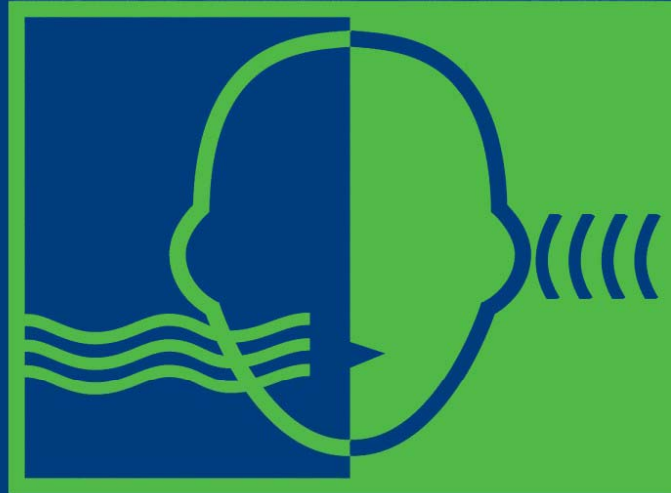


CASLPO



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**PREFERRED
PRACTICE
GUIDELINE FOR
STUTTERING**

APPROVED MARCH 2005

PREFERRED PRACTICE GUIDELINE FOR STUTTERING

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A) Preamble

Preferred Practice Guidelines (PPGs) are necessary to define quality care for the people of Ontario and CASLPO members. The purpose of this PPG is to ensure that individuals who stutter receive competent speech-language pathology care. The intention of this guideline is to provide a set of goals for developmental stuttering intervention and a range of procedures to achieve the goals.¹ This will allow for variations in practice due to differences in approach and philosophy as long as the chosen intervention is evaluated based on available scientific and clinical evidence of treatment effectiveness as well as within the context of the patient/client's best interest. This guideline is meant to be used as a decision-making framework in order to match the range of accepted practices and innovative approaches with the patient/client's specific needs and perspectives. This guideline is not intended to be a tutorial or provide the speech-language pathologist with all the information required to provide intervention for stuttering. Speech-language pathologists are ethically responsible to ensure that they are competent to provide stuttering intervention.

While this guideline is recommended for the majority of cases, the College recognizes that there will arise from time to time exceptional circumstances and/or conditions when guideline procedures cannot be followed. In such instances the speech-language pathologist may be required to modify recommended procedures. Speech-language pathologists should exercise professional judgment, taking into account the clinical environment and the individual patient/client needs when considering deviating from this guideline. These departures from the guideline must be documented.

B) Definition and Prevalence of Impairment

Stuttering is a disorder of speech production in which the natural flow of speech is typically disrupted by involuntary:

- Repetitions of sounds, syllables or words;
- Sound prolongations;
- Blocks and/or pauses.

Stuttering by nature is variable over time, across situations and within linguistic parameters. Normal non-fluencies exist in all speakers and in particular in a higher frequency in children, making it at times difficult to distinguish normal non-fluencies from stuttering. However, dysfluencies that are less common and more likely to be classified as stuttering include:

- Excessive repetitions, particularly when the units of repetition are syllables or sounds as opposed to whole words or phrases;
- Prolongations of sounds;
- Laryngeal, articulatory and/or respiratory blocks.

Signs of physical effort or tension, which might manifest as eye blinking, increasing pitch or loudness, grimacing, etc., might also accompany these dysfluencies.

These observable symptoms of stuttering create an impediment to communication due to the increased time to communicate a message. In addition, the less observable reactions that a patient/client may have to the stuttering, may become the more significant part of the disorder. These also contribute to the communication impairment and may include:

¹ See Appendix IV: Other Disorders of Fluency

- Avoidance of words and situations;
- Fear, anticipation;
- Feelings of lack of control.

The prevalence of stuttering is estimated to be 1% with the lifetime incidence of up to 5% (Guitar, 1998). The proportion of boys to girls who stutter is higher and increases with age. That is, in the preschool years, the ratio of boys to girls is 2:1 but this ratio shifts to 4 or 5:1 in older, school-aged children and adults, reflecting differential spontaneous recovery among boys and girls. Genetics plays an important role in the aetiology of stuttering, as evidenced by research studies of identical and fraternal twins, and studies of family history of stuttering. In addition, persistence and recovery from stuttering appear to have a genetic basis (Yairi, Ambrose and Cox, 1996).

The onset of stuttering occurs at any age from the beginning of speech, usually in the early years, to about age 9; in a few instances it starts in adolescence or adulthood in which case the possibility of neurological disease or trauma needs to be considered.

Probability of recovery decreases sharply with age; if the stuttering persists into adolescence, recovery is unlikely (Curlee, 1998, p. 6). Roughly 3-5% of children stutter (according to the definition provided above), however, anywhere from 50 to 80% will stop stuttering before reaching adolescence. There is evidence that some forms of early treatment may facilitate and enhance recovery in children (Lincoln & Onslow, 1997; Curlee, 1998, p. 6).

Approximately 1% of adults experience persistent stuttering (Guitar, 1998). In most cases, these individuals are affected seriously by stuttering to the extent that it negatively affects their social, educational, vocational and/or psychological functioning (Corcoran & Stewart, 1998).

There are other fluency disorders that may arise in childhood or adulthood but should be distinguished from developmental stuttering. These include cluttering, acquired neurological stuttering (stuttering as a result of brain damage or disease) and acquired psychogenic stuttering (stuttering that is thought to be a result of psychological trauma) (See Appendix IV). Given that speech dysfluency may be an early or singular sign of neurological disease or trauma, it is important to investigate any adult-onset stuttering by making the appropriate medical referral(s).

C) Scope of Practice

The *Audiology and Speech-language Pathology Act, 1991* states: “The practice of speech-language pathology is the assessment of speech and language functions and the treatment and prevention of speech and language dysfunctions or disorders to develop, maintain, rehabilitate or augment oral motor or communicative functions.” Stuttering is widely accepted as a disorder of speech, thus the assessment, treatment and management of stuttering are well within the speech-language pathology scope of practice. However, because the progress of this disorder may involve significant psychological processes, the speech-language pathologist must take measures to ensure adequate preparation to manage this facet of intervention through continuing education. In some instances, intervention may include a referral for psychological counselling when the emotional, psychological and/or behavioural components extend beyond the limits expected with a stuttering disorder. As well as providing fluency intervention, members are expected to act as a resource for patients/clients, their families and other service providers who come in contact with the individual. This may involve education of the public regarding

referral indicators and processes to access speech-language pathology intervention for stuttering as well as promoting awareness of strategies to assist individuals who stutter in maximizing their fluency and communication skills.

D) Definition of Service

The philosophy of this guideline is intended to be consistent with the World Health Organization's (WHO) International Classification of Functioning, Disability and Health – ICF (2001) to support the use of unified terminology across health-related disciplines (Eadie, 2001; Threats, 2002). The multidimensional nature of stuttering, as identified in the WHO model, needs to be recognized in descriptions of the disorder as illustrated below.

Dimension	Definition	Stuttering Examples
Impairment	Problems in body structures and/or body functions such as significant deviation or loss	Disruption or inhibition of verbal expression due to involuntary dysfluencies in the flow of speech or anticipated dysfluencies in the flow of speech
Activity/ Participation	Aspects of functioning from an individual or societal perspective	Examples of limitations and restrictions: impaired ability to start or engage in a conversation, introduce a topic or ask questions; impaired ability to interact with unfamiliar people, inability to fully participate in community life where expressive speech is required
Contextual Environmental Factors	Factors that impact disability ranging from the individual's immediate environment to the general environment	Examples of difficulties imposed by the environment: reduced social acceptance, loss of listener attention, possible diminished potential to access a full range of academic, vocational and social opportunities
Contextual Personal Factors	Individual factors that influence performance in the environment	Examples of relevant individual factors: tendency to avoid situations or words, anxiety response level, poor self-esteem

E) Target Patient/Client Population

This Preferred Practice Guideline focuses on patients/clients of all ages who may require speech-language pathology intervention for stuttering based on their communication, educational, vocational, social, health and emotional needs. Criteria for intervention are the identification of impairment in fluency or potential development of impairment that hinders full activity or participation in communicative interactions either identified on screening, by the individual or by an appropriate substitute-decision maker (e.g. the parent/guardian in the case of a young child) as defined in the Health Care Consent Act.²



² Health Care Consent Act, 1996 S.O. 1996, CHAPTER 2 Schedule A [online]. http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/96h02_e.htm

F) Resource Requirements

Materials needed for stuttering intervention include:

I. Required:

- a) Access to audio/video recording equipment.
- b) Access to standard tests and/or procedures for measuring fluency, stuttering severity, attitudes toward stuttering and speech, self-efficacy as a speaker, situational fears and avoidance behaviour.
- c) Access to standard tests of speech and language function, as developmental stuttering may be accompanied by other communication disorders (note: a full assessment may not necessarily be carried out by the clinician providing the fluency intervention but he/she must have the resources to determine whether a full speech and/or language evaluation is required and to arrange for this to occur).
- d) Systematic protocols for obtaining a variety of speech samples, analyzing samples for percent stuttered syllables or words, characterizing types of dysfluencies, and characterizing secondary behaviours.
- e) Environments that may be controlled with respect to sensory distractions, physical comfort and physical access (i.e. quiet office space or quiet room in individual's home where distractions can be eliminated).
- f) Access to published treatment materials and programs.

II. Optional:

- a) Instrumental procedures may be used to evaluate and monitor the articulatory, laryngeal, and respiratory dynamics addressed in the treatment process.
- b) Behaviour counter.

G) Continuum of Care

Stuttering intervention must include the following components of care:

- Clinical Assessment
- Intervention
 - Management (which may include mediator training, environmental changes, attitudinal change and preventative strategies) and/or
 - Direct Treatment (including establishment, transfer/generalization and maintenance)
- Discharge planning

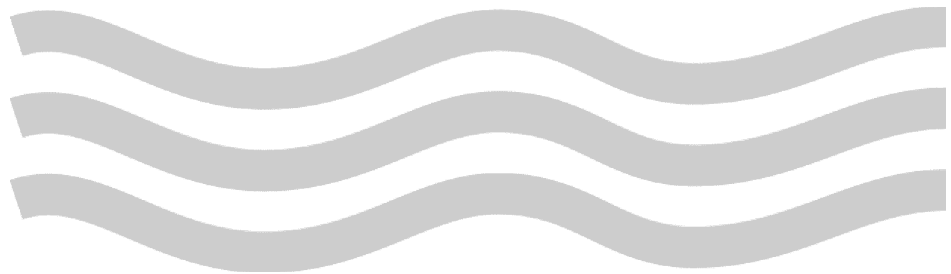
It is recognized that the course of care will most likely take on a different emphasis depending on the age/developmental stage of the patient/client. For example, a young child with emerging stuttering may benefit more from environmental changes while fluency is monitored than an older child or adult. Consequently, the continuum of care for the young child may begin with environmental changes and monitoring for improvement. Direct treatment strategies may then be employed if no improvement is evident. That is not to say that environmental changes are always part of intervention for a young child but rather that this is more likely than for an older child or adult.

Similarly, the continuum of care for an adult is more likely to include attitudinal changes (than in the care for a preschool child) but again, it is not necessarily a part of the care provided for the adult. Certain procedures may not be appropriate, especially when cognitive skills or

developmental stage do not allow or when assessment or treatment outcome measures indicate they are not necessary. Similarly, some aspects of intervention (often the latter phases of transfer/generalization and maintenance) may not be implemented in cases of premature discharge beyond the member's control. If these components of care are not provided, a clinically justifiable rationale must be documented. This is summarized in the following Stuttering Continuum of Care diagram.

Central to the provision of stuttering intervention is a patient/client-centred approach, the patient/client being the one who stutters or the parent/guardian, in the case of children. The nature of a stuttering disorder is defined in part by the limitations of activity and participation and influenced by environmental factors and the patient/client's personal characteristics. These factors must be considered in all aspects of service delivery. The patient/client must be given the opportunity to play an active role in setting individually appropriate goals in partnership with the speech-language pathologist. Stuttering intervention must be customized to the specific needs of the patient/client, ensuring that language, cultural, ethnic and personal considerations are respected. Consent must be obtained from the patient/client (or substitute decision-maker) according to the Health Care Consent Act (1995)³, prior to initiation of intervention.

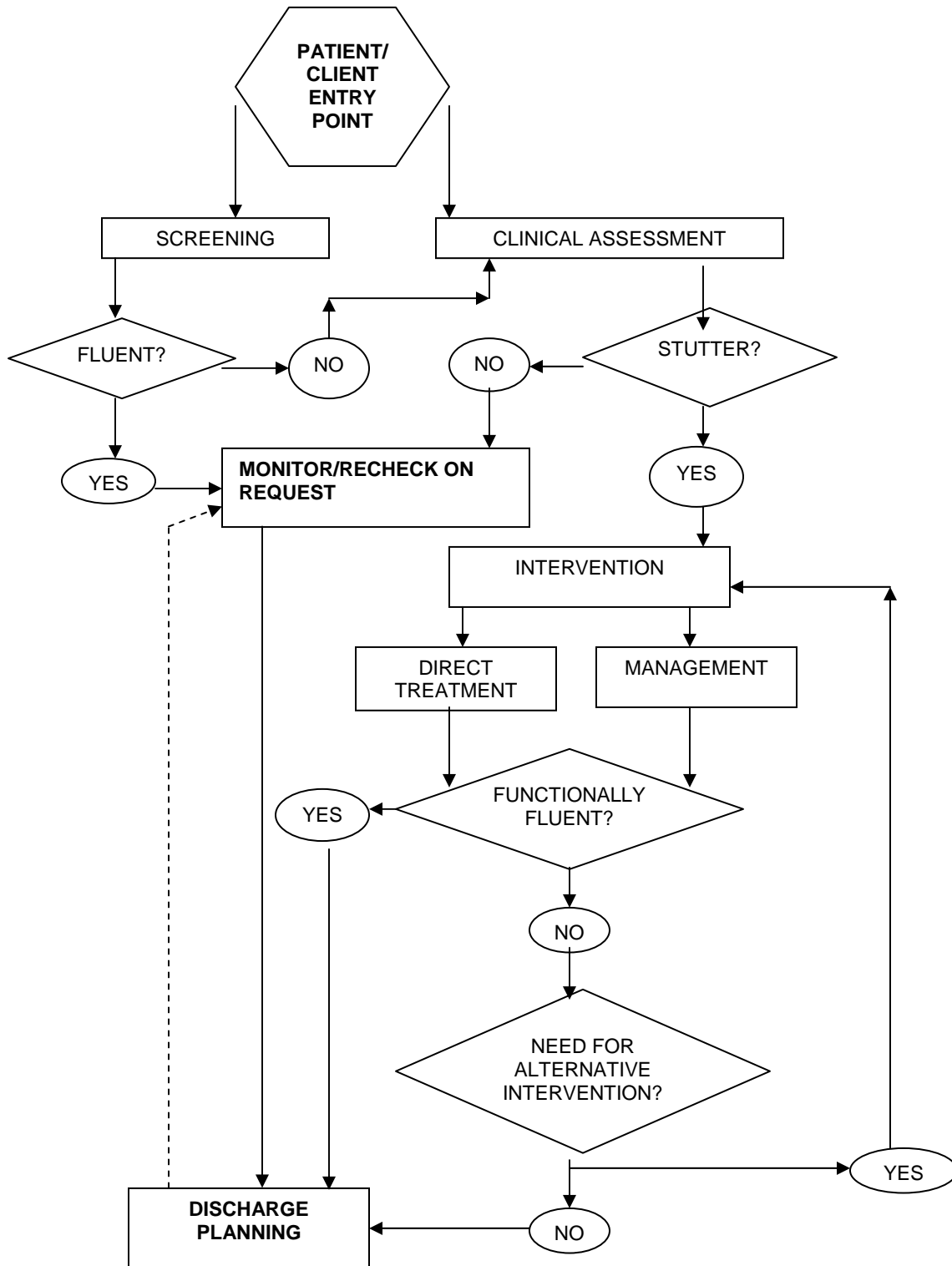
Regardless of personnel or environmental resource limitations, patient/clients should not be abandoned, as detailed in CASLPO (1993) Professional Misconduct Regulation.⁴ In the case where the employer restricts further service, the patient/client (or parent/guardian) should be directed to alternate services providers, as well as any other appropriate resources (e.g. reading material, self-help group). The patient/client's active participation should be encouraged at all times. When the patient/client makes an informed request for discontinuation of services, this should also be respected. Provision of stuttering intervention should strive to preserve the patient's dignity, autonomy, individuality, choice and independence.



³ Health Care Consent Act, 1996 S.O. 1996, CHAPTER 2 Schedule A [online].
http://www.e-laws.gov.on.ca/DBLaws/Statutes/English/96h02_e.htm

⁴ CASLPO (1993) Ontario Regulation 749/93: Professional Misconduct, Section 8⁴
http://www.caslpo.com/english_site/m_memregul749.asp

STUTTERING CONTINUUM OF CARE



H) Risk of Harm

Due diligence is required to assess and minimize any potential harm that results from intervention or lack of intervention. Possible strategies that may be employed to mitigate the risks include:

Risk	Possible Strategies to Mitigate Risk
1. Delayed intervention may result in increasing frequency and severity of stuttering behaviours as well as the development of inappropriate compensatory strategies and/or negative psychological processes.	<ul style="list-style-type: none"> a) Ensure as prompt a response to referrals for stuttering intervention as possible to determine how best to proceed. b) Provide education with regard to the nature of the disorder and general fluency facilitation strategies as needed. c) Direct patient/client or parent/guardian to any community resources available. d) Especially in the case of children, monitor fluency (e.g. through family reports) to determine if level of intervention provided is effective.
2. Older children and adults are at risk of increasing anxiety and avoidance with inappropriate clinical intervention.	<ul style="list-style-type: none"> a) Determine and consider individual responses to speaking situations. b) Develop a hierarchy of situations or factors that result in less to more stuttering and gradually introduce the more difficult situations as skills are mastered in the less threatening situations. c) Encourage involvement from both the patient/client and/or the family to determine what is less and more anxiety provoking. d) Ensure the patient/client or the family is in agreement with speaking tasks assigned. e) Employ anxiety reduction techniques when required.
3. In an effort to achieve fluency, there is risk of establishing unnatural speech patterns that are less desirable than the stuttered speech.	<ul style="list-style-type: none"> a) Have the patient/client or family parent/caregiver evaluate speech naturalness frequently. b) Use others to evaluate the speech naturalness of the patient/client. c) Use rating scales and/or identify specific features of speech that contribute to a natural pattern.
4. Over-dependence on the speech-language pathologist and/or clinical environment by the patient/client to achieve fluency may be fostered through the treatment process.	<ul style="list-style-type: none"> a) Ensure the patient/client understands the process of transfer and maintenance. b) Encourage the use of the fluent speech in a variety of situations with a variety of people. c) Develop self-evaluation skills that allow the patient/client (or the evaluation skills of the parent in the case of children) to judge fluency and/or the specific techniques being employed. d) Develop patient/client's (or parent's) problem-solving skills for recovery when stuttering increases.

I) Health and Safety Precautions

All procedures must ensure the safety of the patient/client and speech-language pathologist and adhere to standard practices for hand washing and glove use⁵ as well as additional precautions where specified by the practice setting or by the patient/client's health care providers. Decontamination, cleaning, disinfection, and sterilization of multiple-use equipment before reuse are carried out according to facility-specific infection control policies and procedures and according to manufacturer's instructions.

⁵ Infection Control Guidelines: Hand Washing, Cleaning, Disinfection and Sterilization In Health Care, Health Canada, Laboratory Centre for Disease Control, Bureau of Infectious Diseases, Nosocomial and Occupational Infections <http://www.hc-sc.gc.ca/hpb/lcdc/publicat/ccdr/98pdf/ccdr/98pdf/cdr24s8e.pdf>

J) Competencies

1. Screening

The speech-language pathologist:

1.1 Demonstrates knowledge and skills to select or develop appropriate screening measures, administer them, interpret the results to identify presence or absence of signs of emerging or persistent stuttering and refers for further assessment.

- a) Knowledge of training methods and consultation processes needed to encourage others to administer screening protocols and refer appropriate candidates for further assessment.

2. Assessment

The speech-language pathologist

2.1 Demonstrates knowledge and skills to differentiate stuttering from other disorders of speech and language.

- a) Ability to consider features that may differentiate between a child's normally non-fluent speech, language-based dysfluency, the speech of a child at risk for stuttering, and the speech of a child who has already begun to stutter.
- b) Ability to consider features that may distinguish stuttering from cluttering, neurogenic stuttering, psychogenic stuttering, disorders of language, articulation and learning with an understanding of the manner in which such disorders may interact.
- c) Ability to relate the findings of language, articulation, voice, and hearing tests to the development of stuttering.
- d) Recognition of the degree of variability in observable stuttering and ability to investigate further (e.g. multi-situational sampling, questionnaires, recorded samples outside the clinical environment), particularly when reported stuttering is not evident.

2.2 Demonstrates accurate selection, administration and interpretation of clinical assessment procedures in order to identify the presence, nature and functional implications of stuttering.

- a) Ability to obtain a thorough case history from an adult patient/client or the family of a child patient/client.
- b) Ability to obtain and evaluate a speech sample for stuttering severity using both informal, subjective impressions and formal measures as relevant (such as the frequency of dysfluency, duration of dysfluency, speaking rate).
- c) Knowledge of risk factors for persistent stuttering in children (e.g. family history, length of time from onset, severity).
- d) Ability to recognize features that assist in differentiating between primary (core) stuttering behaviours and secondary behaviours.
- e) Knowledge of available diagnostic tests for stuttering that serve to objectify aspects of the patient/client's communication pattern (secondary behaviours, avoidance patterns, attitudes, etc.) that may not be readily observed.

- f) Ability to identify and measure, where feasible, external variables (such as time pressure, interruptions, demand speech, the speech patterns of others) and internal variables (such as emotional reactions, anticipation, fear, self perceptions, expectations) that may be related to the onset, development, and maintenance of stuttering and to fluctuations in the severity of stuttering.
- g) Ability to identify dysfluencies by type (prolongation, repetition, blocks, etc.).
- h) Ability to identify avoidance behaviours, struggle behaviours and escape behaviours,
- i) Knowledge of qualitative descriptors of fluency (such as prosody, speech rate, lack of effort, continuity of movement and content).
- j) Ability to identify some of the physical dynamics of speech that may be contributing to or resulting from the moments of stuttering (e.g. recognizing the subtle acoustic cues that signal vocal straining).
- k) Knowledge of referral criteria and procedures for disorders that the member does not have the competence to treat.

2.3 Demonstrates knowledge and skills to communicate the results of an assessment.

- a) Ability to communicate results of assessment to patient/client.
- b) Ability to communicate results of assessment to family and others with patient/client consent.
- c) Ability to communicate treatment options (such as various types of speech treatment, medication, devices, self-help groups) and risks and benefits of each.
- d) Ability to explain the characteristics of a stuttering disorder and intervention strategies to the patient/client based on information gathered in the assessment.
- e) Ability to communicate information regarding the current theories concerning the aetiology of stuttering.

3. Intervention: Direct Treatment

The speech-language pathologist:

3.1 Demonstrates knowledge and skills to formulate a program for the establishment of fluency based on the results of assessment.

- a) Knowledge of appropriate therapy techniques and procedures and the benefits and risks of each.
- b) Ability to identify short- and long-term goals that address issues from the patient/client perspective.
- c) Ability to modify treatment goals in the patient/client's best interest in order to balance ultimate goal of normal speech with tolerance for dysfluency.
- d) Ability to identify that some stuttering behaviours may be secondary to core stuttering behaviours (e.g. repetitions that are used when experiencing a block) and incorporate this knowledge into treatment.
- e) Knowledge of the features that contribute to perceptually fluent speech.
- f) Ability to work toward perceptually fluent speech with an awareness of the possible compromises among effort, fluency and natural-sounding speech.
- g) Knowledge of principles and procedures of conditioning and learning as they apply to modifying speech behaviours.

3.2 Demonstrates knowledge and skills to formulate a treatment program that includes the transfer of fluency based on assessment results and results of the establishment phase of therapy.

- a) Knowledge of the major stuttering treatment approaches and understanding of the indications and contraindications for the specific intervention techniques each includes.
- b) Knowledge of counselling techniques to assist the patient/client to achieve functional fluency.
- c) Knowledge of how and when to incorporate supportive individuals in transfer and maintenance.
- d) Knowledge of the principles of conditioning and learning as they apply to transferring/generalizing new behaviours to new situations.
- e) Ability to identify and address cognitive behaviours that may inhibit the transfer/generalization process (e.g. fear, anticipation, negative self-talk).

3.3 Demonstrates knowledge and skills to formulate a treatment program that includes the maintenance of fluency based on assessment results, results of the establishment and transfer/generalization of fluency.

- a) Ability to assist patients/clients to become independent in maintenance activities, allowing for speech-language pathology support as needed.
- b) Ability to identify and address cognitive behaviours that may jeopardize maintenance of fluency (e.g. learned helplessness, unrealistic expectations).
- c) Ability to assist patients/clients to develop an awareness of recurring stuttering and provide strategies that can be implemented independently to enhance maintenance of functionally fluent speech.

4. Intervention: Management

The speech-language pathologist:

4.1 Demonstrates knowledge and skills to develop and implement an indirect treatment program to enhance and maintain fluency based on assessment and/or treatment results.

- a) Ability to determine when to employ management strategies based on severity, pattern of development, patient/client input etc.
- b) Ability to identify environmental factors that influence the patient/client's fluency (e.g. communication partner, external noise).
- c) Ability to identify internal factors that may influence the patient/client's fluency (e.g. general body tension, awareness).



4.2 Demonstrates knowledge and skills to develop consultation and training programs to improve the ability of the supportive individuals the patient/client has chosen to facilitate fluent speech.

- a) Knowledge of mediator training techniques to assist individuals in the patient/client's environment to support the patient/client.
- b) Knowledge of mediator training techniques to assist individuals in the patient/client's environment to facilitate fluency.
- c) Knowledge of counselling techniques to assist others in facilitating the patient/client's generalization of gains made during intervention.
- d) Knowledge of how and when to incorporate supportive individuals in the implementation of management programs.
- e) Ability to explain the nature of a stuttering disorder of speech and intervention strategies to the patient/client and the supportive individuals the patient/client has chosen to assist.
- f) Knowledge of community resources in order to facilitate referral to self-help groups.

5. Intervention Evaluation

The speech-language pathologist:

5.1 Demonstrates knowledge and skills to evaluate an intervention program.

- a) Ability to determine appropriate timing of intervention based on patient/client's input and knowledge of stuttering development.
- b) Ability to objectively assess the efficacy of treatment continuously, including input from the patient/client.
- c) Ability to apply necessary modifications to treatment program to reflect unique needs of patient/client.
- d) Ability to identify subtle changes in speech, or other behaviours related to treatment change, and explain their importance to the patient/client.

6. Discharge Planning

The speech-language pathologist:

6.1 Demonstrates the ability to arrange for appropriate follow-up at discharge.

- a) Ability to determine the need for follow-up, reassessment and discharge based on the needs of the patient/client. This may include recommendations to attend refresher sessions, patient/client initiated monitoring or patient/client initiated re-evaluations.
- b) Ability to determine appropriate discharge criteria based on progress, motivational level and availability of resources.
- c) Knowledge of additional services that may be appropriate and referral processes.

7. Continuing Education

The speech-language pathologist:

7.1 Demonstrates continual acquisition of knowledge and skills necessary to provide high quality stuttering intervention.

- a) Knowledge of current literature and research.
- b) Knowledge of current treatment modalities and approaches in order to apply different interventions according to patient/client needs.
- c) Allocation of a portion of continuing education credits directly to the field of fluency and/or related fields (e.g. general counselling, behaviour modification, cognitive-behavioural counselling).

K) Collaboration Requirements

Speech-language pathologists have the primary responsibility for assessing, implementing and evaluating treatment programs for stuttering. It is recognized, however, that in some instances a patient/client who stutters may present with other deficits that may impact on the stuttering intervention. In such cases, the speech-language pathologist must adopt a collaborative approach. Such an approach would include:

- Referring to other professionals with regard to psycho-emotional, learning disability or other problems outside of the speech-language pathology scope of practice.
- Coordinating treatment with other speech-language pathologists so as to work simultaneously on language, phonological or voice problems.
- Sequencing treatment based on a broad objective of improving communication efficiently. This may mean postponing work on language, voice or articulation until fluency is under control, but sometimes it means postponing work on fluency until some progress is made on the other disorder, for example, improved intelligibility.
- Designing treatment plans that deal simultaneously with stuttering and coexisting problems.

Collaboration must also be considered when stuttering emerges in adolescence or adulthood. In such cases consideration of referrals to and consultation with other professionals for evaluation of neurological function would be necessary.

A patient/client who stutters or the child's parent/guardian may request that others be involved in the intervention. In the case of a child, a parent/guardian is typically included in the intervention. In some instances where the child is able to understand and provide consent, the child would decide on the involvement of the parent/guardian. Teachers, significant others, siblings and other caregivers should also be involved, but only with appropriate consent.

A speech-language pathologist may assign components of treatment, transfer and/or maintenance to an unregulated provider as long as appropriate training is provided and adequate supervision is maintained according to the CASLPO Position Statement on the Use of Supportive Personnel.⁶

⁶ Position Statement on Guidelines for the Use of Supportive Personnel, CASLPO (1997)
http://www.caspo.com/english_site/m_mempositsupp.asp

L) Documentation

Documentation of intervention should be completed in accordance with CASLPO's Draft Regulation For Records⁷. Assessment findings need to clearly describe relevant background information, the nature and severity of the stuttering, its impact on communication, goals of intervention, prognosis and recommended procedures (including frequency, estimated duration, and type of service). Documentation of intervention must include progress as well as an evaluation of the outcome of the intervention and its effectiveness. Language that can be readily understood by all audiences should always be used when documenting stuttering intervention.

M) Components of Service Delivery

I. Assessment

The purpose of an assessment is to collect information regarding observable dysfluent and fluent behaviours, concomitant features and reported speech behaviours not observed in order to determine if a stuttering disorder exists and the nature of the disorder. The Assessment Goals listed below must be present in any clinical evaluation of stuttering. The procedures list a variety of options for realizing the goals.

Assessment Goal	Assessment Procedures
1. Obtain speech samples that are as representative as possible of the patient/client's speech in everyday use.	<p>Observations must be made during an interview with the speech-language pathologist and / or while child is playing with caregivers. The patient/client may be asked to provide recordings of talking to a relative or friend or during daily activities (e.g. work, home, school). Ensure all features of the stuttering behaviour are revealed, if not directly, then by reporting (e.g. parent/caregiver reports other forms of stuttering, adult reports covert stuttering). Observation of the patient/client's speech may also be made in tasks such as:</p> <ol style="list-style-type: none"> Describing a standard stimulus picture(s). Reading a standard passage aloud. Interviewing using standard questions. Performing a specific speech task, (e.g. describing a job, preferred activity, school subject or favourite toy). Making a telephone call.
2. Generate, from obtained speech samples and observations, quantitative and qualitative descriptions of the patient/client's fluent and dysfluent speech behaviours.	<p>Techniques that may be used include but are not limited to:</p> <ol style="list-style-type: none"> Identifying and counting the frequency of primary (core) and secondary stuttering behaviours and distinguishing normal non-fluencies from stuttering. Computing percentage of syllables or words stuttered. Measuring speech rate (intended syllables per minute with pauses included) and articulatory rate (syllables per minute with pauses excluded). Describing qualitative aspects of fluency, such as apparent level of muscular tension, emotional reactivity to speech or stuttering behaviours, coping behaviours, poor eye contact, etc. Obtaining self-ratings of severity.

⁷ Draft Regulation for Records CASLPO (1996)
http://www.caslpo.com/english_site/m_memregulrec.asp

Assessment Goal	Assessment Procedures
3. Obtain information about variables that affect the patient/client's fluency level and apply this to treatment planning.	The following techniques may be used, such as: a) Administering and interpreting standard tests of attitudes toward stuttering and speech, self-efficacy as a speaker, situational fears, and avoidance behaviour. b) Developing and systematically testing hypotheses about variables that might affect fluency level (e.g. determining if reducing the linguistic level with a stuttering child improves fluency). c) Obtaining information from patient/client about social circumstances, words, listeners, sentence types and speech sounds that are associated with increased or decreased stuttering.
4. Obtain background information concerning the origin of the disorder, its course of development, and apply this information to treatment planning.	Information about a patient/client's social, physical, behavioural, and speech development may be obtained in the following ways: a) Developing questionnaires or other written materials designed to obtain potentially relevant background information. b) Interviewing the patient/client, the patient/client's family or others about developmental milestones of motor control, social-emotional behaviour, speech and language development, and cognitive development.
5. Obtain information about variables that might influence clinical outcome and/or the prognosis for treatment and apply this to treatment planning.	Information regarding language, voice, articulation, psycho-emotional function, learning disability, cognitive level, auditory or visual deficits may be obtained by administering tests or reading reports of others and/or making informal observations to plan for treatment and to provide prognostic information.

II. Intervention: Direct Treatment

The purpose of direct treatment in the adult and older child is typically to increase fluency by directly changing articulatory, respiratory and/or vocal behaviours and directly changing cognitive behaviours to facilitate the use of these new speech behaviours in the patient/client's daily communication over time. In the younger child, typically less emphasis is placed on directly changing the articulatory, respiratory or vocal behaviours and more emphasis is placed on reducing stuttering through contingency management strategies, although some direct attention to these behaviours may occur. The techniques described below are not considered an exhaustive list but are based on a representation of those that are the most widely used. While they are recommended, they are not meant to exclude other evidence-based techniques that have yet to be documented or techniques that the member can show provide benefit for a specific patient/client. The member should always be able to provide sound clinical justification for the techniques chosen. Further, it is appropriate to employ a combination of approaches in order to tailor treatment to the individual patient/client's needs.

The patient/client's age and ability to attend are taken into consideration in determining the duration of sessions. Speech-language pathologists plan sessions so that they are long enough to accomplish some stated objective, but not so long as to lose patients/clients' attention through fatigue or boredom.

Treatment Goal 1 - Reducing the frequency and/or severity of stuttering behaviours

Technique	Procedures
1. Contingency management	<p>The following procedures may be employed to reduce stuttering behaviour through contingent reinforcement.</p> <ol style="list-style-type: none"> Combine reinforcement for fluent speech and mild, non-aversive correction for stuttering behaviours. Introduce a fluency-enhancement technique or use a wearable device to establish fluency in the clinic in the case of severe stuttering (such as a portable Delayed Auditory Feedback device). Successively approximate fluent speech (shaping). Practice in a systematically sequenced series of steps based on length and complexity of an utterance and/or, in the case of adults and older children, a hierarchy of feared or challenging speaking situations so the patient/client progresses from easiest to most difficult speaking conditions. Systematically administer reinforcement for more natural-sounding speech.
2. Fluency-shaping approach	<p>Fluency shaping techniques are taught to the patient/client in a systematic, cumulative manner to change the entire speech pattern in order to prevent stuttering. These techniques may include but are not limited to:</p> <ol style="list-style-type: none"> Slowed rate of speech through slowed movements and/or increased pauses (typically taught in stages, progressing to a slow-normal rate). Easy onset of voicing. Relaxed inhalation. Soft but true voice changing to full voice before vowel initiation. Practice in order to normalize the onset of voicing while maintaining reduced effort and reduced hard voice onsets. Blending or continuous voicing. Light articulatory contacts. Smooth, slow speech movements. Use of computer-assisted feedback to train patient/clients in fluency producing coordinated speech production movements.
3. Reduction of speech-associated anxiety	<p>Some or all of the following techniques are employed to decrease anxiety in speaking situations:</p> <ol style="list-style-type: none"> Systematic desensitization to social situations. Desensitization to the experience of stuttering (confrontation). Pseudostuttering (voluntary stuttering). Incorporate normal speech dysfluencies.
4. Stuttering modification	<p>Some or all of the following techniques are employed to teach the patient/client to modify the moments of dysfluency as they occur:</p> <ol style="list-style-type: none"> Help the patient/client learn ways normalize the dysfluencies. Use modeling and practice, one behaviour at a time, until dysfluencies are normal in type (e.g. easy repetitions). Typically, the modifications involve: <ol style="list-style-type: none"> Post-block modification, or cancellation; In-block modification, or pullout; Pre-block modification, or preparatory set.
5. Confrontational (nonavoidance) techniques	<p>The following techniques may be used to assist in decreasing avoidance:</p> <ol style="list-style-type: none"> Discuss with the patient/client specific behaviours, the circumstances under which they occur, and the variables that may have influence them. Listen to/watch with patients/clients as they review audio or videotapes while speaking, and discuss specific behaviours and reactions with them. Voluntary stuttering.

Treatment Goal 2 - Minimizing or removing processes that may be maintaining stuttering behaviours

Technique	Procedures
1. Instrumental (operant) conditioning	<ul style="list-style-type: none"> a) Identify any external factors that reinforce stuttering (e.g. increased attention, secondary gains). b) Modify conditions in the environment, including in the patient/client's "internal environment", that are reinforcing stuttering or avoidance behaviour.
2. Classical conditioning	<ul style="list-style-type: none"> a) Identify aversive consequences for stuttering (e.g. tension, increased rate). b) Identify stimuli, or constellations of stimuli (situations) associated with aversive consequences (e.g. repeated stuttering on the phone with loss of listener attention and anxiety response so that any phone becomes associated with anxiety and results in increased stuttering). c) Identify behaviours that reduce or avoid the aversive consequences (e.g. not talking on the phone). d) Provide experiences for the patient/client in which the conditioned stimuli occur, but the avoidance behaviours are not performed and no aversive consequences follow.

Treatment Goal 3 - Facilitating the transfer of new speech behaviours to daily communication situations

Technique	Procedures
1. Development of speech situation hierarchy	<ul style="list-style-type: none"> a) Provide the structure for the patient/client or parent/significant others to identify typical, daily speaking situations (e.g. speaking log). b) Have patient/client or parent/significant others then rank those situations in terms of difficulty maintaining fluency and identify factors that interfere with fluency, together with the speech-language pathologist. c) In consultation with patient/client or parent/significant others, develop strategies for transferring fluency into each situation beginning with the easiest and moving towards the hardest.
2. Systematic application of learned behaviour to speech situations in the patient/client's everyday life	<ul style="list-style-type: none"> a) Vary speaking tasks within the treatment setting. b) Role-play social interactions while using new behaviours. c) Hierarchically structure practice in the patient/client's everyday life and monitor online, via tape recordings and/or interviews. d) Systematically and objectively evaluate communication in each speaking situation with the patient/client or parent/significant other. e) Have the patient/client or parent/significant other systematically and objectively evaluate the communication independently of the speech-language pathologist. f) Ensure that appropriate reinforcement occurs when the new speech behaviours (or fluent speech) are being used. g) Develop positive cognitive-behavioural strategies to prepare for, execute and evaluate speaking situations (e.g. self-talk, self-affirmation, reframing).
3. Develop self-reliance and commitment to independence in managing speech behaviour	<ul style="list-style-type: none"> a) Counsel patients/clients or parent/guardians to take over the process of decision-making in treatment. b) Provide exercises for the patient/client that are designed to increase skills at self-evaluation and self-treatment planning or, in the case of children, develop the parent's ability to evaluate and determine plans for effecting improvement in the child. c) Gradually reduce the speech-language pathologist's input in making decisions about treatment. d) Gradually decrease the frequency of contact between speech-language pathologist and patient/client. e) Encourage the use of self-help and support groups.

Treatment Goal 4 - Foster maintenance of newly established fluency skills

Technique	Procedures
1. Develop independence in monitoring and dealing with negative reactions and/or stuttering	<ul style="list-style-type: none"> a) Counsel and train patient/client to recognize any increases in avoidance. b) Encourage use of self-help and support groups. c) Encourage attendance at refresher sessions, self-initiated follow-ups and rechecks when appropriate. d) Increase awareness of early signs of resurgent stuttering and strategies to deal with it, including outward signs as well as internal signs such as increased anxiety and avoidance. e) Develop realistic expectations and goal setting.
2. Foster parental/significant other facilitation of child's fluency development in everyday situations	<ul style="list-style-type: none"> a) Counsel and train families in recognition of subtle signs of returning struggle. b) Desensitize client/patient to reduce anxious reactions to recurrent struggle behaviour. c) Train parent/significant others to recognize and respond to recurrent stuttering with methods of fluency development learned in therapy. d) Train parent/significant others in skills, which provide a fluency-enhancing atmosphere. e) Use family support groups.

There are a number of ways to monitor a patient/client's practice: (1) direct observation, in which the speech-language pathologist is present during the practice session, (2) interviews with the patient/client after practice sessions, and (3) listening, with the patient/client, to audiotape recordings of practice sessions. In each case, monitoring should include opportunities for the speech-language pathologist to discuss the practice session with the patient/client so as to increase understanding, and opportunities to provide immediate feedback on the patient/client's performance. Distance monitoring activities such as the speech-language pathologist sending written comments to mailed audio tape recordings or monitoring by telephone or videoconferencing would be appropriate in situations where the patient/client is unable to attend in person and the speech-language pathologist has had sufficient face-to-face contact with the patient/client prior to this phase of therapy.

III. Intervention: Management

The purpose of management strategies is to increase fluency by changing environmental factors and attitudes. Individuals who interact with the patient/client can have a significant effect on the development and maintenance of fluency but should only be utilized in management intervention with the consent of the patient/client.

Goal	Management Procedures
1. Limit processes that may be maintaining stuttering behaviours	<p>The following strategies may be employed to alter the patient/client's environment, externally or internally, so as to remove any conditioning process that is exacerbating or maintaining stuttering:</p> <ul style="list-style-type: none"> a) Counsel the patient/client and significant others (with patient/client or parent/guardian consent). b) Provide experiences that will alter attitudes or beliefs that result in deleterious conditioning processes. <p>In the case of a child, parent/significant others may be trained to:</p> <ul style="list-style-type: none"> a) Talk and interrupt less often. b) Use simple language. c) Ask fewer questions requiring long complex answers. d) Encourage more conversational turn taking.

Goal	Management Procedures
<p>2. Help patient/client learn how to make decisions about everyday speaking situations</p>	<p>Fostering independent decision-making around fluency enhancement may include the following:</p> <ul style="list-style-type: none"> a) Identify specific avoidance and coping decisions about social behaviour that may affect fluency (e.g. letting a colleague answer the phone when patient/client is closer to it). b) Counsel regarding avoidance reactions that result in increased fear and decreased self-confidence. c) Identify attainable behavioural goals for effective decision-making. d) Plan activities to provide opportunities for successful decision-making. e) Support patient/client decisions that promote increased fluency and confidence. f) Assist patients/clients in predicting consequences of using or not using treatment techniques in day-to-day activities. g) Encourage patient/client to attend a support group with other people who stutter or establish opportunities to discuss speech with significant people.
<p>3. Develop self-esteem</p>	<ul style="list-style-type: none"> a) Counsel the patient/client to appreciate successful speech experiences as well as successful life experiences working towards a balanced perspective. b) Assist the patient/client in reframing negative self-perceptions related to communication abilities. c) Provide validation of the patient/client as a person and speaker: <ul style="list-style-type: none"> i. Listen to the patient/client and demonstrate appreciation of the patient/client as a person. ii. Listen to the patient/client and validate aspects of speech that are unrelated to fluency, e.g. voice quality, expressiveness, word choice, articulation. iii. Listen to the patient/client and validate fluency, where appropriate, e.g. stuttering behaviours that are less struggled or less abnormal. iv. Transfer similar listening skills to patient/client (self-listening). v. Facilitate increased attention from significant others. vi. Encourage support group participation or other such activities. vii. Provide for increased tolerance of dysfluencies (both normal and stuttered) through counselling or modelling. viii. Teach techniques such as positive self-talk and affirmation training.

IV. Discharge Planning

Discharge planning serves to direct interventions toward an appropriate and timely discharge from stuttering intervention. Ideally, the speech-language pathologist and the individual determine the appropriate time and conditions of discharge from stuttering intervention. In circumstances where the criteria for discharge/transfer are beyond the speech-language pathologist's influence, the speech-language pathologist should make every reasonable effort to educate the individual or parent/guardian regarding other treatment options, as indicated (private practice service providers, case managers, consumer groups, community-based services).



Appendix I: Methodology

The development of this PPG for stuttering began with a review of guidelines available at the time of writing. This document is based on the American Speech-Language-Hearing Association (ASHA) (1995) Guidelines For Practice In Stuttering Treatment, ASHA (1999) Preferred Practice Patterns for the Profession of Speech-Language and Canadian Association of Speech-Language Pathologists and Audiologists (1999) Assessing and Certifying Clinical Competency, Foundations of Clinical Practice for Audiology and Speech-Language Pathology. The information was reformatted using the standard CASLPO PPG headings. A speech-language pathologist with extensive clinical experience in stuttering was hired to revise the document. Representatives from the University of Toronto, University of Western Ontario, University of Ottawa and speech-language pathologists in practice have reviewed the document throughout the development phase and have provided input. The document was field tested by 12 speech-language pathologists in 6 different practice sites: 4 private practices 1 hospital 1 preschool program in the following locations: Guelph, Sudbury, Toronto (2), Nepean and Hamilton. A total of 55 patient/clients were included in the field test trials.

Appendix II: Glossary

Affirmation Training:

Affirmation Training is the process of developing internal positive statements.

Attitudinal Change:

Attitudinal change refers to the modification of the thoughts, feelings, reactions and expectations about stuttering by the person who stutters.

Avoidance:

Avoidance occurs when the person anticipates stuttering and chooses not to speak or not to participate in social interaction (situational avoidance) or changes words or the grammatical structure of an utterance from what was intended (linguistic avoidance).

Blocks:

Blocks are involuntary stops in the flow of air, voice or movement of articulators.

Covert Stuttering:

Stuttering exists; however, due to a variety of avoidance strategies, no obvious dysfluencies are heard.

Developmental Stuttering:

Developmental stuttering is stuttering that has its origins in childhood and is not attributable to brain injury or disease.

Environmental Manipulation:

Environmental Manipulation involves modification of the external factors that may influence the amount of stuttering. These factors differ from person to person and between children and adults. For example, in the case of children, parent/significant others may be instructed to develop listening skills, reduce negative comments, foster better conversational turns, etc. In the case of adults, they may be instructed in strategies that allow more time to respond in conversations, reduce external noise/distractions, etc.

Functionally Fluent:

Being functionally fluent is the ability to communicate effectively with minimal hindrance from stuttering. This typically is a result of a reduction in the amount and degree of overt and covert stuttering as well as attitudinal changes.

Escape Behaviours:

These are behaviours that result from the speaker attempting to complete a stuttered word such as eye blinks, head nods or interjections of starter words/sounds (e.g. uh).

Establishment:

Establishment describes the initial development of fluency skills within limited environments, such as in the clinic or at home.

In-Block Modification/ Pullout:

This is a deliberate attempt to modify and control a stuttered word before completing the word.

Incidence:

The incidence of stuttering is the number of people who have experienced stuttering at some time.

Learned Associations:

These are behaviours that become associated with external and internal stimuli, which then become triggers for the behaviour.

Maintenance:

Maintenance refers to the achievement of a stable pattern of functional fluency over time with decreasing involvement of the clinician.

Mediator Training:

Mediator training is the process of instructing significant people in the environment of the person who stutters to implement a variety of fluency-facilitating strategies.

Perceptually Fluent:

Perceptually fluent refers to a speech fluency pattern judged by the average listener to be normal, even though it may contain a number of dysfluencies.

Post-Block Modification/Cancellation:

This is a deliberate pause produced immediately after a stuttered word, followed by a deliberate reproduction of that word.

Pre-Block Modification/Preparatory Set:

This refers to the internal rehearsal prior to an anticipated stuttered word.

Prevalence:

The prevalence of stuttering is the number of people who currently stutter.

Primary/Core Stuttering:

These are the basic, involuntary stuttering behaviours, including repetitions, prolongations and blocks.

Prolongations:

This refers to the involuntary stretching of individual sounds/phonemes within a word.

Psycho-Emotional Problems:

These are problems that have both a psychological and emotional component.

Psychosocial Processes:

These are processes of or relating to the relationship between social factors and individual thought and behaviour.

Reframing:

Reframing involves looking at an event or situation from another point of view in order to reshape the emotional response that comes from viewing the situation in a negative way.

Repetitions:

These are the involuntary reiteration of sounds, syllables and/or words.

Secondary Behaviours:

Secondary behaviours are behaviours that naturally develop to end or avoid the moment of stuttering. These include escape, struggle and avoidance behaviours.

Secondary Gains:

This refers to the benefits or reinforcement experienced as a result of a behaviour that appears to have a negative outcome (e.g. stuttering may result in sympathy).

Self-efficacy:

Self-efficacy is the belief that one's actions are responsible for successful outcomes.

Self-talk:

Self-talk is a cognitive process whereby people engage in an internal dialogue to guide their behaviour.

Struggle Behaviours:

These are effortful behaviours exhibited when trying to complete a stuttered word, such as grimacing, arm movements, tremors, etc.

Transfer/Generalization:

This is the process of learning to apply the fluency skills learned within the clinical setting to the patient/client's everyday situations.

Appendix III: Service Locations for Provision of Services

Patients/clients are seen in a wide variety of settings. Regardless of setting, intervention programs must provide activities for effective transfer/generalization of new behaviours to the ordinary social situations of everyday life. Transfer can be achieved through carefully sequenced, monitored practice in real-life social situations. Programs that treat the patient/client only in a limited setting and do not provide for monitored practice of newly learned behaviours in natural settings fall outside the guidelines of good practice.

Appendix IV: Other Disorders of Fluency

This PPG is intended to apply to typical developmental stuttering. Members are advised to review the current literature on approaches to other fluency disorders. These disorders are listed below:

Cluttering:

Cluttering is a fluency disorder that may exist together with stuttering. It is characterized by a rapid, uncontrolled rate of speech that results in truncated, dysrhythmic and at times incoherent utterances. There usually exists an underlying central language problem. Typically, the speaker is unaware of the communication difficulty (St. Louis, 1986).

Acquired Neurological Stuttering:

This is also referred to as acquired stuttering and is associated with a neurological event (e.g. stroke, head trauma, extrapyramidal disease, tumour, drug use) with no history of developmental stuttering. It may be transient or persistent (St. Louis, 1986).

Acquired Psychogenic Stuttering:

This usually has an adult onset with no significant neurological findings and is associated with emotional stress. It can be categorized as a conversion reaction (Roth, Aronson and Davis, 1989).

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References

- American Speech-Language-Hearing Association. (1994). Guidelines for practice in stuttering treatment. *ASHA*, 37 (Suppl. 14), 26-35, Rockville, MD: Used with permission.
- American Speech-Language-Hearing Association. (1997). Preferred Practice Patterns for the Profession of Speech-Language Rockville, MD: Used with permission.
- Andrew, G., Craig, A., Feyer, A. M., Hoddinott, S., Howie, P., & Neilson, M. (1983). Stuttering: a review of research findings and theory circa 1982. *J of Speech and Hearing Disorders*, 48 (3), 226-246.
- Bloodstein, O. (1995). *A Handbook On Stuttering* (5th ed.). San Diego, CA: Singular Publishing Group, Inc.
- Canadian Association of Speech-Language Pathologists and Audiologists (1999) Assessing and Certifying Clinical Competency, Foundations of Clinical Practice for Audiology and Speech-Language Pathology, Ottawa, Ontario.
- Corcoran, J. A. & Stewart, M. (1998). Stories of stuttering: A qualitative analysis of interview narratives. *Journal of Fluency Disorders*, 23, 247-264.
- Curlee, R. F. (1998). *Stuttering and Related Disorders of Fluency* (2nd ed.). New York, NY: Thieme.
- Eadie, T. L. (2001). The ICDH-2: Theoretical and Clinical Implications for Speech-Language Pathology. *Journal of Speech-Language Pathology and Audiology*, 25(4), 181-200.
- Guitar, B. (1998). *Stuttering: An integrated approach to its nature and treatment* (2nd ed.). Baltimore, MD: Wilkins & Wilkins.
- Lincoln, M. & Onslow, M. (1997). Long-term outcome of early intervention for stuttering. *American Journal of Speech-Language Pathology*, 6(1), 51-58.
- Roth, C. R., Aronson, A. E. & Davis Jr., L. J. (1989). Clinical Studies In Psychogenic Stuttering Of Adult Onset. *Journal of Speech and Hearing Disorders*, 54, 634-646.
- Rustin L, H., Purser, H. & Rowley, D. (1987). *Progress in the Treatment of Fluency Disorders*. Philadelphia, PA: Taylor & Francis, xviii.
- St. Louis, K. O. (1986). *The Atypical Stutterer: Principles and Practices of Rehabilitation*. Orlando (Fl.): Academic Press Inc.
- Threats, T. T. (2002). *The International Classification of Functioning, Disability and Health*. Heart and Stroke Foundation of Ontario, Presentation, Aphasia Institute, Toronto.
- World Health Organization. (2001). *The International Classification of Functioning, Disability, and Health*. Geneva, Switzerland: Author.
- Yairi, E., Ambrose, N. & Cox, N. (1996). Genetics of stuttering: A critical review. *JSLHR*, 39, 771-784.