

MANUAL FOR THE LIDCOMBE PROGRAM OF EARLY STUTTERING INTERVENTION

2002

CONTENTS

PART ONE OVERVIEW OF THE LIDCOMBE PROGRAM	2
PART TWO ESSENTIAL COMPONENTS OF THE LIDCOMBE PROGRAM	3
Parental Verbal Contingencies.....	3
Measurement of Stuttering.....	4
Weekly Clinic Visits	5
Treatment in Structured and Unstructured Conversations.....	5
Programmed Maintenance	5
PART THREE PROCEDURES IN THE LIDCOMBE PROGRAM.....	5
Evaluation	6
Stage 1.....	6
Stage 2.....	8
PART FOUR INDIVIDUALISING THE LIDCOMBE PROGRAM.....	8
Age of the Child.....	9
Stuttering Severity	9
Basic behaviour.....	9
Personality of the child and the parent.....	10
Family circumstances.....	10
APPENDIX A (Summary of research findings and bibliography).....	11
APPENDIX B (Clinical measures for two children).....	16

PART ONE

OVERVIEW OF THE LIDCOMBE PROGRAM

The Lidcombe Program is a behavioural treatment for stuttering in preschool-age children. In this program, a parent or some other significant person in the child's life delivers the treatment in the child's everyday environment. The parent learns how to do this during weekly visits to the speech clinic. During these visits, the speech pathologist trains the parent to do the treatment and to measure stuttering severity in the child's everyday speaking environment. These measures, along with those made by the speech pathologist in the clinic, guide the conduct of the program. At these weekly clinic visits the speech pathologist also monitors and adjusts the treatment, and ensures that it is a positive and enjoyable experience for the child.

The program is conducted in two stages. During Stage 1, the parent and child attend the speech clinic once a week and the parent does the treatment each day in the child's everyday environment. When the child's stuttering reaches a very low level, the second stage commences. During Stage 2, the parent does the treatment less frequently and the child and parent attend the clinic less frequently, over a period of months or years, providing that the low level of stuttering attained at the end of Stage 1 is maintained.

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 methodology and children are not taught to use a different speech pattern, such as slowing down. Nor are parents instructed to alter the child's environment with the aim of facilitating fluency. However, parents change certain aspects of the child's environment when it is thought this is necessary for the successful implementation of the program.

The Lidcombe Program has been developed over the last 10 years as a joint project of the Faculty of Health Sciences, The University of Sydney, and the Stuttering Unit, Bankstown Health Service, Sydney. Ongoing research suggests that the program will be modified in the future, in which case this manual will be revised.

This manual operationalises the basic procedures of the Lidcombe Program. However, speech pathologists who are considering conducting the Lidcombe Program are advised to read the numerous publications which provide more detailed information about the program and the research that underpins it (see Appendix A). The program is examined in detail in the book “The Lidcombe Program of Early Stuttering Intervention: A Clinician’s Guide” (Onslow, Packman, & Harrison, in press). The Australian Stuttering Research Centre and the Stuttering Unit also conduct a program of Continuing Education which includes workshops on the Lidcombe Program. Speech pathologists are advised to participate in the Continuing Professional Education program before using the Lidcombe Program. The contact person is Jane Kelly (J.Kelly@fhs.usyd.edu.au). Professional continuing education programs for the Lidcombe Program have been established in Canada and The United Kingdom. The contact people for those programs are, respectively, Rosalee Shenker (rosalee.shenker@mcgill.ca) and Mary Kingston (kingstonamee@talk21.com).

PART TWO

ESSENTIAL COMPONENTS OF THE LIDCOMBE PROGRAM

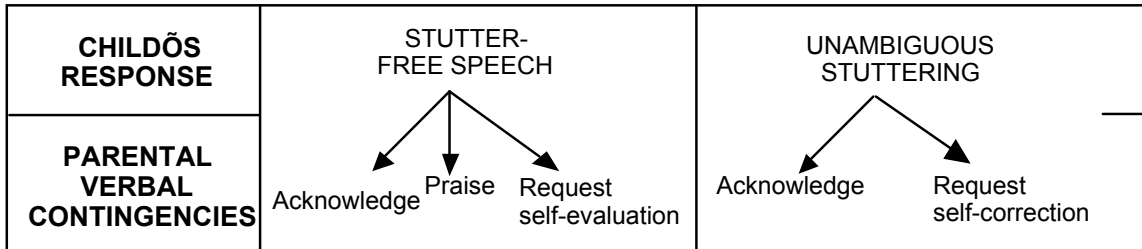
Parental Verbal Contingencies

In delivering treatment, the parent comments after periods of stutter-free speech and after instances of unambiguous stuttering.

After *stutter-free speech*, the parent may (1) acknowledge this response (e.g. “That was smooth”), and/or (2) praise the response (e.g. “That was good talking”), or (3) request the child to evaluate the response (e.g. “Were there any bumpy words then?”). After *stuttering*, the parent may (1) acknowledge the response (e.g. “That was a bit bumpy”) and/or (2) request the child to correct the response (e.g. “Can you try that again?”).

Verbal contingencies should be given as soon as possible after the response (stutter-free speech or unambiguous stuttering) and in such a way that the child hears them. In the case of acknowledging the response of unambiguous stuttering, the parent uses a neutral and non-punitive tone of voice. The ratio of verbal contingencies for stutter-free speech to

verbal contingencies for stuttering must be at least 5:1. The parental verbal contingencies given above are examples only, and parents are encouraged to vary the phrases they use. It is important, also, that type and frequency of verbal contingencies are individualized for each children (see *Part Three*). The child’s responses and the corresponding parental verbal contingencies considered that are essential in the Lidcombe Program are summarised in the diagram below.



The parent may also give verbal contingencies when the child spontaneously and correctly evaluates stutter-free speech (such as when the child says “hey, that was good talking wasn’t it?”), or when the child spontaneously corrects a stutter. However, these responses are not considered essential in the program.

Measurement of Stuttering

The *speech pathologist* measures percent syllables stuttered (%SS) at the start of each clinic visit, using a dual-button electronic counter. This measure is based on a conversational speech sample that is a minimum of 300 syllables or 10 minutes duration.

The *parent* is trained to rate the severity of the child’s stuttering each day, in everyday speaking situations. This is done with a 10-point severity rating (SR) scale, where 1= “no stuttering” and 10 = “extremely severe stuttering.” That is, each day the parent assigns a SR score from 1-10 for the child’s stuttering for that day, either for the whole day or for a particular speaking situation that occurred on that day, such as at dinner time. When individual speaking situations are used, a different situation is selected for each day. Parents start to learn how to make these severity ratings during the first weekly clinic visit. Agreement between the parent and the speech pathologist is established in the clinic. After making the %SS measure, the speech pathologist also

gives the child's stuttering in that speech sample a SR score and asks the parent to do the same. The speech pathologist and the parent compare their scores and discuss any discrepancies. Comparing and discussing SRs in this way continues each session until reasonable agreement occurs between the parent and the speech pathologist's SR scores. "Reasonable agreement" is when the parent and score differ by no more than one scale value.

Weekly Clinic Visits

During the first stage of the program, the parent and child attend the speech clinic once a week for between three-quarters of an hour and one hour.

Treatment in Structured and Unstructured Conversations

Throughout the program the parent conducts treatment in the child's everyday environment. The treatment consists of parental verbal contingencies (see above), which are given during conversational exchanges with the child. At the start of Stage 1, treatment is given during structured conversations of 10-15 minutes duration. This occurs at least once, and sometimes more if appropriate, each day. Later in Stage 1, the parent gives contingencies during unstructured, naturalistic conversations, at various times during the day. Treatment is withdrawn progressively during Stage 2.

Programmed Maintenance

The performance-contingent maintenance phase, Stage 2, is designed to maintain the low level of stuttering that is achieved during Stage 1. The child and the parent attend the clinic less and less frequently, provided the child's stuttering remains at the agreed low level.

PART THREE

PROCEDURES IN THE LIDCOMBE PROGRAM

This section describes the implementation of the essential features of the program.

Evaluation

Parents are asked to bring an audiotape recording of their child stuttering when they first visit the speech pathologist, in case the child is reticent or does not stutter in the clinic. The following occurs during this first visit.

- (1) The speech pathologist obtains information about the nature and course of the child's stuttering.
- (2) The speech pathologist makes brief enquiries about the child's physical, linguistic and cognitive development and the family environment. These are not explored in depth, unless the parent wishes to discuss them or there is a question about stuttering treatment conflicting with other treatments, such as treatment for language delay. Environmental factors are addressed in more detail later in the program if they are thought to be interfering with the program.
- (3) The speech pathologist makes a %SS measure in the clinic.
- (4) The speech pathologist decides if the child is stuttering.
- (5) The speech pathologist gives the parent information about stuttering, including the fact that there is some chance that the child will recover from stuttering without receiving the Lidcombe Program.
- (6) The speech pathologist informs the parent about the Lidcombe Program and the parents' role in implementing it.
- (7) The speech pathologist and the parent decide either to postpone treatment and monitor the child's stuttering, or to commence treatment.

Stage 1

During Stage 1, the parent and child attend the speech clinic once a week. The following events would normally be expected to occur during a clinic visit:

- (1) The speech pathologist measures %SS while the parent and/or speech pathologist talk to the child.
- (2) The speech pathologist checks the parent's use of SR scale by asking what SR score would be given to the speech during the above conversation.
- (3) The parent reports SR scores for each day of the previous week and the speech pathologist enters them into the child's chart.
- (4) The parent and speech pathologist compare SR scores for the previous week and clinic sample.
- (5) %SS and SR scores are used as a focus for an in-depth discussion of clinical progress during the previous week.
- (6) The parent demonstrates treatment procedures used during the previous week.
- (7) The parent and speech pathologist discuss in-depth the treatment procedures used during the previous week.
- (8) The speech pathologist and parent discuss changes to procedures for the coming week.
- (9) The speech pathologist demonstrates those changes to procedures.
- (10) The speech pathologist teaches the parent to do the changed procedures.
- (11) The speech pathologist summarises what is expected for the coming week.
- (12) The speech pathologist invites questions or further discussion from the parent.

Early in the program, the treatment—parental verbal contingencies—is given for 10-15 minutes each day during structured conversations. The parent and child typically sit down in a quiet place and engage in some interactive activity which is structured so that the contingencies can be delivered as described in *Parental Verbal Contingencies* in *Part Two*. When the child's SR scores are low, and treatment is being delivered appropriately, the parent starts to deliver contingencies at various times of the day during unstructured conversations. By the end of Stage 1, treatment occurs entirely during unstructured conversations.

When stuttering reaches a very low level, the parent and child move to Stage 2 of the program. The criteria for the Lidcombe Program are: (1) %SS less than 1.0 within the clinic, and (2) SR scores for the previous week of 1 or 2, with at least four of these being 1.

Stage 2

During Stage 2 of the Lidcombe Program—the maintenance stage—the parent gradually withdraws the verbal contingencies, and the child and parent attend the clinic less and less frequently, providing that the child’s stuttering remains at the low levels described above. 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 visits are 16 weeks apart. There is some flexibility in these schedules (see *Part Four*). If criterion speech performance is met at a visit, the child progresses to the next scheduled visit. Whether or not criterion speech performance is met is determined in the same way as in Stage 1: The parent presents SR scores for each day from the previous week, and the speech pathologist makes a %SS measure in the clinic. In the event of criterion speech performance not being met at any scheduled visit during Stage 2, the speech pathologist decides either to stall progress through the sequence or to return to an earlier stage of the sequence. The speech pathologist 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 speech pathologist 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 rewarding 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 the type of activity engaged in during treatment in structured conversations, and the duration of the treatment. For example, it may be more appropriate with a very young child to engage in general conversation during an activity, while describing pictures or retelling an event may be more appropriate with an older child. Shorter intervals of treatment may be more appropriate for the younger child. Age may also determine the type of contingencies used, for it is essential that the child finds the contingencies for stutter-free speech “rewarding” and that verbal contingencies for stuttering are not perceived by the child as unpleasant or punitive. It may be appropriate for parents to discuss with the child what verbal contingencies the child prefers.

Stuttering Severity

When stuttering is severe, treatment during structured conversations needs to be organised so that the child produces sufficient stutter-free utterances to maintain the 5:1 ratio described in *Parental Verbal Contingencies in Part Two*. 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 stimulus cards requiring short verbal responses rather than engage the child in free conversation. When the child responds to this procedure with longer intervals of stutter-free speech, more normal conversation can be resumed.

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

Basic behaviour

Giving verbal contingencies effectively may be difficult with extremely talkative children, and particular care may be needed to structure activities and conversations in

such cases. In (rare) cases of recalcitrant children, compliance with the program activities may need to be increased before treatment can be given effectively.

Personality of the child and the parent

Parental verbal contingencies for stuttering may be withheld altogether at the start of the program 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. For example, in addition to demonstrating the procedure and training the parent in the procedure, the clinician and the parent may walk together outside the clinic while the parent makes initial attempts at presenting verbal contingencies.

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.

APPENDIX A

OVERVIEW OF SOME CLINICALLY IMPORTANT FINDINGS, AND BIBLIOGRAPHY

The following paragraphs draw attention to some salient information contained in the subsequent bibliography. The most comprehensive and clinically oriented text about the Lidcombe Program is Onslow, Packman, & Harrison. (in press). *The Lidcombe Program of Early Stuttering Intervention: A Clinician's Guide*. Austin, TX: Pro-Ed.

Onslow, Menzies, & Packman (2001) summarise the outcome studies that have been done with the Lidcombe Program. In short, at long-term follow up, 42 children have been shown in those studies to be not stuttering, in everyday speaking situations, after receiving the Lidcombe Program. A randomised controlled trial is under way at the time of writing, and its methods are described in Jones, Gebski, Onslow, & Packman (2001). The Lincoln, Onslow, & Reed (1997) study showed that children's speech after treatment with the Lidcombe Program was perceptually indistinguishable from that of control children. These data are consistent with our clinical experiences that, long after the treatment has been completed, the children have forgotten all about stuttering.

The Jones, Onslow, Harrison, & Packman (2000) paper demonstrated with 250 cases that the median treatment time with the Lidcombe Program is 11 clinic visits. This result was replicated by Hayhow, Kingston, & Ledzion (1998), and we know of several other unpublished file audits that replicate this result. Jones et al. also found that the only predictor of time to complete Stage 1 was pretreatment stuttering rate (%SS). Jones et al. found that, within the preschool years, a delay in beginning the treatment did not increase the time required to complete Stage 1. Chapter 7 in the Onslow, Packman, & Harrison (in press) contains the information that 52% of a Lidcombe Program caseload failed to meet the program criteria at one of their Stage 2 visits. The majority of these occurrences were within 8 weeks of beginning Stage 2. In only a few of these cases did the speech pathologist decide to return the child to Stage 1.

The diagnosogenic theory is no longer considered viable, but its influence still leads some to suspect that a direct treatment such as the Lidcombe Program might harm

children. Consequently, Woods, Shearsby, Onslow, and Burnham (2002) investigated the issue and showed no signs of any adverse psychological effects of the Lidcombe Program.

Exactly how the Lidcombe Program works is not known at present. However, one line of reasoning suggests that the treatment might be effective because it induces extensive changes to children's language function or to that of their parents. Bonelli, Dixon, Bernstein Ratner, and Onslow (2000) investigated this possibility and found no changes in child or parent speech rate, interspeaker turn taking latencies, or pragmatic functioning, that might account for treatment effects. Considering that many treatments for adults who stutter use a novel and unusual speech pattern, it is conceivable that the Lidcombe Program induces changes in speech production. Consequently, Onslow, Hewat, McLeod, and Packman (2002) investigated this issue and found no acoustic evidence that this might be the case

LIDCOMBE PROGRAM BIBLIOGRAPHY AT OCTOBER 2002

The following bibliography contains publications about the Lidcombe Program that have appeared in book chapters and peer-reviewed scientific papers up to October 2002. Published conference proceedings are not included.

Bonelli, P., Dixon, M., Bernstein Ratner, N., & Onslow, M. (2000). Child and parent speech and language and the Lidcombe Program of Early Stuttering Intervention. *Clinical Linguistics and Phonetics, 14*, 427-446.

Blumgart, E., Packman, A., Onslow, M., Harrison, E., Andrews, C., Wahlhaus, M., & Menzies, R. (2001). Issues and some preliminary data for an adaptation of the Lidcombe Programme for adults. *Asia Pacific Journal of Speech, Language, and Hearing, 6*, 103-107.

Eve, C., Onslow, M., Andrews, C., & Adams, R. (1995). Clinical measurement of early stuttering severity: The reliability of a 10-point scale. *Australian Journal of Human Communication Disorders, 23*, 26-39.

- Harris, V., Onslow, M., Packman, A., Harrison, E., & Menzies, R. (in press). An experimental investigation of the impact of the Lidcombe Program on early stuttering. *Journal of Fluency Disorders*.
- Harrison, E., & Onslow, M. (1999). Early intervention for stuttering: The Lidcombe Program. In R. F. Curlee (Ed.), *Stuttering and related disorders of fluency* (2nd Ed.). New York, NY: Thieme.
- Harrison, E., Wilson, L., & Onslow, M. (1999). Distance intervention for early stuttering with the Lidcombe Programme. *Advances in Speech Language Pathology, 1*, 31-36.
- Hayhow, R., Kingston, M., & Ledzion, R. (1998). The use of clinical measures in the Lidcombe Programme for children who stutter. *International Journal of Language & Communication Disorders, 33*, 364-369.
- Huber, A., & Onslow, M. (2001). Intervention bei frühem Stottern: Das Lidcombe Programm. *Die Sprachheilarbeit, 46*, 219-223.
- Jones, M., Gebski, V., Onslow, M., & Packman, A. (2001). Design of Randomized Controlled Trials: Principles and Methods Applied to a Treatment for Early Stuttering. *Journal of Fluency Disorders, 26*, 1-21.
- Jones, M., Onslow, M., Harrison, E., & Packman, A. (2000). Treating stuttering in children: Predicting outcome in the Lidcombe Program. *Journal of Speech, Language, and Hearing Research, 43*, 1440-1450.
- Lincoln, M. and E. Harrison (1999). The Lidcombe Program. In M. Onslow & A. Packman (Eds). *The handbook of early stuttering intervention*. San Diego, CA, Singular Publishing Group.
- Lincoln, M., & Onslow, M. (1997). Long-term outcome of an early intervention for stuttering. *American Journal of Speech-Language Pathology, 6*, 51-58.
- Lincoln, M., Onslow, M., & Reed, V. (1997). Social validity of an early intervention for stuttering: The Lidcombe Program. *American Journal of Speech-Language Pathology, 6*, 77-84.
- Lincoln, M., Onslow, M., Wilson, L., & Lewis, C. (1996). A clinical trial of an operant treatment for school-age stuttering children. *American Journal of Speech-Language Pathology, 5*, 73-85.

- Onslow, M. (2000). A short History of The Lidcombe Programme: Before 1990. *Australian Communication Quarterly*, 2(3), 112-114.
- Onslow, M., & Packman, A. (1999). The Lidcombe Program and natural recovery: Potential choices of initial management strategies for early stuttering. *Advances in Speech Language Pathology*, 1, 113-121.
- Onslow, M., & Packman, A. (1999). The Lidcombe Program of Early Stuttering Intervention. In N. Bernstein Ratner & E.C. Healy (Eds.), *Treatment and research: Bridging the gap*. Mahwah, NJ: Laurence Erlbaum Associates.
- Onslow, M., & Packman, A. (2001). The Lidcombe Program of early stuttering intervention: Awaiting the results of a randomised controlled trial. *Asia Pacific Journal of Speech, Language, and Hearing*, 6, 85-89.
- Onslow, M., Andrews, C., & Costa, L. (1990). Parental severity scaling of early stuttered speech: Four case studies. *Australian Journal of Human Communication Disorders*, 18, 47-61.
- Onslow, M., Andrews, C., & Lincoln, M. (1994). A control/experimental trial of an operant treatment for early stuttering. *Journal of Speech and Hearing Research*, 37, 1244-1259.
- Onslow, M., Costa, L., & Rue, S. (1990). Direct early intervention with stuttering: Some preliminary data. *Journal of Speech and Hearing Disorders*, 55, 405-416.
- Onslow, M., Harrison, E., Jones, M., & Packman, A. (2002). Beyond-clinic speech measures during the Lidcombe Program of early stuttering intervention. *Acquiring Knowledge in Speech, Language and Hearing*, 4(2), 82-85.
- Onslow, M., Hewat, S., McLeod, S., & Packman, A. (2002). Speech segment timing in children after the Lidcombe Program of early stuttering intervention. *Clinical Linguistics and Phonetics*, 16, 21-33.
- Onslow, M., Menzies, R., & Packman, A. (2001). The Lidcombe Program: Development of a parent-conducted operant early intervention for stuttering. *Behavior Modification*, 25, 116-139.

- Onslow, M., O'Brian, S., & Harrison, E. (1997). The Lidcombe Program of early stuttering intervention: Methods and issues. *European Journal of Disorders of Communication, 32*, 231-250.
- Onslow, M., O'Brian, S., & Harrison, E. (1997). The Lidcombe Programme: Maverick or not? *European Journal of Disorders of Communication, 32*, 261-266.
- Onslow, Packman, & Harrison. (in press). *The Lidcombe Program of early stuttering intervention: A clinician's guide*. Austin, TX: Pro-Ed.
- Rousseau, I., Onslow, M. (in press). L'approche Lidcombe: programme d'intervention pour les enfants d'âge préscolaire. *Rééducation Orthophonique*.
- Rousseau, I., Packman, A., Onslow, M., Robinson, R., & Harrison, E. (2002). Australian speech pathologists' use of the Lidcombe Program of early stuttering intervention. *Acquiring Knowledge in Speech, Language and Hearing, 4*(2), 67-71.
- Woods, S., Shearsby, J., Onslow, M., & Burnham, D. (2002). The psychological impact of the Lidcombe Program of early stuttering intervention: Eight case studies. *International Journal of Language and Communication Disorders*.

APPENDIX B

CLINICAL MEASURES FOR TWO STUTTERING PRESCHOOL CHILDREN DURING STAGE 1 OF THE LIDCOMBE PROGRAM

The Lidcombe Program Stuttering Measures

Leon

● severity ○ % SS

