

Low cost, high impact occupational therapy solutions for seniors



A Brief for the Standing Committee on Human Resources, Skills and Social Development and the Status of Persons with Disabilities

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Background

Over the last few years the Canadian Association of Occupational Therapists (CAOT) has been promoting low cost, high impact occupational therapy solutions with decision makers including Federal parliamentarians. In 2016 CAOT co-hosted a reception with MPs Warawa, MacGregor and Stanton on Parliament Hill which afforded occupational therapists the opportunity to talk to MPs and Senators about the value add of occupational therapy for improving the health and well-being of Canadian seniors. One of the outcomes of that event was an invitation to present a Brief and an appearance before the House of Commons Standing Committee on Human Resources Skills and Social Development and the Status of Persons with Disabilities (HUMA).

In June 2017, HUMA began a new study, *Advancing Inclusion and Quality of Life for Canadian Seniors*. One of the themes of this study is to explore how the Government can improve accessible and affordable housing for seniors including aging in place. The purpose of this brief is to outline how community based occupational therapy interventions identify barriers and propose solutions to enhance the quality of life of Canadian seniors. This brief provides two real-life examples of low cost, high impact occupational therapy interventions that support aging in place for seniors in their homes and communities.

Meet Pierre and Marie

Pierre, 89, and Marie, 87, have been married for 60 years. They currently live in the home in which they raised their three children. Pierre was diagnosed with early dementia. Marie has no major health concerns but has been slowing down due to age. Their children have concerns about their safety living alone in such a large home and wonder how their parents will manage if Pierre's condition deteriorates or he begins to wander.

An occupational therapist worked with Pierre and Marie and their children to help make the home environment safer, more manageable, and easier to navigate. For individuals with dementia, not only are their memory and thinking processes effected, but their visual perception and understanding of their environment can also be impacted. Environmental adaptations that the occupational therapist implemented included removing or locking up potentially dangerous items to keep them out of sight, turning down the temperature of the water heater to ensure that Pierre could not burn himself while using the sink, padding sharp corners and edges of countertops, and providing high contrast, visual cues throughout the home to help Pierre understand what he is meant to do. The occupational therapist also recommended the installation of a home alarm system on the front door that is activated during the night to notify Marie if Pierre attempted to wander away from home.

To help Pierre increase his independence in his daily tasks, his occupational therapist recommended memory aids and strategies. Important appointments or events were marked on a calendar, and Pierre used an alarm as a reminder of when he was supposed to complete certain tasks, such as taking his medications.

As Pierre's dementia progressed, his ability to communicate verbally with his wife and children deteriorated. To encourage socialization, his occupational therapist provided his children with tips on how to best communicate. Asking short, simple questions and avoiding potentially distressing statements like "Don't you remember?" were simple but important strategies. His occupational therapist also recommended activities to help encourage non-verbal emotional expression and provide a sense of meaning for Pierre. Marie was able to share in these activities with him, allowing them to maintain their close relationship. These activities included caring for plants or pets, listening to favorite music or singing, physical activity (such as walking, digging in the garden), use of touch

(holding hands, brushing hair, rubbing hand cream), and simple household chores to enhance feelings of usefulness and self-worth (Bowlby Sifton, 2012).

Return on investment of occupational therapy interventions

Dementia can be a difficult issue for individuals and their families. The annual cost to Canadians to care for those living with dementia is \$10.4 billion (Alzheimer's Society of Canada, 2017). Occupational therapy interventions can assist those with dementia and their families to stay in their current homes for longer, avoiding the cost and emotional stress of residential care. Occupational therapy interventions have the potential to postpone entry into residential care, saving up to \$48,000 per year per person (Laing & Buisson, 2008).

About occupational therapy

Occupational therapy is about helping people participate in daily activities that are important to them, whether it is paid employment, volunteer work or pursuing hobbies. Occupational therapists are university educated, regulated health professionals who address activities that take place where people live, work and play – in homes, communities or work places. When individuals can't participate in daily occupations, due to injury, illness, disability or environmental circumstances, occupational therapists help find solutions by taking a holistic client-centred approach to care, and address barriers to participation.

Occupational therapists can work in many settings, including hospitals, community settings (i.e. clients' homes, long-term care homes), clinics and private practices. In these settings, they apply their specialized knowledge and skills to recommend a course of preventive or corrective action that will help people lead more productive and satisfying lives. They are trained to understand not only the medical and physical limitations of a disability or injury, but also the psychosocial factors that affect the functioning of the whole person – their health and their wellness.

By looking at the whole picture – a person's psychological, physical, emotional, cognitive and social functions, as well as the impacts of the environment and social context in which they need to function, occupational therapists assist seniors to achieve their goals and to maintain or rebuild their independence and participate in everyday life. Benefits of occupational therapy include:

- decreased risk of institutionalization (Bierlein et al., 2015);
- lower hospital readmission rates (Rogers, Bai, Lavin & Anderson, 2016);
- increased physical activity in community dwelling older adults (Arbesman & Lieberman, 2012);
- improved outcomes in those with chronic diseases (Hand, Law & McColl, 2011);
- decreased rate of functional decline (Chase, Mann, Wasek & Arbesman, 2012); and
- reduced cost of fall-related injuries (Lampiasi & Jacobs, 2010).

Despite the benefits and cost-effectiveness of services provided by occupational therapists in homes and communities, access to occupational therapy continues to be a challenge. Funding and access to occupational therapy is patchy at best in publicly funded systems (i.e. hospitals, home care), and occupational therapy services are not currently covered by the majority of extended health insurance plans. Without coverage, seniors may not enlist the services of an occupational therapist due to lack of awareness and out-of-pocket expense. Doctors and other health professionals may also not refer senior patients to occupational therapists knowing there may be a financial implication.

Occupational therapy and Canadian seniors

According to the results of the 2016 census, Canada is home to 5.9 million seniors. Over 85% of aging seniors would prefer to "age in place" in their homes and communities (Canada Mortgage and

Housing Corporation, 2013), however many homes and communities lack the structural features and support services to make this a safe, realistic option (Home Modification Canada, 2017). Occupational therapists, as experts in aging in place, can work with seniors to adapt their environments through modifications and assistive devices to ensure their homes are safe and physically accessible environments (Home Modifications Canada, 2017).

According to Home Modification Canada (2017), about 70% of adults over the age of 65 will require help with bathing, food preparation, dressing and medication management. Commonly referred to as “activities of daily living (ADLs)”, completing these activities is essential for seniors to be able to live independently. When outfitted properly, a senior’s home environment can enable their independence and confidence in these ADLs (Home Modification Canada, 2017). A study on the long-term outcomes of home modifications found that 91% of respondents reported that as a result, they could do things they could not do before home modifications, with 41% reporting additional unexpected benefits (March of Dimes Canada, 2014). Occupational therapists can intervene to enable individuals to perform their required ADLs through adaptations, home modifications and assistive devices.

Seniors face a number of health and age-related challenges that may make remaining in their homes more difficult. These include decreased mobility and increased risk of falls, loss of or decreased vision, cognitive decline and dementia. These challenges can be addressed through home and community-based services that extend beyond those of physicians, nurse practitioners, and physician assistants, with client-centred strategies that address barriers that limit seniors’ participation in everyday activities (Muir, 2012).

Falls. Falls are the leading cause of injury-related hospitalizations among Canadian seniors, with 20% to 30% of seniors falling each year (PHAC, 2014). Occupational therapists address falls in the home through interventions such as recommending assistive devices, strengthening exercises, decluttering or modifying the home environment

Low Vision. Age-related macular degeneration (AMD) is the leading cause of vision loss in Canada, with about 1.4 million Canadians living with AMD (CNIB, 2017). For individuals with low vision, magnifying devices can be recommended to help manage their own activities of daily living. Occupational therapists can work with individuals to identify personalized compensatory strategies to help them thrive in their environment despite vision loss.

Dementia. The Alzheimer’s Society of Canada (2017) estimates that in the next 15 years, close to one million Canadians will be living with cognitive impairment and dementia compromising the safety of seniors in navigating their homes and communities. Occupational therapists recommend a number of adaptations and devices to help with safety. Memory aids help to mediate challenges caused by memory loss. For individuals with dementia, communication and expressing emotion can also become more challenging. Occupational therapists can work with family members and friends of an individual with dementia to provide tips on how best to socialize and interact with them to help maintain social relationships despite the presence of dementia.

Occupational therapists who work within hospital settings are also valuable supports for seniors aging in place in their home environment. A recent study by John Hopkins University identified that occupational therapy was the only category of health spending within hospitals that resulted in reduced re-admission rates (Rogers et al., 2016). Study results link lower readmission rates to occupational therapy’s focus on assessing whether a client can be discharged safely, and addressing potential barriers in the home and community environment. Through focusing on client factors outside of the hospital, including living situation, home accessibility and social supports, occupational therapists address risk factors for readmission. The Royal College of Occupational Therapists (2016) estimated that occupational therapists’ services resulted in avoidance of unnecessary hospital

admission and/or reduced hospital stays, saving an average of \$15M annually. Occupational therapists who see patients in hospital commonly refer them for occupational therapy services within the community, so that an occupational therapist can make home visits to assess their safety and other needs within the home.

As highlighted in the 2017 report *Reshaping the housing market for aging in place and home modification* by Home Modification Canada, “occupational therapists can assess both an individual’s functioning and the physical environment, and provide advice about how best to adapt the environment or behavior to optimize a person’s functioning and independence” (p.13). These adaptations, which will be discussed throughout the remainder of this brief, fall into two primary categories: 1) home modifications, and 2) adaptations and devices.

Home Modifications

Home modifications to reduce barriers and create enabling environments are necessary to enable seniors to stay in their current homes. Occupational therapists have a unique understanding of how individuals function in their living environment, and collaborate with home modifications professionals to ensure that seniors’ needs and preferences are met.

Occupational therapists consider present and future functional needs (including caregiver and family needs) and recommend structural changes or alterations for homes. For instance, if an individual is no longer able to step over the side of the bathtub to bathe, they may stop trying to bathe or shower. An occupational therapist could suggest that a level-access walk-in shower be installed in the bathroom, if the individual plans to be in the house long-term. The individual could then use a shower seat or wheelchair to access the shower. If an individual is no longer able to access the second floor of their home due to their inability to climb stairs, an occupational therapist may recommend the installation of the stair lift, which can transport the individual from one floor to another. In the United States and United Kingdom, occupational therapists presently have a greater role in supporting the housing needs of individuals with disabilities and/or seniors than they do in Canada. For example, in the UK, occupational therapists work as staff members for housing associations to provide advice on required adaptations to meet renters’ needs (Williams, 2015). If a property is deemed to not be a good fit for an individual, the occupational therapist has the capacity to recommend other, more accessible options, as they are familiar with the properties available through the housing association.

Home modifications have the potential to reduce the need for daily home care assistance. Research from the United Kingdom has demonstrated that occupational therapy housing adaptations can dramatically reduce costs associated with daily home care, with savings ranging from \$2,000 to \$50,000 per year (Heywood & Turner, 2007). Occupational therapy interventions related to housing can also postpone entry into residential care, saving up to \$48,000 per year per person (Laing & Buisson, 2008).

Occupational therapists can also be involved in the pre-construction phase, collaborating with design/build professionals to identify necessary accessibility features for new builds. The cost of including 75% of the required accessibility features in new homes costs less than \$500 per home (Home Modification Canada, 2017). This cost for accessibility features is small in comparison to the costs of home care or residential care settings for those whose homes are no longer accessible for them.

Adaptations and Devices

Occupational therapists’ recommended adaptations and assistive devices assist seniors to safely age in place and remain independently in their own homes. Mobility devices, such as canes, walkers, and manual or power wheelchairs are common types of assistive technologies recommended to seniors at risk of falls and declining mobility. Occupational therapists can assess an individual’s mobility and

home environment to determine if a mobility device could help them to navigate their homes more safely. Occupational therapists address mobility issues by identifying (poor lighting, non-secured rugs and carpets, and clutter), and reducing potential hazards that contribute to the risk of falls.

As reported by Home Modification Canada (2017), independently completing activities of daily living can pose challenges for Canadian seniors due to decreased strength, mobility, endurance or other factors, including vision loss or cognitive impairment. Equipment added to the bathroom can help to support individuals to independently complete their activities of daily living, including toileting, bathing, and showering. Examples of commonly recommended bathroom equipment include:

- raised toilet seats with arms (to help more easily sit and stand)
- grab bars in showers
- transfer pole (to provide support when getting up and down from toilet and in/out of the tub)
- bath/shower bench
- bath lift chair (lifts individual into the tub and can lower/raise them)
- handheld shower head
- long-handled sponge
- anti-slip shower mat

These devices can help to reduce the amount of support that individuals need on a daily basis, whether it be from personal support workers or informal caregivers such as family members. Occupational therapists not only recommend what equipment and devices are appropriate, but also provide training for individuals and caregivers on how to properly use the equipment.

For individuals with low vision, magnifying devices can be recommended so that individuals with vision loss can continue to safely and independently manage their own medications, read their bills and mail, and read food package labels. Organizational strategies, like always placing items in the same spot, can also assist with staying in one's home.

For individuals with dementia, occupational therapists recommend a number of adaptations and devices such as home alarm systems, stove alarms, color contrasting, removal of hazardous surfaces, decluttering, and visual cues to help with safety. Smart home technology is becoming increasingly used by families of those with dementia to help make the environment safer and easier to navigate. Memory aids, such as calendars, timers, and electronic reminders can help to mediate challenges caused by memory loss.

Accountability: Measuring occupational therapy outcomes

Occupational therapists use a variety of outcome measures to assess the impact of occupational therapy interventions. One of the most commonly used tools is the Canadian Occupational Performance Measure (COPM). The COPM is used to identify and measure the impact of intervention on an individual's goals in the areas of self-care, productivity and leisure. Each goal/activity (for example, bathing independently) is rated on a scale of 1 to 10 on three dimensions: how important that goal is, how well the individual perceives their abilities in performing the activity currently, and how satisfied the individual is with their current performance of that activity. Following occupational therapy intervention, the COPM is re-administered, and the scores can be compared to the initial baseline score to identify quantifiable improvements.

Meet Karen

In Karen's case, her occupational therapist began by completing a comprehensive assessment, which involved learning more about Karen's daily activities, her environment, her physical and cognitive abilities, and her history of falls. The occupational therapist identified that the bathroom was a common location for Karen's falls. Falls or fear of falling in the bathroom can lead to avoidance of bathing and a decline in hygiene. Without adaptations to help Karen resume bathing independently, home care services may have been required to help her with her hygiene. As a cost-effective alternative to home care, there were many adaptations recommended by the occupational therapist, such as the installation of grab bars in the shower, a bath bench, a bath lift chair and a raised toilet seat with arms or a transfer pole.

Knowing that Karen wanted to stay in her current home and age in place, the occupational therapist's interventions focused on ensuring that Karen was able to be safe and independent in her home. The occupational therapist also focused on helping Karen to become more physically active and overcome her fear of falling by recommending a mobility device, specifically a walker, to help reduce rates of falls and increase her sense of confidence and safety. Karen's home was cluttered, which contributed to her risk of falls and made it more difficult to use a walker in her home. The occupational therapist helped Karen to ensure her home was organized and accessible to promote the safe use of a mobility device. Karen's fear of falling greatly contributed to a sense of social isolation and depression, and by providing Karen with a walker, the occupational therapist was able to help Karen be active in her community again.

Return on investment of occupational therapy interventions

Occupational therapy interventions can greatly decrease the amount of home care required, saving up to \$50,000 a year (Heywood & Turner, 2007). Karen safely resumed bathing on her own, avoiding home care services altogether. Falls and associated expenses are extremely costly to the health care system, with the Public Health Agency of Canada (PHAC) estimating a cost of \$2 billion annually, highlighting the importance of reducing the prevalence of falls in Canadian seniors.

Another alternative for Karen was a walk-in shower, where Karen could sit on a bath bench while showering, and not have to worry about lifting her legs over the edge of the tub – a common cause of falls for her. If Karen eventually needed to use a wheelchair, a level-access shower would allow her to continue to shower independently. The Royal College of Occupational Therapists (2017) shared an example of the cost of a walk-in shower renovation organized by an occupational therapist and found that the total cost of the occupational therapist's time and the bathroom adaptation (cost for the physical shower renovation itself) was about \$11, 226 compared to an annual cost for personal care support of \$24,911 to \$35,160.

Recommendation

CAOT recommends that as part of the \$5B in Federal transfers to provinces for home care, provinces be mandated to ensure that occupational therapists are an integral part of all primary care teams and home and community care service teams that provide services to seniors.

As highlighted throughout this brief, occupational therapists are well-suited to support seniors to age in place in homes and communities across Canada, reducing hospitalizations and associated costs. Occupational therapists deliver direct services in the community, delivering priority health

care to Canadians. Home modifications and adaptations and devices are important contributions by occupational therapists that can support the quality of life, safety and independence of Canada's seniors as they age in place in their homes and communities.

Occupational therapists demonstrate the principles of collaboration and accountability, working with a variety of stakeholders and measuring the results of interventions to support aging in place, through tools such as the COPM. Occupational therapists as a mandated part of all primary care teams would be an innovative approach by the Government to supporting Canadian seniors, as supporting universal access to occupational therapy services is not currently done. This would allow for low cost, high impact occupational therapy solutions to support a greater number of Canadian seniors to age in place, thus improving quality of life and independence.

Summary of Recommendations

CAOT recommends that as part of the \$5B in Federal transfers to provinces for home care, provinces be mandated to ensure that occupational therapists are an integral part of all primary care teams and home and community care service teams that provide services to seniors.

About CAOT

The Canadian Association of Occupational Therapists (CAOT) is the national organization that supports the more than 16,000 occupational therapists who work or study in Canada. CAOT's mission is to advance excellence in occupational therapy, and its vision is that occupational therapy is valued and accessible across Canada. CAOT provides products, services and learning opportunities that assist occupational therapists in achieving excellence in their professional practice. Additionally, CAOT provides leadership in the development and promotion of the occupational therapy profession in Canada and internationally.

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