



Ageing in Canada: A changing health landscape

By 2030, there will be an estimated 9.4 million seniors living in Canada (Neurological Health Charities Canada, 2014). Age-related health issues in Canada are becoming more prevalent than ever before. According to the Fraser Institute, Canadians are living longer and future projections show that life expectancy will continue to increase (Fuss, 2020).

Moreover, Canada's senior population is expected to grow as 2021 marks the year that Baby Boomers begin turning 75 years old. A recent Canadian Medical Association study revealed this will add strain on the system as aging Baby Boomers require more care – with 606,000 seniors expected to seek long-term care in 2031, up from 380,000 in 2019 (Canadian Medical Association, 2021).

We are already beginning to see the impacts. Based on data from a Canadian Longitudinal Study of Ageing, by age 75, hearing loss becomes extremely prevalent – with about 50% of people living in Canada experiencing mild hearing loss and 50% mild vision loss (Mick et al., 2021). By age 85, about 50% of people in Canada have both mild hearing and vision loss – known as dual sensory loss which increases the likelihood of deterioration in communication and cognitive performance (Guthrie et al., 2021).

We can also anticipate an increase in common neurological disorders. For example, there were 878,000 stroke survivors living in Canada last year (Stroke in Canada, 2022) – and as a result, more than two-thirds will experience communication issues such as aphasia, apraxia, and dysarthria, as well as swallowing difficulties, also known as dysphagia (Speech-Language & Audiology Canada, n.d.). By 2030, approximately 164,000 Canadians are also projected to be living with Parkinson's disease. Almost all of these individuals – roughly 95% - will face speech and/or voice impairments (Sapir et al., 2003), and more than 80% will develop dysphagia over the course of their disease (Suttrup & Warnecke, 2016).

Communication and swallowing disorders in an ageing population

Having a communication disability can create significant barriers to successfully aging at home. For example, individuals with communication disabilities including hearing loss are at increased risk for:

- loss of independence and reduced social support (Sanchez-Garcia et al., 2019);
- mental health issues including depression (Kauhanen et al., 2000);
- feelings of loneliness and reduced social engagement (Palmer et al., 2016)
- social isolation and negative changes to social relationships, (Mick et al., 2018; Savundranayagam et al., 2005);
- reduced quality of life (World Health Organization, 2019);
- increased falls risk (World Health Organization, 2019); and
- caregiver burnout due to challenges coping with communication difficulties (Watson et al., 2012).

Research has also shown that communication and hearing difficulties are associated with increased frailty (Howlett et. al., 2021; Hura et. al., 2022) and interact with many other factors of frailty - including physical, cognitive, social, and emotional factors – which often results in long-term care admissions. Adults living with these chronic conditions might also face frustrating – and costly – hospital admissions and re-admissions.

Hearing loss is a leading cause of disability among men and women over 60 (World Health Organization, 2018) and in the top three most prevalent disabilities that could be addressed by rehabilitation (Cieza, 2020). Hearing loss can exacerbate cognitive difficulties, feelings of loneliness, depression, and increase the risk of falls. It can even impact nutrition, as it diminishes the enjoyment of mealtime as a social activity (World Health Organization, 2019).

Canada’s senior population is also at greater risk for health conditions – such as cognitive impairment, stroke, dementia, and Parkinson’s disease - that can lead to swallowing difficulties (i.e., “dysphagia”). Dysphagia increases the risk of other serious complications including dehydration, respiratory infections, and aspiration pneumonia which require medical intervention and potential hospitalization (Carrion et al., 2017). Indeed, the impact on the healthcare system is significant, as the presence of dysphagia has been found to:

- nearly double the risk of an individual dying in a hospital;
- increase the length of hospital stays by 43%;
- increase hospital costs by 33%; and
- nearly double the odds of an individual being malnourished, which can result in other health complications (Attrill et al., 2018; Patel et al., 2018; Namasivayam-MacDonald et al., 2017).

While communication disorders can have a significant impact on a person’s physical, emotional, social, vocational, and financial well-being, there is hope for improvement or even recovery through early identification and treatment. Rehabilitation can improve functional outcomes in adults with different chronic conditions, and has the potential to avoid costly hospitalizations and reduce hospital length of stay. Individualized rehabilitation can also help older adults remain independent at home.

How can speech-language pathologists and help people age in their home?

Speech-language pathologists (S-LPs) are vital members of a healthcare team who specialize in speech, voice, resonance, language, cognitive-communication and swallowing disorders. They provide person-centered, evidence-based interventions which can improve functional outcomes and mitigate further health and social challenges.

S-LPs commonly work with seniors with cognitive impairment, stroke, dementia, Alzheimer’s disease and Parkinson’s disease. They complete screenings and assessments that can identify, predict, and contribute to accurate diagnoses of cognitive impairment (McCullough et al., 2019). They can also assess depression in individuals with communication disorders, such as aphasia resulting from stroke (Baker et al., 2018).

S-LPs provide individualized care that includes the individual and their care support circle. For example, they “help persons with cognitive impairment to live the life they choose to live... by identifying and capitalizing on their spared abilities, modifying the physical and social environment to support their

impaired systems such as declarative memory, and continually educating, supporting, and involving families throughout the entire process.” (Bourgeois et al., 2016, p. 191). In doing so, S-LPs help mitigate negative health and social outcomes frequently associated with communication disorders (e.g., decreased quality of life, isolation, loss of independence, behavior issues, caregiver burden, and negative impacts on personal relationships and safety) and help individuals maintain dignity, choice, and engagement in meaningful activities. They also deliver restorative speech-language therapy, which prolongs communication capacity in people with some forms of fronto-temporal dementia, such as primary progressive aphasia.

S-LP provide critical support to caregivers that has been shown to decrease caregiver burden (Badesha et al., 2023). This support can also improve satisfaction with communication, identify the effective use of communication strategies, and offer a sense of preparedness for family members of people with health conditions like dementia (Jokel et al., 2017; Small & Perry, 2012). S-LP-led group education programs for people with dementia-related communication difficulties and their families can result in increased confidence, feelings of support, and the ability to cope for both the individual and their loved ones (Decker, 2022; Jokel et al., 2017).

In addition to communication, S-LPs also take a lead role in managing dysphagia given their extensive knowledge of anatomy, physiology, cognition, and behavior related to swallowing and these commonly co-occur with speech, language, and cognitive-communication disorders. S-LP involvement facilitates early identification, intervention, and prevention of dysphagia that can prevent hospital (re)admissions for related negative health outcomes (e.g., respiratory infections).

Despite significantly contributing to the well-being of seniors, speech-language pathology services in home and community care across Canada are currently limited and inconsistent. By expanding access to these services, we can help seniors in Canada age at home with increased independence, dignity, and safety. Through improved communication with friends and loved ones, we can also reduce caregiver stress which can further support ageing in place.

How can audiologists help people age at home?

Audiologists are critical members of a senior’s healthcare team and should be included in rehabilitative care across the continuum for older adults living with frailty, or at risk of frailty. They identify, diagnose, and manage peripheral or central hearing loss, tinnitus, vestibular and balance disorders and other communication disorders across the lifespan. As one of the top three most prevalent disabilities that could be addressed by rehabilitation, managing hearing loss can help keep older adults at home longer and reduce admissions to long-term care.

Audiologists screen for sensory and communication impairments by using standardized assessments that help them determine the most appropriate treatment and interventions which may include amplification such as hearing aids. They can recognize and treat hearing loss before it worsens and causes social and communication difficulties (Williams, et al., 2018).

Research shows that management of hearing loss including prescription of personalized assistive devices such as hearing aids has the potential to:

- improve quality of life (Boi et al., 2012);
- reduce problem behaviours in people with dementia (Palmer et al., 1999);

- be cost effective and save money for healthcare systems in the long-term as a hearing loss was recognized as a potentially modifiable risk factor for dementia (Livingston et al., 2020); and
- the increase in Quality-Adjusted Life Years (QALY) as described for individuals in United Kingdom (World Health Organization, 2021).

When audiologists are part of a health care team, their expertise can also ensure more accurate assessment of a senior's cognitive abilities. Audiologists can identify and manage hearing loss prior to cognitive testing to ensure that hearing loss does not erroneously contribute to poor test outcomes (e.g., provide false positives for cognitive impairment or exaggerate cognitive impairment). With improved hearing and more valid test results, seniors can better demonstrate their strengths, participate in care needs, and health care teams can get a more accurate sense of an individual's ability to manage their care needs at home.

Canadian Examples of S-LPs and Audiologists Providing Community-based Care to Seniors

Speech Therapy Centres of Canada

[Speech Therapy Centres of Canada](#) is a team of dedicated S-LPs and speech-language pathology assistants (S-LPAs) who provide assessment and therapy services to all people living with communication disorders - including seniors who are experiencing communication and swallowing difficulties due to health conditions such as cognitive impairment, stroke, dementia, Parkinson's Disease and Alzheimer's Disease. The team provides support for clients and their families, and helps them navigate the world of speech therapy. In addition to treatment, Speech Therapy Centres of Canada provides initial assessments and individual treatment plans, strategies to reduce frustration for the individual, and education for the individual and their families.

Aphasia Institute

The [Aphasia Institute](#) is a non-governmental organization and registered charity group that has a mission to "give hope to people with aphasia and their families by developing and sharing innovative solutions that reduce language barriers to full-life participation. [Their] vision is that there are no barriers to living successfully with aphasia". They offer direct services for people with aphasia due to stroke, brain injury, dementia, etc. to optimize functional communication. They also provide education and training for caregivers and healthcare workers to improve their comfort in making communication accessible to people with aphasia.

Gearing Services (CHS) – Hearing Care Counselling Program (New Virtual Service)

CHS is a non-profit organization that provides services, products and education that empowers the deaf and hard-of-hearing to overcome barriers. The Province of Ontario has funded CHS's Hearing Care Counseling Program for decades. The organization offers a continuum of support and solutions, including mental health and hearing care counselling, audiology, employment and training, interpreting services, captioning, communication devices and hearing aids. CHS assists seniors with hearing loss who are 55 years and older - but the median age of those serviced in this program is 85 years of age, living at home. The program also provides community outreach, including at long-term care homes.

Vancouver Community Outreach to Hard-of-Hearing Seniors

The Vancouver Community Outreach to Hard-of-Hearing Seniors served older adults who experienced hearing loss. Provided by the BC Ministry of Health, Continuing Care with Community Partnership Grants in the 1990s, it helped seniors who were unable to access HHC in clinics. This project connected seniors with HHC through community centres, designated seniors' housing, adult day-centres and continuing care facilities. The Outreach to Hard-of-Hearing Seniors project effectively used a combination of volunteers, audiometric technicians, students, and rehabilitative audiologists to maximize the efficient use of funds, limited time, knowledge, and expertise.

Conclusion

An ageing population in Canada presents specific challenges to the healthcare system. We know that seniors and the healthcare system will benefit from individuals being able to age at home for as long as possible. However, in order to optimize their chances of doing so successfully, we need to consider their whole health which includes their communication needs. This growing wave of seniors in Canada need greater access to speech-language pathologists (S-LPs), audiologists, and communication health assistants to avoid premature long-term care admissions and extend the comfort of living safely and with dignity in their own homes.