

Chapter 14

Kirsten Howells & Jenny Packer

Acquired Stuttering: Differential Diagnosis, Therapeutic Considerations and Support Options

Purpose of the chapter

The defining characteristics of acquired stuttering are later onset (usually in adulthood) of stuttering-like dysfluencies apparently unconnected with a history of developmental stuttering. This may be associated with:

- side effects of medications,
- structural neurological conditions, such as head injury, stroke, brain tumour or Parkinson's disease,
- functional neurological conditions,
- malingering, where an individual feigns symptoms.

This chapter aims to summarise current knowledge, assessment, and diagnosis of acquired stuttering, as well as therapeutic considerations and treatment options. Key terms, definitions, review questions and suggestions for further reading are included at the end of the chapter.

The authors firmly believe that stuttering is how some people talk – different to, but not less than, fluent speech. Within this chapter, terms such as ‘changes in fluency’ and ‘loss of fluency’ are used to reflect the personal experience of those with an acquired stutter. For these people, the onset of stuttering may have been abrupt and involve a significant challenge and loss to their sense of self within family, social and work interactions.

Considerations for differential diagnosis

There are multiple causes for acquired stuttering. It is therefore important to have an open mind in relation to the nature of the stuttering, as any preconceptions you



hold may influence your clinical reasoning and decision making. Acquired stuttering really can be a bit of a puzzle, and may require some detective work on the part of you and your client to differentially diagnose what is going on.

Available research on acquired stuttering is sparse (Cruz et al., 2018). Many relevant papers report only case study examples. Earlier literature tended to suggest that different types of stuttering (e.g., developmental vs. acquired, and acquired structural neurological vs. acquired functional neurological – then called psychogenic stuttering) could be discriminated via differing patterns of symptoms and responses during assessment. Some authors provide tables or lists which suggest that different stuttering behaviours are characteristic of either acquired or developmental stuttering. However, more recent research indicates that the patterns reported in earlier literature are unreliable. Instead, heterogeneity of symptoms among individuals with the same aetiology seems common, while similar patterns of stuttering have been observed in association with a range of acquired conditions, or with brain lesions at different sites (Chang, Synnestvedt, Ostuni & Ludlow, 2010; De Nil, Jokel & Rochon, 2007; Krishnan & Tiwari, 2013; Lundgren, Helm-Estabrooks & Klein, 2010).

In summary, developmental and acquired stuttering, and different types of acquired stuttering, cannot necessarily be differentiated based on speech symptoms alone. Nevertheless, assessment of symptoms is essential to generate a clinical hypothesis regarding the underlying cause, and to contribute to the selection of the appropriate support or management approach.

Evaluation of acquired stuttering

Through the evaluation process, the person and clinician aim to collaboratively explore the nature and cause of the changes in fluency (differential diagnosis); decide whether intervention is warranted; agree goals of any intervention; and subsequently discuss and identify suitable intervention approaches.

Case history

The varied nature of acquired stuttering means that gathering information through the case history is the foundation of your evaluation. This information is likely to have a significant influence on your hypothesis regarding what may have caused the stuttering, and which intervention or support approaches may therefore be appropriate. This is the basis on which you and your client can start to build a treatment and management plan. The case history should include the following elements, to facilitate diagnosis, planning and appropriate intervention or support:

- what the person is seeking from you,
- onset and development of the change in fluency (e.g., gradual or sudden onset; any concurrent symptoms; history of developmental stuttering; earlier episodes of altered fluency),
- pattern and variation in fluency and dysfluency,
- what the individual believes has caused the changes in fluency,
- medical history, including diagnoses, planned or completed investigations, and other professionals involved,
- medications and drug use, including any changes in dosage, newly introduced, or withdrawn,
- social circle and activities,
- family commitments, relationships and responsibilities,
- work,
- hobbies and interests.

As well as collecting the facts related to the topics listed above, you should remain open to *listening* to the person as they talk about these aspects of their life. They may reveal emotional responses and personal stressors that could be contributing to their presentation of stuttering.

Assessment

Assessment should include an evaluation of the stutter, including observation and description of type and patterns of fluency and dysfluency. For example, does stuttering occur rarely or often? Is it heard at the beginning, middle or end of words and sentences? When does speech flow more or less easily, and how much physical struggle is associated with the moments of dysfluency? Are the dysfluencies predominantly stutter-like, or do they reflect word-retrieval difficulties, articulatory groping, or language formulation difficulties?

Assessment of broader speech and language skills should be included, to identify any underlying impairments, additional difficulties or linguistic factors that may influence fluency. For example, dysfluencies may be associated with word-retrieval or word-production difficulties in aphasia; with articulatory groping in apraxia; or with palilalia or speech festination in parkinsonism and other extrapyramidal conditions (Lundgren et al., 2010).

If not already undertaken by another relevant health professional, use of the *Mini Mental State Examination* (MMSE) as a routine screen of cognitive function can be useful (De Nil et al., 2007). As with all formal assessment tools, it is important to consider the ways in which involuntary dysfluencies may impact the individual's ability to respond to the questions.



Other elements of the assessment may vary depending on the individual's personal goals for therapy. The person should be given the opportunity to both articulate their goals and describe their hopes for the collaboration with a therapist. Questions about the impact of stuttering should be asked to determine which aspects of this individual's life are most affected by the changes in fluency. For example, how does the person see their ideal future? Would they like to work with the public, but at the moment feel unable to do this? Are they currently getting their partner to order meals in restaurants, but would like to do this for themselves in the future? A conversation about how the person's life has changed since the onset of stuttering can help the therapist better understand the person's needs and wishes, and help the individual define their personal goals.

It is useful to understand the individual's perception of severity, regarding both their stuttering behaviours, and the impact the stutter has on their daily life. Visual analogue scales, descriptions, and questionnaires regarding the subjective experience of stuttering are useful and may help the person clarify their experience while additionally providing a baseline for later comparison. Examples of relevant questionnaires include the WASSP (*Wright & Ayre Stuttering Self-Rating Profile*) (Wright & Ayre, 2000) and the OASES (*Overall Assessment of the Speaker's Experience of Stuttering*) (Yaruss & Quesal, 2006). Caution should be taken in drawing comparisons with any normative data for these or other assessment tools, as these have typically been developed from norms based on developmental stuttering. They cannot, therefore, be applied in the same way to someone with acquired stuttering.

Reports from key people in the person's life can be gathered and used alongside the information outlined above to assess the level of insight the person who stutters has into their communication changes and their impact. This information can feed into your hypothesis about the cause of the acquired stutter, and subsequently into any proposals for intervention or follow-up. For example, if the individual perceives their overt stuttering behaviours as very noticeable but other key people view these as minimally intrusive to conversations, this may suggest that desensitisation work could be helpful. Alternatively, the person may have a very low level of awareness regarding stuttering behaviours that all others perceive as a significant change. In this case, you may wish to evaluate their level of cognitive functioning, as this could have implications for their ability to process and retain information within the therapy process, if intervention is desired.

Development of hypotheses

As previously stated, acquired stuttering can be associated with a variety of causes, or more than one cause. Your evaluation will allow you to develop a best hypothesis regarding the nature of a particular individual's acquired stuttering. This can then guide your choice of intervention approach, as different intervention approaches may be more, or less, suitable for different types of acquired stuttering and an individual's specific circumstances. Your hypothesis may change over time, as you and your client learn more about their individual stuttering presentation. Potential hypotheses for consideration are outlined below.

Recurrence or exacerbation of a developmental stutter

The re-emergence of a developmental stutter which has not been present for many years may be similar to the experience of someone with an acquired stutter, as the individual adjusts to new sensations, emotions and responses within communicative exchanges. Even if assessment findings indicate no history of developmental stuttering or an uncertainty regarding this, it may be helpful to ask the individual to check with others whether they stuttered as a young child.

Side effects of medications

The literature includes occasional reports of stuttering onset associated with various medications (Aukst-Margetić & Margetić, 2008; Grover, Verma & Nebhinani, 2012; İpsalan, Coşkun, Kocak & Gorücü, 2015; Lebrun, 1992; Margetić, Aukst-Margetić & Krajinović, 2009; Norman, Jaramillo, Eapen, Amuan & Pugh, 2018). These include, for example, some antidepressants, antiepileptic medication and neuroleptics. The potential for changes in medication to be a causal factor should therefore be considered more seriously if these classes of medication are part of the picture. Thus, if the person has recently begun taking any new medications or has altered the dosage of a pre-existing medication, check the literature for any references linking this particular medication with loss of fluency. While being aware that many people take many medications without experiencing any impact on their fluency, if it seems that the timing of any medication changes has coincided with changes in fluency, discuss this possibility with the individual and their doctor. If the link is confirmed, there may be alternatives available, or an adjustment in dosage may lead to a reduction in stuttering.

Medication use is often a balance between target effects and side effects. In some cases, it may be that alternative medications are not an option, and any changes



in fluency must be viewed as secondary to the health gains resulting from the prescribed medication.

Structural neurological stuttering

Information gathered during assessment may indicate the presenting stutter is attributable to physical changes in neurological structures. This could include diagnoses such as epilepsy, brain tumour, recent stroke, or a progressive condition such as Parkinson's disease. On occasion, speech changes may be the first indication of neurological change or disease. You may be the first professional to evaluate the symptoms and listen to the person's concerns. Unless you already know the onset of stuttering is linked to a *known* neurological diagnosis, it is essential to consider the potential for an as yet *undiagnosed* neurological issue. If no such diagnosis or investigations have been reported during the case history, you have a duty of care to draw this to the attention of a doctor who can decide whether neurological investigations are warranted. This is particularly important if symptoms started recently, or if the person has not already discussed them with a doctor. It is necessary to do this in a sensitive manner, to minimise unnecessary concern about potentially serious health issues that may turn out to only be hypothetical. You can explain the range of causes that can be associated with changes in speech fluency in adults, stating that – based on the information gathered – it is clear that something has changed, and it is important to find out if the symptoms are associated with a medical condition. Phrasing such as the following may be helpful:

“Usually, stuttering starts in childhood. For you, stuttering has started later, and we need to work out which factors have come together to contribute to this, so that we can find the best strategies for you. There are lots of reasons why speech might change as an adult, but it can sometimes be associated with a medical condition or even with some medications. That's why I've asked all the questions about whether you're taking any medication and so on. We also need to make sure there aren't any small changes in the way your brain is functioning or the way your muscles are working that are impacting on your speech. This isn't something I can look at here, so I'm going to contact your doctor and ask them to give you a check-up to make sure there isn't anything else going on.”

Therapeutic work can start at the same time as any neurological investigations are undertaken. The investigations do not need to delay onset of therapy, but their results may influence management decisions. The findings of the broader speech and

language assessments taken as part of the evaluation may also assist the medical team by highlighting other areas of concomitant change.

Functional neurological stuttering

Functional neurological stuttering is associated with changes in *how* the brain is working rather than changes to its structures. Functional neurological stuttering is involuntary and genuine, and can have just as much, if not more, impact on an individual as any other form of stuttering. Terminology around such symptoms varies, and historically has included descriptions such as ‘psychogenic disorder’, ‘functional disorder’, ‘conversion disorder’ or ‘medically unexplained symptoms’. This diversity of terminology has been acknowledged to add to the confusion relating to such disorders (Barnett & O’Kane, 2020). Within this chapter, the term functional neurological stuttering will be used.

In some cases, there may be a clear trigger for the onset of functional neurological stuttering, such as illness or a traumatic event, but this is not always the case. Indeed, where there is no clear trigger, some people find explaining the changes in their speech patterns to others a significant challenge. Stuttering has also been noted in association with concussion, particularly in the early stages (Cherry & Gordon, 2017), although it seems less likely to persist in these cases (Binder, Spector & Youngjohn, 2012).

Baker et al. (2021) recognise a range of biological, psychological and social factors that may contribute to the onset and maintenance of functional neurological disorders, including stuttering. Some factors may predispose someone to develop a functional neurological stutter (for example, genetic factors or experience of previous functional disorders, less helpful psychological coping styles, or adverse life events) while other factors (such as physical injury or illness, dilemmas leading to negative consequences or stress) potentially trigger the onset of stuttering. A final set of factors can maintain the communication changes (for example physical pain, fear or avoidance of speaking situations and stigma related to the changes in fluency).

It is important to remember that changes in fluency that appear to be functional *could* be an early symptom of changes to brain structures, or may exist *alongside* structural changes, possibly as a functional response to those physical changes and their impact for the person.

Although the evidence is limited, there may be a subset of features that occur more often in acquired psychogenic stuttering than in developmental or other forms of acquired stuttering. Baumgartner and Duffy (1997) and Baker et al. (2021) each identify some features that may occur more often in functional neurological stuttering than in other forms of stuttering. These include:



- language involvement, with unusual grammatical constructions observed, e.g., “me get sick”,
- an unusual pattern of dysfluencies, such as a very high number of repetitions of every syllable or extremes of variability or consistency,
- presence of concomitant behaviours which are unusual in their nature or severity, for example, arm tremors or extreme facial grimacing,
- increased stuttering with more simplistic speech tasks.

Awareness of such features may be helpful within the diagnostic process, but caution should be employed as, although *some* individuals with functional neurological stuttering may display these behaviours, others may not.

Malingering

There are occasional reports in the literature of individuals *feigning* onset or exaggerating stuttering symptoms for personal gain, perhaps financial or psychosocial, or to avoid or reduce negative consequences (Binder et al., 2012). It is important to attempt to differentiate malingering from functional neurological presentations, as malingering is a false presentation that could unfairly waste clinical time and resources, whilst functional neurological disorders are genuine with real consequences for the individual. However, as always, differential diagnosis is complex, and malingering may exist alongside genuine symptoms and concerns.

Binder, Spector and Youngjohn (2012) describe three cases where stuttering, along with other symptoms, was suspected to be an instance of malingering, related to a personal injury lawsuit or compensation claim. They describe the patterns of dysfluency and symptoms, as well as a range of testing protocols used in evaluation. If you suspect malingering or feigning of symptoms, a referral to psychology may be appropriate for multidisciplinary discussion.

Management of acquired stuttering

The choice of management approach is directly linked with the hypothesis formulated during the evaluation process. Discuss your hypothesis, rationale and possible goals for intervention with the person, and invite their thoughts and opinions. Details of the conversation will vary depending on your hypothesis, any underlying medical conditions, and causal factors associated with the changes in fluency.

The aim of intervention will vary for each individual depending on their personal circumstances. Therapy for acquired stuttering is about much more than simply trying to restore former speech patterns. The goal may be to help the individu-

al adjust to living with a stutter, understand different factors that impact on the presence of stuttering, increasing their communicative strengths and ability to advocate for their communication needs with family, friends and colleagues or may include some work on the introduction of strategies to reduce struggle and effort when speaking. Time spent agreeing shared goals and building the beginnings of a strong therapeutic relationship is a good investment, as this can be a key part of successful intervention.

Regardless of the cause, individuals with acquired stuttering, just as those with developmental stuttering, deserve the best evidence-based interventions (De Nil et al., 2007). Elements of management related to specific types of acquired stuttering are outlined below. Some articles in the literature which describe treatment for acquired stuttering focus purely on speech behaviours. Our opinion, however, is that the presence of an acquired stutter can trigger a dramatic change in self-image and communication style that can have a significant impact on the individual and their interactions with friends, family, employer and colleagues. For this reason, we recommend a more holistic approach to management, including information, coping and compensatory strategies, and desensitisation for the person and their communication partners.

Recurrence or exacerbation of developmental stuttering

If your case history has established that the individual seeking support has a history of developmental stuttering, the range of management approaches designed to address developmental stuttering in adults will be appropriate. The focus of any intervention will be determined by the person's own goals. Other chapters in this book cover a range of therapy options that can be considered. The person may benefit from support in adjusting their self-image to that of someone who stutters if they have regarded themselves for many years as a person who consistently speaks fluently. Your management approach may need to include an extra focus on this area.

Side effects of medications

As previously mentioned, where stuttering is a side effect of medication, altering the drug type or dosage may not always be possible. There will be times when the essential health benefits of a medication outweigh the challenges posed by any side effects. In this case, work on understanding, desensitisation, and acceptance of the speech changes can form the central pillar of early management. Again, the person may benefit from support in adjusting their self-image to that



of someone who stutters, and your management approach may need to include an extra focus on this area.

Exploring the broader nature of communication, and the fact that a person can be a skilled communicator regardless of their level of fluency, can also be helpful. If desired, the individual may also benefit from support in helping friends, family and colleagues to understand the changes in fluency, and ways to be good communication partners for the individual.

Case study

Janine, aged 10, was referred to Speech and Language Therapy as her parents and teacher had noticed a stutter which was affecting her confidence to speak at school. At initial assessment, case history information revealed that although Janine had experienced very mild periods of gentle stuttering since the age of 6, this had not impacted on her day to day communication. In the last 5 months, Janine's stutter had increased in frequency and severity, with a lot of tense blocks. Within the last 6 months, Janine had been diagnosed with ADHD and prescribed a stimulant medication to manage this. The therapist checked possible side effects associated with this medication, and noted some published case studies where use of stimulant medications had led to increased stuttering. Janine had been having significant difficulties maintaining attention and focus through the school day due to her diagnosed ADHD, and medication was proving helpful in a number of ways. Following discussion with Janine, her parents and the paediatrician, Janine's medication was changed to a non-stimulant option, as this had been found to be helpful in some other cases of medication-induced stuttering. Janine and her parents were reassured to know there was a reason for the increase in stuttering, and the fact that this could be explained helped Janine feel more confident to speak in school. Some therapy sessions were arranged to help Janine recognise her strengths as a communicator, understand what stuttering is, and rebuild her confidence to speak in school.

Structural neurological stuttering

In cases of structural neurological stuttering, management will be influenced by the underlying disorder. For example, if assessment has brought to light underlying language formulation or word retrieval difficulties linked to aphasic symptoms, or coordination difficulties linked to dyspraxia, these areas would be the target of intervention rather than focusing on the stutter itself.

In circumstances where the communication difficulty can be described as stuttering, the focus of intervention should be on the whole presentation and the impact of the loss of fluency, including the person's communicative confidence and emotional well-being, rather than purely on the reduction of the overt stuttering behaviours. The choice of intervention approach in structural neurological stuttering is likely to be the result of a trial-and-error process, to evaluate what works best for the individual (De Nil et al., 2007). However, the impact of the underlying structural neurological changes should be taken into account when selecting various elements of your intervention. For example, someone experiencing stuttering-like dysfluencies associated with Parkinson's disease may find using a strategy to alter initiation of speech sounds less helpful, due to the inherent difficulties initiating movements associated with the Parkinson's diagnosis. It should be noted that great variability has been reported in treatment responses by individuals presenting with structural neurological stuttering. This type of stuttering often has a slower response, and has been reported as more resistant to change (Cruz et al., 2018).

In a survey of SLTs in Germany (König, 2009), the vast majority of respondents reported taking a holistic approach when working with people with structural neurological stuttering, consciously incorporating elements such as anxiety reduction and the counselling of relatives into their management strategy. When considering direct therapy to ameliorate speech symptoms, the fluency shaping techniques of reduced speech rate and rhythmical speech were most often used, followed by the stuttering modification technique of easy onset. Poor health and low levels of therapy motivation were identified as factors that may limit the potential for positive change in speech symptoms or psychosocial responses. The surveying author concludes that similar methods to those used with developmental stuttering can form part of therapy with people with structural neurological stuttering, and that a combination of approaches and techniques may be used.

Case study

Dorothy, aged 72, was admitted to hospital following acute onset of right-sided weakness and difficulty talking. Medical investigations revealed a left-sided infarct, which was treated with thrombolysis. Over subsequent days Dorothy's right-sided weakness gradually resolved and the speech difficulties took on the characteristics of stuttering and mild word-finding difficulties. She was seen by the inpatient speech and language therapy team on three occasions to monitor and discuss the changes in her speech. Dorothy appeared relatively unconcerned, and regarded the 'stumbles and loss of words' as a minor frustration but nothing more. Follow-



ing her discharge from hospital, Dorothy was visited at home. She and her husband reported minor speech hesitations, but they did not feel the need for specific speech and language therapy support. Three months later, the community team telephoned Dorothy to review the situation. Dorothy answered the call herself and chatted freely, reporting that all difficulties had resolved.

Functional neurological stuttering

The available literature on working with people who present with functional neurological stuttering is limited. Whereas Baumgartner and Duffy (1997) suggest that some individuals with functional neurological stuttering show a marked reduction in symptoms within two treatment sessions, Baker et al. (2021) point out that this is not always the case, and that other people will benefit from significantly longer and more intensive therapeutic partnerships. Therapeutic outcomes may be uncertain, and therapy may not necessarily follow a linear course, due to the multiple factors and influences that may be involved.

Recent consensus recommendations for management of functional communication disorders (Baker et al., 2021) recommend consideration of three therapeutic domains: Education and explanation, symptomatic intervention, and exploration of psychological factors.

Education and explanation

Baker et al. (2021) emphasise the importance of naming and describing the 'diagnosis' to validate the experiences of the person and help them develop an understanding of what has changed. Useful phrasing is given for ways such explanations can be made accessible, such as describing a 'software' rather than a 'hardware' issue, or using an analogy such as, 'the train is off the rails. The train and railway are both working but only run smoothly when properly aligned.' The clarity of such explanations can further assist the person to advocate for themselves with family, friends and colleagues.

Education on the typical functioning of the speech mechanisms can further aid understanding of the nature of the change. As the therapeutic journey progresses, exploring relationships between different relevant predisposing, triggering and maintaining factors and their impact for the individual will be important.

Symptomatic intervention

If the stutter is of recent onset, then incorporating activities that focus on facilitating change, both physically and emotionally, may be helpful (Ward, 2010). Duffy (1995) suggests a positive, can-do attitude, with optimism and confidence in the process, combined with intensive treatment that includes physical relaxation techniques and regular practice. Ward (2010) echoes this, highlighting how reduction in musculo-skeletal tension has been found in some cases to re-establish fluency. Baker et al., (2021) suggest a range of symptomatic interventions, including identifying symptomatic behaviours and explaining the mechanism of the symptom, alongside the introduction of strategies that facilitate previously natural and automatic patterns of movement. See the *Further Reading* section at the end of this chapter for suggestions regarding activities in diagnostic therapy.

Exploration of psychological factors

If the case history suggests an apparently clear link between a recent stressful psychosocial event and the onset of stuttering, it is recommended that close attention be paid to the relevant psychosocial issues within the therapy process (Baker et al. 2021). Use of an approach such as cognitive behavioural therapy to identify and challenge unhelpful thoughts is recommended, alongside support to address predisposing and triggering psychosocial factors of relevance for the individual. Mahr and Leith (1992) describe a situation where an individual's acquired stuttering appeared to be associated with a physically and emotionally abusive marriage, but resolved when the person was able to end the relationship and plan divorce proceedings. Ward (2010) describes cyclical patterns which can link stress, anxiety, and stuttering. Where appropriate, it is prudent to consider onwards referral to a psychologist or counsellor to support the individual, with possible speech therapy input alongside to desensitise the individual to the experience of stuttering.

Clinical experience suggests that it is wise to establish a timescale for active treatment aiming to resolve or significantly reduce the physical symptoms of stuttering, and to subsequently alter the aim of therapy to *living well with stuttering* if this initial approach is not sufficient.

Case study

Following a sudden loss of consciousness, Marius (aged 52) was taken to hospital by the emergency services. Upon regaining consciousness, Marius started stutter-



ing, characterised by prolonged blocks and associated tense hand, neck and facial movements. Initial medical investigations revealed no structural neurological involvement, but subsequent medical investigations gave conflicting results, with one nerve conduction study suggesting possible Motor Neurone Disease and another finding no abnormalities. The medical team ultimately concluded that there was no structural damage or disease. Five months after the loss of consciousness, Marius was referred to Speech and Language Therapy.

At his first meeting with the therapist, Marius expressed frustration due to both the changes in his speech and what he perceived as a lack of understanding or interest from medical professionals. During the course of the discussion the therapist noted the following:

- a significant increase in stuttering and tense concomitant hand, neck and facial movements in any structured speaking task, not just those that might typically be expected to increase stuttering.

The concomitant body movements were unusual, consisting of significant facial grimacing, and large twisting movements in the neck and wrists. These movements also occasionally occurred in non-speaking tasks. The case history revealed multiple stressors in the period prior to the loss of consciousness, including moving house and resigning from his job following a dispute with his line manager. Marius had experienced a period of significant anxiety some years earlier.

On reviewing the information and discussing with Marius, the therapist hypothesised that functional neurological stuttering was the most likely diagnosis. This was based on:

- the history of prolonged and multiple stressors prior to the onset of symptoms,
- the somewhat unusual nature of the concomitant behaviours and their pattern of severity.

This information was shared with Marius, balancing reassurance that his communication changes were being taken seriously (particularly important as Marius had expressed frustration at being dismissed by medical professionals previously) alongside an explanation of the factors thought to be contributing to the speech changes. Intervention focused on exploring the relationships between the various factors, including consideration of the impact of the ongoing grievance with Marius' employer. Symptomatic intervention focused on reducing high levels of muscular tension.

Malingering

If your evaluation findings suggest feigned symptoms, calmly bring the evidence to the individual's attention, explaining that this fits a pattern more typical of feigned

symptoms than of organic disorder. If appropriate, consider offering 1–2 sessions of therapy, with intensive self-directed training in between, which may give the individual the opportunity for their symptoms to resolve without “loss of face”. The clinician may additionally wish to consider signposting the individual to appropriate counselling services to explore the underlying reasons for the malingering presentation. If the stuttering presentation persists, reconsider whether symptoms are feigned or if there could be a functional neurological presentation at play.

Intervention options for acquired stuttering

The evidence base regarding treatment approaches to use with people with acquired stuttering is limited. De Nil et al. (2007) acknowledge that intervention techniques traditionally used with developmental stuttering are often the first option favoured by clinicians when meeting someone with acquired stuttering, but research indicates there is no consensus on the most effective approach (Cruz et al., 2018). Careful consideration needs to be given to tailor the choice of approach, based on the cause (or causes), pattern and impact of the stutter, and the person’s goals and wishes. Stuttering modification, fluency shaping, altered auditory feedback (AAF) approaches, cognitive behavioural therapy (CBT) and solution focused brief therapy (SFBT) are just a few of the options available. Consideration can also be given to the role of peer support. Several studies have demonstrated the value of interacting and networking with other people who stutter (Boyle, 2013; Trichon & Tetnowski, 2016). It should be noted that these studies focused on individuals with *developmental* stuttering but there will also be great value for the individual with an acquired stutter in realising, ‘*I am not alone*’, and having an opportunity to be part of a community of people who stutter. Ideally, networking opportunities should be considered thoughtfully. When the individual is in the early stages of developing a self-image as a person who stutters, they may benefit from initial contacts with other individuals with acquired stuttering. Later, when the individual has adjusted to the fact that they now stutter, contacts with people with developmental stuttering may also be welcomed and helpful. There can be many benefits to exploring the concept that communicative success does not equate solely to fluency. Exploring the value of stuttered speech alongside other diverse communication styles may help someone develop a positive sense of self alongside their new stuttering identity.

Other chapters in this book cover all the intervention and support options outlined above in detail, and we recommend the reader take time to study these chapters for further information.

Once you have an intervention approach in mind, think again about the individual you are working with. Use the information you have gathered during your



assessment process, and consider what impact stuttering is having on their day to day communication. What effect is stuttering having on their confidence and interactions with others? What has the individual expressed as their hopes and goals for therapy? Does the intervention approach you are considering fit with these? If not, consider other options. Might another approach fit better? Weaving together relevant aspects of different approaches may be the best way to tailor an individualised management plan for the person you are working with.

Conclusion

Assessment, diagnosis and treatment of acquired stuttering is not necessarily straightforward, as the umbrella term encompasses a number of different presentations and diagnoses. In addition, a person may present with an acquired stutter with multiple causal factors. This chapter has highlighted factors for consideration and investigation when acquired stuttering is suspected, and signposted some of the options for management. Although it is not possible to write a step-by-step definitive guide for this client group, we hope that this information will help therapists develop confidence in working with people with acquired stuttering to explore treatment options together. Findings in the literature and clinical experience suggests that a key factor in facilitating change is the clinician-client relationship. It is therefore worthwhile investing time in this at the start of the intervention process, ensuring that everyone involved is working towards a common goal.

Key Terms and Definitions

Acquired stuttering – later onset of stuttering-like dysfluencies in the absence of, or apparently unconnected with, a history of developmental stuttering.

Aetiology – the cause or set of causes of a condition.

Case history – relevant information gathered about the individual to inform the assessment process.

Desensitisation – the process of reducing sensitivity to something, reducing negative emotional responses to a situation.

Developmental stuttering – stuttering with onset in early childhood; the most common type of stuttering.

Heterogeneity – the state of being diverse in character.

Holistic approach – support that looks at the whole person and their overall well-being, not just considering their stuttering in isolation.

Hypothesis / hypotheses – the proposed explanation/s made from evidence gathered, as a starting point for ongoing investigation and evaluation.

Malingering – feigning of symptoms for some form of personal gain.

Neurological – caused, controlled by, or arising in the nervous system.

Peer support – people using their own lived experience of stuttering to help each other.

Functional – related to the way something works rather than its structure.

Side effects – secondary, usually undesirable, effects of a medication or treatment.

Symptoms – physical or psychological features that are regarded as indicative of a disease, condition or illness.

Therapeutic relationship – an interactive relationship between the client (and family) and the professional, which maintains clearly defined boundaries of care, trust and respect.

Multiple Choice Questions

1. Which of the following is **not** one of the primary differential diagnoses in acquired stuttering?
 - a) Recurrence of developmental stuttering
 - b) Medication-induced stuttering
 - c) Functional neurological stuttering
 - d) Secondary stuttering
2. Why is it important to involve the medical team in the process of differential diagnosis in acquired stuttering?
 - a) To enable the medical team to make a diagnosis of structural neurological stuttering
 - b) To investigate whether the stuttering could be associated with an undiagnosed neurological condition or be medication-induced
 - c) To request medication
 - d) To request literature on acquired stuttering
3. Which three domains should be considered for management of functional neurological stuttering?
 - a) Counselling, physical symptoms and laryngeal manipulation
 - b) Speech, cognition and behaviour
 - c) Education and explanation, symptomatic intervention, and exploration of psychological factors
 - d) Insight, awareness and goals



4. Which of the following statements is most accurate?
- a) Stuttering modification should always be offered to people with acquired stuttering
 - b) A range of therapy approaches are relevant in acquired stuttering
 - c) Cognitive Behavioural Therapy is the preferred therapy option in acquired stuttering
 - d) Acquired stuttering will resolve in time

Further reading

The following items taken from the reference list may be of particular interest for further reading:

For an overview of the literature related to neurogenic stuttering, see *Etiology, symptomatology, and treatment of neurogenic stuttering* by Luc De Nil et al. (2007) and *Stuttering following acquired brain damage: A review of the literature* by Kristine Lundgren et al. (2010).

For consensus recommendations for the management of functional neurological stuttering in the context of other functional neurological disorders, see Baker, J., Barnett, C., Cavalli, L., Dietrich, M., Dixon, L., Duffy, J.R., Elias, A., Fraser, D.E., Freeburn, J.L., Gregory, C., McKenzie, K., Miller, N., Patterson, J., Roth, C., Roy, N., Short, J., Utianski, R., van Mersbergen, M., Vertigan, A., Carson, A., Stone, J. & McWhirter, L. (2021). Management of functional communication, swallowing, cough and related disorders: consensus recommendations for speech and language therapy. *Journal of Neurology, Neurosurgery and Psychiatry*, 92, 1112–1125.

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