



Shoreline Speech Therapy

Adult Communication Disorders: Causes, Descriptions, and Accessing Support

Pamela Coulter, M.Sc., S-LP(C)
Speech-Language Pathologist

Many people are unfamiliar with the communication disorders that affect over 10% of adults¹. This rate is higher when hearing loss is included, or when considering residents of long term care². This lack of awareness exists among the general population and even many health professionals. This is often because persons with these conditions have disabilities in expressing themselves – and thus, with sharing their experience with others. Frequently, adults with communication disorders are socially isolated. Also, communication disability is frequently ‘invisible’. Physical disabilities are more visible, such as when someone with difficulty walking uses a walker. If somebody has a communication or other cognitive issue, however, it is not readily noticed unless you interact with the person, and sometimes, not even then. Nevertheless, these communication difficulties (whether mild or severe), can have a substantial impact on a person's quality of life, independence, social life, academic success, and employment.

“A **communication disorder** is an impairment in the ability to receive, send, process, and comprehend concepts or verbal, nonverbal, and graphic symbol systems. A communication disorder may be evident in the processes of hearing, language, and/or speech. A communication disorder may range in severity from mild to profound. It may be developmental or acquired. Individuals may demonstrate one or any combination of communication disorders. A communication disorder may result in a primary disability or it may be secondary to other disabilities.” *American Speech-Language-Hearing Association*

Speech-language pathologists (S-LPs) often work with adults with communication disorders. This includes people who have survived a stroke or head injury (including concussion), were born with a condition that affects speech and language (e.g., Down Syndrome), have communication disorders that emerged in childhood and have persisted (e.g., stuttering), or have developed a degenerative condition (e.g., Parkinson’s disease). With assessment, an S-LP can identify a specific communication disorder (e.g., ‘hypokinetic dysarthria’), develop a profile of a person's strengths and areas of difficulty, offer individualized recommendations for management, and deliver intervention programs.

Recommendations may include specific strategies to optimize communication with an individual, caregiver training/coaching, or direct treatment. Following is a brief description of some of the reasons adults with communication disorders seek out or are referred to S-LPs.

Communication Disorders Following a Stroke

25-40% of stroke survivors will acquire aphasia³. Aphasia is a reduction of the ability to express and understand linguistic information. People with aphasia may have difficulty thinking of the words they wish to say and forming sentences, say things that don't sound like real words, misunderstand what others say, have difficulty reading and writing, and have problems using and understanding gestures. Cognitive impairment that affects communication may also result following a stroke (e.g., attention, organizing information, reasoning). Although during the first year after a stroke, people are able to make gains most rapidly with treatment, those who are many years post-stroke demonstrate improvement at the impairment level (word finding, reading, writing, production of sentences, comprehension of spoken language), in their functional communication skills (conversation, paying bills), and in their quality of life following treatment⁴.

Many individuals will acquire a motor speech disorder (dysarthria and/or apraxia of speech) *in addition to* aphasia. About 40% of stroke survivors will exhibit dysarthria⁵. Dysarthria is the word used to describe difficulty making speech sounds. It can involve unclear speech, altered vocal quality (e.g., hoarse or breathy), lowered volume, hypernasal resonance, monotone speech, and a rapid or slow rate. Apraxia of speech is a difficulty with programming the sequences of motor movements required to produce speech. Those with motor speech disorders following stroke also have the potential for improved speech clarity and control in the chronic stage⁶.

Right Hemisphere Impairment

Following a right hemisphere stroke, people may experience persistent communication difficulties. These individuals may experience difficulty with attention, visual neglect (with an impact on reading and writing), reasoning and problem solving, producing and understanding prosodic features of language (meaning that is conveyed with changes in stress, rate, rhythm, and intonation), understanding non-literal language (e.g., lies, jokes, sarcasm, idioms), interpreting emotion that is conveyed verbally and through facial expression, pragmatics (communicating



appropriately in specific social contexts, such as when speaking with a supervisor versus a friend), and conversation skills (e.g., maintaining a topic, turn-taking)⁷. Such difficulties may not be obvious in brief interactions, but can have a substantial impact on social relationships and employment post-stroke.

Parkinson's Disease Spectrum Disorders

Up to 90% of people with Parkinson's disease (PD) will experience voice and speech symptoms⁸. Those who develop voice symptoms or dysarthria may be good candidates for LSVT LOUD, an intensive behavioural treatment with positive outcomes for vocal loudness, speech clarity, and confidence for those with mild to severe voice and speech symptoms. Part of the referral process for assessment and determination of candidacy for treatment involves review of a laryngeal exam by an otolaryngologist, also known as an 'ear-nose-and throat' specialist (ENT). The ENT will identify the presence of any structural factors (such as vocal nodules) and provide medical treatment as appropriate. If considering referring a patient with PD or other voice symptoms for an S-LP assessment, family physicians should first consider referring their patient to an ENT to rule out or identify other causes of changes in vocal quality. The client may also require clearance for any contraindication for exercises that involve pushing/pulling that require exertion of effort (e.g., some cardiac conditions, recent heart surgery). In addition to LSVT LOUD and other direct behavioural approaches, other options for intervention include training strategies to improve intelligibility, communication partner training, amplification, and augmentative systems. To learn about other communication changes associated with PD such as neurogenic stuttering and cognitive-linguistic symptoms without dementia, visit Shoreline's website.

Alzheimer's Disease

Language dysfunction may occur as the initial manifestation of Alzheimer's dementia ('logopenic primary progressive aphasia'), or as one of the cognitive domains affected by the disease. Symptoms progress and may include word finding difficulties, problems with comprehension, and social communication difficulties, repetitive vocalizations, and mutism. Furthermore, communication disability contributes to responsive behaviours such as agitation and aggression. Options for communication interventions include caregiver training, memory retraining using errorless learning procedures, external memory aids, memory books, environmental modification, and modification of activities to provide appropriate



stimulation. With effective intervention, persons with dementia can experience decreased frequency and/or severity of responsive behaviours, improved functional communication, and a better quality of life⁹.

Stuttering and Persistent Childhood Speech Sound Delays/Disorders

It is estimated that approximately 1% of adults stutter¹⁰. Although *complete* recovery with intervention in adulthood is uncommon, people who do participate in treatment may achieve decreased severity and frequency of stuttering episodes with increased control over fluent speech production, reduction in learned secondary behaviours (e.g., physical tension and struggle), increased self-efficacy and confidence, and a reduction in avoidance behaviours.

Sometimes speech sound problems that start in childhood continue into adolescence and adulthood. You may have met another adult whose ‘r’ sounds seem to sound more like a ‘w’, or who have a lisp when they say ‘s’. Although these issues arise in childhood, children do not always have access to treatment, or have difficulties that persist after therapy.



For some people, these speech errors have no to minimal impact on their life. Other people experience a significant impact – they may be mocked or ridiculed, others may make assumptions about their intelligence, or they might experience decreased confidence when required to speak in social, academic, and work settings. Adults who are interested in addressing these speech issues can speak to an S-LP about their potential for improvement with treatment.

Other Communication Difficulties

There are of course additional diagnoses that may involve communication disability that are not described here. These include:

- Down syndrome
- autism spectrum disorders
- developmental language disorder
- reading disorders
- cerebral palsy
- traumatic brain injury including concussion
- presbyphonia
- voice disorders
- Huntington's disease
- multiple sclerosis
- corticobasilar degeneration
- progressive supranuclear palsy
- amyotrophic lateral sclerosis
- primary progressive aphasia
- primary progressive apraxia of speech

What to Expect From Working with an S-LP

Assessment

A clinical assessment can answer many different questions, such as:

- What has the client noted about their communication? What are the concerns that led to the request for an assessment?
- Are this client's communication skills within the range of what is expected for their age and gender?
- If the client's performance is below what is typical, by *how much* is it different? How severe is the problem?
- What is the impact of this difference in communication skills on the person's life? Is it impacting how they socialize, behave, learn, work, and how they feel about themselves?
- What are the client's specific strengths? What are their specific areas of difficulty?
- What diagnostic label best fits with what the client is experiencing?
- What aspects of the person's history, personality, and environment are relevant?
- How likely is the person to improve without treatment?
- How likely is the person to improve with treatment?
- If treatment is appropriate, what would be the next steps?

An assessment will likely involve the following elements:

- Formal testing: using a published tool, the client will complete a variety of tasks introduced by the S-LP, and their performance on the tasks will be compared to others adults
- Informal testing: the S-LP will use different tasks and tools to elicit and measure communication behaviours and compare the client's performance to normative data
- Language sample analysis: the S-LP will elicit, record, and analyze a sample of the client's speech/language during conversation and other tasks to measure different aspects of their communication skills and compare their performance to that of other adults
- Observation: the S-LP may observe the person in natural settings
- Interview and case history: the S-LP will talk with the client and their family to discover pertinent information about their skills and history and review documentation and reports completed by other professionals (e.g., family doctor, neurologist, psychologist, ENT specialist)
- Report: the S-LP will provide a written report summarizing the findings of the assessment with recommendations

Post-Assessment: Recommendations and Planning

Based on the outcomes of the assessment and discussion with the client, the S-LP will make recommendations:

- If the client’s communication abilities are within normal limits:
 - Information: the S-LP will provide information on typical communication abilities for their age
 - Contact: The client can contact the S-LP for re-assessment if any concerns arise
- The client’s communication abilities are consistent with a communication disorder:
 - Information: the S-LP will provide information on typical communication abilities and how the client’s skills differ
 - Strategies: the S-LP can provide information or direct coaching for strategies that will support communication
 - Intervention: the S-LP will offer specific recommendations for how to proceed with intervention
 - Referral: the S-LP may suggest and make referrals to different professionals (e.g., social worker, psychologist, occupational therapist, ENT specialist)
 - Prognosis: the S-LP will make a clinical judgment about how the client’s communication skills are likely to change with or without treatment

Intervention

If intervention is warranted and agreed to by the client, there are different approaches and parameters that may be considered depending on the needs of the specific client:

- Direct: the S-LP may provide direct one-on-one intervention
- Caregiver training: training may be provided by the S-LP to family members and professional caregivers to maximize communication success (e.g., with persons with dementia, aphasia, and TBI)
- Location: the intervention may take place in a clinic, hospital, nursing home, the person’s home, or a combination
- Frequency: the frequency of sessions may vary from several times a week to once a month
- Length of sessions: sessions may range from 30 minutes to several hours in length
- Clinical approach: the S-LP will develop a treatment plan based on what was revealed during the assessment, their clinical judgment, their knowledge of the research literature, and the preferences of the client

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- Augmentative communication strategies and systems: sometimes a person will benefit from ‘augmenting’ or ‘supplementing’ their verbal communication with non-verbal strategies such as gestures, writing, or pictures so that they can successfully communicate with others (this may be temporary or long term)
- Individual or group: some clients may do best if seen one-on-one with the S-LP or in a group with others with similar goals
- Home practice: most intervention will involve some type of home practice in addition to sessions with the S-LP – this component is critical to achieving progress
- Counselling: the S-LP will provide support to the client and their family (if appropriate) related to coping with a communication disability
- Collaboration: the S-LP will communicate and work with other professionals involved in the client’s care

Accessing and Funding S-LP Services in Nova Scotia

S-LPs work in the public health and education systems and in private practice. In the public system, services for adults are provided by the Nova Scotia Hearing and Speech Centres (www.nshsc.nshealth.ca). Adolescents in high school can receive services through the Regional Centres for Education. Private practitioners work in clinics or see clients in their homes. They can be found through the Speech and Hearing Association of Nova Scotia (www.shans.ca/our-professionals/).

Private practice services are paid for by clients. Many private insurance plans provide some coverage for S-LP services. Contact your insurance provider to learn about your coverage. In Nova Scotia, professional fees for treatment are often in the range of \$100-\$120/hr. Professional fees for assessment vary based on the nature of the evaluation, how comprehensive the assessment is, and the amount and complexity of analysis required. Shoreline’s professional fees are available on our website. If you have any questions about what you read here or would like more information about services, you are welcome to contact Shoreline Speech Therapy.

¹ Morris, M. A., Meier, S. K., Griffin, J. M., Branda, M. E., & Phelan, S. M. (2016). Prevalence and etiologies of adult communication disabilities in the United States: Results from the 2012 National Health Interview Survey. *Disability and Health Journal*, 9, 140-144. <http://dx.doi.org/10.1016/j.dhjo.2015.07.004>

² Guthrie, D. M., Davidson, J. G. S., Williams, N., Campos, J., Hunter, K., Mick, P., . . . Wittich, W. (2018). Combined impairments in vision, hearing and cognition are associated with greater levels of functional and communication difficulties than cognitive impairment alone: Analysis of interRAI data for home care and long-term care recipients in Ontario. *PLoS ONE*, 13(2), 1-27. <https://doi.org/10.1371/journal.pone.0192971>

³ National Aphasia Association. (n.d.). Aphasia FAQs. Retrieved September 9, 2018 from <https://www.aphasia.org/aphasia-faqs/>

⁴ For example, see: Allen, L., Mehta, S., McClure, J. A., & Teasell, R. (2012). Therapeutic interventions for aphasia initiated more than six months post stroke: A review of the evidence. *Topics in Stroke Rehabilitation*, 19, 523-535. doi: 10.1310/tsr1906-523

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⁵ Lawrence, E. S., Coshall, C., Dundas, R., Stewart, J., Rudd, A. G., Howard, R., & Wolfe, C. D. (2001). Estimates of the prevalence of acute stroke impairments and disability in a multiethnic population. *Stroke*, *32*, 1279-1284. Retrieved from <https://www.ahajournals.org/journal/str>

⁶ See the Academy of Neurologic Communication Disorders and Sciences “Evidence Based Clinical Research” for a list of citations (<https://www.ancds.org/evidence-based-clinical-research>)

⁷ Blake, M. L., Duffy, J. R., Myers, P. S., & Tompkins, C. A. (2002). Prevalence and patterns of right hemisphere cognitive/communicative deficits: Retrospective data from an inpatient rehabilitation unit. *Aphasiology*, *16*, 537-547. doi: 10.1080/02687030244000194

⁸ For example, see: Müller, J., Wenning, G. K., Verny, M., McKee, A., Chaudhuri, K. R., Jellinger, . . . Litvan, I. (2001). Progression of dysarthria and dysphagia in postmortem-confirmed Parkinsonian disorders. *Archives of Neurology*, *58*, 259-264. Retrieved from <https://jamanetwork.com/journals/jamaneurology>

⁹ Hickey, E. M., & Bourgeois, M. S. (Eds.). (2018). *Dementia: Person-centered assessment and intervention* (2nd ed.). London: Routledge.

¹⁰ Craig, A., Hancock, K., Tran, Y., Craig, M., & Peters, K. (2002). Epidemiology of stuttering in the community across the entire life span. *Journal of Speech, Language, and Hearing Research*, *45*, 1097-1105. Retrieved from <https://jslhr.pubs.asha.org/journal.aspx>