Canada's Drug Agency
L'Agence des médicaments du Canada

Health Technology Review

Aging in Place

Evidence Report

Canada's Drug Agency recognizes the traditional territories, rights, and diversity of all First Nations, Inuit, and Métis communities across Canada. Indigenous Peoples have been, and continue to be, excluded from and harmed by Canada's health care systems. In the spirit of reconciliation, we are committed to addressing these inequities alongside Indigenous communities.

Key Messages

What Is Aging in Place?

Aging in place is the ability of older adults to access the health and social supports they need to live safely in their own homes or communities for as long as they wish and are able.

What Are the Challenges?

Canada, like many other countries, is experiencing an important demographic transition toward an aging population. At the same time, health care systems in Canada are facing a range of challenges, such as limited availability of, and access to, long-term care beds and services, staffing shortages, and gaps and disparities in the quality of care, among others. There remains a strong preference by older adults to live in their home or community for as long as possible, while an estimated 7.9% of older people in Canada are living in long-term care facilities.

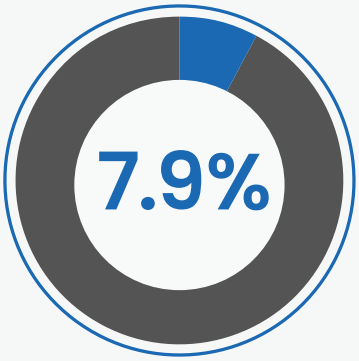
Health systems data indicate that 1 in 9 new long-term care admissions are not necessary (i.e., people potentially could have been cared for at home with supports).

Costing data suggest that Canada spends more on institutional long-term care than home and community care.

To address these challenges, jurisdictions in Canada are exploring evidence-based aging in place initiatives to enhance the infrastructure and support systems aimed at facilitating aging in place for older adults in Canada.

> Aging in place is the ability of older adults to access the health and social supports they need to live safely in their own homes or communities for as long as they wish and are able.

> There remains a strong preference by older adults to live in their home or community for as long as possible.



Approximate percentage of older people in Canada living in long-term care facilities.

What Did We Do?

To facilitate decision-making, in this report we:

- identify and describe the current context of aging and hinderances to aging in place in Canada
- describe considerations relevant to aging in place for equity-deserving groups, highlighting perspectives of First Nations, Inuit, and Métis Peoples and communities
- describe and appraise strategies and initiatives intended to address unmet needs and improve outcomes of importance to older adults in Canada
- describe some systemic considerations for implementing initiatives that support aging in place in the country.

To accomplish this, we engaged people with extensive personal and/or professional experience with aging, caring for older adults as they age, or health care decision-making in Canada. We searched key information and data sources — including journal databases, trial registers, and websites focused on Indigenous health — and conducted focused internet searches for relevant evidence on initiatives to support aging in place.

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What Did We Find?

We learned that the reasons people are unable to age in place in Canada are interrelated and disproportionately impact members of equity-deserving groups, such as First Nations, Inuit, and Métis Peoples and other communities experiencing historical, structural, and systemic factors that cause lifetime disparities in social determinants of health. Hinderances to aging in place can be grouped into 3 broad and closely related categories:

- preventing and managing health conditions (including challenges accessing necessary, person-centred, culturally safe, and trauma-informed care and supports within the health and social systems)
- social isolation and loneliness
- housing and the built environment.

We learned that the reasons people are unable to age in place in Canada are interrelated and disproportionately impact members of equity-deserving groups.

We examined evidence on the effectiveness of interventions intended to address these challenges, and learned that several interventions have been shown to improve outcomes associated with aging in place, including:

- chronic disease prevention and management
- dementia prevention and support
- falls prevention
- support for unpaid caregivers

- at-home care and support
- at-home palliative care
- reablement (i.e., regaining and maximizing function and independence)
- support for social isolation and loneliness
- assistive devices and home modifications
- housing.

We learned that First Nations, Inuit, and Métis organizations and Peoples have similarly prioritized increasing the availability of, and access to, culturally safe and trauma-informed care in the home and community; social connections and belonging; and adequate housing, accessible transportation and spaces for socialization, and community health infrastructure in their communities. We also learned that cost considerations of the affordability of implementing these initiatives may include those related to infrastructure, health care services (formal and informal), social support systems, and potential cost savings as a result of changes in resource use.

Policy researchers and implementation specialists emphasized that promising innovative ideas, infrastructures, and practices to support aging in place exist. However, they suggested that implementing them requires a shift from traditional paradigms that prioritize consistency, standardization, and efficiency. They emphasized that contextualized, flexible, and fit-for-purpose policy, research, and service delivery has the potential to catalyze sustainable and equitable implementation of innovative solutions. Indigenous-led literature reported that First Nations, Inuit, and Métis organizations and Peoples have advocated for using a distinctions-based approach to embed Indigenous culture into policy, program, and service design.

> Policy researchers and implementation specialists emphasized that contextualized, flexible, and fit-for-purpose policy, research, and service delivery has the potential to catalyze sustainable and equitable implementation of innovative solutions.

Next Steps

Our Health Technology Expert Review Panel will use the findings of this report for deliberations that will result in the development of guidance to inform decisions around evidence-informed strategies and initiatives that could be considered to enable older adults in Canada to successfully age in place.

Key Terms

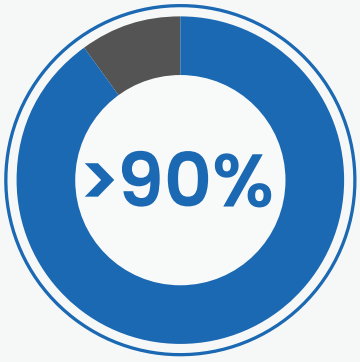
We recognize that the terminology and understandings of concepts related to aging in place vary across Canada. We present our understanding of a few key terms here. Please refer to the glossary in our Supporting Information document for additional terminology.

- **Aging in place:** The ability of older adults to access the health and social supports they need to live safely in their own homes or communities for as long as they wish and are able.[1,2] For this report, we consider older adults as people aged 55 and older in recognition of the diversity of older adults, experiences of aging, and eligibility criteria for various programs and services in Canada.[3-7] Home refers to various types of private dwellings. The community includes community-based housing options, such as retirement homes, supportive housing, and assisted living facilities. Aging "in place" excludes aging in long-term care facilities; that is, places of residence that provide ongoing care and services to people with care needs that cannot be addressed in the home or community.[8]
- **Acceptable housing:** Housing that is adequate (i.e., does not require major repairs); suitable (i.e., contains enough bedrooms for the household); affordable (i.e., costs less than 30% of a household's before-tax income); and adaptable, accessible, and safe (i.e., currently meets, or can be modified to meet, the current and evolving needs of an older adult).[9,10]
- **Caregiver and care providers:** A caregiver is an unpaid family member or friend who provides care to an older adult to address needs related to aging.[11] Caregivers provide care because of a relationship they have with an older adult, not because of a job or career.[11] Care providers are people trained and paid to provide care to people with needs related to aging.[11] These providers may include, but are not limited to, personal support workers, nurses, physicians, paramedics, social workers, care navigators and coordinators, medical translators, occupational therapists, and physical therapists.
- **Equity-deserving groups:** Groups of people who have been historically disadvantaged and underrepresented. These groups include, but are not limited to, the 4 designated groups in Canada — women, racialized groups, Indigenous Peoples, and people with disabilities — and people in the 2SLGTBQ+ community and/or those with diverse gender identities and sexual orientations.[12]
- **Home and community care and supports:** Home and community care services provide medical- and personal care–related supports, including, but not limited to, primary care and health promotion services, nursing care and medication management services, personal care, respite care, palliative and end-of-life care, physical therapy, rehabilitation, care coordination, and case management.[10,13-15] A variety of trained and paid care professionals (e.g., personal support workers, physiotherapists, social workers, dieticians, nurses, and other specialists) frequently provide these services.[10,14] Home and community supports include nonmedical services related to meal preparation and delivery, housekeeping, home maintenance, and transportation.[2,10,14,16] These supports may also include social care programs and services that facilitate older adults' engagement with their social and physical environments and healthy behaviours (e.g., exercise and financial education programs).[10,14,15] Untrained and typically unpaid individuals (e.g., family members, friends, and volunteers) may provide these services.
- **Long-term care:** Long-term care is a range of care services that may include assistance in the activities of daily living and instrumental activities of daily living necessary for daily life and independent living, respectively.[10] Unpaid family members or friends (i.e., caregivers) or trained and paid care providers can deliver long-term care in the home or in designated buildings (e.g., retirement homes, assisted living facilities, supportive housing, or long-term care facilities).
- **Social isolation and loneliness:** Social isolation is low quantity and quality of contact with others.[17] Loneliness, in contrast, is the subjective feeling of distress experienced when a person perceives their social relationships as less satisfying than they desire.[17]

Introduction

Aging in place refers to the ability of older adults to access the health and social supports they need to live safely in their own homes or communities for as long as they wish and are able.[1,2] For older adults, aging in place means having a choice to decide where to live.[18]

More than 90% of the general population and almost all older adults in Canada have expressed a desire and plan to age in place.[10,16,19,20] The National Institute on Ageing reported that aging in place is associated with improved well-being for older adults.[10] Additionally, it reported that providing older adults with care based in their home and community may offer good value for health systems compared to providing equivalent care in institutions such as hospitals and long-term care (LTC) facilities.[10]



Percentage of the general population in Canada who desire and plan to age in place.

What Are the Challenges?

Canada is experiencing an important demographic transition toward an aging population. In 2019, there were 6.6 million older adults aged 65 years and older and 838,200 people aged 85 and older.[21] By 2040, one-quarter of people (10.7 million) in Canada will be older adults, with the number of those aged 85 and older expected to triple to more than 2 million by 2050.[10,21] People may experience health challenges and the need for care and support during their years lived at older age.[21]

Estimates indicate that older adults in Canada spend approximately 6 years of their lives in an unhealthy state, as indicated by the difference between life expectancy and health-adjusted life expectancy.[21] The Canadian Community Health Survey reported that 1 in 3 adults aged 65 or over described having high cognitive and physical function, active engagement with life, and a low probability of disease and disability.[22] Close to half (47%) of health care spending in Canada relates to care for older adults aged 65 and older, despite them comprising less than 20% of the total population.[10] The average yearly public health care cost in Canada for an adult aged 65 and older is $12,000 compared with $2,700 for an adult aged 64 years and younger.[10]

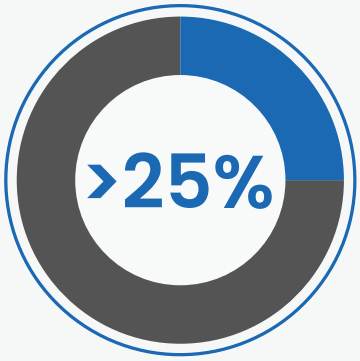
Despite the potential need for health care support, **the COVID-19 pandemic reinforced older adults' strong preference for living in their home or community for as long as possible**, with 96% of older adults now determined to avoid admission to an LTC facility.[23] However, in 2021, it is estimated that 205,000 people in Canada were living in, and more than 52,000 were waiting for, placement in these facilities and Canada spends more on institutional LTC care than on home and community-based care.[10,24] Additionally, most adults (70%) living in Canada prefer to be at home during their final days and for end-of-life care,[25] but 47% of older adults do not die in their homes or community settings.[26] The mean age of those who received residential care ranged from 78 to 84, with a median length of stay of 1 to 2.5 years in an LTC facility in various jurisdictions in Canada.[24]

Aging Trends and Sociodemographic Characteristics of Older Adults in Canada

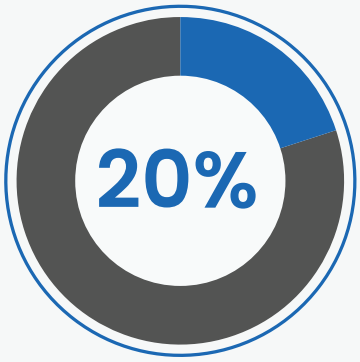
- At age 65, women in Canada can expect to live another 22.3 years and men another 19.5 years.[21] Accordingly, among older adults living in Canada in 2019, there were more women (54%) than men (46%), and the proportion of women increased to 63% in the 85 years and older age groups.[21]
- The percentage of older adults in First Nations, Inuit, and Métis populations has grown from 4.8% to 7.3% from 2006 to 2016.[27] The proportion of older adults aged 65 years and over among First Nations, Inuit, and Métis populations is projected to more than double by 2036.[27]
- Statistics Canada reported that the First Nations, Inuit, and Métis populations are, on average, almost a decade younger than the non-Indigenous population in Canada.[28] This can be attributed to disparities in social determinants of health (SDH), such as the history and ongoing legacy of colonization (refer to the Considerations From Indigenous Perspectives section for more details); socioeconomic status; employment; education and literacy; spirituality; connection to community and social support networks; culture and language; and connection to land, geography, and physical environments.[4,6,7,29] These factors are also associated with a greater risk of frailty and other age-related health conditions (e.g., dementia) at a higher rate and earlier age of onset than the non-Indigenous population.[7,27,29,30] Researchers, organizations, and governments representing or offering services to First Nations, Métis, and Inuit Peoples have recommended or used an expanded definition of Indigenous older adults that includes those 55 years and older.[4,5,7] This expanded definition recognizes that Indigenous Peoples may need to access health and social supports at earlier ages and over longer periods of time to thrive in their communities.[4,7]

The COVID-19 pandemic reinforced older adults' strong preference for living in their home or community for as long as possible.

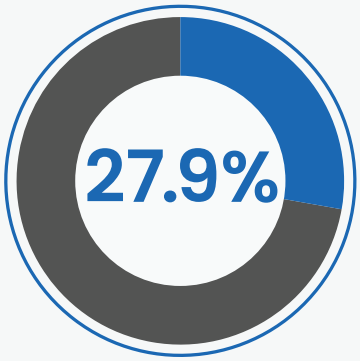
- People in Canada have diverse cultural backgrounds and languages and more than 25% of older adults within Canada are immigrants.[21] As of 2021, almost half of recent immigrants came from Asia and 69.4% did not report English or French as their first language.[31] The most spoken first languages among recent immigrants include Arabic (10.3%), Tagalog (8.4%), Mandarin (7.9%), and Punjabi (6.5%).[31] Older adults who are immigrants may experience challenges to healthy aging related to cultural and familial expectations, language and cultural barriers to accessing services, and discrimination (in society and while accessing services).[32] Immigrants have been reported to be significantly less likely than Canada-born older adults to age successfully (i.e., with physical, social, and self-reported wellness).[33] The Healthy Immigrant Effect reports that immigrants tend to be healthier than the Canada-born population when arriving to the country, but observes that this health advantage diminishes over time, possibly because of difficulties adjusting to their new environment.[33,34]
- Across Canada, approximately 20% of older adults work or reside in rural or remote areas.[21] However, the proportion of older adults living in rural versus urban areas varies across the provinces and territories.[21] In the territories and Atlantic provinces, the proportion of older adults in rural areas is approximately 40% and 50%, respectively.[21] In other regions of Canada, the proportion of older adults residing in rural areas aligns with the overall average of approximately 20%, with the lowest percentage found in British Columbia at about 15%.
- More than 1 in 4 (27.9%) older adults live alone, and the proportion increases with increasing age.[35] According to the 2018 Canadian Community Health Survey, 58.4% of those aged 85 and over lived alone.[22] The survey indicated that older, female, lower-income, divorced or separated, renting, and less educated adults were more likely to live alone.[22]
- The proportion of older adults living in persistent poverty in Canada may be increasing.[36-39] In 2016, census data by Statistics Canada indicated that 790,820 older adults (14.5%) were living below low-income cut-offs (per the after-tax low-income measure), compared to 606,000 (12.1%) in 2012.[36-38] The number of older adults living below Canada's official poverty line increased from 207, 000 (3.1%) in 2020 to 383, 000 (5.6%) in 2021.[39]
- Canada does not gather comprehensive data on houselessness. We encountered limited data on the prevalence of houselessness among older adults in the country, including that pertaining to Indigenous Peoples and other equity-deserving groups known to disproportionately experience the phenomenon because of inequities related to systemic barriers and discrimination, including racialized people, women, and members of the 2SLGBTQ+ community.[40,41] However, data from the Greater Vancouver Homeless Count showed that while 9% of people experiencing homelessness were aged 55 years and older in the 2005 count, 22% fell into this age category in the 2023 count.[42,43] Of note, Indigenous and racialized



Percentage of older adults within Canada who are immigrants.



Percentage of older adults working or residing in rural or remote areas.



Percentage of older adults living alone.

persons, members of the 2SLGBTQ+ community, and those who did not access services for houselessness are likely underrepresented in this data.[43]

- Recent data from Statistics Canada indicates that 1.3% of adults aged 65 years and older self-identified as 2SLGBTQ+ (79,100).[44] It is important to note that these numbers may not be representative as older adults may be less likely to report being 2SLGBTQ+, given that they have lived a significant part of their life in a society that was less accepting of gender and sexual diversity. Approximately 1 in 10 (10.4%) 2SLGBTQ+ adults aged 65 and older reported their mental health to be fair or poor, compared to 5.7% of non-2SLGBTQ+ older individuals.[44]

Evidence Assessment Methods

To facilitate decision-making, we conducted:

- a summary of evidence related to the context of aging and hinderances to aging in place in Canada; we obtained this evidence from a variety of sources, including real-world data, government and policy documents, nongovernmental publications on aging in place and aging in Canada, journal articles, and consultations with community partners and health care decision-makers
- a summary of considerations from the perspectives of First Nations, Inuit, and Métis Peoples and communities, as derived from Indigenous-led, publicly available sources, and as reviewed by First Nations, Inuit, and Métis peer reviewers
- a summary of systematic review (SR) evidence on aging in place strategies and initiatives that are known to successfully address the hinderances that prevent people from aging in place in Canada
- a summary of existing economic evaluations (i.e., cost-effectiveness analyses, cost-utility analyses, cost-benefit analyses, costing studies) relevant to aging in place in Canada; we identified key economic considerations, including economic barriers and opportunities at the individual and health systems level
- a summary of lessons learned from initiatives in health systems comparable to Canada, a list of technologies, and a list of programs and initiatives that may potentially support aging in place in Canada
- a summary of policy, funding, and other systemic barriers that may challenge the implementation of promising aging in place initiatives in Canada, informed by consultations with academic researchers, policy analysts, and implementation scientists.

Details on the methodology used for this report, including the literature searches and inclusion criteria, can be found in the Supporting Information document.

> The proportion of older adults living in persistent poverty in Canada may be increasing. We encountered limited data on the prevalence of houselessness among older adults in the country, including that pertaining to Indigenous Peoples and other equity-deserving groups known to disproportionately experience the phenomenon because of inequities related to systemic barriers and discrimination, including racialized people, women, and members of the 2SLGBTQ+ community.

To enhance the quality and relevance of this work, we engaged people with extensive personal and/or professional experience with aging, caring for older adults as they age, or health care decision-making in Canada.

- In February of 2024, we held 2 round table sessions with jurisdictional decision-makers to validate our planned approach and help ensure that our evidence product would be relevant and meet the needs of the health systems. The sessions included an overview of our proposed approach to this work, followed by a facilitated discussion.
- In March of 2024, we held 3 community engagement sessions to better understand the reasons why people are unable to age in their home or community for as long as they want to or are able to. The participants included people who are aging in place, or who would like to; family members and caregivers to older adults; a variety of health care professionals, academics, and researchers; and other interested community members.
- In April of 2024, we held 1 engagement session with health policy, services, and technology researchers; policy analysts; and implementation scientists with knowledge and expertise on this topic to discuss possible barriers to action in this area.

The findings from our engagement sessions are detailed throughout this report alongside those identified in the literature. The Engagement Summary document details the approach to, and full summaries of, these sessions.

What Did We Hear?

- During our engagement sessions with senior decision-makers, we heard that aging in place is a priority across jurisdictions in Canada.
- As we engaged with senior decision-makers and community members, we heard that a root cause of people being unable to age in place was health and social needs that could not be safely managed in the home or community.
- Finally, health policy researchers and implementation specialists emphasized that promising innovative ideas, infrastructures, and practices to support aging in place exist. However, they suggested that implementing them requires a shift from traditional paradigms that prioritize consistency, standardization, and efficiency. They emphasized that contextual, flexible, and fit-for-purpose policy, research, and service delivery catalyze sustainable and equitable implementation.

Organizational Context Regarding Our Reconciliation Journey

We know that our commitment to reconciliation means that we must develop our internal capacity so that our approach respects and supports truth and reconciliation. As a mainstream settler health organization in Canada, we acknowledge that we are on a learning journey to reconciliation in which we continue to learn from First Nations, Inuit, and Métis Peoples. We recognize that the research team is made up of primarily settler researchers, and we come to this work with our individual privileges and biases. We also acknowledge the historical power dynamics and ongoing impact of systemic discrimination in Canada's health care systems and the challenging realities of equity-deserving groups.

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For this report, given we are early in our learning and reconciliation journey, and because we have spent time building capacity and focusing internally, we have not yet pursued relationships and collaborations with Indigenous Peoples, communities, and organizations. We know that to understand Indigenous Knowledge, perspectives, and experiences, Indigenous engagement is a priority. We have intentionally approached truth and reconciliation by spending time reflecting and looking inward at our organization.-We are committed to developing our readiness to actively engage with Indigenous Peoples in the future.

We recognize the lack of active engagement with Indigenous Peoples as a major limitation in our work. In the context of this limitation, our approach to this work was to include distinctions-based perspectives derived from publicly available, Indigenous-led literature. Our Strategic Partner, Indigenous Engagement and Partnerships, led our engagement with and integration of

these perspectives. This report has been part of an independent First Nations, Inuit, and Métis peer review process to ensure that what was captured in the literature accurately represents Indigenous voices.

Later in this report, we present a summary of considerations from the perspectives of First Nations, Inuit, and Métis Peoples and communities. Our approach to this was unique; it included a targeted literature search derived from Indigenous-led, publicly available sources with a summary that was reviewed by First Nations, Inuit, and Métis peer reviewers. Further details about the methodology of this summary can be found in the Supporting Information document.

Objectives

Aging in place can help older adults exercise their autonomy when making decisions about how and where they age and support their dignity by providing care contexts that align with respect and well-being.

Yet, opportunities to age in place in Canada may not be distributed or experienced equitably among population groups. This report explores opportunities to support aging in place in Canada to facilitate equitable, dignified, and sustainable aging pathways for older adults.

We conducted this work to support efforts in Canada to meet the needs of older adults across diverse population groups and settings who wish to age in place, as well as to meet the information needs of decision-makers as they plan for the aging population. Aging in place is a shared federal, provincial, and territorial priority in Canada[10,14] and a key priority for First Nations, Inuit, and Métis Peoples and communities.[4-6]

> We conducted this work to support efforts in Canada to meet the needs of older adults across diverse population groups and settings who wish to age in place, as well as to meet the information needs of decision-makers as they plan for the aging population.

The findings from this report will be used by a multidisciplinary expert panel, the Health Technology Expert Review Panel, to develop trusted guidance for health care decision-makers to support evidence-informed, equitable, aging in place initiatives across jurisdictions.

We are aware of other organizations, including pan-Canadian health organizations and academic groups, that are working on ongoing initiatives on this topic. Our goal is to leverage work done by these groups to support aging in place and avoid potentially unnecessary LTC institution admissions in Canada.

Why Are People Living in Canada Unable to Age in Place?

Key Considerations

The hinderances to people aging in place in Canada are interrelated and may disproportionately impact members of groups experiencing historical, structural, and systemic factors that cause lifetime disparities in SDH. These disparities influence older people's agency and opportunities to prevent and manage health conditions and injuries. We identified 3 broad categories of closely related reasons people are unable to age in place, including those related to:

- **Preventing and managing health conditions**: As people age, they are more likely to experience frailty, chronic health conditions, and fall-related injuries. These experiences may lead to unsafe living conditions and reduced quality of life at home or in the community, and a greater need for complex care. Limited availability of, navigation of, integration and continuity of, and physical access to home and community care and supports within the health and social system reduce older adults' capacity to prevent and manage health conditions and injuries in the home or community.
- **Social isolation and loneliness:** Social isolation and loneliness are associated with decreased physical, emotional, cognitive, and mental health and quality of life. A lack of opportunities for social participation, connection, and support may limit older adults' ability to age in place.
- **Housing and the built environment:** Limited availability of, and access to, acceptable housing, home adaptations, safe and curated spaces in the built environment, and transportation constrain older adults' agency and ability to participate in social activities and access health care services.

Figure 1

Supporting Aging in Place

Findings

The primary hinderances to aging in place in Canada identified from the various sources of evidence are summarized in Table 1. While discussed in separate categories and corresponding subcategories in the upcoming sections of this report, these reasons are interrelated, with each influencing or being influenced by the others.

Table 1

Primary Hinderances to Aging in Place

Reasons related to preventing and managing health conditions	Reasons related to social isolation and loneliness	Reasons related to housing and the built environment
• Health conditions and injuries caused by and leading to care and support needs • Considerations related to the health system and accessing home and community care and supports • Caregiver burden • Financial considerations • Considerations regarding person-centred, trauma-informed, and culturally safe services	• Difficulties maintaining health and well-being when experiencing social isolation • Lack of social participation and unmet support needs	• Limited availability of, and access to, acceptable housing • Limited accessibility of home adaptations • Considerations regarding transportation and curated spaces, safety, and mobility in the built environment

All hinderances to aging in place may disproportionately affect members of equity-deserving groups who experience multiple and often intersecting historical, social, cultural, medical, structural, institutional, and environmental barriers and forms of discrimination. These groups (presented here in alphabetical order) include, but are not limited to, older adults who are:

- experiencing language barriers
- experiencing social isolation
- First Nations, Inuit, and Métis older adults
- immigrants, newcomers, and refugees
- living in rural communities
- living with advanced age (i.e., those aged 85 years and older)
- living in persistent poverty
- living with multiple chronic conditions, frailty, dementia, disabilities, and mental health disorders
- members of the 2SLGBTQ+ community
- precariously housed
- racialized
- women.[5,7,9,11,14,17,20,23,30,32,45-56]

Some older people may belong to more than 1 of these equity-deserving groups while also experiencing the impacts of **ageism**. Ageism is "stereotyping, prejudice, and discrimination against people on the basis of their age" and may underpin policies and priorities and the care and treatment that older adults receive in their community.[32,49,57]

Reasons Related to Preventing and Managing Health Conditions and Injuries in the Home or Community

Health Conditions and Injuries Caused by and Leading to Care and Support Needs

As older adults age, they become more vulnerable to experiencing declining health and well-being, reduced physical or cognitive functioning, and disability.[21]

Historical, structural, and systemic factors can cause lifetime disparities in SDH that influence older people's agency and their opportunities to prevent and manage their health conditions and injuries.[16,29,58]

The literature findings, community engagement session inputs, and available health systems data emphasized frailty, chronic health conditions, and fall-related injuries as particularly relevant to hindering older adults' ability to age in place.[10,51,59] These interrelated conditions may be associated with reduced functioning that prevents an older person from being able to conduct the activities of daily living (ADLs) and instrumental ADLs (IADLs) necessary for daily life and independent living, respectively.[10] As a result, older adults may experience unsafe living conditions and reduced quality of life at home or in the community, and experience a greater need for complex care.[10]-These conditions are associated with hospitalizations, which are a risk factor for admission to an LTC facility.[10,51,59,60]

- The literature and participants in the community engagement sessions reported that prolonged hospital stays lead to worsening functioning (e.g., because of reduced mobility or hospital-acquired delirium and deconditioning) and exacerbation of an older person's health and social needs.[16] Compared to older adults assessed in the community, those initially assessed in the hospital are 6 times more likely to be admitted to an LTC facility.[61]
- One in 10 hospitals stays are prolonged by a median of 9 days or more because of a lack of postacute and alternate level of care resources.[62] Older adults may not be discharged from the hospital when they cannot access adequate supports to address complex health and social needs in the home or the community.[20] This, in turn, may lead them to experience prolonged hospital stays or placement in an LTC facility, even when not needing this level of care.[20]
- The community engagement session participants also described a lack of autonomy to choose when to leave the hospital because of inadequate information about or access to home and community care and support services. Challenges related to accessing such services are detailed in the following subsections.

Considerations related to frailty, chronic conditions, and falls relevant to aging in place include the following.

Frailty

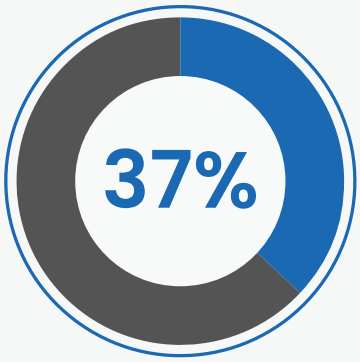
- Frailty is a state of increased vulnerability and functional impairment because of reduced reserves across multiple systems.[63-65] It is associated with an increased risk of, and decreased likelihood of recovering from, sudden changes in health status because of stressors such as acute illnesses (e.g., influenza) or falls.[64-66] As such, it is associated with adverse outcomes, including hospitalization and readmission to hospital within 30 days of discharge, disability, and death.[51,60]
- Some Indigenous people understand frailty as relating to low energy.[30] As 1 First Nations person living in Ontario described, frailty necessitates "adjustment of activities to what you are still able to do, examples [sic] walk in small spaces inside, have fresh air on your porch, play guitar and sing."[30] Of note, while some First Nations people who are living with frailty report poor self-rated health, most also report maintaining emotional, physical, spiritual, and mental balance.[30]
- While more common among older adults, frailty is not an inevitable part of the aging process.[64-66] Risk factors include experiencing comorbidities (i.e., multiple chronic health conditions); polypharmacy (i.e., the simultaneous use of 5 or more prescription and nonprescription medications by a single individual); challenges with nutrition and weight management; poverty; and social isolation.[30,67-70] As previously detailed, the legacy of colonization has led Indigenous Peoples to experience such risk factors disproportionately. First Nations people living with frailty are 1.7 times more likely to have had parents who attended residential schools.[30]

Chronic Conditions

- The increasing prevalence of chronic conditions, especially multiple chronic conditions, as people age leads to an increased burden of care.[10,16,19,21,71] Notably, 73% of older adults aged 65 years and older have at least 1 chronic disease, and 37% have at least 2 chronic diseases.[21] By age 85 years and older, 47.7% have multiple chronic conditions.[21] In the context of experiencing historical, structural, and systemic barriers to health, one-quarter of First Nations people aged 75 and greater have 5 or more chronic conditions.[30] Having multiple chronic conditions is associated with chronic pain, higher hospitalization risk, or higher hospital readmission rates in older adults.[59]

> Frailty is a state of increased vulnerability and functional impairment because of reduced reserves across multiple systems. It is associated with an increased risk of, and decreased likelihood of recovering from, sudden changes in health status because of stressors such as acute illnesses (e.g., influenza) or falls.

> While more common among older adults, frailty is not an inevitable part of the aging process.



Percentage of older adults with at least 2 chronic diseases.

- Dementia (i.e., chronic conditions leading to cognitive functioning deterioration) is a chronic condition that may influence the ability to age in place.[10] It may hinder older adults' ability to manage other health conditions.[10] The global burden of dementia is increasing and 1 in 4 older adults aged 85 years and older in Canada live with the condition.[10,21,72] In total, 39.3% of community-dwelling older adults entering LTC institutions experience dementia.[10] Frailty is associated with risk of dementia, and a person's degree of frailty generally corresponds with their degree of dementia.[73,74] The behavioural and psychological symptoms of dementia (i.e., noncognitive symptoms such as mood and behaviour changes) impact an estimated 75% of community-dwelling people living with dementia.[75] These symptoms are associated with reduced mental health for people with dementia and their caregivers and increased caregiver burden.[75] They are also associated with more rapid cognitive and physical decline, increased informal care and health care costs, and earlier admissions to LTC facilities.[75] Compared to non-Indigenous communities, rates of dementia are expected to increase more rapidly in Indigenous communities where people experience greater risk factors for the condition.[76] Indigenous languages in Canada do not have a word meaning *dementia*.[76,77] Indigenous Peoples' understandings of these conditions vary from aligning with a biomedical understanding of memory loss as problematic to more positive conceptualizations that the phenomenon signifies coming "through the full circle" of one's life.[76] How Indigenous Peoples understand dementia and related conditions and the language they use when referring to them influences stigma that, in turn, can impact timely access to care.[76,77]
- Older adults experiencing serious and persistent mental illness are at an increased risk of higher use of emergency services, and, ultimately, placement in LTC facilities.[20] Older adults experiencing mental illness are at a greater risk of disability, poor outcomes related to physical illnesses, impaired social functioning, reduced quality of life, and decreased life expectancy.[20] Additionally, most mental illnesses are associated with an increased risk of dementia later in life.[20] However, like frailty, mental illness is not a natural consequence of aging.[20] The Public Health Agency of Canada reported that 72% of older adults perceived their mental health as very good or excellent, with the proportion lowering to 63.1% for those aged 85 years and over.[21] However, ageism is associated with older adults' experiences of depression, anxiety, general stress, and elder abuse, the latter of which is associated with reduced quality of life and increased risk of death.[20] Simultaneously, the systemic violence of colonization, racism, homophobia, and transphobia contribute to an increased risk of mental illness and barriers to accessing care and support among Indigenous Peoples, Black and racialized persons, and members of the 2SLGBTQ+ community.[20] For example, among the population of those aged 65 years and older, approximately 1 in 10 (10.4%) 2SLGBTQ+ older adults reported their mental health to be fair or poor, almost double the number of older

Dementia (i.e., chronic conditions leading to cognitive functioning deterioration) is a chronic condition that may influence the ability to age in place. It may hinder older adults' ability to manage other health conditions.

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adults who are not 2SLGBTQ+ (5.7%).[78] Financial hardship and housing insecurity also negatively impacts older adults' mental well-being.[20] Of note, older adults who identify simultaneously as members of multiple equity-deserving groups may be particularly at risk of experiencing mental illness.[20]

- **Ageism that intersects with mental health stigma can result in older adults experiencing reduced access to mental health diagnosis and treatment.**[20] There is a false but persistent belief that mental illness is a normal part of aging.[20] As a result of this belief, older adults may minimize their symptoms or attempt to manage them on their own.[20] Simultaneously, care providers' ageist beliefs regarding mental illness can serve as barriers to timely diagnosis and care.[20] Compounding this barrier to access, primary care providers may lack the appropriate information, resources, and tools to diagnose and treat mental illnesses in older adults.[20]
- Each year, 18% of older adults in Canada report symptoms of anxiety and depression.[79] Factors associated with anxiety include, but are not limited to, multimorbidity, pain, polypharmacy, social isolation, cognitive impairment, and function limitations.[79] Older adults are at an increased risk of depression if they have a history of the condition or experience physical illness or disability, cognitive impairment, social isolation, the death of someone close to them, or sleep disturbances.[20] Older adult males have relatively high suicide rates — 21.5 per 100,000 for those aged 80 and older and 24.8 per 100,000 for those aged 90 and older.[20] Depression, substance use, social isolation, bereavement, sleep disorders, and physical illness or disabilities are associated with suicide in older adults.[20]
- The number of older adults with substance use disorders (SUDs) in Canada is expected to increase as the baby boomer population ages.[80] However, SUDs among older adults may be underrecognized, underdiagnosed, and undertreated.[80,81] Factors challenging the detection of SUDs in older adults include health care providers attributing signs of these disorders to those of aging and a lack of research and policies on SUDs in older rather than younger adults.[80] Indigenous Peoples in Canada may experience challenges to mental wellness related to the legacy of colonization.[5,82] For example, intergenerational trauma related to forced relocation, dog slaughter, and the legacy of residential schools challenges building family and community support for mental wellness in Inuit communities.[82] Inuit Elders have raised Elder abuse as an issue resulting from their living with people experiencing SUDs in the context of this intergenerational trauma.[5]

Ageism that intersects with mental health stigma can result in older adults experiencing reduced access to mental health diagnosis and treatment.

The number of older adults with SUDs in Canada is expected to increase as the baby boomer population ages. However, SUDs among older adults may be underrecognized, underdiagnosed, and undertreated.

- **The use of multiple medications to treat multiple chronic conditions has been linked to adverse drug reactions, increased risk of impairment of balance and cognition, as well as increased risk of hospitalizations.**[83] In 2021, 1 in 4 older adults were prescribed 10 or more different classes of drugs.[83] The proportion was higher in adults aged 85 and over (36.4%) and in those in the lowest income quintile (25.5%) compared to those in the highest income quintile (16.5%).[83] The most common medications prescribed to older adults include those to manage cardiovascular disease, diabetes, and depression.[84] Older adults, together with people living in persistent poverty and women, are most at risk of harms caused by inappropriate medication use.[85]

Falls and Fall-Related Injuries

- **Older adults with dementia or psychiatric conditions prescribed psychotropic medications may be more at risk of falls and less able to manage their safety in the home.**[10] In 2017 to 2018, the proportion of older adults reporting a fall-related injury was 5.1% in those aged 65 to 74 and 9.6% in those aged 85 and over, with almost two-thirds of such incidents being reported by women in the age group of 65 years and over.[21] Antidepressants, antipsychotics, and benzodiazepines have been associated with significant harms, including falls.[22] Of note, 14.6% of adults aged 65 years and older in Canada have reported using sedatives, including benzodiazepines, within the past year, compared to 8.3% of adults younger than 65 years of age.[80] Sedative use is particularly high among older women (18.9%) compared to older men (10%).[80] Other risk factors for falls include frailty and living in hazardous physical environments.[10,86]

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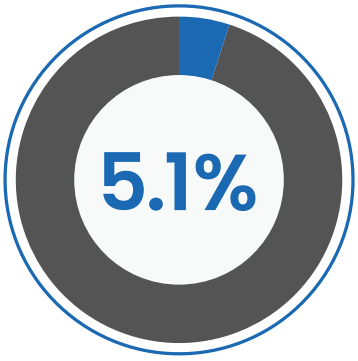
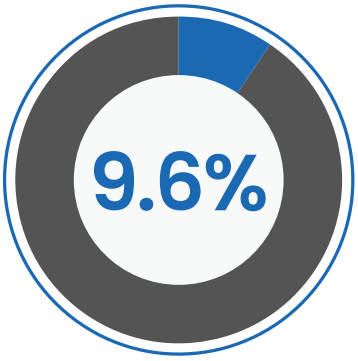


Percentage of older adults aged 65 to 74 reporting a fall-related injury.



Percentage of older adults aged 85 and over reporting a fall-related injury.

Considerations Related to the Health System and Accessing Home and Community Care and Supports

Older adults and their families in Canada prefer services that allow them to receive care in their own homes or communities (e.g., at primary care clinics and pharmacies), rather than in hospitals or LTC institutions.[4,5,10,20,54,87] However, older adults may transition to an LTC institution when they cannot access home and community care and supports to address their health and social needs.[4,5,20,87] This transition to institutionalized care outside of the community may be particularly traumatizing and revictimizing for Indigenous Survivors of residential institutions, Indian hospitals, or the Sixties Scoop.[4]

Managing health conditions and preventing injuries for older adults requires coordination of care and services across multiple types of providers that may be paid or unpaid, regulated or unregulated.[88] While there is an absence of comparable data to describe the care of older adults across different types of care providers, there is information about medical care services provided through provincial fee-for-service systems.

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Based on information from 8 provinces, the Royal College of Physicians and Surgeons reported that:

- older adults receive one-third of all physician services
- the majority of medical services for older adults are provided by family physicians
- medical service utilization rates increase steadily among progressively older age groups.[88]

However, the lack of access to primary care has been consistently highlighted in the community engagement sessions and numerous reports.[89-91] Unmet demand for specialized geriatric services is also expected to increase based on an update of the Canadian Geriatrics Society physician resource inventory.[92] Conversely, a 2020 report indicated that 55% of people living in Canada visit their community pharmacist once per week.[93]

> The lack of access to primary care has been consistently highlighted in the community engagement sessions and numerous reports.

The literature, community engagement sessions, and data from Canada also highlighted accessibility issues related to the availability, navigation, integration and continuity of, and physical access to home and community care and supports for preventing and managing health conditions and injuries in the home or community.[10,11,14,16,18,19,45,46,50,52,53,94,95]

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Limited, Fragmented, and Unsustainable Availability of Home and Community Care and Supports:

- In Canada, health care systems were designed to address the acute and episodic care needs of relatively young people rather than the LTC needs of an older population.[50] Home care is not an insured service under the Canada Health Act. However, the federal government does deliver some

services to specific groups, including First Nations and Inuit.[96] Access to these same services for Métis Peoples can be quite different because they were not recognized as distinct Indigenous Peoples until 1982.[6] Provincial and territorial governments provide publicly funded coverage for some home and community services at their discretion.[97] As a result, the availability of home and community care and support services vary between jurisdictions and geographic regions and may not meet the demands of a growing and diverse population of older adults.[2,14,16,20,82,87]

The participants in the community engagement sessions emphasized the need for increased availability of, and access to, health promotion services and care from allied health professionals (e.g., occupational therapists, dieticians, and social workers) in the home and community.

- Statistics Canada reported that in 2021, 10% of households in neighbourhoods classified as having a relatively high proportion of people aged 65 and older living in the community received formal home care.[54] This compared to 6% of households in neighbourhoods not having this classification.[54] However, the needs for home care services are not being met for about half of those who require it, and estimates indicate that the demand will likely increase by 53% by 2031.[19,54] Canadian Institute for Health Information (CIHI) data indicate that more than 10% of new admissions to LTC are potentially avoidable with access to appropriate home-based support and care.[53] Those most likely to be unnecessarily admitted to LTC facilities are those living alone and in rural areas, and, overall, most of the residents in LTC facilities are women aged 85 year or over.[53]
- Although older adults may have increased care needs in the early morning and late evenings, home services are typically offered only during regular working hours.[50]
- Care services may be more readily available than support services, but the availability of either may be particularly limited in rural communities.[11,14,18,46,50,91] Compared to people in urban areas, people living in rural areas may be more than 50% more likely to be admitted to LTC institutions when they could have been cared for at home with appropriate supports.[53]
- As demand grows, health systems, health professionals, and caregiver may not be able to maintain available home and community care and support services over time, or these services may be unreliable, because of limited private and public funding, shortages of trained care providers (e.g., family

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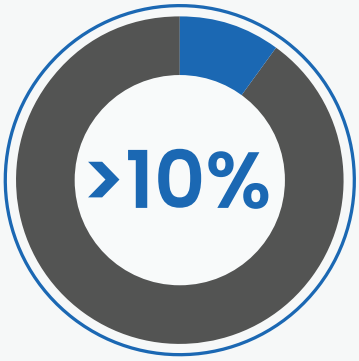

Percentage of new admissions to LTC that are potentially avoidable with access to appropriate home-based support and care.

physicians, nurses, personal support workers, geriatricians, psychiatrists, and other specialists), and reliance on unpaid caregivers.[2,14,45,50,57,87,92,98,99] Shortages in paid care providers may be exacerbated by these workers, or potential workers, experiencing or anticipating dissatisfaction with factors including, but not limited to, their working conditions, professional support, and compensation.[11,50] First Nations organizations, Inuit Elders, and Métis older adults have emphasized the need for more trained home care workers in their communities.[4,5,87] Métis older adults have also reported a shortage of youth in their communities available to support them with physically demanding tasks, such as shovelling snow.[87]

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Health Care System Navigation Issues

- **Even when supports are available, older adults and their caregivers may not receive relevant information, meet eligibility criteria, or be able to navigate the complex process of accessing them**.[2,14,32,50,52,53,94]
- The participants in the community engagement sessions described how navigating supports depended on overcoming administrative barriers (e.g., complex application forms) and advocating for themselves or their loved ones using the "right words." Doing so may be especially challenging for members of equity-deserving groups who are attempting to navigate care in a system that does not accommodate their linguistic, cultural, or cognitive needs.[32,50,52] First Nations, Inuit, and Métis organizations and older adults have raised the need for trusted medical escorts, translators, and other supports to address navigation issues related to language barriers, accommodation challenges, and scheduling that hinder access to care.[4-6,55]
- Older immigrants face more challenges in accessing primary health care, preventive services, and mental health care than younger immigrants and their Canada-born peers.[100] Challenges older immigrants experience while navigating and accessing services include racism, discrimination, and assumptions that members of certain ethnocultural groups "take care of their own."[32]

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Lack of Integrated and Coordinated Care

- The lack of an integrated and coordinated health and social care system contributes to (premature) admission to institutionalized care and unnecessary emergency and acute care visits.[2,10,45,95]
- A study published in 2011 found that linkage mechanisms between primary, acute, and community care for older adults in Canada were "weak" and appeared to be "an area for greater attention by the provinces."[101] The participants in the community engagement sessions provided insight into continued challenges with integrated care, noting a lack of coordination among and between health care providers. They perceived this as leading to fragmented, delayed, and lower-quality

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care that limits the ability to manage and prevent health conditions and injuries in the home or community. A report by the National Institute on Ageing noted that limited existing care coordination services may not help older adults and their families navigate the full spectrum of care and support options available for maximizing their holistic well-being.[10] The same report noted that Canada seems to lack a "gold-standard care navigation model."[10]

- The community engagement session participants also described how the lack of interoperability of health data in Canada may contribute to a lack of integration and coordination. Specifically, they described how nonintegrated electronic medical records prevented care providers from easily sharing information with each other and between health care settings.

Barriers to Physically Accessing Care

- Older adults may not be able to physically access community care and supports because of limited mobility (e.g., related to health conditions) or lack of access to transportation (e.g., associated with the loss of a driver's licence and inadequate public transportation, especially in rural communities).[10,82,87]

Caregiver Burden

Support from unpaid family caregivers and volunteers is integral to older people's choice and ability to live where they choose.[7,18,87]

Almost 1 in 4 (23%) people living in Canada report providing care for dependent adults with almost all being unpaid.[102] Almost all (96%) individuals of all ages receiving home care in Canada have an unpaid caregiver.[103] Still, unpaid caregivers may experience distress and burnout, family and work commitments, and financial constraints that hinder their ability to sustain caregiving.[10,11,20,94,104]

- One in 3 unpaid caregivers experience distress, which may include feeling anger, depression, fatigue, worry, or an inability to continue caregiving.[104] Caregivers experiencing distress spend an average of 38 hours per week delivering care.[104] Those identifying as women may assume more caregiving hours and tasks than those identifying as men.[11] Women generally experience more burden, mental health challenges, reduced well-being, and employment and social consequences related to their caregiving duties.[11] Of note, some people may be "double-duty caregivers" who provide unpaid care to a family member or friend while also being employed as a health care provider.[11] This subset of caregivers may be more likely to reduce their hours of paid work or forego promotions when providing 4 or more hours of unpaid care each week.[11] Of note, Indigenous

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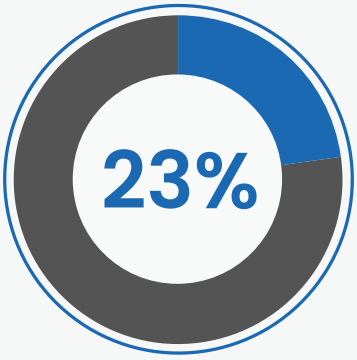

Percentage of people living in Canada who report providing care for dependent adults. Almost all are unpaid.

Peoples generally understand the care of older adults as the responsibility of family and communities.[7] It follows that Indigenous families may continue to provide care to older family members even when experiencing financial and emotional challenges in the context of inadequate access to caregiver supports.[7]

- Many caregivers cannot access sufficient supports to address their needs (e.g., respite care services, training opportunities, and support groups) and those of the person in their care because of the previously detailed challenges related to availability, continuity, integration, and navigation.[11,94] The challenge of navigating supports contributes to caregiver burden, and may be especially onerous for those who are racialized and Indigenous, immigrants or newcomers, experiencing language barriers, and aging.[11,32]

Financial Considerations

- Older adults and their family members have identified financial barriers as contributing to premature LTC institution admissions.[53] As home care is not an insured service under the Canada Health Act, eligibility for publicly funded home care services varies across jurisdictions.[10] Estimates suggest that about 35% of older people pay for home care out-of-pocket or via private insurance coverage.[10] Out-of-pocket caregiver costs related to dementia alone are estimated to reach $16.6 billion by 2031.[10] Older adults and their caregivers, especially those with low income, may not have the financial capacity to pay for care, which creates a barrier to aging in place.[11,14,30,45,50,54] Households in lower socioeconomic status suburban neighbourhoods have higher unmet home care needs.[54]
- Because of the legacy of colonization in Canada, members of Indigenous communities disproportionately experience low income and poverty alongside high costs of, and limited financial support for, essentials such as transportation, food, and housing.[5-7] This socioeconomic disadvantage is associated with reduced access to health care services and other resources necessary for aging well.[7,30,82]
- Caregivers have reported limited availability of, and difficulties accessing, government-funded financial aid and workplace protections.[11,94] A total of 63% of unpaid caregivers have reported experiencing financial hardships related to their caregiving duties, which may require travel, obtaining care supplies, and making home adaptations.[11,94] Travel-related expenses may especially burden older people and their caregivers living in rural communities.[87,91] Many caregivers have reported being unable to remain in paid employment while caregiving.[11]

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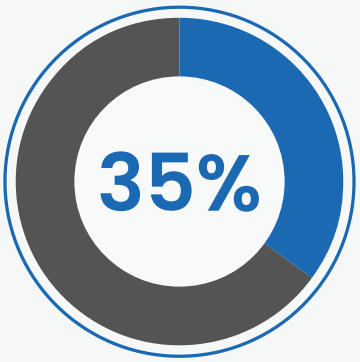

Estimated percentage of older people paying for home care out-of-pocket or via insurance coverage.

Considerations Regarding Person-Centred, Trauma-Informed, and Culturally Safe Services

As the older population in Canada is diverse, and goals and needs evolve as people age, respecting older people's choices and culture in their home and community care is essential.[2,32,52,105]

Care that does not flexibly respond to the diversity of the older population in Canada and the evolving needs of an older person may prevent ability to age in place.[53]

- Services, especially those in rural or remote communities, may not be tailored or accessible to groups with unique health, social, and cultural needs.[32,46,52,55] The literature and community engagement sessions highlighted that these groups may include, but are not limited to, First Nation, Inuit, and Métis Peoples; members of the 2SLGBTQ+ community; immigrants, newcomers, and people experiencing language barriers; people leaving correctional facilities; people with stigmatized mental health or substance use conditions; and veterans.[10,14,32,45-47,50,52,54,55] Of note, trauma and violence-informed care is that which recognizes the connections between trauma, violence, and adverse health outcomes and actively prevents traumatizing or retraumatizing people interacting with services.[106,107] These approaches to care are essential for increasing safety and self-determination for people with a history of experiencing trauma and violence.[107] An understanding that experiences and outcomes of violence strongly relate to gender and culture informs these approaches.[107]
- There is a limited availability of Indigenous-led, culturally safe, trauma-informed, and appropriate health services in Canada, which results in Indigenous older adults underutilizing such supports.[7,55,82] Because of historical and ongoing racism and discrimination in health and social service systems in Canada, Indigenous older adults may perceive mainstream health care services as untrustworthy, undesirable, and unsafe.[4,30,55] For example, Indigenous people have reported experiences of racism leading to instances of being devalued, disregarded, and abandoned by health care providers.[108] Some have reported being labelled as "drug seeking" while attempting to access care because of some providers' stereotypes about drug use within Indigenous communities.[108] Experiencing harm related to racism, colonial violence within health care systems (e.g., forced or coerced sterilization), inconsistent care and providers, and long waiting periods for assessments can exacerbate mistrust.[55,108,109] First Nations, Inuit, and Métis communities have expressed a desire for trained and local home care workers who they are comfortable with, who understand their needs, and who are readily

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available to them.[4,5] Increased access to culturally safe, trauma-informed, and accessible community-based LTC enables Indigenous older adults living in both urban and rural settings to feel supported in aging well.[6,110]

- Caregivers may be especially vital for facilitating person-centred care for older adults experiencing stigma or language barriers while accessing and receiving care.[11] However, caregivers, especially young caregivers, may not always experience respect from service providers, which could limit their involvement in care planning.[11]
- The participants in the community engagement sessions identified the need for care providers to respect individual autonomy in care planning. They noted that an older adult or caregiver may desire choices that involve "living with risk."

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Reasons Related to Social Isolation and Loneliness

Difficulties Maintaining Health and Well-Being When Experiencing Social Isolation

Social isolation and loneliness are associated with decreased physical, emotional, cognitive, and mental health and quality of life.[2,10,17,20,111] These phenomena are associated with the increased use of health care services and entering LTC institutions.[2,10,17,111] It follows that the quality of an older adult's social connections and social environment influences their ability to age in place.[18]

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An estimated 30% of older adults in Canada are at risk of experiencing social isolation and almost 1 in 5 report social isolation and loneliness.[17,21,57]

The risk factors for social isolation, which are often interrelated, include being over the age of 80, experiencing significant life transitions (e.g., retirement, losing a spouse, or losing a driver's licence), having reduced physical health or multiple chronic conditions, experiencing mental illness or dementia, having no contact with family, living with low income, lacking adequate and accessible transportation, living in rural communities, being an unpaid caregiver, having lower education, identifying as a member of the 2SLGBTQ+ community, and being an immigrant or newcomer to Canada.[10,17,20,27,32,46,47] In the 2019-2020 Canadian Health Survey on Seniors, self-reports of loneliness were higher in immigrants (22%), in those aged 85 or over (23%), and in the lowest income group (25%).[112] Of note, social isolation increases the risk of, and may result from, elder abuse.[20]

Lack of Social Participation and Unmet Support Needs

Older adults, especially those in rural areas, may experience limited opportunities for social support and connections in the community (e.g., recreational services and social and civic engagement events).[10,113] Nearly 1 in 4 older adults in Canada (38%) reported barriers to social participation (i.e., participating in social, recreational, or group activities) in 2019 and 2020.[112]

These older adults were almost 3 times as likely to be lonely as those who reported no social barriers (13%).[112]

- In the community engagement sessions, we heard that older people living in rural communities may especially want to avoid LTC homes, as they may be placed in a facility far from their communities and established social support networks. At the same time, CIHI data show that living in a rural community is associated with unnecessary LTC institution admissions.[53] Of note, Indigenous older adults who live in remote areas often experience social isolation because of a lack of access to social events and services.[30,76] Additionally, Indigenous older adults experiencing scarcity of on-reserve care and support may be forced to move away from their communities and the social ties, languages, and cultures embedded within them.[7] At the same time, those staying in their communities may experience isolation as younger persons leave in search of job opportunities.[7]
- During the community engagement sessions, we also heard about the particular need for social innovations that address older adults' care and support needs in rural communities. Unique considerations are also necessary for creating effective social innovations with and for members of First Nations, Inuit, and Métis communities; members of the 2SLGBTQ+ community; and immigrants, newcomers, and refugees[17,27,32,46,47] The participants in the community engagement sessions emphasized the need for improved support in navigating significant life transitions that could lead to social isolation, especially the loss of a spouse. This included support for more ambiguous losses occurring when a spouse or loved one experiences declining mental, physical, or cognitive health. Losing social connections during these transitions can adversely impact an older adult's psychosocial well-being.[17] These transitions may also result in losing the practical support provided by key social contacts to help manage care, ADLs, and IADLS.[17]
- The literature and community engagement sessions highlighted the need for intergenerational interventions that could enhance social connectivity while combatting ageism.[17,18,46,47]

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Reasons Related to Housing and the Built Environment

To maintain optimal health and well-being and age in place, older adults need home and living environments that meet their changing physical, cognitive, safety, lifestyle, and social needs.[2,9,10,18,87,114] Elements of the built environment that can impact aging in place include buildings and structures, patterns of land use, outdoor spaces (e.g., lighting and benches), and infrastructures that support human activities (e.g., walkways and roads).[18]

Limited Availability of, and Access to, Acceptable Housing

- The Canada Mortgage and Housing Corporation considers housing acceptable when it is adequate (i.e., does not require major repairs), suitable (i.e., contains enough bedrooms for the household), and affordable (i.e., costs less than 30% of a household's before-tax income).[9,10] In Canada, 24.9% of older adults live below this housing standard.[10] Additional criteria proposed for acceptable housing for older adults include adaptability, accessibility, and safety.[9,10,56] Older adults experiencing unacceptable, precarious, or a lack of housing can find it difficult to prevent and manage physical and mental health issues, maintain independence, and uphold physical safety.[10,18,56,87,115,116] For example, Elders in Nunavut have reported that a lack of housing has resulted in them feeling obligated to live with their extended families in overcrowded conditions that cause household distress that adversely impacts their well-being.[5] Especially in the context of rising housing costs, there is an insufficient supply of adequate housing that accounts for the diversity of health and social needs, incomes, and preferences of older adults in Canada, particularly in rural communities.[9,45,56,87,91,116,117]
- Equity-deserving groups, such as those living with low income, women who are older and live alone, people with disabilities, people living in major metropolitan areas (where housing costs may be higher), immigrants, and First Nations, Inuit, and Métis people may be at an increased risk of experiencing unmet housing needs.[5,9,32,45,56]
- An estimated 65% of older adults in Canada are part of the "missing middle" with low or middle incomes and moderate needs.[11] This group experiences "few or no housing options that meet their financial, medical, functional, and personal preferences and needs."[117]
- For those older adults who experience houselessness, are underhoused, or who otherwise do not have access to stable, safe, adaptable, or accommodating housing, aging in place may pose distinct challenges or be impossible.

To maintain optimal health and well-being and age in place, older adults need home and living environments that meet their changing physical, cognitive, safety, lifestyle, and social needs.

Limited Accessibility of Home Adaptations

The participants in the community engagement sessions described how home care professionals could help an older adult and their caregivers understand and access the affordable home adaptations best suited to their needs. However, previously detailed barriers to accessing home care may prevent older adults from benefiting from such services.

Some older adults may not be able to afford to make home adaptations to accommodate their evolving needs, particularly those related to mobility.[9,56,87] The participants in the community engagement sessions also noted barriers related to program design and processes to making home adaptations (e.g., building permits or zoning restrictions).

Considerations Related to Transportation and Curated Spaces, Safety, and Mobility in the Built Environment

- Limited transportation options can constrain older people's ability to access necessities for daily living, care and support, and social activities.[10,18,32,52,87]This may lead to social isolation and loneliness that negatively affect overall health and well-being.[10,32,45,105] The types and availability of transportation services vary greatly across regions and jurisdictions.[91,105] Transportation issues are greater in rural and remote areas, where alternative options to driving (e.g., public transit or taxi services) are lacking or very limited.[10,18,87,91,113] Additionally, transportation may be available but difficult to access, especially for those living with a disability or belonging to groups such as immigrants, who may need tailored supports to use the services.[32] First Nations and Métis older adults have described how snow or flooding can hinder access to roads connecting to other communities or driveways leading to their homes.[30,87] This can impede their ability to obtain essential supplies (e.g. medications) and emergency and health providers' access to their location.[30,87] Métis older adults living in rural communities have also reported experiencing transportation challenges related to not owning their own car or being unable to afford gas or vehicle insurance.[87]

- We conceptualize curated spaces as those planned and designed to be locations where community members can offer resources and services. Built environments that lack buildings and spaces where older adults can access resources and services may hinder healthy aging and aging in place.[18,32,55] Specifically, older adults may find aging in place challenging without spaces to access culturally safe and relevant health services, essentials for daily living (e.g., grocery stores and shopping malls), and opportunities for exercise, recreation, entertainment, and social events.[18,32,52] Members of the 2SLGBTQ+ community described having to make decisions about whether to move to less affordable urban areas where more resources and services were available.[52] As 1 lesbian woman in her 70s described, "the moment you move to somewhere that's more affordable, you're further away from everything."[52]
- Features in the built environment (e.g., public buildings that cannot accommodate mobility aids, neighbourhoods with high crime rates, or inadequately maintained walking routes) may challenge older adults' ability to safely access, use, and benefit from available services and participate in community activities.[9,18,45,87,113,114,116] The All Nations Health Partners reported that the farther remote communities are, the more likely they are to have a safety and mobility infrastructure that has been strained by environmental factors.[55]

Challenges Engaging With Technologies to Support Aging in Place

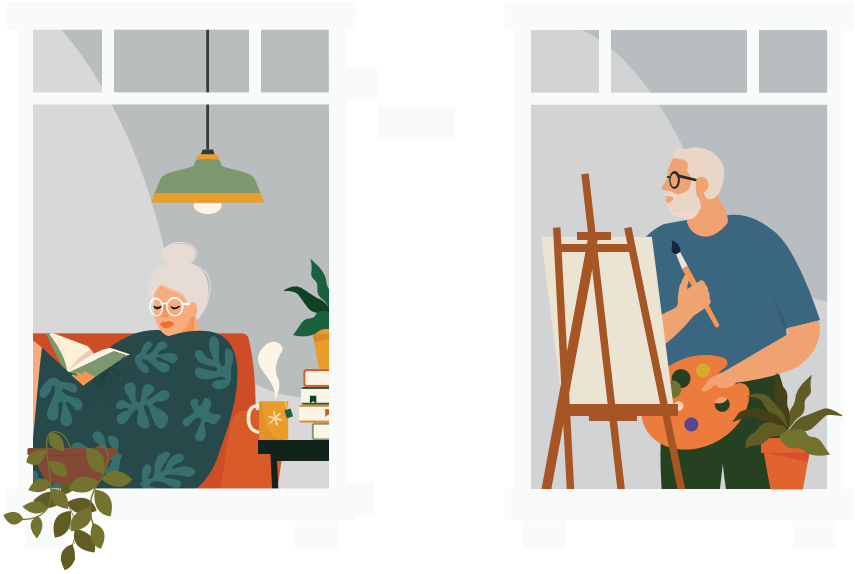
Multiple factors may limit older adults' willingness or ability to access, use, and benefit from technological devices intended to address the previously detailed issues that hinder aging in place:

- Smart technologies and integrated electronic medical records may raise both perceived and actual concerns about privacy, trust, personal agency in the home, and the accuracy of information collected, which may reduce adoption or optimal use.[14,48] Technologies that integrate artificial intelligence may also pose unintended consequences related to, for example, biases in training data that result in systems being less able to respond to the needs of equity-deserving groups.[48] Additionally, when engaging with technologies that require internet, older adults may also be at an increased risk of cyber crime because of factors including, but not limited to, limited cyber and security skills or awareness.[118]
- Older adults living with low income or lacking publicly funded technologies may experience financial barriers to accessing technological devices or the internet and data plans required for their use.[48,57,87,119]
- Some technologies may have geographic restrictions.[87]
- Some technologies may assume tasks otherwise provided by human caregivers and can alleviate some challenges associated with the need for support from caregivers. However, they may also reduce an older adult's contact with others, thus worsening social isolation.[14]
- Some older adults, particularly those experiencing disadvantage because of age, language, education, or employment status, may experience difficulties using technologies because of limited digital literacy or failure of the technology to accommodate their physical or cognitive (dis)abilities.[18,48,87]
- In the context of stigma regarding aging, reduced independence, and a loss of autonomy, older adults may find it challenging to accept needing to rely on technologies to conduct their ADLs or IADLs.[14]

What Does the Evidence Say to Support People Living in Canada to Age in Place?

Key Considerations

- Several initiatives may improve outcomes associated with aging in place, including those related to chronic disease prevention and management, dementia prevention and support, falls prevention, support for unpaid caregivers, at-home care and support, at-home palliative care, reablement, social isolation and loneliness, assistive devices, and home modifications.
- Several initiatives share characteristics and are interconnected with each other. Some of the aspects of these initiatives that have shown the most promise are those that are multicomponent and address physical, environmental, social, and psychological domains.
- The needs of older adults vary over time and from person to person, requiring adaptability of solutions. Offering access to these initiatives through a centralized model or practice may help older adults navigate and access services as they are needed.



What Outcomes Are Important to Older Adults?

The following section provides examples of established international and Canadian health outcomes measures related to aging. The reports and estimates of these outcomes were identified from our review of government and policy documents, nongovernmental publications on aging in place and aging in Canada, journal articles, and consultations with community partners and health care decision-makers.

- The International Consortium for Health Outcomes Measurement developed a standard set of priority outcomes measures about aging and health care that matter to older people using a modified Delphi process that involved a global panel of interdisciplinary professionals and older people and their caregivers. The process was informed by findings from a literature review and consultation with a variety of interest parties.[120] The identified outcomes included measures concerning general health status, physical health, mental and psychological health, social and community participation, health care utilization and disutility of care, and personal experiences related to care and end of life. The complete list of outcomes are presented in the following infographic.
- The Canadian Longitudinal Study on Aging and various pan-Canadian health organizations in Canada, such as the Public Health Agency of Canada, Statistics Canada, and CIHI, are measuring or have reported on some of these outcomes or indicators but have not necessarily used the suggested data sources, measurement tools, or definitions. Some examples are presented in the following infographic.
- In Canada, CIHI received funding to lead federal, provincial, and territorial governments; Statistics Canada; pan-Canadian health organizations such as the Canadian Home Care Association; people with lived experience; and measurement experts in a consensus process to establish, measure, and report indicators on shared health priorities to improve understanding of care across the country and identify gaps in services. The health systems indicators relevant to the care of older adults have been presented in this report and are listed in the following. Only some of these shared health priority indicators are able to be reported at a provincial and territorial level but CIHI reports that efforts to expand and improve their data holdings are under way.

The most recently reported results for these indicators are presented in an interactive dashboard:

- wait times for home care services
- home care services that help the recipient stay at home
- hospital stay extended until home care services or supports are ready
- caregiver distress
- new residents of LTC facilities who potentially could have been cared for at home
- death at home or in the community.

Linking Patient-Centred Outcomes Measures to the Health Systems Context in Canada

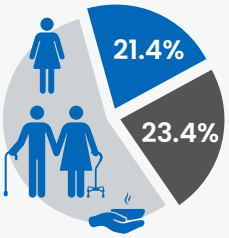
The International Consortium for Health Outcomes Measurement (ICHOM) developed a standard set of outcome measures about aging and healthcare that matter to older people. In Canada, a consensus process involving pan-Canadian health organizations and FPT governments established health system indicators on shared health priorities including those relevant to care of older adults. The Canadian Longitudinal Study on Aging and various pan-Canadian health organizations in Canada, such as Public Health Agency of Canada, Statistics Canada, and Canadian Institute for Health Information are measuring or have reported on some of these outcomes and indicators.

Polypharmacy

One in 4 older adults were **prescribed 10 or more different classes of drugs.**[a]

The proportion was **higher in adults aged 85 and over** (36.4%) and in those in the lowest income quintile (25.5%) than in those in the highest income quintile (16.5%).[a]

Five of the most frequently prescribed drug classes were to treat **cardiovascular disease.**

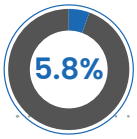


More than 1 in 5 older adults were **prescribed drugs to treat diabetes (21.4%) and 23.4% were prescribed antidepressants.**[a]

Women, older adults, and people living in **persistent poverty are most at risk of harms caused by inappropriate medication use.**[b]

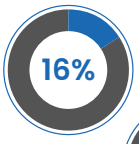
Falls

Fall-related injuries are serious threats, affecting about **5.8% of older adults annually** (almost two-thirds of whom were women) and increasing hospitalization risk and declining health-related quality of life.[c]

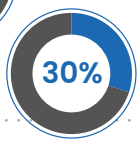


Loneliness and Isolation

More than **1 in 4 older adults (27.9%) live alone**, and the proportion increases with increasing age.[d] According to the Canadian Community Health Survey in 2018, **58.4% of those aged 85 and over lived alone**, and older adults living alone were **less likely to own their home** and more likely to **live in an area with the lowest household income.**[e]



Almost **1 in 5** older adults (16%) report **social isolation and loneliness.**[c]



30% are **at risk of becoming socially isolated.**[c]

Autonomy and Control

Although the average 65-year-old in Canada can expect to live an additional 21 years, it is estimated that for approximately **6 of these years, they will need health care support.**[c]

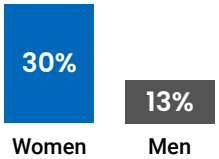
In Canada, about **8% of adults aged 65 or over live in collective dwellings** such as long-term care facilities or nursing care facilities, this **rises to over one-quarter for those aged 85 years and older.**[c,g]

Pain

More than **1 in 3 seniors (37%)** living in private dwellings with 2 more chronic conditions **report chronic pain that lasts more than 3 months.**[c]

Activities of Daily Living

According to Canadian Longitudinal Study on Aging data, 30% of women aged 75 or older had **at least 1 limitation in basic activities of daily living or instrumental activities of daily living.** For men in the same age group, the percentage was 13%.[f]



Mood and Emotional Health

The Public Health Agency of Canada reported that **72% of older adults perceived their mental health as very good or excellent**, with the proportion lowering to 63.1% for those aged 85 years and over.[c]

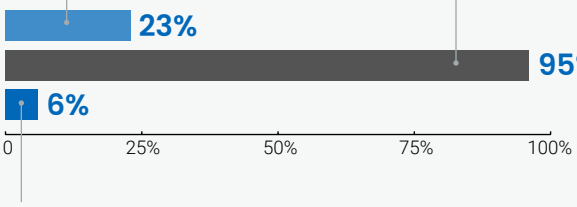
Canada's Drug Agency
L'Agence des médicaments du Canada

Canada's Drug Agency is a pan-Canadian health organization. Created and funded by Canada's federal, provincial, and territorial governments. We're responsible for driving better coordination, alignment, and public value within Canada's drug and health technology landscape.

Caregiver Burden

Almost **1 in 4 people** living in Canada (23%) are **providing care** for dependent adults with **almost all being unpaid.**[h]

Unpaid caregivers play a significant role in home care or informal care,[i,j] with **95% of individuals receiving home care from an unpaid caregiver.**[k]



In 2021, **6% of households in Canada reported using formal home care services**, either publicly funded or purchased privately, within the past year.[l]

Time in Hospital

More than **340,000 older adults at risk of frailty are hospitalized each year**; they are 3 times more likely to be hospitalized for 30 days or more.[p]

Participation and Decision-Making

One in 10 hospital stays are **prolonged by a median of 9 days or more because of a lack of postacute and alternate level of care resources.**

The community engagement session participants described lacking the ability to choose when to leave the hospital.[m]

Métis older adults and their caregivers emphasized the importance of **"having a voice to speak for yourself or having someone speak on your behalf"** in care contexts.[n]

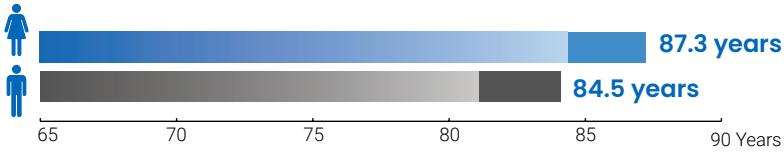
Frailty

Frailty or risk of frailty are associated with adverse outcomes,[o] including:

- more frequent and **longer stays** in hospital,
- more frequent **readmission** to hospital within 30 days of discharge, disability, and death.[p]

Vital Status

At age 65, **women in Canada can expect to live another 22.3 years and men another 19.5 years**.[c]



Those who are First Nations, Inuit, and Métis have a **life expectancy of 3 to 5 years shorter than non-Indigenous populations at the age of 65.**[q]

Place of Death

In Canada, **47% of older adults do not die in their homes or community settings**,[r] while **more than 70% of adults expressed a preference for being at home during their final days or end-of-life care.**[s]

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Considerations From Indigenous Perspectives

Key Takeaways

- First Nations, Inuit, and Métis Peoples generally conceptualize health and healthy aging as holistic harmony between physical, mental, emotional, and spiritual well-being. This contrasts a medicalized, deficit-based view of wellness often framed in relation to sickness.
- Aging in place allows Indigenous older adults and Elders to exercise self-determination and remain connected to their land, family ties and kinship, and culture. This, in turn, empowers them to uphold and revitalize holistic wellness for themselves and their communities. First Nations, Inuit, and Métis organizations and Peoples have advocated for using a distinctions-based approach to embed Indigenous culture into policy, program, and service design. They have emphasized that policies and services should prioritize community health. Additionally, research informing these policies and services should be strengths-based and grounded in Indigenous worldviews.
- First Nations, Inuit, and Métis organizations and Peoples have prioritized increasing the availability of, and access to, culturally safe and trauma-informed primary, specialist, long-term, and palliative care in the home and community. Related priorities include providing consistent funding for Indigenous-led services, increasing the availability of culturally safe and trauma-informed health care providers in Indigenous communities, mitigating service fragmentation through coordinated partnerships, enhancing caregiver support, and increasing health benefits.
- Connection to community, family, and kinship are essential to the holistic well-being of Indigenous Peoples. Enhancing social connections and belonging requires ensuring older adults and Elders have adequate social supports, access to social events at which they feel safe and respected, and protection from Elder abuse.
- First Nations, Inuit, and Métis organizations and Peoples have emphasized prioritizing adequate housing, accessible transportation, safe and accessible spaces for socialization and intergenerational engagement, and community health infrastructure in Indigenous communities and urban areas.

Why Highlight Indigenous Perspectives?

Considering Indigenous viewpoints, priorities, and strengths in decision-making regarding aging in place aligns with the Truth and Reconciliation Commission's Calls to Action.[128] Specifically, Indigenous perspectives can inform actions to address historical, structural, and systemic injustices that perpetuate ongoing inequities in health outcomes. Indigenous perspectives also ensure the preservation of Traditional Knowledges, languages, and cultural practices for future generations.[4,5,87]

First Nations, Inuit, and Métis Peoples generally conceptualize health and healthy aging as holistic harmony between physical, mental, emotional, and spiritual well-being.[4-7,30,76,87,129] This contrasts a medicalized, deficit-based view of wellness often framed in relation to sickness.[129] For First Nations, Inuit, and Métis older adults, health and wellness are grounded in an intimate connection between themselves, their communities (including intergenerational engagement with youth), land, culture, and language.[4-7,30,76,87]Historical and ongoing colonization disrupts this connection by imposing foreign cultures, ideologies, worldviews, and governance structures that benefit white settlers onto Indigenous Peoples, often to the detriment of Indigenous lands, waters, communities, and individuals.[29] In this way, it acts as a root determinant of health that creates disparities in other factors that influence Indigenous Peoples' well-being.[4,6,29]

Of note, Indigenous perspectives include First Nations, Inuit, Métis, and urban Indigenous populations. A distinctions-based approach recognizes and respects unique experiences, histories, and cultural identities.[4] It also acknowledges that each group faces distinct health challenges and requires tailored solutions, rather than a 1-size-fits-all approach.[4,7] This process aims to address the historical and ongoing impacts of colonization and systemic racism in health care systems in Canada.

As previously detailed, First Nations, Inuit, and Métis worldviews emphasize interconnectedness and holistic well-being.[4-7,27,29,30,87,129] These perspectives also highlight person- and community-centred care that prioritizes community and family involvement to help older adults age in familiar cultural environments.[4-7]

> First Nations, Inuit, and Métis worldviews emphasize interconnectedness and offer a comprehensive understanding of aging and health that incorporates balance between physical, emotional, mental, and spiritual well-being.

Aging in Place as a Priority for Indigenous Peoples and Communities

First Nations, Inuit, and Métis Peoples and communities in Canada have emphasized aging in place as a priority.[4-6]

- **Self-determination:** Indigenous Peoples have and continue to demonstrate strength by resisting colonial structures, systems, spaces, and practices that cause them to experience health inequities.[29] A vital tool for this resistance is Indigenous self-determination, characterized by principles such as freedom to decide how to live and authority over, responsibility for, and support in using resources to support well-being.[6,29] Aging in place allows Indigenous Peoples to exercise this self-determination and autonomy in their own homes and communities.
- **Connection to land and kinship and the preservation of traditional language, culture, and knowledges:** As previously detailed, Indigenous holistic well-being is intimately connected to culture that, in turn, is rooted in land and community.[4-7,27,29,30,87,129] Aging in place allows Indigenous older adults to remain connected to their ancestral lands and territories and the family, kinship, and communities they support and are supported by.[4,5,7,76] Maintaining these connections allows Indigenous older adults and Elders to continue practising and sharing Indigenous Knowledge, lived and living experiences, and stories with younger generations.[7] This, in turn, allows for cultural resurgence.[4,5,7,76] Aging in place may also serve to protect Indigenous Survivors of residential schools, Indian hospitals, and the Sixties Scoop from being retraumatized by institutionalization.[4] Specifically, it provides these survivors with the agency to avoid admission to LTC facilities where they could once again experience displacement from their culture, land, and community.

Indigenous Priorities, Recommendations, and Promising Practices to Support Aging in Place

First Nations, Inuit, and Métis organizations, Peoples, and communities have proposed priorities, recommendations, and promising practices relevant to supporting aging in place.

- **Recognize Indigenous culture as a foundation for wellness:** First Nations, Inuit, and Métis organizations and Peoples emphasized the need to recognize Indigenous Knowledges, practices, values, languages, and medicines as a foundation for holistic wellness.[4-6,76]

> Aging in place may also serve to protect Indigenous Survivors of residential schools, Indian hospitals, and the Sixties Scoop from being retraumatized by institutionalization.

- First Nations, Inuit, and Métis organizations and Elders have advocated for embedding Indigenous culture into policy, program, and service design to promote the well-being of older adults, Elders, and their communities.[4-6,30,76] First Nations organizations have noted that policies and programs should incorporate principles such as wellness as the balance between physical, mental, emotional, and spiritual well-being; All My Relations (i.e., an awareness that everything in the universe is connected and that everyone and everything has a purpose and is worthy of respect); and relationships to land, language, family, and community.[4,30] Inuit Elders have emphasized the importance of grounding policies and services in Inuit Qaujimajatuqangit and the Inuktitut language[5] At the foundation of Inuit Qaujimajatuqangit are 4 laws, or *Maligangit*, that include for the common good, respecting all living things, maintaining harmony and balance, and continually planning and preparing for the future.[130] Métis Nation noted the need for intersectional Métis SDH to inform programs and policies that uphold respect for culture, autonomy, sense of place, involvement of family and community, and protection of Métis human rights.[6]
- The significance of connection to culture is exemplified by considerations regarding Indigenous Peoples' access to traditional foods. Inuit country food, for example, features prominently in Inuit identity and holistic well-being and offers a rich source of antioxidants; omega-3 fatty acids; monounsaturated fatty acids, protein, and micronutrients.[131] Inuit Elders have emphasized access to country food as a priority.[5] One study conducted within an Inuit community reported a nutrition transition where "unhealthy market food choices" replaced country food.[131] Alongside this transition, the authors reported a high prevalence of metabolic syndrome in the community (i.e., 37% of 46 participants without diabetes).[131] Metabolic syndrome has been linked to cardiovascular disease and type 2 diabetes mellitus, the latter of which has been linked to dementia.[131-133]
- **Creating and providing services for First Nations, Inuit, and Métis older adults requires a distinctions-based approach grounded in awareness of Indigenous Peoples' diverse needs, languages, and practices, including traditional medicines, healing practices, and ceremony.**[4,7,76] First Nations, Inuit, and Métis organizations and Elders have emphasized the importance of Indigenous-led and owned services and involving Elders in designing policies and programs to address distinct community needs.[4-7,76] Inuit Elders, for example, emphasized the need for a secretariat for Elders that could act as their point of contact with the Government of Nunavut to enhance communication, accountability, and coordination.[5] They also noted the need for an Elder's committee in every community.[5]

The significance of connection to culture is exemplified by considerations regarding Indigenous Peoples' access to traditional foods.

- **In the context of the relationship between holistic wellness and connection to community, First Nations, Inuit, and Métis organizations have emphasized prioritizing community health to support Elders and older adults in aging well.**[4-6] Inuit Elders noted the need to prioritize family-focused and collective community healing grounded in Inuit ways to resolve conflicts that adversely impact community well-being, including substance use, interpersonal violence, and theft.[5] They also noted the need to address poverty in their communities by, for example, increasing pensions and subsidies to reflect living costs and increasing Inuit employment.[5]
- **Data and research can facilitate identifying needs within Indigenous communities to inform the design and implementation of policies and services to support aging well**.[4] First Nations and Métis organizations have emphasized the need to use a decolonizing and strengths-based approach grounded in Indigenous worldviews for these activities.[4,6] These approaches should uphold ethical principles to respect the rights, dignity, and cultures of Indigenous Peoples.[134] These include informed consent, transparency, and accountability; community engagement, collaboration, and codesign; and respect for Indigenous traditional knowledges and intellectual property.[134] Researchers should engage in ongoing reflection throughout their work to ensure they continuously uphold these principles. They should also respect the principles of Ownership, Control, Access, and Possession (OCAP®, a registered trademark of the First Nations Information Governance Centre);[134,135] Inuit Qaujimajatuqangit; and Ownership, Control, Access, and Stewardship (OCAS),[134] when working with First Nations, Inuit, and Métis data, respectively.

> In the context of the relationship between holistic wellness and connection to community, First Nations, Inuit, and Métis organizations have emphasized prioritizing community health to support Elders and older adults in aging well.

- **Increase availability of, and access to, culturally safe and trauma-informed home and community-based care services:** First Nations, Inuit, and Métis organizations and Peoples have prioritized increasing the availability of, and access to, culturally safe and trauma-informed primary, specialist, long-term, and palliative care and health promotion services in the home and community.[4-7]
  - **First Nations, Inuit, and Métis Peoples and organizations have also noted the need to prioritize consistent and predictable funding for Indigenous-led home and community health service infrastructures and to potentially make these services available at a younger age than for the general population in Canada (i.e., 55 years).**[4-6]

> First Nations, Inuit, and Métis Peoples and organizations have also noted the need to prioritize consistent and predictable funding for Indigenous-led home and community health service infrastructures and to potentially make these services available at a younger age than for the general population in Canada (i.e., 55 years).

- **Informed by engagement with citizens of Métis Nations, Métis Nation noted the need to prioritize barrier-free primary health and specialist care by incorporating a lens of intersectionality to designing and delivering services.**[6] It also recommended tailoring services to meet the unique needs of Elders, people living in rural communities, men, women, gender diverse people, and members of the 2SLGBTQ+ community.[6]
- **First Nations, Inuit, and Métis organizations and Peoples have recommended increasing access to health care providers in their communities.**[4-6] They have emphasized that these providers should have training to deliver culturally safe and trauma-informed services grounded in an understanding of Indigenous SDH.[4-6,76] To enhance health systems navigation, First Nations, Inuit, and Métis organizations and Peoples have also recommended these providers include care navigators, care coordinators, medical escorts, and medical translators.[4-6]
- **First Nations, Inuit, and Métis organizations and Elders have proposed priorities and recommendations to address access challenges related to siloed and fragmented services.**[4-6] Reporting on the perspectives of First Nations Peoples, the Assembly of First Nations (AFN), for example, recommended establishing coordinated partnerships between First Nations communities, organizations, and governments and federal, provincial, and territory service delivery partners.[4] They also proposed creating policies and legislation outlining the care required for First Nations people living on and off reserve.[4] Following engagement with citizens of Métis Nations, the Métis Nation recommended that their communities are involved in the co-development of integrated services to address their health needs through collaborative relationships with federal and provincial jurisdictions, First Nations, and postsecondary institutions.[6] Inuit Elders similarly noted the need to establish organizational supports that allow Elders better access to available programs, services, and benefits.[5]
- **The AFN (reporting on the perspectives First Nations Peoples) and Inuit Elders have recommended enhancing resources aimed at educating and supporting informal caregivers.**[4,5] Of note, First Nations Peoples may prefer care delivered by family caregivers.[4]
- **To alleviate financial barriers to access, First Nations, Inuit, and Métis organizations and Elders have also recommended enhancing health benefits to support older adults, Elders, and their caregivers in obtaining care not currently funded through private or public insurance.**[4,6,82]

First Nations, Inuit, and Métis organizations and Peoples have recommended increasing access to health care providers in their communities. They have emphasized that these providers should have training to deliver culturally safe and trauma-informed services grounded in an understanding of Indigenous SDH.

- **Enhance Indigenous older adults' and Elder's social connections and belonging:** As previously detailed, connection to community, family, and kinship are essential to the holistic well-being of Indigenous Peoples.[4-7] Such connections protect older adults and Elders from loneliness while offering them practical and emotional support for maintaining wellness.[4]
  - Reporting on the perspectives of First Nations Peoples, the AFN recommended that planning and care for aging well should "harmoniz[e] protective factors" for older adults, Elders, and people with disabilities, chronic conditions, and life-limiting conditions.[4] These protective factors include ensuring these people have social support from their families and communities, are respected, and have access to social events where they feel safe, welcome, and included.[4]
  - Inuit Elders noted the need for Elders to be protected from dangerous social situations characterized by abuse.[5] They emphasized the need to prioritize protection and support services for those experiencing abuse and the need to increase public awareness that Elder abuse is against the laws of Nunavut and *Maligangit*.[5]
- **Prioritize built environments that support wellness:** First Nations, Inuit, and Métis organizations and communities have emphasized the need to prioritize creating and maintaining built environments that allow older adults and Elders to maintain their holistic well-being.[4,5,87]
  - Inuit Elders living in Nunavut emphasized the need to prioritize providing adequate and appropriate housing for Elders so they can choose where to live and with who.[5] They noted this housing should be accessible (i.e., with ramps and minimal stairs) and designed specifically for Elders.[5] They also emphasized prioritizing increased access to safe transportation and improved road conditions.[5] Additionally, they noted the need for safe and accessible spaces in the community for Elders go to socialize and, if necessary, to seek refuge from abuse within the home.[5] They also desired designated gathering places to use for social events and intergenerational engagement.[5]
  - Following engagement with citizens of Métis Nations, Métis Nation recommended creating a series of "multi-purpose, multi-functional, family-centered Métis Comprehensive Community Health Centres" to address the wellness needs of Métis communities.[6] While reporting on the perspectives of First Nations Peoples, the AFN also recommended expanding health centre infrastructure for First Nations within or in close proximity to First Nations communities and in urban locations (i.e., to serve First Nations who do not live on reserve).[4]

> Connection to community, family, and kinship protect older adults and Elders from loneliness while offering them practical and emotional support for maintaining wellness.

> First Nations, Inuit, and Métis organizations and communities have emphasized the need to prioritize creating and maintaining built environments that allow older adults and Elders to maintain their holistic well-being.

What Does the Evidence Say Regarding the Effectiveness of Initiatives?

The following section outlines examples of strategies and initiatives that exist to help enable aging in place. This is not a comprehensive examination of all initiatives. Rather, to narrow our focus, the included SR evidence comes from literature related to 12 initiative types, or categories, that were outlined by the National Institute on Ageing.[10] These 12 initiative types correspond to, and are presented in line with, the hinderances to aging in place discussed earlier in this report, which are:

- difficulties preventing and managing health conditions
- challenges related to social isolation
- challenges related to housing and the built environment.

These 12 types of initiatives include chronic disease prevention and management, dementia prevention and support, falls prevention, home oxygen, at-home care and support services, at-home palliative care, reablement, support for unpaid caregivers, social isolation and loneliness, housing, assistive devices and home modifications, and transportation. We also included the strategies and initiatives that combined 2 or more types of interventions across the 3 different category types. The included literature also aligns with the International Consortium for Health Outcomes Measurement's priority patient-centred outcomes previously discussed.

> Twelve types of initiative categories were identified from the literature.

Table 2 presents a summary of initiatives and their associated favourable findings organized by the hinderances to aging in place. We defined favourable findings as those that indicated better effectiveness of an intervention versus a comparator, or had a beneficial effect on outcomes. We did not find any literature about home oxygen and transportation initiatives that met our inclusion criteria. A more detailed description of these findings is presented after these tables, including information about when interventions were not effective or had negative effects. Additional information (i.e., effect sizes for meta-analyses) can be found in the Supporting Information document.

Table 2

Summary of Initiatives and Associated Favourable Findings

Initiative category	Initiative name	Main findings
Difficulties preventing and managing health conditions		
Chronic disease prevention and management	Telemonitoring	Improved self-care behaviours
	Community-based interventions	Associated with decreased emergency department attendance
Dementia prevention and support	Personally tailored activities	Reduced challenging behaviour, may slightly improve quality of life and caregiver distress
Falls prevention	Multifactorial interventions	Reduced falls
At-home care and support services	Home meal delivery service	Better nutritional intake (e.g., related to malnutrition, frailty)
At-home palliative care	Home-based end-of-life care	Increased likelihood of dying at home; may slightly improve patient satisfaction after 1 month
Reablement	Home exercise and multicomponent home-based rehabilitation	Improved muscle strength, gait speed, quality of life, mobility, balance, and activities of daily living
Support for unpaid caregivers	Empowerment interventions	Improved effects on caregiver burden, physical well-being, psychological well-being, confidence in providing caregiving, caregiver-care receiver relationship, social support, caregiving situation
	Nonprofessional interventions for caregivers of older adults with dementia	Psychosocial, psychoeducational, social support, and multicomponent interventions were associated with positive outcomes
Challenges related to social isolation		
Social isolation and loneliness	Group-based treatment and internet training	Reduced loneliness
Challenges related to housing and the built environment		
Housing	Home sharing	Provided companionship and support
Assistive devices and home modifications	Multicomponent home modification models that use an occupational therapist	Occupational therapist–led multicomponent models that used 2 or more domains were most likely to show positive effects on patient functional status
Interventions spanning multiple categories		
Community-based complex interventions	Individualized care planning with medication optimization and follow-up	Maintained independence

Preventing and Managing Health Conditions and Injuries in the Home or Community

Chronic Disease Prevention and Management

Because of the broad nature of chronic disease prevention and management, we included 2 SRs for this category. Specifically, we identified 1 SR that examined telemonitoring interventions and another that examined community-based interventions. The findings of these reviews are presented in the following.

Review #1

The National Institute on Ageing identified remote care and monitoring as an area that showed promise with helping older adults self-manage their chronic conditions in the home and community.[10] We identified 1 narrative SR that examined the effectiveness of remote care and monitoring of biometric and outcomes data.[136] Self-care behaviours were measured using 1 of 2 validated instruments. In this study, authors use the term *telemonitoring* to describe the intervention.

About Telemonitoring

The telemonitoring interventions included in this review fell into 3 categories: telephone or videoconference support, interactive telemonitoring devices with physiological data collection, and interactive telemonitoring devices without physiological data collection.[136]

Outcomes Examined

Self-care behaviours were examined as the outcomes of interest.[136]

Findings

Overall, telemonitoring improved self-care behaviours among community-living older adults with heart failure. These findings persisted for both of the validated instruments used.[136] It is unclear how long these effects last.[136]

Considerations

- These findings are based on moderate certainty evidence.[136]
- These findings are applicable to older adults with heart failure who are living in the community.[136]

Review #2

Holistic approaches to care for older adults with chronic conditions have been identified as important for navigating health care services and managing health conditions. We identified 1 narrative SR that investigated the impacts of different community-based interventions on unplanned health care use.[137]

About the Community-Based Interventions

The community-based interventions investigated in this review took place either in a primary health care setting or in the community and involved holistic management for the patient.[137] Generally, interventions took the form of integrated care plans, care coordination, advance care planning, and palliative care.[137] Most community interventions were multifaceted and emphasized education, self-monitoring of symptoms, and regular follow-ups.[137]

Outcome Examined

Unplanned health care usage was examined as the outcome of interest.[137]

Findings

- Overall, community-based interventions are associated with a decrease in emergency department visits.[137]
- Of the studies that reported statistically significant decreases in emergency department attendance, the types of interventions associated with the decreases were classified as integrated care plans and advance care planning.[137]
- To meet the needs of the patients, the interventions were personalized and included the patient in the development of the approach.[137]
- A multidisciplinary team of health care providers was a common component among all but 1 of the integrated care plans.[137]

Considerations

- The risk of bias among most of the included primary studies was low. They ranged in quality from poor (2 studies) to fair (8 studies) to good (3 studies).[137]
- The findings are applicable to older adults with at least 2 coexisting chronic conditions who are living in the community.[137]

Dementia Prevention and Support

We identified 1 SR with meta-analysis that investigated the effects of personally tailored activities on psychosocial outcomes compared to other types of psychosocial interventions, placebo interventions (e.g., nonspecific personal attention), and usual or optimized usual care.[138]

About Personally Tailored Activities

Personally tailored activities are activities that have been developed to a person's individual interests and preferences. The precise activities offered can vary and are based on the interests, preferences, and capabilities of the participants.[138]

Outcomes Examined

- **For the person living with dementia,** challenging behaviour, quality of life, depression, and affect were examined as the outcomes of interest.[138]
- **For unpaid caregivers,** depression, burden, and quality of life were examined as the outcomes of interest.[138]

Findings

- Personally tailored activities may reduce challenging behaviours for people living with dementia.[138]
- Personally tailored activities may slightly improve the quality of life of people living with dementia.[138]
- Personally tailored activities may slightly improve distress in caregivers of people living with dementia.[138]
- Offering personally tailored activities to people living with dementia made little to no difference on depression and affect of people living with dementia.138 There was also little to no difference on caregiver depression, caregiver burden, and caregiver quality of life.[138]

Considerations

- The findings for all of the previously reported outcomes were based on low certainty evidence.[138]
- The findings are applicable to older adults with mild to moderate dementia who are living in their own homes, as well as to their unpaid caregivers.[138]

Falls Prevention

A significant number of older adults experience falls each year, and fear of falling is a common concern among this population.[139] We identified 1 SR with meta-analysis that examined the effectiveness of multifactorial falls prevention interventions compared to usual care among older adults living in the community.[139] The review also compared the effectiveness of these interventions among subgroups that differed in terms of their degree of fall risk, the intensity of the intervention, and other components of interventions.[139]

About the Multifactorial Fall Prevention Interventions

Fall prevention interventions are typically designed to address risk factors for falls.[139] The components included in multifactorial interventions in this review were exercise, education, environmental modification, medication, mobility aids, and vision and psychological management.[139] The intensity of the intervention was classified as either active or referral.[139] Active interventions assessed risk factors and resolved fall-related problems. Referral interventions provided referral to other services or information.[139]

Outcomes Examined

Fall rates and number of people experiencing falls were examined as the outcomes of interest.[139]

Findings

- Overall, multifactorial falls prevention interventions reduced falls rates and the number of people experiencing falls.[139]
- Subgroup findings:
  - Fall rates were significantly reduced among adults who were considered either high risk or healthy. There was no significant difference in fall rates for the group considered frail.[139]
  - The number of people experiencing falls was significantly lower among the healthy group but not the high-risk group.[139]
  - Active interventions were associated with significantly lower fall rates and number of people experiencing falls, whereas referral interventions were not.[139]
  - Interventions with an exercise component were associated with significantly lower fall rates and number of people experiencing falls, whereas interventions without an exercise component were not.[139]
  - Interventions that included environmental modifications were associated with significantly lower fall rates and number of people experiencing falls, whereas interventions without environmental modifications were not.[139]

Considerations

- Many of the primary studies had unclear allocation concealment and were therefore at risk of selection bias.[139] Additionally, only 3 studies blinded participants to the intervention. However, because of the nature of the intervention, blinding was often not feasible.[139]
- The findings are applicable to older adults who are living in the community and are either at high risk for falls or not at high risk for falls.

At-Home Care and Support Services

At-home care and support services can come in many different forms, 1 of which is home meal delivery services. Home meal delivery services may help decrease malnutrition, which can worsen health conditions, frailty, and disability.[140] Additionally, the National Institute on Ageing noted home meal delivery services as common interventions used in Canada.[10] We identified 1 narrative SR that investigated the effects of home-delivered meal services compared to no home-delivered meal service for older adults.[140]

About Home-Delivered Meal Services

Home-delivered meal services provide ready-made meals to a home or to a congregate setting (e.g., seniors centres) for older adults who require nutritional support.[140]

Outcome Examined

Nutritional intake was examined as the outcome of interest.[140]

Findings

- The results of this review suggested that home-delivered meal services were associated with better nutritional intake in older adults living in the community.[140]
- Studies reported improvements in dietary intake of energy, protein, and some micronutrients.[140]
- Overall, these results suggest that home-delivered meal services can help decrease the risk of malnutrition and its associated conditions.[140]

Considerations

- Most of the included primary studies were assessed as having a neutral overall quality rating.[140] One study received a positive overall quality rating and one received a negative overall quality rating.[140]
- The findings are applicable to older adults who are living at home.[140]

At-Home Palliative Care

We identified 1 SR with meta-analysis that investigated home-based end-of-life care programs compared to a combination of services that included nonspecialized home care, acute inpatient care, primary care services, and hospice care.[141] While end-of-life care is not synonymous with palliative care, it is 1 component of it.

About Home-Based End-of-Life Care

Home-based end-of-life care entails active and continuous treatment by health care professionals in the patient's home when they would otherwise require inpatient care (i.e., in hospice or hospital).[141]

Outcomes Examined

Place of death, unplanned admission to hospital, time spent in hospital, participant health outcomes, patient satisfaction, caregiver outcomes, staff views on the provision of services, health service resource use, and costs were examined as the outcomes of interest.[141]

Findings

- Home-based end-of-life care increased the likelihood of dying at home.[141]
- Home-based end-of-life care may slightly improve patient satisfaction after 1 month.[141]
- Some studies indicated a relative increased risk of hospital admission while others indicated a relative reduction in risk of hospital admission.[141]
- The effects on participant outcomes, including control of symptoms, caregiver outcomes, staff views on the provision of services, and health service resource use and cost, were inconclusive because of imprecision, indirectness, and inconsistency in the primary studies.[141]

Considerations

- The findings for dying at home were based on high certainty evidence.[141] The findings for patient satisfaction and unplanned admission to hospital were based on low certainty evidence.[141] The findings for all other outcomes were based on very low certainty evidence.[141]
- The findings are applicable to older adults who were referred to end-of-life care.[141]

Reablement

Reablement refers to initiatives that help people regain and maximize their function and independence.[142] Physical rehabilitation is 1 aspect of reablement.[143] We identified 1 SR with meta-analysis that investigated the effects of multicomponent home-based rehabilitation and home exercise compared with in-hospital rehabilitation, active control, or usual care in older adults who had hip fracture surgery.[143]

About Multicomponent Home-Based Rehabilitation and Home Exercise

Multicomponent home-based rehabilitation interventions are those that incorporate exercise, education, and environmental modifications. Home exercise interventions are those that include exercise components only.[143] The purpose of both types of interventions are to help individuals regain functional independence.[143]

Outcomes Examined

Muscle strength, balance, mobility, daily activity, fall efficacy, and quality of life were examined as the outcomes of interest.[143]

Findings

- Both multicomponent home-based rehabilitation and home exercises favourably affected muscle strength, gait speed, quality of life, mobility, daily activity, and balance among older adults who underwent hip fracture surgery.[143]
- There was no significant difference in physical function between multicomponent home-based rehabilitation and in-hospital rehabilitation, indicating that multicomponent home-based rehabilitation is a comparable strategy to in-hospital care.[143]

- There was no significant difference in mobility measures between multicomponent home-based rehabilitation and active control, which may point to the importance of compliance with an intervention. Compliance was similar in the active control and multicomponent groups, but not in the usual group.[143]

Considerations

- Six primary studies included in this review were at risk of selection bias because of unclear allocation concealment and 2 primary studies reported incomplete outcomes data.[143]
- The findings are applicable to older adults who have undergone surgery for hip fracture.[143]

Support for Unpaid Caregivers

Review #1

We identified 1 SR that narratively synthesized the effects of empowerment-oriented interventions for informal caregivers of older adults who need care and are living at home.[144] These interventions were compared to waitlists, care as usual, provision of funds for respite care, or no treatment.[144]

About Empowerment-Oriented Interventions

Empowerment-oriented interventions are those that aim to enhance the caregiver's control of mind and body, improve proactive care and caregiving capabilities, and equip them with skills to encourage care receivers' independence and build relationships.[144]

Outcomes Examined

Caregiver burden, physical well-being, psychological well-being, confidence in providing caregiving, caregiver-care receiver relationship, social support, and caregiving situation were examined as the outcomes of interest.[144]

Findings

- Overall, the effectiveness of empowerment interventions were mixed as they were associated with both positive and neutral effects across all outcomes.[144]
- None of the empowerment interventions were associated with negative outcomes.[144]

Considerations

- The included primary studies ranged in quality. Three studies were based on very low-quality evidence, 5 on low-quality evidence, 1 on moderate-quality evidence, and 4 on good-quality evidence.
- The findings are applicable to unpaid caregivers of older adults living at home and without a specific diagnosis.[144] Half of the caregivers were at risk for adverse health outcomes.[144]

Review #2

We also identified 1 rapid review of SRs that examined the effects of several categories of interventions for informal caregivers.[145] The interventions were categorized into psychosocial, key workers, technology-based, multicomponent, case management or care coordination, psychoeducational, and exercise and health promotion.

About the Intervention Categories

- Psychosocial interventions consisted of support groups, role play, counselling, stress and mood management, cognitive behavioural therapy, general social support, befriending, peer support, and respite.[145]
- Key workers consisted of admiral nurses, coaches, professionals, and volunteers.[145]
- Technology-based interventions consisted of any type of intervention administered electronically, by telephone, through e-health, or by computer.[145]
- Psychoeducational interventions consisted of providing people with information (e.g., about their personal needs, care recipient needs) and social skills training.[145]
- Exercise and health promotion consisted of complementary and alternative medicine therapy, healing touch (e.g., registered massage therapist), yoga, meditation, aerobics, strength, balance, and occupational therapy.[145]
- Multicomponent interventions consisted of using more than 1 form of intervention together.[145]
- Case management and care coordination focused on organization, facilitation, and planning to offer services and meet patient needs.[145]

Outcomes Examined

Caregiver burden, depression and anxiety, social outcomes, knowledge and skills, health and well-being, quality of life, and health care services utilization were examined as the outcomes of interest.[145]

Findings

- Psychosocial, psychoeducational, social support, and multicomponent interventions were those most consistently associated with positive outcomes.[145]
  - **Psychosocial interventions** were positively associated with increased health and well-being, social outcomes, quality of life, and health care utilization.[145]
  - **Psychoeducational interventions** positively impacted burden, depression and anxiety, health and well-being, knowledge and skills, and health care utilization.[145]
  - **Social support interventions** positively impacted depression and anxiety, health and well-being, knowledge and skills, quality of life, and health care utilization.[145]
  - **Multicomponent interventions** that were tailored to the needs of individual caregivers were most often identified as having positive impacts. Multicomponent interventions should include characteristics of psychosocial, psychoeducational, and social support interventions.[145]

Considerations

- The findings were based on a rapid review and therefore may not be comprehensive or may be missing relevant studies.[145]
- The findings are applicable to unpaid caregivers of older persons living with dementia.[145]

Social Isolation and Loneliness

Social Isolation and Loneliness

We identified 1 narrative SR that examined a variety of initiatives to reduce loneliness among older adults living in the community.[146]

About the Types of Interventions

The initiatives to reduce loneliness examined in this study were broadly categorized into group-based interventions, individual interventions, training on internet use, and miscellaneous (i.e., those that did not fit into any other established category).[146] Group-based interventions were further subdivided into group-based treatments, group activities, and group exercise.[146] Individual interventions were further subdivided into in-person administration, telephone administration, and internet administration.[146]

Outcomes Examined

Loneliness was examined as the outcome of interest.[146]

Findings

- Out of all the interventions examined, the authors found that group-based treatments and internet training were most likely to be associated with a reduction in loneliness:[146]
  - **Group-based treatment:** The shared characteristics of these initiatives included that they brought together small groups of participants for regular group sessions, typically 2 to 4 months in duration, and the sessions were led by a trained moderator.[146]
  - **Internet training:** The older studies focused on training participants in basic computer skills, internet use, and email competency, while the more recent studies focused on training participants in the use of social media, photographs, and video chat applications.[146]
- Group-based exercises have also slightly reduced loneliness. Examples included tai chi, "structured supervised exercise programs," personalized plans and group sessions to sustain these plans, aerobic exercises, and stretching and toning.[146]
- There was insufficient evidence to draw conclusions about the other categories of initiatives examined because of very low certainty in the evidence.[146]

Considerations

- The findings for group-based treatment and internet training were based on moderate certainty evidence.[146] The findings for group-based exercise therapy were based on low certainty evidence.[146]
- The findings are applicable to older adults living in the community in high income countries, some of whom were at increased risk of loneliness.[146]

Housing and the Built Environment

Housing

We did not identify any SRs focused on housing that met our inclusion criteria. In the absence of an SR, we included 1 scoping review that examined the impact of home sharing on older adults.[147]

About Home Sharing

Home sharing is an exchange-based housing model in which a home provider, often an older adult, shares a spare room in their home with a home seeker in exchange for money, service provision, or a combination of the 2.[147] This model is often intergenerational in nature, in which the home seekers are younger adults, such as students.[147] All home sharing programs in this study were agency-assisted, meaning that an organization facilitated the home sharing process.[147]

Themes Identified

- Benefits of participating in home share for older adults[147]
- Challenges of participating in home share for older adults[147]
- The key role of agency facilitation[147]

Findings

- The benefits of home sharing were associated with both companionship and receiving support in daily tasks.[147] The outcomes related to companionship included greater connection, improved quality of life, feeling safer, eating better, and having more social activities.[147] The outcomes related to receiving support in daily tasks included help with accomplishing personal care activities and tasks of daily living (e.g., household chores) and enhanced independence.[147]
- The challenges with home sharing that older adults faced included navigating personal boundaries regarding shared time and space, interpersonal relationships, and discomfort with the unfamiliar.[147]
- The involvement of a third-party agency helped ensure a positive home sharing experience for older adults.[147] The arrangement helped with facilitation, mediation, and conflict resolution, and was viewed as more trustworthy.[147]

Considerations

- The findings of this scoping review were based on a content analysis by the study authors.[147] Because of the study design, the included studies were not assessed for risk of bias and we are unable comment on the certainty of evidence.[147]
- The findings are applicable to older adults who participated in home sharing programs as the home provider.[147]

Assistive Devices and Home Modifications

The National Institute on Ageing noted that home modifications can improve accessibility in the home, which can support aging in place.[10] We identified 1 narrative SR that examined the effects of single-component and multicomponent home modification models that incorporate occupational therapist (OT) practice compared to usual care, attention control, non-OT–led interventions, and delayed treatment.[148]

About OT-Led Home Modification Models

Single-component models of home modifications included environmental modifications only.[148] Multicomponent models of home modifications included environmental modifications plus 1 or more additional interventions in the categories of clinical, physical activity, behavioural, and social.[148]

Outcomes Examined

The effectiveness of interventions based on improvement was examined as the outcome of interest in the primary studies.[148] The primary studies examined a broad range of outcomes related to patient functional status.[148]

Intervention effects were categorized as:

- Positive: all outcomes improved[148]
- Mixed positive: more than half of outcomes improved[148]

- Mixed effects: on average, the outcomes did not improve[148]
- Mixed negative: more than half of the outcomes did not improve[148]
- Negative: no outcomes improved[148]

Findings

- OT-led multicomponent home modification models were more likely to show positive effects on outcomes related to patient functional status than single-component interventions.[148]
- Multicomponent interventions that incorporated 2 or more domains in addition to environmental modifications were more likely to show positive effects than multicomponent interventions and included only 1 additional domain.[148]

Considerations

- The primary studies in this review were rated as having a high risk of bias because of a lack of blinding; however, because of the nature of this intervention, blinding is unlikely to be feasible.[148]
- The findings are applicable to older adults living in the community.[148]

Interventions Spanning Multiple Categories

We identified 1 SR with network meta-analysis that examined community-based complex interventions compared to usual care, placebo, or another complex interventions to sustain independence in older adults living at home.[149] This study did not focus on any single 1 of the 12 specific categories established by the National Institute on Ageing, but rather applied to multiple categories. As a result, we have included it as its own category.

About Community-Based Complex Interventions

Community-based complex interventions in this study were initiated and primarily provided in the community, included 2 or more interacting components (i.e., intervention practices, structural elements, and contextual factors), were targeted at the individual person with provision of appropriate specialist care, and focused on maintaining or improving a person's independence.[149]

Outcomes Examined

- **The main outcomes** examined were living at home, ADLs and IADLs, care home placement, and service and economic outcomes at 12 months.[149]
- **The additional outcomes** examined were health status, depression, loneliness, falls, and mortality.[149]

Findings

- Out of all of the interventions examined, the 1 that is most likely to sustain independence among older adults is multifactorial action from individualized care planning that includes medication optimization and regular follow-ups.[149] Individuals receiving home care may find this intervention especially beneficial.[149]
- Other interventions that may, to a lesser extent, result in an **increased** chance of living at home:[149]
  - multifactorial action with medication review[149]
  - cognitive training, medication review, nutrition, and exercise[149]
  - ADL training, nutrition, and exercise.[149]

- Interventions that may result in a **reduced** chance of living at home:[149]
  - risk screening[149]
  - education and multifactorial action and review with medication review[149]
  - education and multifactorial action and review with self-management strategies.[149]

Considerations

- The findings for multifactorial action from individualized care planning, including medication optimization and regular follow-ups, is based on moderate certainty evidence.[149] The findings for other interventions that may result an increased chance of living at home are based on low certainty evidence.[149] The findings for interventions that may result in a reduced chance of living at home are based on low certainty evidence.[149]
- The findings are applicable to older adults who were living at home upon study entry.[149]

What Are the Economic Impacts and Considerations of These Initiatives?

The following section outlines economic considerations related to strategies and initiatives that exist to help enable aging in place. This is not a comprehensive examination of all initiatives; rather, the included evidence comes from reviewing findings related to the 12 initiative types explored in the former section.

We searched for review articles relating to all initiative categories of interest. No articles reporting economic outcomes were identified in our search related to the following categories: support for unpaid caregivers, at-home palliative care, assistive devices and home modifications, home oxygen, housing, and transportation. For the categories that we identified economic evidence, the specific interventions within the categories that were identified did not directly align with those summarized in the clinical effectiveness review.

The information presented subsequently reflects what was available and reported in the identified reviews. Neither the review articles, nor the primary studies identified by the reviews, were assessed for risk of bias, quality, or generalizability to the context in Canada. Additional details about the review articles and included primary studies are available in the Supporting Information document.

Preventing and Managing Health Conditions and Injuries in the Home or Community

Chronic Disease Prevention and Management

We identified 1 SR that examined economic evaluations of deprescribing interventions among older adults living in the community in 14 primary studies.[150] The primary studies included economic evaluations of medication reviews with or without a supportive educational component in multiple clinical settings (e.g., community pharmacies, patients' homes, primary care and/or outpatient clinics).

Findings:

- The main outcomes included changes in patient falls and associated health care costs, quality of life, hospital admissions, and emergency department visits.

- Two studies included outcomes related to institutional care, including rehabilitation centres and LTC facilities.
- Two primary economic evaluations were conducted in Canada (1 focused on deprescribing sedatives and 1 on nonsteroidal anti-inflammatory drugs) and both included costs associated with pharmacist intervention, medications, physician visits, emergency department visits, and hospital admissions.[151,152] Both economic evaluations reported that deprescribing initiatives were associated with lower costs to the health care payer and improved health outcomes for patients. The average per person cost savings predicted by these studies were approximately $850 and $1,150 over a 1-year time horizon, and the estimated health gains were 0.108 and 0.077 quality-adjusted life-years.

Dementia Prevention and Support

We identified an SR that included 45 economic evaluations for which the direct outcome of evaluated initiatives was a modifiable risk factor for dementia.[153] The included initiatives targeted the following modifiable risk factors: smoking, education, physical inactivity, obesity, air pollution, and traumatic brain injury. The interventions that were evaluated included modifying the physical and/or food environment, mass media programs, increased financial supports, and legislative change.

Findings:

- Across a diverse range of risk factors for dementia, intervention costs fell both within and outside of health spending budgets (e.g., some intervention costs may be borne by other budgets, including education).
- Interventions aimed at smoking, educational attainment, and physical activity appeared to offer the best value. Economic outcomes were reported as cost-effectiveness ratios, cost savings, and returns on investment in multiple different currencies and populations, which makes it difficult to present number values that are directly relevant to the context in Canada.

We identified a second SR that evaluated the excess costs of dementia and included 22 primary studies.[154] In this study, costs were measured in multiple settings (i.e., in the community, in residential care, or a mix of both) and at multiple time points (i.e., time of diagnosis, time between diagnosis and death, and time before death).

Findings:

- The health care costs that were considered in the identified studies included those related to inpatient care, outpatient care, emergency department visits, medications, LTC facilities, and professional home care.
- Overall, based on studies from different settings and jurisdictions, the excess total costs of dementia in the time period between diagnosis and death were 119% higher for those with dementia than those without. The largest differences in costs for those with dementia were associated with professional home care, informal care, and nursing facilities.
- The results of this study noted a lack of data on the costs of informal care, suggesting that the true excess costs of dementia for society are likely greater than direct health care costs alone.

Falls Prevention

We identified an SR that included 46 primary studies on community-based falls prevention economic evaluations.[155] The interventions included in the economic evaluations were community-based home assessment and modification, vitamin D supplementation, falls risk screening, medication review, and exercise programs.

Findings:

- The costs of falls that were considered in economic evaluations included ambulatory care, emergency department visits, hospitalization, rehabilitation, social care, and fall-induced LTC facility admissions. Some studies noted the difficulty of estimating the costs of LTC admissions because of the need to identify admissions that were specifically attributable to falls, which may not be reported.
- Many identified primary studies considered costs from a societal perspective (i.e., estimated costs for all of society, including patient costs) in addition to direct costs to a health care payer.
- Approximately half of the identified economic evaluations considered the possibility of recurrent falls and the subsequent compounding long-term impact on health and functional decline.
- In 2 primary studies using data from Canada, the cost-effectiveness of several initiatives were assessed: fracture risk screening, physical activity, vitamin D and calcium supplementation, osteoporosis screening, home assessment medication, medication modification, and the use of gait stabilizers.[156,157] The results of these 2 studies both found generally favourable economic outcomes associated with the interventions when compared to usual care. The majority were found to be dominant compared to usual care, suggesting that they provide greater health gains at a lower cost to the health care payer. Additional details are presented in the Supporting Information document.
- Based on the review of the economic evaluations, the authors recommended future work to evaluate the initiatives' impact on social inequalities to consider the strength of the decision-maker's willingness to promote health equity through methods such as distributional cost-effectiveness analyses.

At-Home Care and Support Services

We identified an SR that assessed the impact of a home care provider mix (i.e., formal and informal care providers), with a focus on care recipient benefits as reported in 65 primary studies.[158]

Findings:

- Health care costs were typically defined in the included studies as the care recipient's total costs over a set period of time. The cost categories included those related to hospitalization, medication, LTC institutionalization, emergency department visits, and doctor visits.
- The findings of the included studies indicated that combining formal and informal care generally led to improved outcomes for care recipients — both when informal care was added to formal care and when formal care was added when informal care in the home was already present.
- The care recipients' costs varied greatly across studies, though notably, this study did not assess the costs to informal care providers (e.g., family members) and so may not fully capture the economic implications of a care provider mix.

An additional SR was identified that examined the cost-effectiveness outcomes of enhanced home care interventions for older adults living in the community.[159] This SR included 17 primary studies that evaluated alternative nursing care, interdisciplinary care coordination, falls prevention, telemedicine, and reablement care.

Findings:

- The most promising cost-effectiveness results were found for home care related to alternative nursing care (such as health promotion and preventive care) because of improved quality of life and reduced costs related to avoided hospitalization and outpatient care visits.
- The SR identified 4 primary studies conducted using data from Canada published between 2003 and 2017.[160-163] In 1 study (2003), standard case management plus regular in-home or telephone contact by a registered nurse for older adults who were frail and living in the community were associated with annual cost savings of more than $200,000 for every 100 home care clients compared to usual care.[163] Additional details about these studies are available in the Supporting Information document.

Reablement

We identified an SR that included 3 primary studies on the cost-effectiveness of physical rehabilitation of older adults living in the community following hip fractures.[164] The 3 initiatives that were evaluated in the included studies were a home-based exercise program in combination with dietary strategies, a home-based rehabilitation program, and the initiation of rehabilitation on a specialized geriatric ward before discharge.

Findings:

- All 3 included economic evaluations considered costs from the health care payer perspective and measured outcomes over 1 year or less.
- The findings of these studies were mixed. One study conducted in Australia estimated a small increase in health gains for a small incremental cost and may be considered cost-effective at commonly used willingness-to-pay thresholds.[165] The 2 studies conducted in Norway found that a home-based rehabilitation program that began 4 months after surgery was associated with no change in health outcomes at an additional cost,[166] and the other found that comprehensive geriatric care following hip fracture before hospital discharge was associated with cost savings and an improvement in health outcomes compared to usual care.[167]

Social Isolation and Loneliness

Social Isolation and Loneliness

We identified 1 scoping review that included 9 primary studies that assessed robotic pets for older adults and/or people with dementia to help improve social connection.[168]

Findings:

- Issues of affordability and equitable access to robotic pets were raised in several of the primary studies.
- No other economic outcomes were reported in the identified studies.

What Equity and Ethical Considerations Should Be Considered?

It is important to keep in mind the following points when considering the results of this evidence review:

- Notably absent from the literature is the discussion of diverse groups and how equity-deserving groups may relate to these initiatives. Overall, the included literature lacked explicit reporting around characteristics such as race and ethnicity, sex and gender identity, sexual orientation, socioeconomic status, newcomer status, culture, language, place of residence (i.e., urban, rural, remote), religion, and education. The included literature also did not report on the experiences of initiatives specific to Indigenous Peoples. The only characteristic that was occasionally reported in the included literature was the sex or gender of the individuals taking part in an initiative; however, this characteristic was poorly defined. The studies typically reported only the percentage of participants who were female or who were women, implying that gender was defined as a binary characteristic. Information about whether participants were asked to self-identify their gender was not provided.
- One review related to caregiving and caregiver burden did note that most caregivers included in the study were women taking care of an older family member.[144] This suggests that caregiver burden and responsibilities tend to be disproportionately assigned to women and that women may be at higher risk of experiencing adverse effects of caregiving. This may impact opportunities to meet their own personal care, social, and financial goals. Initiatives to reduce or address caregiver burden should include input from women when they are being developed or implemented.
- The overall lack of information about equity characteristics can lead to gaps in understanding about how equity-deserving groups may differentially interact with, benefit from, or be disadvantaged by, these initiatives. It is possible that the primary studies included in these reviews provided more details around equity characteristics, but they were not captured or described in the SR literature we included. Future work to examine initiatives that stratify results by various equity characteristics would help provide greater context about why and for whom these initiatives are effective, as well as where barriers exist.
- The overarching intent of initiatives related to aging in place, generally, is to help sustain independence among older adults. As such, initiatives typically intend to support the values and principles of autonomy and dignity. However, respect for autonomy and dignity must also be embedded in the creation and implementation of these initiatives. Creating initiatives *with* older adults, rather than *for* them, may help both promote their autonomy and dignity and help older adults and their caregivers derive the greatest benefit from the initiatives.

> One review related to caregiving and caregiver burden noted that most caregivers included in the study were women taking care of an older family member.

- As the development and use of technologies to assist with aging in place grows, it is important to be mindful of some of the ethical implications that these technologies might have. Digital technologies and smart devices can result in ethical concerns related to privacy, trust, ageism, and stigma, and these considerations may have disproportionate effects on some older adults over others. Older adults should be engaged as active participants in the implementation of these technologies and should be enabled to participate in them where these would be of benefit. Increasing transparency, data protection, and strategies to promote equitable digital literacy and uptake among older adults could help improve outcomes and trust.
- Considerations around consent to participating in initiatives are also important for older adults. The autonomy of people receiving care or participating in initiatives should be upheld through informed consent processes. While their autonomy can be understood as being embedded within multiple social, political, economic, and historical spheres, older adults who are able to consent should not have care or participation decisions made on their behalf or experience coercion to participate (e.g., through family members or care providers).These considerations may be particularly important for individuals living with dementia (or similar neurocognitive disorders), who may more heavily rely on caregivers to assist in decision-making. While these individuals may experience some limits to their autonomy or agency, their care and participation decisions should be aligned with their prior wishes or interests.

> It is important to be mindful of some of the ethical implications related to technologies that assist with aging in place and considerations around consent.

What Do These Findings Mean?

Outcomes

Ideally, implementation of initiatives to address the unmet needs being faced by older adults living in Canada would include the measurement of an established set of indicators to support ongoing decision-making, quality improvement, and positive impact on patient-centred priority outcomes.

Effective interventions and care initiatives are needed to improve overall survival, manage symptoms, maintain function, and enhance quality of life and death. This involves supporting autonomy and control, emotional health, and daily activities; preventing and managing frailty, polypharmacy, falls, pain, loneliness, and isolation; reducing the length of hospital stays; and helping older adults remain at home. Effective interventions or care models should also aim to reduce caregiver burden and encourage active participation and decision-making in health care. We recognize that individuals' values and preferences or personal outcome goals vary among older adults with multiple chronic conditions,[169] and also play a significant role in individual decision-making processes.

> Values and preferences or personal outcome goals vary among older adults and play a significant role in individual decision-making processes.

Findings From the Evidence on Effectiveness of Initiatives

Overall, the initiatives identified in this review may have favourable effects on 1 or more outcomes important to older adults, which suggests they may be beneficial if implemented. Very few of the reviews noted adverse or negative outcomes, which suggests that the initiatives are unlikely to be harmful to older adults.

A general theme that can be taken from these findings is that most initiatives are not simple or standalone solutions; instead, they are multifaceted and interconnected. For example:

- The multicomponent and multifactorial characteristics of reablement, home modifications, falls prevention programs, and support for unpaid caregivers were all reported to be effective and to work best when more than 1 aspect of an intervention was addressed (e.g., education, environment, exercise).
- Several initiatives overlap and relate to each other. For instance, dementia support programs may affect caregiver burden, reablement initiatives may affect falls prevention, and home sharing can promote social connection.

> Most initiatives are not simple or standalone solutions; instead, they are multifaceted and interconnected.

This interconnectedness suggests that taking a holistic and multicomponent approach to implementing initiatives may be an effective way to facilitate aging in place. The needs of older adults can change over time and vary from person to person. People may need to engage with some of these initiatives on a regular basis (e.g., meal programs for nutrition, group-based programs for social connectedness), whereas other initiatives may serve a purpose at a particular moment in time (e.g., rehabilitation after a hip fracture). As noted in the section describing hinderances to aging in place, while we identified 3 broad reasons why older adults are unable to age in place, these reasons do not exist in silos. Consequently, consideration should be taken to avoid implementing initiatives in silos.

Offering multiple initiatives through a centralized practice or model would mean that adults could access and benefit from these initiatives as needed. Healthcare Excellence Canada has identified promising practices that are set up in this way, offering integrated services through partnerships with communities.[170] For example, support services offered by the Ottawa West Aging in Place Program include the provision of meals, case management, and social activities (including exercise classes, education sessions, and others).[171] Many of these services align with the initiatives discussed in this work. The value of practices like these is not only that older adults can benefit from the initiatives themselves, but that they receive help finding and connecting with the initiatives, which may be otherwise act as a barrier to access (and as a result, to aging in place).

Findings From the Economic Evidence

Broadly, the identified evidence raised the following economic considerations:

- **Cost considerations:** The affordability of implementing interventions from the public payer perspective and individual payer perspective (including caregivers) is an important economic consideration. Costs may include those related to infrastructure, health care services (formal and informal), and social support systems, as well as potential cost savings as a result of changes in resource use.
- **Health outcomes and well-being considerations:** Economic evaluations frequently incorporate clinical benefits (e.g., avoided hospitalizations) and well-being measures (e.g., quality of life) into their analyses. These measures capture essential well-being outcomes that may not be solely represented by clinical indicators, including patient-reported outcomes and broader aspects of wellness.
- **Equity considerations:** The previously described cost and health outcomes considerations raise equity considerations related to differential access to services based on affordability, and the inequitable distribution of health outcomes and well-being. The identified evidence also raised that decision-makers should strive for equitable implementation and access across populations when considering implementing initiatives that may shift spending from 1 payer to another or provide inequitable access to opportunities to support aging at home. Economic evaluation methods, including distributional cost-effectiveness analysis, may support decision-making by considering how potential shifts in spending may differentially affect certain populations.

> Economic evaluation methods may support decision-making by considering how potential shifts in spending may differentially affect certain populations.

Limitations

The overall quality of most of the evidence in the included reviews was moderate to low. While this does not mean that the initiatives examined are not beneficial, the results should be interpreted with caution.

One key limitation of our work is that we do not examine every single initiative related to each of the 12 categories. Rather, we sought to select initiatives that met our inclusion criteria, came from reviews with the highest quality appraisal rating, and were as relevant as possible (e.g., initiatives that were noted as important or common in previous work such as that of the National Institute on Ageing).[10] We are aware there are other initiatives not discussed in this work that may be effective solutions for enabling aging in place; however, common themes, such as the importance of connection, collaboration, and tailoring the needs to each individual when implementing solutions, are likely to persist regardless of the specific initiative.

There were also some areas in which we did not identify literature that met our inclusion criteria and may benefit from further exploration. For example, chronic disease prevention and management is a broad area and difficult to comprehensively examine. Additional work on initiatives that help prevent and manage various and complex comorbidities would be beneficial. Primary studies examining home oxygen therapies is another area that may benefit from synthesis in an SR. These initiatives are important for older adults as some of the most prevalent chronic conditions among this population (e.g., cardiovascular diseases and respiratory diseases) are likely to use supplemental oxygen.[21] Similarly, other home-based medical services and supplies, such as phlebotomy, chemotherapy, and so forth, may also be valuable areas for future research. Transportation is another area where additional research would be beneficial. Accessible, reliable, and safe transportation may help older adults more easily stay socially engaged, attend medical appointments, and complete daily tasks such as buying groceries.[10] Systematic reviews that examine initiatives that successfully enable the use of transportation are therefore important to help older adults sustain independence and age in place. Finally, we did not identify any SRs related to housing that met our inclusion criteria. To ensure this area was still discussed, we included a scoping review that examined home sharing, which is 1 possible initiative that may help older adults remain in their homes.[147] However, other initiatives such as naturally occurring retirement communities (e.g., NORC Innovation Centre at University Health Network)[115] are also areas that would benefit from further examination in future work.

Notably, there were a lack of data on direct costs and indirect costs (e.g., costs related to burnout) to caregivers, which may vary for different groups (e.g., by socioeconomic status, newcomer status, geographic differences). Additionally, there were limited reported outcomes on costs to older adults directly (e.g., to pay for care or support themselves) and the impact that different initiatives, including a lack of access to informal caregiver support, may have on out-of-pocket expenses. Many of the included studies reported economic considerations alongside clinical studies, including randomized controlled trials where access to the initiatives was provided to those who were enrolled, and did not address the inherent inequities related to access to programs and initiatives aimed at adults living in the community who want to age in place. There are direct and indirect costs to individuals that may make care, and subsequently beneficial health outcomes, difficult to access.

> Additional work on initiatives that help prevent and manage various and complex comorbidities would be beneficial.

What Initiatives for Aging in Place Are Available in Canada?

Because of the prominence of the topic, there are numerous strategies and initiatives in Canada to help facilitate aging in place. We acknowledge that not all initiatives available in Canada were included in our evidence assessment given our approach of only including those studied through systematic, rapid, and scoping reviews. While we are unable to comment on the effectiveness of all available initiatives, we have developed a list to provide a more comprehensive understanding of the programs and initiatives that may potentially support aging in place in Canada. We have compiled this list using existing work from Healthcare Excellence Canada,[170,172] the National Institute on Ageing,[10] and McMaster University.[15] We also engaged with federal, provincial, and territorial contacts for input on the status of the included initiatives (i.e., whether they were still being offered), as well as information about any missing initiatives.

As this area is broad and quickly developing, we recognize that this list may not be complete. Rather, users can refer to this resource to view and navigate to some of the available government supported programs and services for those aged 55 and older in Canada.

This list is available on our website.

What Technologies Are Available That Aim to Support Aging in Place?

There is growing interest in adopting technologies to support aging in place.[45,119] To complement the evidence on initiatives, we provide a list of technologies identified through AGE-WELL and consulting expert opinion. We categorized the listed technologies as they relate to the types of initiatives outlined by the National Institute on Ageing.[10]

Of note, we did not perform a comprehensive literature search to identify or critically appraise the evidence regarding the listed technologies. We also recognize that this list does not provide a comprehensive picture of all of the available technologies that support aging in place. The purpose was to identify examples of potentially important technologies not yet widely used in health systems in Canada.

The list is available in our Supporting Information document.

> Because of the prominence of the topic, there are numerous strategies and initiatives in Canada to help facilitate aging in place.

What Can We Learn From Other Countries?

We searched for and summarized some lessons learned from initiatives (e.g., strategies, care models and principles, insurance schemes) in health systems comparable to Canada and have presented the findings in the following table.

Table 3

International Initiatives and Outcomes

Initiative, country	What is it?	Lessons learned and considerations	Result
Preventive Home Visits, Denmark	Denmark required municipalities to offer at least 2 home visits per year to adults 75 and older.	These visits are separate from home care assessments, which are specifically done to assess eligibility for home care support and care services.[173] The goal is to address early signs of decline while maintaining the older adult's functional capacity.[173]	This initiative was part of Denmark's transition to shift its focus to home and community care.[10,173,174] From this shift, Denmark accomplished the following:[10] • reduced long-term care spending by 12% for adults 80 and older • avoided building new long-term care facilities. Compared to Canada, Denmark spends less on long-term care facilities.[10,174]
Stopping Elderly Accidents, Deaths & Injuries (STEADI), US	The tool facilitates uptake and dissemination of various knowledge and strategies by simplifying and coordinating an approach for falls prevention.[175,176]	One primary care centre stated that the key to success when integrating Stopping Elderly Accidents, Deaths & Injuries (STEADI) into clinical practice is getting early buy-in from leadership and staff, considering the physician's capacity and needs, being responsive to feedback, and adapting the tool to existing workflows and tools.[175]	A trauma centre reported a decrease in length of stay and likelihood of returning because of another fall.[176]
Reablement in Home Care, UK	The UK invested in intermediate care services as an alternative to extended hospital stays and to avoid admissions to long-term care facilities, inclusive of reablement.[177]	Program managers identified staff training, access to other care and support services for patients, flexibility around program length, and the patient's attitude and motivation as key success factors to reablement.[177]	An investigation of some of the UK's local programs suggests that reablement avoids ongoing use of home care altogether or decreases their needs and the hours needed from home care.[177]

Initiative, country	What is it?	Lessons learned and considerations	Result
National Age-Friendly Program, Ireland	All local authorities developed and implemented an Age-Friendly program tailored to the local needs of their community.[178,179]	To realize their goal toward being an Age Friendly nation, municipalities: • applied a broadened view of aging that extends beyond health Guided by the WHO Age-Friendly Framework[178-180] • followed a common process and approach but developed independent programs tailored to local needs.[178,179] Collaboration at the local, regional, and national level that spanned across many relevant sectors.[178,179]	In 2019, Ireland was recognized as the first country affiliated with WHO's global network of Age-Friendly Cities and Communities.[178] This means that all 31 local municipalities committed to developing and implementing a local Age-Friendly program. The municipalities are at different stages of implementing their programs.[178]
Person-centred care: Cash & Counseling (Self-Directed Care[a]), US **(While Cash & Counseling is specific to the US, self-directed care options can be found in other countries, such as Australia.)[b,181]**	Cash & Counseling is considered a self-directed care approach.[a] Cash & Counseling beneficiaries self-manage their personal care budget with the option to allocate some to their caregivers.[182]	It was recommended that self-directed care programs implement a strong system that guides older adults on how to manage their resources and informs them of their care options.[182,183] An advisory group in Australia raised concerns about self-directed care for Aboriginal and Torres Strait Islanders living in rural and remote communities.[184] These communities often lack support, which is compounded by high costs for services and limited care providers who are past capacity.[184]	This initiative was reported to reduce unmet needs, lead to positive health outcomes, and improve quality of life for older adults and their caregivers in the US.[183,185]
Person-centred care: Buurtzorg Model, Netherlands	The model simplifies care and minimizes bureaucracy by allowing a team of up to 12 community-based nurses to lead and self-manage their work.[186]	The care plans focus on the patient's needs and perspectives, often designed in partnership with the patient, with consideration of informal and formal networks.[186]	It is estimated that the Netherlands can decrease health care spending by 20% by delivering all care though the Buurtzorg Model.[187] By 2016, the model was active in 24 countries with 870 self-managed teams.[187]
National long-term care insurance plans, Germany, Japan, and Netherlands	Residents make contributions to a long-term care insurance program.[10,188-190] The program pools contributions to help address the costs associated with the rising demand for long-term care.[10]	To offset the rising expenditure, Japan increased contributions from its residents, while decreasing coverage for individuals with less severe needs.[189] In 2015, the insurance in Japan covered 10% less of the care provided compared to the year before.[189]	Not reported

Note: This is not an exhaustive list of all international initiatives that facilitate aging in place.

[a] Self-directed care is an approach that allows eligible individuals or their family members to take an active role in their care. They are given the freedom to manage their care and the funds to pay for chosen services. This approach may also be referred to as direct funding, individualized funding, consumer directed care, or family managed care.[191]

[b] Many international programs offer self-directed care options with varying flexibility. For example, Australia's government-subsidized long-term care services are delivered using a self-directed care approach.[181]

What Are Some Implementation Considerations That Support Aging in Place Initiatives?

Key Considerations

- We held 1 engagement session with experts who specialize in health systems and policy research and implementation science, with a dedicated focus on aging populations. The purpose of this session was to understand systemic barriers and catalysts for the implementation of promising aging in place initiatives in Canada from the perspectives of these experts.
- The participants indicated that innovative ideas, infrastructures, and practices support aging in place. They emphasized that contextual, flexible, and fit-for-purpose policy, research, and service delivery that values older adults and considers accessibility catalyzes their sustainable and equitable implementation. However, they noted that such implementation will require a shift from traditional paradigms that prioritize consistency, standardization, and efficiency and are grounded in ageism and ableism. They suggested that shifting traditional mindsets, infrastructures, and practices will take time.
- Approaches to support sustainable and equitable implementation identified by the participants included:
  - engaging those with lived and living experience in the design, early evaluation, and knowledge mobilization practices; this ensures the implementation of fit-for-purpose and equitable initiatives that attend to older adults' well-being, dignity, and diverse needs
  - advancing shared and coordinated decision-making across multiple government sectors at different administrative levels, especially with local municipalities and communities
  - strengthening capacity building within the community to support the implementation of flexible, fit-for-purpose, equitable, and culturally safe aging in place solutions.

Findings

This section presents essential considerations of what we heard during our engagement session with health policy, services, and technology researchers and implementation specialists. Throughout this section, *implementation* refers to the sustainable and equitable uptake of promising aging in place strategies and initiatives. For a descriptive summary of this session, refer to the Engagement summary document.

Ideas, Worldviews, and Paradigms

- **Prioritizing aging in place.** The participants suggested that believing older adults can age in place and valuing their agency to do so is a powerful driver for change. As 1 participant stated, "If you start with a normative view of never building another nursing home again, it is actually possible."
- **Advancing new paradigms.** The participants perceived that paradigms of consistency, standardization, and efficiency have traditionally shaped policy, research, and implementation practices in Canada. However, they noted, "our language and our paradigms are outdated." They anticipated that innovation supporting aging in place would align better with fit-for-purpose and flexible practices, policies, and infrastructures. They noted these paradigms are grounded in the recognition that social, organizational, and cultural considerations, as opposed to "hard, technical" ones, shape, and are shaped by, strategies and initiatives and their implementation.
- **Engaging end-users.** The participants reported that older adults, caregivers, and health care professionals have intimate knowledge of their context and self-identified needs related to aging in place. For this reason, they emphasized the benefits of enabling and involving older adults in the codesign, selection, and implementation of interventions within their communities.

As 1 participant stated, "If you start with a normative view of never building another nursing home again, it is actually possible."

Research, Evaluation, and Knowledge Mobilization

Informed by these proposed innovative paradigms, the participants provided relevant considerations to support evaluation and knowledge mobilization practices for sustained implementation:

- **Early and integrated knowledge mobilization.** The participants described how knowledge mobilization activities that seek and integrate end-users' knowledge needs, (dis)abilities, and use contexts facilitate sustained commitment and buy-in for innovation. They noted that capturing and effectively translating knowledge about why a solution is important for end-users as well as ensuring these groups have the information, training, and abilities to engage with it is essential to the design and sustained implementation of innovative solutions.

The participants described how knowledge mobilization activities that seek and integrate end-users' knowledge needs, (dis)abilities, and use contexts facilitate sustained commitment and buy-in for innovation.

- **Context-sensitive evaluations and implementation plans.** The participants perceived that without clearly defined outcomes at the outset of an assessment, the collected data may not provide a complete picture of the initiative in context. This challenges effectively using the outcomes to support sustained buy-in and implementation planning. They noted that evaluators who account for the relationship between an initiative and its contextual and systemic considerations can better understand and identify which and how outcomes and data are relevant for implementation. However, the participants noted that collecting and analyzing data on outcomes is expensive and time-consuming, and evaluators may not publish their findings.
- **Alignment between political goals and pilot initiatives cycles.** The participants emphasized the need for decision-makers to wait and consider the final outcomes of ongoing evaluations to inform new policy decision-making. They noted that doing so would allow for long-term benefits for current and future generations of older adults and health systems.
- **Diverse and fit-for-purpose data and evaluation approaches.** Rather than needing "a ton of data," the participants noted that sustainable and equitable implementation requires data and evaluation practices that originate from, and are specific to, communities and equity-deserving groups, including First Nations, Inuit, and Métis Peoples.

Equitable Implementation Considerations

The participants provided insight into how respecting older adults; valuing their diversity, autonomy, dignity, and well-being; and considering (dis)abilities inspires and underpins innovative, fit-for-purpose, and flexible worldviews and practices that catalyze implementation.

- **The design of equitable strategies, initiatives, and implementation plans should prioritize the needs of equity-deserving groups disproportionately experiencing, often intersecting, barriers to access.** The groups highlighted by the participants included those living in persistent poverty, those experiencing precarious housing or houselessness, those with a history of trauma within the health or social system (e.g., related to discrimination or the violence of colonialism), those living in rural communities, those with diverse language and cultural backgrounds, and those living with disabilities. The participants also noted that older adults may belong to more than 1 equity-deserving group. The strategies proposed to promote equitable implementation included peer-based outreach models or virtual care models that target people who are underhoused or experiencing geographic barriers to services, respectively. However, the participants emphasized that consideration should also be made for those who remain left out, even with such strategies. They noted that virtually delivered initiatives, for example, may not be accessible to

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people who have limited digital literacy or do not have internet because they cannot afford it or live in rural communities or older buildings where it is not reliable or available.

- **Equitable implementation requires consideration of accessibility and challenging ableist assumptions.** The participants acknowledged that people are more likely to experience decreased mobility or live with a disability as they age. They emphasized that taking accessibility into account while designing strategies, initiatives, and implementation plans can ensure they are broadly adopted. They also described how involving those with lived and living experience in the design and implementation process can ensure initiatives are fit-for-purpose. The participants emphasized the role that municipal governments have in creating and enforcing age- and accessibility-friendly cities in locally appropriate ways.
- **The challenges related to implementing strategies and initiatives using electronic devices, the internet, and artificial intelligence highlight the importance of anti-ageist and accessibility-conscious worldviews.** The participants noted that some older adults may have limited digital literacy, which may be influenced by intersecting factors such as low income and language barriers. They discussed how implementing digitally based initiatives without considering digital literacy may prevent older adults from learning about, engaging with, and benefiting from them. They reported that this may also lead older adults to experience preventable harms, such as privacy breaches. Furthermore, they reported that the technologies intended to support implementation rarely accommodate sensory and physical disabilities (e.g., by using accessible colours, font sizes, imagery, and keyboards). The participants proposed that involving older adults in the design of technologies and incorporating training, intergenerational supports, and "privacy guardrails" into implementation plans could address some technology-related concerns.

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Decision-Making Frameworks and Practices

The participants reflected on perceived implementation challenges related to legislative and decision-making frameworks and practices within governmental institutions in Canada and provided pragmatic considerations for change.

- **Helping municipalities adopt and enforce Age-Friendly city paradigms**. The participants noted that local governments and grassroot, community-based organizations are best positioned to attend to, and provide services for, the diverse and unique needs of their communities. However, they felt that federal and provincial legislative and funding structures are not designed to sustainably support local entities' initiatives. The participants noted that the 40-years old Canada Health Act provides a national legislative framework for reasonable access to medically necessary

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hospital and physician services at the point of use, but not for other health care services, including, for example, home care. Therefore, they proposed that innovative legislation and sustainable funding that empowers municipalities may facilitate the design and enforcement of aging in place initiatives for Age-Friendly cities.

- **Innovative infrastructures that promote shared and coordinated decision-making across multiple government sectors.** The participants felt that decision-making practices that use "health care as the main [or only] lever" to address multifaceted and interconnected needs related to aging in place challenge implementation. We heard that, for example, having a central ministry that provides oversight to other ministries to address a common aim may promote coordinated policy- and decision-making.

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Service Delivery Infrastructure and Practices

Innovative, flexible, and fit-for-purpose services in the health and social system may catalyze implementation. However, the participants reflected on how decision-makers initially supportive of such "ambitious" change often "just [keep] wanting to do the future using today's infrastructure." Informed by their research and implementation experience, the participants provided insight into how they envisioned service delivery infrastructure and practices changing to better support implementation:

- **The strategies and initiatives designed to maximize, use, and support human resources that are available within communities remain fit-for-purpose and sustainable.** The participants reflected on how older adults benefit from initiatives delivered by providers from their communities within their communities. They noted that these providers are more likely to deliver culturally safe care that is grounded in a deep and contextualized understanding of their needs and is less vulnerable to discrimination, stigma, and interruptions related to travel barriers, such as bad weather or distance. However, they reflected on how health care workforce shortages pose key challenges to implementation, especially in rural and remote communities. They suggested that increasing pay for nurses and other home care providers and introducing salaries rather than "by the minute" payments may facilitate retention. While these shortages continue, however, they acknowledged that implementation depends on supporting informal caregivers, especially women who disproportionately experience caregiver burden. The participants also highlighted that, while available, some support strategies for caregivers currently exclude those without full-time employment.

- **Fit-for-purpose implementation requires challenging traditional "fixed infrastructure, fixed roles, fixed buildings, [and] fixed care models" in favour of flexible, end-user-centred approaches.** The participants shared that favouring flexibility is grounded in recognition that needs related to aging in place vary between people and for the same person over time. To support flexibility, some participants proposed restructuring models and structures of care and support to bring recipients and providers together (e.g., the Buurtzorg Model out of the Netherlands). They proposed that these models would allow providers to flexibly respond to recipients' evolving needs. They noted, however, that facilitating this flexibility would require eliminating strict provider scheduling and management to give them more control over the design, execution, and timing of care. The participants also advocated for providing funding directly to older adults and their caregivers. They reported that this would give older adults the agency and autonomy to select care and support based off their needs rather than having "the health system" decide for them. The participants noted that artificial intelligence could help older adults and caregivers make these care decisions. However, as previously detailed, implementation involving such a technology would raise important equity and ethical considerations.

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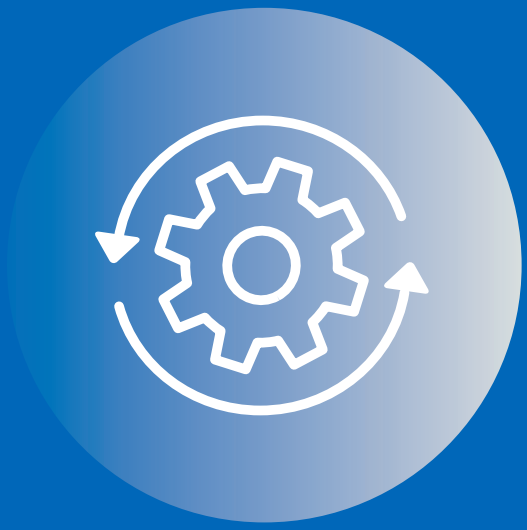


A Peek Into the Aging Experience: Personas

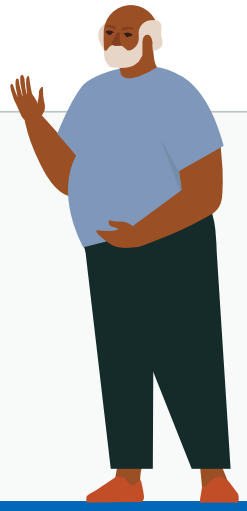
Meet **Ram, Cheryl, and Jane.**

All 3 fictional personas embody the information we gathered and shared previously related to older adults in Canada. Ram, Cheryl, and Jane aim to portray real experiences of older adults. However, aging is experienced differently by individuals across their lifetime. These personas provide only a narrow view of the diversity of the aging process and are specifically focused on older adults.

Using interventions from Health Care Excellence's Promising Practices for Enabling Aging in Place, we provide an example of a potential care pathway for each persona. These interventions are underpinned by the following principles of Health Care Excellence's program:

- access to specialized health care support
- access to social and community support
- access to system navigation
- adaptive and responsive
- equitable
- high value.

Who is Ram?



Ram, 59 (he/him)

Edmonton, Alberta

- Migrated from India 5 years ago
- Lives with his wife and mother in a rental
- Has 1 son
- Speaks Hindi fluently with limited knowledge of English
- Diagnosed with diabetes, high-blood pressure, and high cholesterol
- Works full time in security

Table 4: Ram

Factors to aging in place		What does this mean?	What local and regional programs are available to Ram?
Difficulties preventing and managing health conditions and injuries in the home or community	Ram's family doctor recently retired. He is unsure how to find a new one.	Ram is looking for help finding a new family doctor and navigating the health care system for other available support. As he is a new immigrant, he knows little about Canada's health systems, and navigating it may be an intimidating process with a language barrier. With proper support, Ram could advocate for and communicate his needs. In the past, he felt misunderstood by his care providers because of lack of culturally safe care and difficulties communicating in English.	Ram may benefit from care navigation and tailored care, such as the Nav-CARE program. He may also access Better Choices, Better Health to learn how to better manage his chronic conditions. Care providers may request Interpretation & Translation Services to facilitate discussions during Ram's appointments.
Challenges related to housing and the built environment	Ram's rent is increasing at the end of the year. He is considering moving his family to maintain their budget. His family doesn't own a car. They rely on their son driving them or walking to places to save money.	Ram could better prioritize his health and adhere to his care plan if he were to receive support to alleviate some of the financial constraints he and his family are experiencing. Ram may be more likely to attend his appointments and focus on managing his care if costs and transportation are less of an issue.	Programs that provide some financial relief: Ride Transit Program Alberta Adult Health benefit Coverage for Seniors Program Affordable housing programs
Lack of social participation	Ram and his wife recently became empty nesters when their son moved away for university.	Ram and his wife are navigating a new phase of life. In India, they had a large extended family and a strong community network for support. They are trying to build strong and meaningful connections in Canada.	These programs may help Ram and his wife meet friends in their community: Seniors' Center Without Walls Multicultural Seniors Outreach Program.

Who Is Cheryl?

Cheryl, 65 (she/her)

Rural Northern community in British Columbia

- Is a First Nations Elder
- Remains active and involved in her community
- Lives with her family in an intergenerational home
- Diagnosed with high cholesterol and hypertension

Table 5: Cheryl

Factors to aging in place		What does this mean?	What local and regional programs are available to Cheryl?
Difficulties preventing and managing health conditions and injuries in the home or community	Cheryl needs to travel to the nearest urban surgical facility for her coronary bypass surgery.	Person-centred, culturally safe, and trauma-informed care may help Cheryl through her recovery. This may be especially important while she's away from home. Travelling for care could bring about trauma from previous experiences of institutionalization and colonialism. Persistent racism may negatively impact Cheryl's quality of care and overall health. It may discourage her from seeking care in the future.	Indigenous Patient Navigators may help access culturally safe and trauma-informed care during her surgery and recovery. They may guide Cheryl as to how she can access traditional medicine and ceremony. Additionally, they may guide her through available supports when she returns home.
Challenges related to housing and the built environment	Cheryl depends on her cane to move around.	Cheryl adapted to using her cane. However, falls may become a concern as she ages. She may benefit from a tailored program that reflects the reality of her culture and the environment of her rural community.	Tailored programs, such as reablement and falls prevention, may be limited in rural areas. Cheryl's access to services will depend on whether this is offered in her community and, if so, their capacity.
Lack of social participation	During surgery and recovery, Cheryl was away from her community and family.	Community is very important to Cheryl. She would like to be able to go home as soon as she physically can to be around her community and family. Culturally safe care, where she can stay connected to her culture and language, may help her recover while she's away from home.	Aside from culturally safe care, technology may help Cheryl stay connected with her family during her time away.

Who Is Jane?

Jane, 76 (she/her)

Moncton, New Brunswick

- Lost her wife last year
- Lives alone
- Diagnosed with hypertension, arthritis, and depression
- Is retired

Table 6: Jane

Factors to aging in place		What does this mean?	What local and regional programs are available to Jane?
Difficulties preventing and managing health conditions and injuries in the home or community	Jane has been experiencing mild cognitive impairment.	She may benefit from care and support so can adhere to her care plan (e.g., take her medications regularly) and attend her appointments.	Jane may be eligible to receive home care and support services. She may also benefit from Nursing Home Without Walls to help her access knowledge, support, and services at home. Tele-Care 811 may assist her with any health emergencies. She may also access specialized care for the 2SLGBTQ+ community.
Challenges related to housing and the built environment	Jane relies on a wheelchair to move around because of a recent stroke.	With home care support, Jane could adapt to moving around using her wheelchair. She may also receive assistance with daily activities of living. Her home may also be adapted to suit her mobility needs and help prevent falls and emergencies. Wheelchair-friendly transportation services may alleviate Jane's concerns with travelling within her community with her wheelchair, including to her medical appointments.	Jane may be eligible to receive home care services for rehabilitation services and support for daily activities of living. The New Brunswick Seniors' Home Renovation Tax Credit could help make Jane's home wheelchair safe. She can access a personal emergency response system through Social Support NB. NB Community Transportation can provide Jane with appropriate transportation.
Lack of social participation	Jane has been reading and watching a lot of news reports about violence against 2SLGBTQ+ individuals.	Supports that may help Jane feel safe in her community may encourage her to engage with others. This could improve her overall health and quality of life.	Community Connectors can help Jane better engage with her community. iGenNB: Intergenerational Living may provide her with an intergenerational cohousing living arrangement for companionship. She can virtually connect with 2SLGBTQ+ peers through Rainbow Table: Connecting 2SLGBTQI Seniors – Egale.

Ram's, Cheryl's, and Jane's journeys reflect the complexity of aging and interconnectedness of factors to aging in place. For Ram, prioritizing his care is impacted by financial considerations and a language barrier. Cheryl's experience highlights the importance of person-centred and trauma-informed care, as well as community for Indigenous people. For Jane, stigma against 2SLGBTQ+ individuals and mobility limitations exacerbate her social isolation, which negatively impacts her health.

Access to programs varies across Canada. The local and regional programs available to Ram, Cheryl, and Jane may not be available to all individuals. This is especially highlighted in Cheryl's journey. She had to leave her community because of limited access to care in rural areas.[14,50] All 3 fictional personas experience care that is further limited by the lack of culturally safe and tailored care options across Canada.[4-7,32,52]

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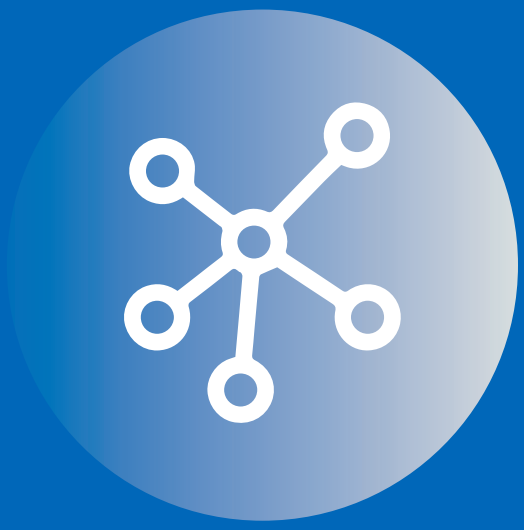

Final Thoughts

This evidence assessment report described the current challenges being faced by our aging population and health care system to support aging in place in Canada. By engaging people with personal and/or professional experience with aging, and by searching key information and data sources, we identified reasons why people are unable to age in place, along with strategies and initiatives intended to address unmet needs and improve outcomes of importance to older adults in Canada. We described considerations relevant to equity-deserving groups, highlighting perspectives of First Nations, Inuit, and Métis Peoples and communities, and described some systemic considerations for implementing aging in place initiatives.

The hinderances to people aging in place in Canada can be related to 3 broad and closely related categories: **preventing and managing health conditions, social isolation**, **housing and the built environment.** Increased availability of, and access to, culturally safe and trauma-informed care in the home and community; social connections and belonging; and adequate housing, accessible transportation and spaces for socialization, and community health infrastructure were identified as priorities in the literature detailing the perspectives of Indigenous Peoples and communities. Indigenous older adults who can age in place are able to exercise self-determination and remain connected to their land, family ties and kinship, and culture.

Effective interventions and care initiatives are needed to improve overall survival, manage symptoms, maintain function, and enhance quality of life and death. **These interventions and care initiatives should also aim to reduce caregiver burden** and encourage active participation and decision-making in health care.

Improved outcomes were seen with initiatives related to:

- chronic disease prevention and management
- dementia prevention and support
- falls prevention
- support for unpaid caregivers
- at-home care and support
- at-home palliative care
- reablement
- social isolation and loneliness
- assistive devices and home modifications
- housing.

These initiatives are not simple or standalone solutions; they are multifaceted and interconnected. Offering access to these initiatives through a centralized model or practice may help older adults navigate and access services as they are needed. Infrastructure, health care services (formal and informal), social support systems, and potential cost savings as a result of changes in resource use are cost considerations of the affordability of implementing these initiatives.

Health policy researchers and implementation specialists informed us that implementing initiatives to support aging in place requires a shift from traditional paradigms that prioritize consistency, standardization, and efficiency. They emphasized that contextual, flexible, and fit-for-purpose policy, research, and service delivery may catalyze sustainable and equitable implementation.

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July 2024