidcombe Program are summarised with the diagram below.



In addition to providing verbal contingencies for stutter-free speech and unambiguous stuttering, the parent may occasionally make general supportive comments about the child's progress with controlling stuttering. An example might be *Your speech has been so smooth today!*

Optional Verbal Contingencies

The parent may also give praise or acknowledgment when the child spontaneously and correctly evaluates stutter-free speech, such as when the child says, *hey, I did good talking didn't I?* The parent may also give praise or acknowledgment when the child spontaneously corrects a stutter. However, these child responses—spontaneous self-evaluation of stutter-free speech and spontaneous self-correction of stuttering—are not considered essential during the treatment.

Measurement of Stuttering

The Severity Rating (SR) Scale

The parent is trained to measure the severity of the child's stuttering, starting during the first clinic visit. A 10-point severity rating (SR) scale is used, where 1 = *no stuttering*, 2 = *extremely mild stuttering*, and 10 = *extremely severe stuttering*. These scores are given in relation to any stuttering

child, not just the child at the clinic. For example, a SR of 10 would be the most severe stuttering imaginable for any child, not the most severe a parent has seen of their own child.

Agreement between the parent and the clinician is established during the start of each clinic visit. They both give a SR for the child's speech during a conversation where the child displays a reasonably representative amount of stuttering. For this purpose the parent and/or the clinician converse with the child until the extent of stuttering, if any, is apparent.

The clinician and parent compare their scores and discuss any discrepancies. If there is a discrepancy, clinician advises the parent about what would be an appropriate SR for the child during the speech observed. Comparing and discussing SRs in this way continues at each clinic visit, ensuring that there is reasonable agreement between parent and clinician SRs. Reasonable agreement is when the scores differ by no more than one scale value. In cases where the difference is greater than this, the clinician is assumed to be the correct observer, based on clinical experience.

The parent assigns a daily SR score for the child's stuttering. It is assigned for the whole day. The parent SR is recorded on a chart each day during Stage 1.

A clinician may wish the parent to use supplementary SRs for a particular speaking situation that occurs each day, such as at dinner time and bath time. These are recorded in addition to the daily SRs. Another option is for the parent to record a most severe SR for each day in addition to an overall score for each day.

Percent Syllables Stuttered (%SS)

Percent syllables stuttered (%SS) may be measured by the clinician at the start of the clinic visit during Assessment (see *Part Three*). Measures of %SS are made during a conversation where the child displays a reasonably representative amount of stuttering, or it becomes clear that stuttering will not occur. For this purpose the parent and/or the clinician converse with the child until the extent of stuttering, if any, is apparent.

Clinicians may collect %SS measures at the start of other clinic visits but this is an optional component of the program. Some experienced Lidcombe Program clinicians report that there are benefits to collecting %SS measures at the start of each clinic visit, particularly during the early parts of Stage 1. For example, it may be gratifying and motivating for the parent to see a change in %SS recorded by the clinician as therapy progresses.

Weekly Clinic Visits

During Stage 1, the parent and child attend a clinic visit once a week for between 45 minutes and one hour. Procedures for these clinic visits are described in *Part Three*.

Treatment During Structured and Unstructured Conversations

Throughout the treatment the parent conducts treatment in the child's everyday environments. The treatment consists of parent verbal contingencies (see above), which are given during conversations with the child. At the start of Stage 1, treatment is given during structured conversations of 10-15 minutes duration. During these conversations the parent typically structures the conversation so that the child stutters only occasionally.

Treatment conversations occur once or twice each day, and sometimes more often if appropriate. When the clinician observes that the parent is giving contingencies safely and correctly, the parent can give them during unstructured conversations, at various times during the day. During Stage 2, the parent progressively withdraws verbal contingences during unstructured conversations.

Treatment during Structured Conversations and Unstructured Conversations is considered in more detail in *Part Three*.

Programmed Maintenance

The progress of Stage 2 is performance contingent and is designed to maintain the low level or absence of stuttering that is achieved during Stage 1. The child and the parent attend clinic visits less and less frequently, provided the child's stuttering remains absent or at the very low level attained at the end of Stage 1. Stage 2 is described in detail in *Part Three*.

PART THREE

LIDCOMBE PROGRAM CLINIC VISITS

This section describes what occurs during Lidcombe Program clinic visits.

Assessment Clinic Visit

Parents may be asked to provide an audio or video recording of the child stuttering when they first visit the clinician, in case the child is reticent or does not stutter during the clinic visit. The following sequence occurs during this first clinic visit.

- The clinician obtains information about the onset, nature and course of the child's stuttering.
- At the start of the assessment visit, the clinician assigns a SR to the child's speech during a conversation which displays reasonably representative amount of stuttering, or it becomes clear that stuttering will not occur.
- The clinician may wish to also measure %SS during this speech sample.
- The clinician decides whether the child is stuttering.

If the child is clearly stuttering, or is possibly stuttering, the clinician obtains the following information:

- Possible emotional and psychological impact of the stuttering on the child and family, paying attention to possible impact on the parent.
- Possible negative reactions to stuttering from peers at preschool and/or from older children.
- Time of onset and hence the period for which the child has been stuttering. Research shows this to be an important component of timing with Lidcombe Program early intervention, and is considered during Lidcombe Program Trainers Consortium workshops (see Part One).
- The child's physical, linguistic and cognitive development. These are not explored in depth, unless the parent wishes to discuss them or there is a possibility that stuttering treatment may conflict with other treatments, such as treatment for language delay.
- The clinician then gives the parent information about stuttering, the best time to begin intervention, including information about recovery without treatment. Timing of early intervention, and pertinent research about the topic, is explored during Lidcombe Program Trainers Consortium workshops.
- The clinician informs the parent about the Lidcombe Program and how parents implement it. Types of service delivery may also be discussed (see *Part Five*).
- The clinician and the parent then decide either to monitor the child's stuttering to determine whether natural recovery is occurring, or to begin treatment. An Internet based, password protected SR chart is useful for monitoring parent SRs without regular clinic attendance.⁴

Stage 1

During Stage 1, the parent and child visit the clinic once each week. The following sequence of events normally occurs during a clinic visit:

- The parent and/or the clinician converse with the child until the extent of stuttering, if any, is apparent.
- The clinician assigns a SR to the child's speech.
- The clinician checks the parent's use of the SR scale by asking the parent to give a SR for this conversation (for detailed procedure see *Part Two*). An agreed SR is recorded on child's file chart. This chart can be hard copy or an Internet based, password protected SR chart.⁴ The clinician may choose to record a %SS score during this conversation (see *Part Two*).
- The clinician uses SR scores for each day of the previous week as a focus for an in-depth discussion of treatment responsiveness during the previous week.

⁴ One Internet site is Google docs (<http://www.google.com/google-d-s/tour1.html>), which allows the clinician and parent to access a password protected spreadsheet document for SRs which can be graphed automatically. Such sites also allow electronic child files to be kept and password protected as word processing documents.

- The clinician enters these SRs into the child's file chart or an Internet based, password protected SR chart.⁴ The hard copy chart can be downloaded from the ASRC website.⁵ Examples of SR charts during treatment are in the *Appendix*.
- The parent demonstrates treatment procedures used during the previous week.
- Parent and clinician discuss in-depth the treatment procedures used during the previous week.
- Parent and clinician discuss changes to procedures for the coming week.
- The clinician trials and demonstrates those changes to procedures for the coming week.
- The clinician teaches the parent to do the changed procedures.
- The parent demonstrates capacity to do the changed procedures.
- The clinician summarises what is expected for the coming week.
- The clinician invites the parent to ask questions or raise issues of concern. Problem solving is undertaken when required.

Treatment During Structured Conversations

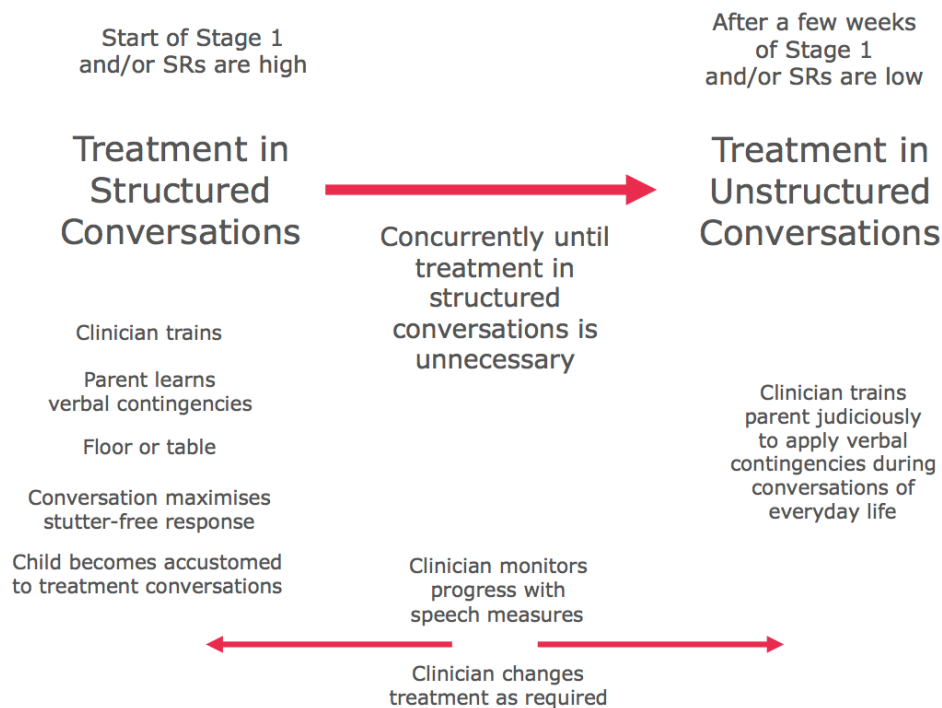
Early during the treatment parent verbal contingencies are given for 10-15 minutes each day with Treatment During Structured Conversations. The parent and child typically sit down in a quiet place and engage in some interactive activity. The activity is structured so that the contingencies can be delivered as described in *Part Two*.

Treatment During Unstructured Conversations

The clinician subsequently instructs the parent how to give verbal contingencies with Treatment During unstructured conversations at various times of the day. This occurs in all environments where the child may stutter: at home, while shopping, in a car, at a park, and so on. The parent typically starts to do this when (1) the parent demonstrates safe and correct delivery of verbal contingencies in structured conversations, and (2) the parent's SRs across the day are generally low and/or stuttering severity is low during periods of the day. By the end of Stage 1, treatment usually occurs entirely during unstructured treatment conversations.

Guided by the child's progress as shown by weekly SRs, the clinician may at any time alter the balance between Treatment during Structured Conversations and Treatment During Unstructured Conversations. The relationship of Treatment During Structured Conversations and Treatment During Unstructured Conversations is shown in the diagram below.

⁵ http://sydney.edu.au/health_sciences/asrc/health_professionals/asrc_download.shtml



Preparing for Stage 2

Preparation for Stage 2 begins when, for the first time, SR scores for the previous week are 1 or 2, with at least four of these being 1. At the first clinic visit when this occurs, the clinician assigns a SR for the entire clinic visit rather than only at the start of the clinic visit. This SR clinic measure continues each week thereafter during preparation for Stage 2.

Criteria for entry to Stage 2

The criteria for progressing to Stage 2 are three consecutive clinic visits where: (1) the within clinic clinician SR is 1 or 2 for the entire clinic visit, and (2) the beyond clinic parent SR scores for the previous week are 1 or 2, with at least four of these being 1. In the event that a parent does not supply a SR for any day of a week during preparation for Stage 2, that week is not counted in the requisite sequence of 3 weeks of criterion speech performance.

Stage 2

Stage 2 Procedures

During Stage 2 the parent is guided to progressively reduce the frequency of verbal contingencies, and the child and parent attend clinic visits less and less frequently, providing that the child's stuttering remains at the low levels described above. The amount of treatment is adjusted according to the child's need. The first two clinic visits are 2 weeks apart, the next two are 4 weeks apart, then two are 8 weeks apart, and the final two clinic visits are 16 weeks apart. There is some flexibility with these schedules (see *Part Four*). If the Stage 2 entry speech criteria are met during a clinic visit, the child progresses to the next scheduled visit. Whether or not criterion speech performance is met is determined in the same way as during Stage 1: The parent presents SR scores for each day from the previous week and the clinician assigns a SR measure for the entire clinic visit. In the event that criterion speech performance is not met at any scheduled clinic visit during Stage 2, the clinician decides either to stall progress through the sequence or to return to an earlier stage of the sequence. The clinician may also decide to return the child to Stage 1.

PART FOUR

INDIVIDUALISING THE LIDCOMBE PROGRAM

While the components described in *Part Two* are essential to the Lidcombe Program, it is important that their implementation be individualised for each child and family. The clinician and the parent adopt a problem-solving approach to ensure that the program is implemented in an optimum fashion and that it remains a positive and enjoyable experience for the child. The following few examples illustrate ways in which the program might be individualised for children and their families:

Age of the Child

The age and cognitive and linguistic development of the child will determine, (1) the type of activity used during structured treatment conversations, and (2) the duration of the structured treatment conversation. For example, it may be more appropriate with a very young child to engage in general conversation during Treatment During Structured Conversations, while describing pictures or retelling an event may be more appropriate with an older child. Shorter treatment conversations may be more appropriate for the younger child. The child's age may also influence the type of contingencies used, because it is essential that (1) the child perceives the contingencies for stutter-free speech as rewarding and (2) the verbal contingencies for stuttering are not perceived by the child as unpleasant or punitive. It may be appropriate for the parent to discuss with the child what verbal contingencies the child prefers.

Stuttering Severity

When stuttering is severe, the parent structures activities and conversations during Treatment During Structured Conversations so that the child produces sufficient stutter-free utterances to maintain the principle described in *Parent Verbal Contingencies* in *Part Two*; namely, that most of the parent's verbal contingencies are for stutter-free speech rather than for stuttering. To this end, the parent can organise activities so that the child produces shorter utterances, which are more likely to be free of stuttering. For example, the parent may use simple books requiring short verbal responses rather than engage the child in free-flowing conversation. When the child responds to this procedure with longer intervals of stutter-free speech, more normal conversation can be resumed.

The schedule of clinic visits for Stage 2 may also be altered for individual cases. For example the frequency of clinic visits may be reduced when it is clear that the child no longer stutters *at all* in *any* situation. However, clinic visits must be maintained over the time span stipulated for Stage 2, even though the frequency of clinic visits may be reduced.

Child Behaviour

Giving verbal contingencies effectively may be difficult with extremely talkative children and particular care may be needed when structuring activities and conversations in such cases. In (rare) cases of reticent children, compliance with the interactive activities may need to be increased before treatment can be given effectively.

Personality of the Child and the Parent

Parent verbal contingencies for stuttering may be withheld altogether at the start of Stage 1 if a child is not happy having attention drawn to stuttering. A parent who feels generally uncomfortable drawing attention to any aspect of a child's speech may need particular assistance from the clinician.

Family Circumstances

Parents may need help with time management if they have other young children or if both parents work long hours outside the home. Additionally, it is natural for the clinician to consider issues such as strained marital relations and parent health.

Parent Treatment History

Stuttering runs in families so there are cases where parents of children being treated with the Lidcombe Program stutter themselves and have received successful treatment. Almost always, these

adult treatments are not suitable for preschoolers, and in some cases it can be a challenge to ensure that parents do not apply those treatment methods to their children. If a parent stutters this does not prevent that parent administering the Lidcombe Program.

PART FIVE

ALTERNATE MODELS OF SERVICE DELIVERY

Background

Lifestyle and location are barriers to many metropolitan and rural dwellers receiving speech pathology services. For these reasons, clinical trials of alternative service delivery options of the Lidcombe Program are under way. When the results of these trials are published, the Lidcombe Program Trainers Consortium will make training available for those methods.

Group

A randomised controlled trial is underway to determine whether that group delivery of the Lidcombe Program is effective, efficient and economical. A guide is currently being developed and will soon be available from the Australian Stuttering Research Centre.

Telehealth

Low-tech telehealth involves the telephone, and more sophisticated methods involve Internet webcam technology. Clinical trialling of webcam telehealth is currently under way.

Standalone Internet Based Treatment

Preliminary clinical trials have shown that standalone Internet-driven treatment for social anxiety is viable. A website for similar Lidcombe Program delivery is under construction and clinical trials will begin shortly.

APPENDIX
SAMPLE MEASUREMENT CHARTS FOR STAGE 1
OF THE LIDCOMBE PROGRAM

The Lidcombe Program

Parent Severity Rating Chart

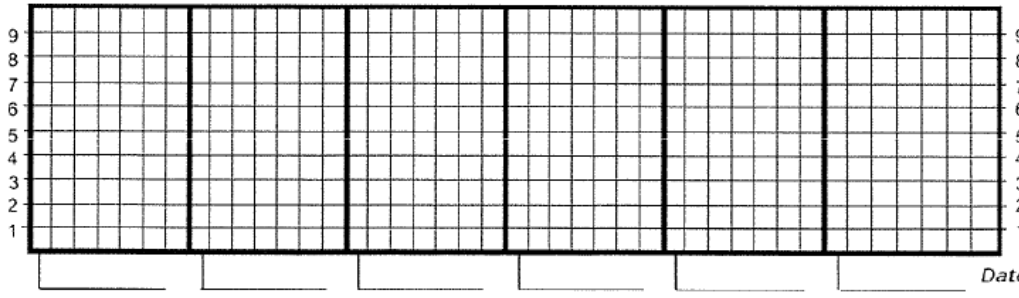
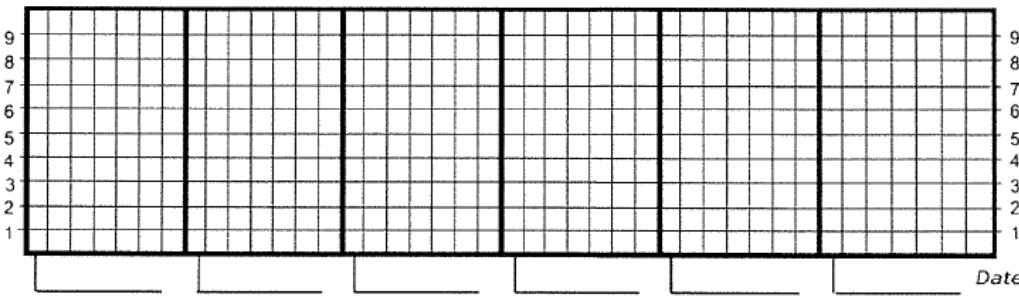
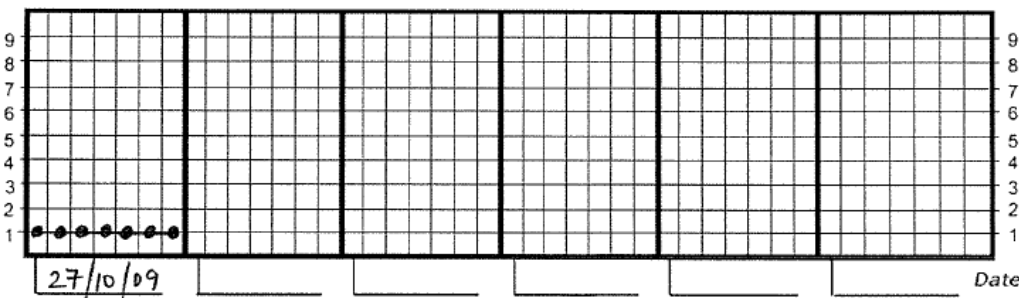
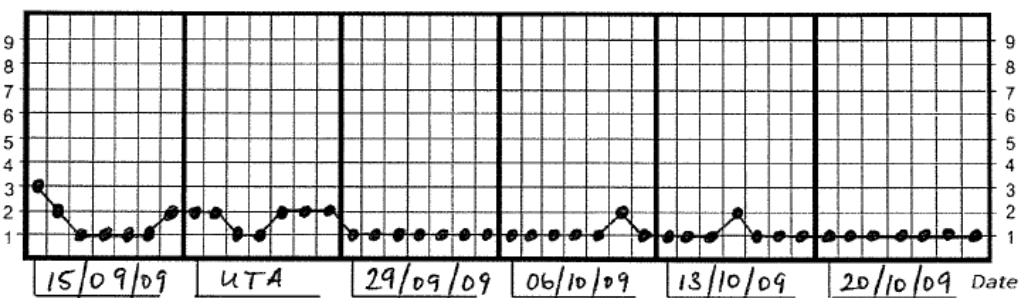
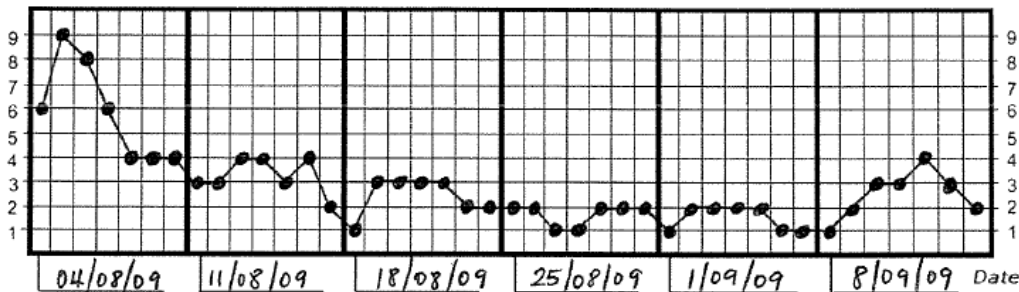
Name: *Hayden*

Stuttering Severity

1 = No Stuttering

2 = Extremely Mild Stuttering

10 = Extremely Severe Stuttering



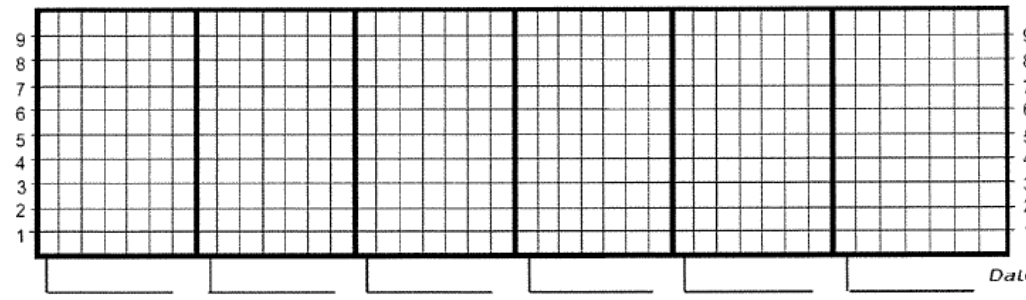
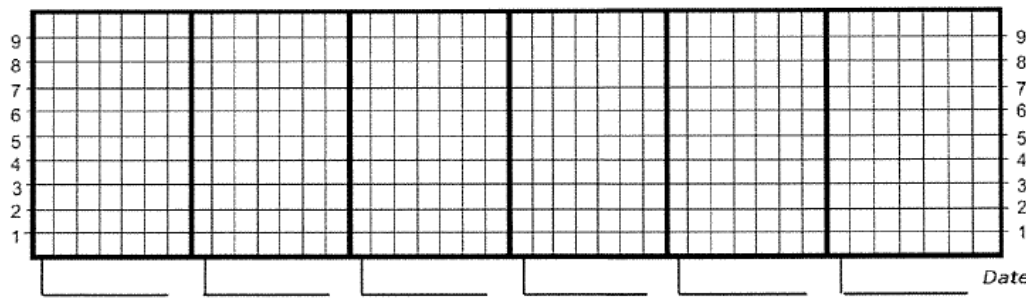
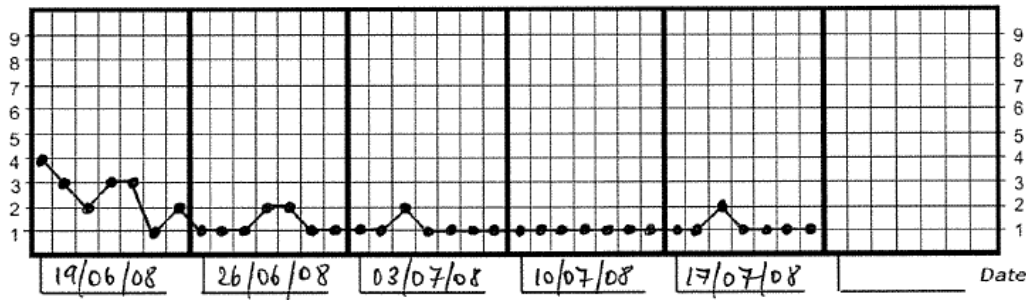
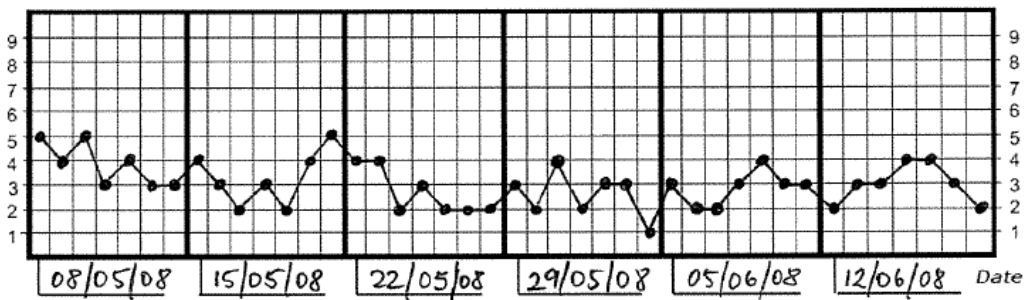
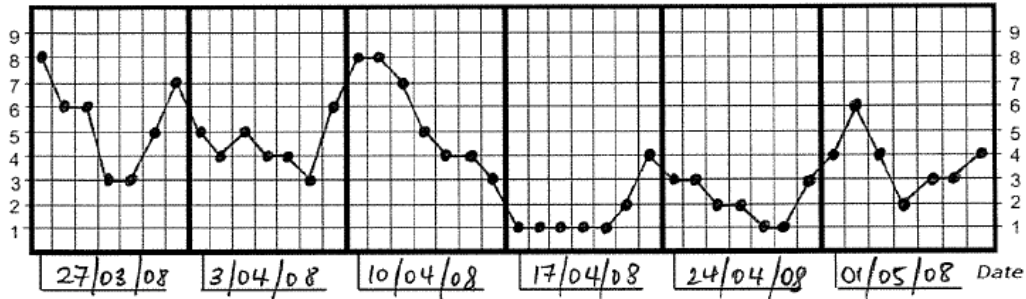
The Lidcombe Program

Parent Severity Rating Chart

Name: *Jade*

Stuttering Severity

- 1 = No Stuttering
- 2 = Extremely Mild Stuttering
- 10 = Extremely Severe Stuttering



The Lidcombe Program

Parent Severity Rating Chart

Name: *Joshua*

Stuttering Severity

- 1 = No Stuttering
- 2 = Extremely Mild Stuttering
- 10 = Extremely Severe Stuttering

