Key Issues in Aging in the 21st Century

Science and Technology for Aging Research (STAR) Institute
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**Acknowledgements, Collaborators and Disclaimer**
Executive Summary

This booklet is aimed at encouraging people who work in the field of aging to think about current and emerging issues. In this booklet we outline 18 key issues. We believe these issues present major opportunities for innovation and knowledge growth through research, new ideas, technology, policies, and practice. Older adults, the economy, government, and society as a whole will benefit from real-world solutions. In the following pages we will cover 18 key issues in global aging in the 21st century:

1. Overcoming the Digital Divide
   The digital revolution has seen rapid technology development. New ways of accessing information, products, services, and ways to connect have been created and inclusive society requires each one of us to address the digital divide.

2. Lifelong Learning
   Lifelong learning has been shown to help older adults sustain and even improve their physical and mental health, overcome or avoid social isolation, and offers a new way for older adults to look at their later years.

3. Healthy Lifestyles
   Being healthy is about making conscious, positive lifestyle choices that promote and sustain physical and mental health, including nutrition, substance use, exercise, and self-management of health issues.

4. Social Participation
   Social participation is about a person’s involvement in community life, the economy, and society. Actions are needed to remove barriers to participation in social and economic spheres, which may include access to the digital economy and services.

5. Social Isolation and Loneliness
   Isolation and loneliness are caused by many factors, including living alone, health problems and disability, sensory impairment, and significant life events. Identifying possible ways to counteract the reasons for isolation among older adults would help them enjoy a healthier lifestyle.

6. Cognitive Health
   Providing more resources for those affected by cognitive disorders (older adults, formal caregivers, and informal caregivers) while also growing the research field can lead to reduced stigma, better preparation and prevention, and improved health.

7. Autonomy and Independence
   Developing solutions and supports to help older adults to live independently in their own homes and communities as they grow older has major benefits for their well-being and self-esteem, and reduces demands on the caring services.

8. Aging in Place and Supportive Homes and Communities
   Aging in place means being able to live independently in one’s own home and community. This positively affects older adults’ quality of life and also provides a more autonomous and cost-effective alternative to residential long-term care.
9. Transport and Mobility
Older adults require convenient and appropriate options to meet their mobility and transport needs. Improving transport and mobility is essential for older adults’ continued health, social participation, and quality of life.

10. Healthcare for Seniors
While most older adults enjoy active and healthy lives, declining health is a reality for many Canadians as they get older, due to the onset of chronic disease and frailty. Providing the best possible health care for older adults is an important policy priority.

12. Caregiving
Care for older adults is provided by both family members and by paid professional care workers. Providing care has become increasingly demanding due to the increased level and complexity of health conditions.

13. Safety, Security, and Abuse
Everyone has the right to feel safe and secure, free from abuse and discrimination. Training workers on elder abuse, while also providing easily accessible resources on how to identify and report violence, may help older adults feel comfortable and safe.

14. Equity, Diversity, and Inclusion
To achieve fairness for the way all members of a community are treated we must ensure that everyone has the same opportunities for employment, irrespective of race, ethnicity, gender, sexual orientation, age, religious or political beliefs, and socioeconomic status.

15. Aging Workforce
Canada has a rapidly aging population with major implications for the workforce, including labour shortages and recruitment and retention of workers in key areas such as healthcare and other labour-intensive industries.

16. Financial Wellness
How can an individual maintain his or her financial status throughout his or her life? What is the role of governments in providing a reasonable financial plan to help overcome income inequality among older adults?

17. The Silver Economy
The Silver Economy focuses on the significance of the growing number of older adults in many countries’ economies. It recognizes that seniors will have immense influence as consumers, users of health and other services, as well as workers and volunteers.

18. Global Issues
Population aging is a truly global issue and the majority of older people in the 21st century will live in lower-and middle-income countries with developing economies. Decision-makers often have limited access to information that is crucial to identify solutions for promoting and sustaining health and well-being of older adults.
Introduction

The challenge of an aging population

Population aging is one of the most significant social transformations of the 21st century. It will have implications for every part of society. Family structures and ties across generations will be affected. Population aging will alter labor and financial markets as well as the demand for goods and services such as health care, housing, transportation, and social protection. These changes will bring opportunities and diverse markets for businesses. For instance, health spending is likely to increase with the greater number of seniors.

The challenge of an aging population requires us to embrace new ideas, approaches, and solutions. We must all help each other adapt. This means societies and economies must work together to meet the growing needs and aspirations of seniors in the mid-21st century.

What is a “challenge”?

A challenge is an important, but difficult and complex problem area that demands innovation and the application of real-world solutions. A challenge may be about making positive contributions to societies, government policies, and economies. There is more to a challenge than just ordinary research questions or priorities. A challenge is engaging and is worthwhile to pursue because it:

- Results in significant social and economic benefits to older adults;
- Is difficult to accomplish, but is ultimately solvable;
- Requires collaboration across many disciplines and groups;
- Pushes the scientific envelope;
- Must capture popular imagination and political support;
- Inspires hope; and,
- Brings people together to work for the common good.

How we defined the key issues

This booklet is the result of an extensive review and consultation in the field of technology and aging between 2017 and 2019. A review of international and Canadian policy on aging and technology was conducted by Simon Fraser University’s STAR Institute, the Network Management Office of the AGE-WELL Network of Centres of Excellence and AGE-WELL’s APPTA Innovation Hub in New Brunswick. Feedback from older adults and caregivers, commercial and not-for-profit companies, government agencies and service providers was elicited through a public online survey and through local workshops to identify the 18 Key Issues presented in this booklet. These were further prioritized to create AGE-WELL NCE’s 8 Challenge Areas for future research funding (https://agewell-nce.ca/wp-content/uploads/2019/01/Booklet_8_Challenges_English_5_final_PROOF_rev.pdf).

The booklet’s format and scope

Each key issue follows a similar format. We highlight the main challenges, policy priorities, and potential opportunities for innovation and technology-based solutions for each issue. We include examples of initiatives from around the world that address the highlighted issues and challenges. The booklet is meant as a guide. It is not meant to be a systematic review or definitive set of research topics or policy priorities. Citations and endnotes can be found at the end of the booklet.
An Aging Population

The world is aging. Almost every country in the
world is experiencing a rising number of older
adults who make up a larger proportion of their
population. According to the United Nations, the
global population aged 60 and older is projected to
be 2.1 billion by 2050, twice as large as in 2017. The
world, Canada has seen a major increase in the
number of older adults since 1960. There has also
been a significant increase in the proportion of older
adults in the population compared to younger people.
Older adults are likely to comprise around 25% of the
population by the year of 2036.

These demographic changes are driven by an unprecedented increase in the average human lifespan, as well as a
decline in human fertility, particularly in the more developed regions of the world. Migration has also contributed to the
change in the median age of the population in some countries. For instance, Britain’s population is set to grow larger,
and it was projected that there will only be 37 pensioners for every 100 working-age individuals by 2039, mainly due to
the inflow of working-age immigrants. Similar to Britain, Canada is also relying on the entrance of immigrants, however
the contribution of the newcomers is still considered to be small compared to the gap in the workforce left behind by
the “baby boomers”.

Source: own computations based on the UNDESA Population Division
Key Issues in Aging
Overcoming the Digital Divide

Summary of key issue
The digital revolution has seen rapid technology development. New ways of accessing information, products, services, and ways to connect have been created. In the 21st century being a citizen of the digital society is crucial to social and economic participation. While we should not see older adults as technology-averse, not all older adults have equitable access due to factors such as education, income, and gender. A person’s experience, skills, and attitudes also play a part. This is important to consider as the design and operation of technologies are not typically friendly for older adults. An inclusive society requires each one of us to address the digital divide. It also requires us to promote equitable access to technologies.

What are the issues?
- How do we provide accessible, affordable, and reliable technology to remote and underserved regions and communities?
- How do we train older adults on new and upcoming technologies while still considering their varying skill levels and health?
- How do we teach older adults to evaluate the quality of online resources and technology so they are not taken advantage of?
- How do we remove the stigma of lacking skills to use technology in a technologically diverse era and encourage older adults to seek training?

Policy Priorities
- Invest in cost-effective technologies that improve the lives of people with physical and/or cognitive limitations.
- Provide better and more equitable access to the digital infrastructure.
- Provide accessible training and support for people to engage or re-engage with technologies and the digital economy.
- Investigate the impacts of technologies on the lives of older adults.
- Improve usability of everyday technologies.

Potential impact

Social impact:
- Connect people of different generations all around the world.
- Allow people to manage and control their own health and lives.
- Decrease loneliness while increasing social interactions and bettering health.

Economic impact:
- Reduce the amount of resources needed in a work environment used to train older individuals in the use of their technology.
- More devices could be targeted to older adults if they are technologically skillful.
- Older adults will be able to continue working longer in their careers and with more ease even with digital format shifts.

Science impact:
- Information could be more easily collected/accessed.
- Research that uses technology to gather information is at a disadvantage when it cannot access the portion of the population that is digitally illiterate. If the digital divide is overcome, more people may be available for research that, in turn, may inform and benefit services and government policies.
What are the opportunities for technology and innovation to address these issues?

- Workshops that revolve around teaching and using various types of technologies.\(^1\),\(^2\)
- Technology that is customized to the specific group that it is targeting.\(^2\)
- Technology services that are offered along with human interaction.\(^2\)
- Supplying technology to isolated and remote regions.\(^2\)

Find out more

Active aging - a policy framework in response to the longevity revolution: the report focuses on policy changes required for a prosperous aging community. While it does not specifically focus on the digital divide, it provides relevant policy changes.

Individual Internet use and e-commerce, 2012: this Statistics Canada survey was conducted to investigate general Internet usage trends in Canada and how this usage affects purchasing goods online.

World development report, 2016: digital dividends: this World Bank focuses on how to make digital technologies beneficial for everyone by closing the digital divide, with a focus on Internet access.

Canadian Internet Registration Authority: this CIRA report discusses the ranking of Canada among other countries in relation to internet access and usage.

Key statistics

- Older adults in Canada have the “fastest growing rate of Internet usage.”\(^3\)
- “Canadians aged 75 and older who choose to go online rose” from 5% to 27% from 2000 to 2012.\(^3\)
- Older adults use the Internet for e-mail and to access information about products, travel, hobbies, health information.\(^4\)
- A study of computer use among older adults, in the city of Detroit, was found to be 27%.\(^4\) Among nonusers, who were older adults, 55% expressed an interest in trying to use a computer.\(^4\)
Overcoming the Digital Divide

**Country exemplar - United States of America**

- **Senior Service America**: This organization focuses on employment programs across different groups of older adults across the United States (i.e., ex-offenders; those who are not technology savvy).
- The SSA aims to develop programs that help older adults in these same areas, such as bridging the digital divide that exists in the workforce (those aged 55 and older).
- The SSA offers many services to help older adults learn how to use technology in a way that makes them viable candidates in the technology-centered workforce.

**Digital Inclusion Initiative and the Senior Community Service Employment Program**

- The Senior Community Service Employment Program (SCSEP) helps older adults, from many different backgrounds, to gain the skills to become both employed and excel at their job.
- SCSEP does this by helping older adults with tasks like learning how to use technology and more specifically, computers.
- The Digital Inclusion Initiative involves one peer coach helping an older adult one-on-one to learn how to use a computer.
- The older adults are then able to use these skills to increase communication with loved ones, find resources online, and become more qualified for employment opportunities.
- This program and initiative is offered across the United States to try and reach every community and older adult that needs help crossing the digital divide.
- $450 million USD was used to train 400,000 workers in this program countrywide.

**Examples of older adult groups that use this service**

- Some examples of groups that are helped through this initiative are veterans who suffer from PTSD. Their newly acquired computer skills helps their communication with family members who are far away and improves their social supports.
- Another example of a group that benefits greatly from this initiative are those with disabilities. For example, one individual who did not have his right

“Internet technology empowers many older adults to take more control over their own health information and health status and can potentially help them move toward healthier aging.”

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4 Internet technology empowers many older adults to take more control over their own health information and health status and can potentially help them move toward healthier aging.”

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hand needed help learning how to use a keyboard and mouse using only his left hand.

- Senior Service America also has a program to help older adult ex-offenders gain employment by helping them network and learn how to use computers and technology. This helps these older adults take advantage of employment opportunities to obtain gainful employment.

Testimonies from the Digital Inclusion Initiative

- “Donna, who recently turned 71, now searches online for material to use in her Bible study classes - and she just sent a first e-mail to her son. His response was he’s so proud of me, she says, and that made me feel like being on the computer is going to be a lot of fun. It’s a whole new adventure and I’m very excited. I just wish I’d started sooner.”

- “Many are Vietnam vets without computer skills - and they’ve had little or no communication with family because they have post-traumatic stress syndrome and don’t want to make phone calls, says SCET executive director Elizabeth Anderson. But coached by SCSEP participants who are also vets, some residents of the shelter - which has its own small computer lab - have gone online to reach out to family and friends.”

“We are in an increasingly digital world and if you’re not digitally connected you’re not part of the world. You’re left behind.”
Lifelong Learning

Summary of key issue

Lifelong learning has been shown to help older adults sustain and even improve their physical and mental health as well as overcome or avoid social isolation. Hence, lifelong learning can not only improve health and open up avenues for socialization, but also offers a new way for older adults to look at their later years. There is a connection between the lack of interest of older adults in lifelong learning and experiencing a less healthier lifestyle. Providing education and training opportunities across a life course contributes to a more dynamic and sustainable economy. Additionally, it opens up new employment and career opportunities as people age.

What are the issues?

- How do we enable access to learning to those populations who have difficulty in accessing it?
- How can we support those individuals who struggle with language barriers or those who classify themselves as members of minority groups (immigrants, women, indigenous), or are living in small rural communities or live far away from larger education institutes?
- How can lifelong learning contribute to better employment opportunities across the life course?
- How should educational organizations adapt to changing demographic needs?

Policy Priorities

- Promote social, educational, and leisure activities for seniors and retirees.
- Promote education about the value of mutual support and care within families and between generations from an early age.
- Improve the quality of recreation and creative arts programs offered by community centres, older adults’ centers, and public libraries.
- Promote language courses for older immigrants and refugees.
- Create better mechanisms for older adults and young people to participate in educational programs together.
- Identify training programs for older adults to develop their knowledge about technology.

- Support on-the-job training programs for older adult workers to help them remain active in the labor market

Potential impact

Social impact:
- Meet new people and build on social connections.
- Remain active in communities and society.
- Promotes intellectual, emotional, and social well-being.
- Growth of educational institutions to expand what courses and the programs that they offer.

Economic impact:
- Promotes diversity in classrooms at university and education centers.
- Education and interest in new information could inspire older adults to seek potential employment or volunteer and may provide civil engagement opportunities even in retirement age.
- Growth of educational institutions to expand what courses and programs they offer.

Science impact:
- Allows students in educational institutions to share learning experiences amongst an intergenerational population.
- Engages older adults within academia, research, and ongoing studies. They become aware of what information is available and what research is currently being done. Older adults would become a larger part of the research community.
What are the opportunities for technology and innovation to address these issues?

- **Third Age Network**: association of lifelong learning groups across Canada.
- **Meet the millennial entrepreneurs teaching seniors how to use technology**: founders Moe Elmaleh, Corey Freeman, and Ami Moyal have been travelling to retirement residences around the Greater Toronto Area to teach older adults how to use smartphones, tablets, and computers.
- **The Neil Squire Society**: funded by the Public Health Agency of Canada began as a three year pilot program for older adults to join focus groups to identify barriers that prevent older adults from adopting new technologies.

Find out more


Older adults in lifelong learning: participation and successful aging discussed in journal article examining the importance of participating in lifelong learning.

Key statistics

- Participation in adult learning declines from 34% for Canadians aged 56 to 60, to 20% for those aged 61 to 65, to 13% for those aged 66 to 70, and 7% for those aged 71 to 75.4
- Participating for personal interest reasons becomes significant for those who are retired or are reaching their retirement. Over 80% of participants over 65 cited this reason for participation.4

“The experience is great, I would recommend it to anybody who is either retired or about to retire. You don’t want to sit at home and vegetate for the rest of your life. You want to do something with your brain and you want to be with people that think similarly to you and you can discuss things and it’s better than just being at home and doing nothing.”1
Lifelong Learning

Country exemplar - Norway

- This country has the highest rate of older adult educational fulfillment.\(^5\)
- Over 60\% of citizens in Norway participate in adult learning.\(^6\)
- Norway has 15 adult-based education associations that have made the effort to support the goal of adult learning for more than 75 years.\(^5\)

Education Act (2002) and Adult Education Act (2009)

- Adult education is regulated by the Adult Education Act and the Education Act.\(^6\)
- The Adult Education Act allows public education authorities at various levels of education to be responsible for the establishment of courses suitable for all ages including adults.
- The Education Act allows regulation of the differing levels of schooling (primary, lower secondary, upper secondary) for all students including adults.
- In 2001, rights were given to adults to have access to higher education without having had prior formal education.
- These acts believe that “Adult education should help give adults a more meaningful life.”

Education in Norway

- Wide range of topics including fishing, gardening, folk dance and music, knitting, and singing.\(^6\)
- Courses and study circles are easy to join and there are no exams.\(^6\)
- Adult education is expected to be a tool for employment and employability.\(^6\)

Adult education institutions in Norway

- Association for Adult Education Centres\(^5\)
- Folk High School Council
- Ministry of Education and Research
- Nordic Network for Adult Learning
- Norwegian Agency for Lifelong Learning
A couple of weeks ago we were teaching a class and we happened to stumble upon the Google Earth app on iPad. They were amazed to see that not only could you go back to a city to see an aerial view, but get right down to street view. [One of the seniors] was almost in tears when he was able to see the house that he proposed to his late wife in. That was one of the highlights that I’ve had in a session.”}
Healthy Lifestyles

Summary of key issue

Being healthy is about making conscious, positive lifestyle choices that promote and sustain physical and mental health, including nutrition, substance use (e.g., smoking, alcohol), exercise, and self-management of health issues. More generally, being active and socially engaged are important for developing and maintaining optimal health across a life span. Having a healthy lifestyle is often seen in terms of individual actions, but important contextual factors also influence health outcomes, including, physical environment, socioeconomic status, education, access to information, social isolation, and culture.

What are the issues?

• How do we understand and promote ideas about aging well that are culturally relevant in society, and then support people to age well in those ways?
• How can we develop more accessible systems of education and support for people at any age so that they can implement healthy lifestyles throughout their life span?
• How do we address physical, social, and economic factors that hinder access to resources that help establish and assist in sustaining healthy living (e.g., physical and mental activities, nutritious foods, and social engagement)?

Policy Priorities

• Support access to physical activities that are affordable, regardless of an individual’s age or physical and mental functioning levels.
• Educate and help people to have a healthy, balanced diet, and to ensure they have access to affordable and nutritious foods.
• Educate people about responsible and abusive substance use and consumption.
• Support healthy living across the life span to cultivate positive attitudes and behaviors that can help to enhance both physical and mental health as well as well-being.
• Create and sustain safe physical environments to minimize risks of injury.
• Prevent chronic disease and enhance health through positive changes to living and working environments.
• Advance people’s understanding of what it means to age well, what needs have to be met to age well, and what the trajectories of aging well might be.
• Address factors that contribute to negative health outcomes and disparities.

Potential impact

Social impact:

• Increase social awareness of age appropriate healthy eating and physical exercise habits that will help individuals stay healthy across the life span.
• Facilitate and co-create societal understanding of what aging well means and what a healthy lifestyle entails in different sociocultural contexts.

Economic impact:

• Decrease health care costs, as adopting and maintaining a healthy lifestyle lowers the risk of chronic diseases (e.g., obesity, cardiovascular diseases).
• Increase demand for services and resources to educate and support older adults in adopting and sustaining healthy lifestyles, which creates business opportunities and increases employment in those sectors.

Science impact:

• Create opportunities to contribute to global research on healthy aging, as promoted by the World Health Organization, in order to better understand the
Healthy living: a Government of Canada website that offers guidance and strategies for sustaining healthy lifestyle, including healthy eating, physical activities, and injury prevention.

10 priorities for a decade of healthy ageing: identifies 10 action priorities for attaining objectives of global strategies and an action plan on aging and health developed by World Health Organization.

Key statistics

- “Older seniors spent more time on passive activities (for example, reading and watching television), and also slept more than their younger counterparts. Other activities, such as using technology, were less prevalent among older seniors.”

- “Almost a million (an estimated 979,000) Canadians aged 65 or older were at nutritional risk in 2008/2009. They made up a third (34%) of people in this age range,” and “people who were underweight were more likely to have been hospitalized.”

What are the opportunities for technology and innovation to address these issues?

- Devices and apps that help older adults improve and sustain cognitive functioning.
- “Portable and wearable” electronic devices and apps that monitor older adults’ physical activities, weight, heart rate, and track their progress to help them achieve their fitness goals.
- Information and communication technology that helps older adults to engage socially and connect with individuals, groups, and organizations, which can foster their sense of belonging and connectedness.

Find out more

Global strategy and action plan on ageing and health: provides a political mandate for action required to ensure everyone’s opportunities to experience a long and healthy life.

 “[M]obile/wearable technologies continue to be popular. People buy them to lose weight, increase strength and endurance, eat well.”

“Proper and adequate nutrition is vital for older adults, and to “measure and monitor Healthy Ageing.”

Create opportunities for developing technologies that support healthy lifestyles for older adults (e.g., monitor and encourage physical activities).
Healthy Lifestyles

Country exemplar - Switzerland

- Switzerland was ranked, in 2015, as the best country to live in for older adults 60+ years of age.\(^6\)
- “A 60-year-old living in Switzerland can expect to live another 25 or more years with 19 of those being in good health.”\(^6\)
- Switzerland has been given the number one spot for best nation with respect to policies on active aging.\(^7\)
- This country has great pensions, “flexible employment opportunities, lifelong learning, and effective health care.”\(^8\)
- This is based on of the HelpAge International’s Global AgeWatch Index, which measures income security, heath, personal capacity, “life expectancy, coverage by pension plans, access to public transit and poverty rate of people over 60.”\(^9\)
- The Swiss have a long life expectancy with women living an average of 85.1 years and men about 80.7.\(^9\)

Why Switzerland?

- Long life expectancies.\(^10\)
- Increased number of older people living alone (aging in place) rather than with family.\(^10\)
- Many nursing homes funded by each region (canton) of the country, which is responsible for licensing its own nursing staff and providers.\(^10\)
- Ranked first for “enabling societies and environments” including “social connectedness,” and feeling “safe walking alone.”\(^11\)

How the Swiss get it right

- The Swiss\(^12\) eat “real” food including whole foods. They do use butter and oils, however most of their flavorings come from fresh herbs, produce and cheeses.
- Dining is a social experience where diners gather leisurely rather than eating in a rush.
- The markets are not open 24 hours and close on Sundays. Fast food restaurants are rare. This limits poor food choices.
- They walk everywhere. Switzerland has walkable paths all over the cities with friendly parks along the way.
- They get enough sleep at night and exercise daily.

Technology in Switzerland

- The Enhanced Daily Living and Health (EDLAH) project is a tablet-like device designed to help seniors live autonomously by providing them with nutritional advice, medication reminders, and “facilitate social interaction.”\(^13\)
- Project Ironhand is a glove-like device that allows older adults to perform activities of daily living with functional grip strength such as personal care and leisure activities.\(^13\)

“Weight-bearing physical activity reduces the rate of bone loss associated with osteoporosis. Regular physical activity maintains strength and flexibility, balance and coordination, and can help reduce the risk of falls.”\(^5\)
Social Participation

Summary of key issue
Social participation is about a person's involvement in community life, the economy, and society. It is also about the rights and responsibilities of individuals to be full participants in society, regardless of their economic situations or physical or mental limitations. Actions are needed to remove barriers to participation in social and economic spheres, which may include access to the digital economy and services. Being engaged in everyday life is important for physical, social, and economic well-being. Active social participation may improve the well-being of seniors and it may tend to increase the social and human capacity of their communities. However, it has been found that seniors are less likely to engage in social activities, mainly because of illness and/or disability, fear of social rejection, and fear of losing their identity. Seniors may increase their interaction with others in the community if their beliefs, fears, and identities are addressed. Other factors may include proximity to resources, neighborhood security, and access to recreational facilities.

What are the issues?

- How do we prevent older adults from losing their connections to social groups, whether it is due to loss of health or function, loss of social ties, or change in resources or residence?
- How do we incorporate changes to be fluid in all four key service categories: foundation services (strategies to engage individuals within the system); direct interventions (services that directly address isolation); gateway services (services that facilitate participation in other services); and structural enablers (supporting the development of communities)?
- How do we allow older adults, who are of varying minorities, access to social participation groups? What about those who are at a distance and live in rural areas of the country?

Policy Priorities

- Actively involve older adults in the development of policies, programs and services, and express appreciation for their contributions.
- Advocate for local communities to establish volunteer programs to strengthen people’s connections across generations, genders, and cultures, while encouraging their digital inclusion.
- Invest in community-based groups organized by older adults.
- Support associations for older adults and promote self-help groups.
- Develop programs to encourage older adult immigrants and refugees to participate in the community.

Potential impact

Social impact:
- Allow older adults to remain integrated within communities (e.g. technology linking individuals with local volunteer opportunities).
- Older adults should be able to participate in developing opportunities within society.
- Improve participation in the volunteering sector that provides purpose and engagement for older adults to continue to feel connected to others.

Economic impact:
- Involvement of older adults into decision-making for policies and programs allows their voices to be heard, which can generate successes for business and services.
• Channel the initiatives and needs of older adults to encourage the development of new and existing associations.

Science impact:
• To continue to research social participation and its relevance to physical, social, and psychological health and well-being.
• To continue to look at the impact of social participation on depression and mental health.
• Few studies have used objective measures of health outcomes of social participation; they do not include a control group to compare differences between participants and very few studies have looked at the long-term impact of nursing home admissions.

What are the opportunities for technology and innovation to address these issues?
• Despite applications or websites that promote online game use to play Scrabble, bingo, crosswords, or card games older adults are familiar with, finding new innovative technologies that encourage social participation for older adults is still an area that requires further development.
• It’s been concluded that the most dominant technological devices that assist older adults in participating in groups, joining clubs, religious services or even volunteering, are hearing aids and walkers.

Find out more
Socializing key to ‘successful aging’: CBC News health article on why socializing is the key to successful aging.

Social participation and the health and well-being of Canadian seniors: national report on Canadian senior’s social participation for health and well-being.


Key statistics
• A Government of Canada report 2013 - 2014 found that 24% of older Canadians did not participate in as many social activities as they would like due to: a loss of sense of community; lack of affordable options; lack of awareness to programs; fear of ageist attitudes; life transitions; and lifelong health issues.
• Research by Statistics Canada found that ~80% of older adults are frequent participants in at least one social activity per week, which includes seeing relatives or friends outside their home, or attending church, or a sporting activity.
Social Participation

Country exemplar - European Union

- University of Southampton (United Kingdom) created a tool to measure the potential of older people for active and healthy aging across countries: the Active Aging Index (AAI).5
- The AAI measures the level at which older adults are living independent lives, participate in paid employment and social activities, as well as their capacity to engage in active aging.6
- The most recent AAI was measured in 2012. Sweden was ranked no. 1 and the United Kingdom no. 4; based on the policies in place for older adults to sustain employment and security for retirement.5
- Ireland and Italy received high rankings for social participation in society.5

Ireland as an exemplar for social inclusion

- Ireland recognized social isolation and loneliness as an issue in 2001 with the creation of the Promoting Social Inclusion (PSI) group.7
- The PSI was created in 2002 and the official report was released in 2004.7
- The Government of Canada did not release its equivalent of a Social Isolation Report until 2016, when the reports Social Isolation of Canadian Older Adults (2016)9 and Social Isolation of Seniors (Volume 1) (2017)8 were released.
- PSI suggests a holistic approach to reach the multiple needs of older adults and how to address exclusion.7
- In 2015, HelpAge Canada10,11 launched the Research Isolated Seniors Everywhere (RISE) Program, a national campaign against social isolation. This occurred approximately 12 years after Northern Ireland launched their program7 equivalent to address social isolation and loneliness for vulnerable seniors.

Role of the PSI Working Group7

- Is committed to communicating with organizations that represent older people to identify the requirements of older people and what services should be provided in the most appropriate and accessible way to meet those requirements.
- Has identified that older adults are one of several groups who are most vulnerable to social exclusion.
sets out a practical agenda that aims to have a positive impact for older adults over a five-year period.

**PSI Five Strategic Objectives**

1. “To address comprehensively the economic and financial inclusion of older adults (i.e., government to review pensions).” (p. 14)
2. “Develop and deliver health and social services that address the distinctive and complex needs of older adults (i.e., training to health care staff and resources to assist with aging in place).” (p. 21)
3. “To increase the safety of older adults and to ensure that they have access to the facilities and services that meet their needs and wishes (i.e., appropriate community designs for those with accessibility needs).” (p. 25)
4. “To promote equality of opportunity for older adults and their full participation in civic life, and to challenge ageism wherever it is found (i.e., government to protect older adults from discrimination especially in workforce).” (p. 32)
5. “To ensure that departments, agencies, and the Age and other voluntary sectors work in a coordinated way to improve services for older people (i.e., monitor, research, and evaluate current services).” (p. 40)

The AAI reviewed European countries in 2012. A 2015 article reviewing the well-being of older adults in various countries, stated that Ireland still ranked first for the category: ‘participation in society’. 
Social Isolation and Loneliness

Summary of key issue
Isolation and loneliness are caused by many factors, including living alone, health problems and disability, sensory impairment (e.g., hearing loss), and significant life events (e.g., the death of a family member). Reduced contact with family or friends may lead to various adverse physical and emotional outcomes in older adults. Identifying possible ways to counteract the reasons for isolation among older adults would help them enjoy a healthier lifestyle.

What are the issues?

- How do we reduce social isolation in older adults in a modern world; a world that is different from the one they grew up in, where technology is abundant, yet new to this cohort?
- How can we help older adults to stay socially connected while struggling with chronic health conditions, like dementia?
- How do we make social technologies and mobile devices more financially affordable for older adults? Can we have a device recycling program?
- How can we include specific populations who may be the minority? For example, women, indigenous populations, or even immigrants? How can we make these older adult populations feel more included?

Policy Priorities

- Determine why the senior population might feel isolated or lonely.
- Promote social connectedness by creating age-friendly communities.
- Support volunteer programs specifically aimed at strengthening people’s connections.
- Identify ways to use technology to improve social connectedness.
- Advocate for affordable transportation options to community services and programs.

Potential impact

Social impact:
- An opportunity to create thriving communities,
  services, and programs to improve the lives of older adults by allowing them to interact with fellow community members.
- Reducing the burden caregivers might feel.
- Improving mental and physical health of older adults.
- Finding purpose and self-worth by volunteering.

Economic impact:
- Increasing social connections among older adults will reduce the health care burden faced financially by government and the demand for health care professionals.
- Reduces the amount of times older adults seek a visit with their family physician.
- Older adults as volunteers saves the economy more than 372 million hours of labor, which is an economic value of $5.5 billion dollars.3

Science impact:
- To evaluate technology as a positive model for older adults to use to reduce isolation and loneliness; various studies are finding that technology use among seniors is limited.4

What are the opportunities for technology and innovation to address these issues?

- There are eight different identified technologies that have been applied to strategically reduce loneliness and social isolation in older adults.
  - These include your regular technology communication tools (phone, Internet, e-mail); video games; robotics; personal reminder information and management systems; peer
Key statistics

- Nearly a quarter of Canadian older adults are negatively affected by social isolation and loneliness, which in turn affects how they go about their daily routines.\(^6\)
- Lack of social support means a 60% increase in the risk of dementia and cognitive decline in older adults; while socially stimulating lifestyles result in the opposite effect.\(^6\)
- Social isolation decreases participation of older adults in volunteer-based roles, which provides approximately $5.5 billion in labor costs.\(^4\)

Find out more

Social isolation and technology: how technology can be used to reduce social isolation among older adults in British Columbia: examines technologies that are currently preventing social isolation.

Social isolation in Canadian older adults: examines risk factors and barriers for social isolation among Canadian older adults.

Social isolation of seniors, Volume 1: understanding the issue and finding solutions: a report on social isolation in Canadian older adults by the Government of Canada.

“Socially isolated people are not more likely to see their physicians on an annual basis. Indeed, in the model, use of physicians, use of home care and use of BC NurseLine are not significantly associated with social isolation.”\(^5\)
Social Isolation and Loneliness

Country exemplar - United States of America

- In 2015, the United States was ranked one of the top countries in the world for having positive relative mental well-being (Germany and Norway were two other countries that were found to have higher positive relative mental well-being).
- Approximately 97.9% of older adults over 50 years of age feel their life has meaning and 94% of those over 50 have social connections like friends or family they can call on for assistance or socializing.
- In 2014, the American Association of Retired Persons (AARP) announced its three-year renewal for outreach efforts to combat isolation among older adults in the United States.
- Pennsylvania created a project called Coming of age to revamp senior centers and make them more appealing for older adults to join in programs that will assist in the reduction of their social isolation.
The AARP Foundation established an online database network of resources to meet the needs of older adults who are isolated or lonely, which allows them to build social connections they need to thrive.

Some examples are: a nightclub for older adults to fight loneliness by having tea party raves, community choirs, and fall prevention groups.

Older adults can also sign up for text reminders. These enable older adults to stay connected with their social circle; Connect2Affect sends a message that reminds older adults to message a friend or loved one, to ensure a healthy and active social life.

By signing up for the mailing list, Connect2Affect will email older adults information, tips, current events, and more, to help them remain connected.

In 2015, Afghanistan was ranked the worst country to grow old in, due to the high rates of social isolation and loneliness.

A few organizations in North America, including the Afghan Women’s Organization in Canada and the Afghan Elderly Association in the United States, are targeting older adult Afghani immigrants. These organizations aim to help support Afghan older adults and reduce social isolation.
Cognitive Health

Summary of key issue
Cognitive health is about the ability to perform cognitive mental processes, such as learning, intuition, judgment, language, and memory. It is greatly affected by age-related disorders, such as dementia and Alzheimer’s disease. These disorders can lead to symptoms that are debilitating and which significantly reduce a person’s independence and quality of life. Providing more resources for those affected by cognitive disorders (older adults, formal caregivers, and informal caregivers) while also growing the research field can lead to reduced stigma, better preparation and prevention, and improved health.

What are the issues?
- How do we create affordable cognitive health resources and care for everyone affected?
- How do we deliver cognitive health resources and care to people living in isolated and underdeveloped regions?
- How do we remove the stigma that comes with illnesses that affect cognitive health?
- How do we account for informal caregiving in all aspects of cognitive health illnesses?
- How do we address the variability in cognitive health aging in healthcare and make personalized solutions?

Policy Priorities
- Raise awareness of health problems associated with dementia to reduce the stigma that prevents people from seeking aid.
- Develop evidence-based care standards for the prevention and management of diseases.
- Accelerate investments in dementia research.
- Support the role informal caregivers play and provide financial assistance.

Potential impact

Social impact:
- Allows people to be more in control of their illness(es) and health.
- Effective innovations will allow people to spend less of their income on the illness and more in the community.

Economic impact:
- People with cognitive health illness(es), and informal caregivers, will be able to continue their career for longer.
- Businesses and employers will be able to teach employees how to serve customers with age-related cognitive impairments.

Science impact:
- Information will be collected with more ease through technologies, such as artificial intelligence, which will result in the scientific community expanding its knowledge.
- Future generations of researchers will be trained on how to address the specific needs of the aging community in relation to cognitive health.

What are the opportunities for technology and innovation to address these issues?
- Technologies that remove burdens placed on the health care system and aid in the diagnosis and treatment of patients.
  - Artificial intelligence and Virtual Health Assistants\(^1\); telemedicine; e-Health\(^2\); technologies that measure brain health.\(^5\)
- Technologies that monitor older adults and ensure that they are safe.
  - Wayfinding technologies\(^2\); in-home monitoring systems to monitor changes.\(^3\)
- Technologies that remove the burden placed on caregivers by assisting them.
  - Caregiving robots.\(^4\)
• Technologies that allow people with cognitive distresses to live independently.
  • Assistive technologies, such as smart homes, that help older adults by monitoring their home environment while also helping with simple tasks.²

Find out more

The Canadian Alzheimer's Disease and Dementia Partnership: this partnership concentrates on mandate changes required to target the issue of Alzheimer’s and dementia in Canada.

HealthDay: News for healthier living: this is a great resource for Alzheimer's disease information. It is updated daily with articles related to Alzheimer's disease and new findings.

Prevalence and monetary costs of dementia in Canada: this report gives an overview of dementia. It discusses how common dementia is in Canadian society and the financial burden associated with it.

The Healthy Brain Initiative of the Centers for Disease Control: The public health road map for state and national partnerships, 2013: this report provides an overview of cognitive health in detail and discusses action items to improve how cognitive health issues are addressed.

Key statistics

• World Health Organization states that by 2031, 47.5 million people will live with dementia.⁶
• By 2031 health care costs for Canadians with dementia will be $16.6 billion.⁶
• Research indicates that two-thirds of costs related to looking after those with dementia are indirect and this burden is taken on by families.⁷
groups across London are able to band together and create more widespread change across England.

- Some examples of projects and initiatives going on in the local DAAs include:
  - Recruiting companies and organizations (both local and national) to identify and tackle three areas or actions that can help those with dementia or those caring for those with dementia.
  - Actively working towards being a certified Dementia Friendly Community by the Alzheimer’s Society (Lewisham DAA).
  - Helping companies and organizations to understand that those living with dementia and their caregivers are relevant to their business (Redbridge DAA).

What they do

- “Action - Dementia Action Alliance captures and promotes best practice, enabling it to benefit many more people. We do this through member Action Plans. These are made public on our website.”
- “Learn - Members come together to share best practice and learn about the latest trends and innovations from across health and social care. We enable this through our events program that includes roundtables, conferences and webinars.”
- “Campaign - Members come together to influence system-wide change and campaign on major issues within health and social care affecting people living with dementia.”

Local Dementia Action Alliance: London, England

- The DAA develops local alliances that aim to address and tackle issues regarding older adults on a smaller level.
- There are several alliances across the United Kingdom.
- The London (England) DAAs are further broken down into 23 smaller local DAA communities.
- This ensures that these groups are addressing the needs of the dementia population and their caregivers on a more meaningful level.
- This structure is important as it ensures, as mentioned above, that those in the community who are diagnosed with, or caring for someone with, dementia are getting the immediate help and resources that they need, but also these 23 smaller

Country exemplar - England

The Dementia Action Alliance

The Dementia Action Alliance (DAA) is a country-wide initiative that aims to change the way that current cities work to be more accessible for older adults, specifically with dementia.
“Care for people with dementia is often provided in the home by family members or friends. These caregivers typically have a longer and harder caregiving journey than caregivers for people with other conditions. While they provide a tremendous service to the person with dementia and to society, they are at greater risk of developing health problems.”

“Regardless of gender, race, ethnicity, language, or geographic region, older adults agreed that cognitive health - memory, decision-making, and similar functions - is important to healthy aging.”
Autonomy and Independence

Summary of key issue

Most people want to continue to live independently in their own homes and communities as they grow older. Being able to live independently is about having the capacity to do things for yourself, but more importantly having choice and control over key aspects of life and not feeling beholden on others for everyday help. Age-related physical and cognitive changes can undermine a person’s ability to live independently and carry out everyday activities and tasks. But being able to live independently extends far beyond health-related issues and financial vulnerability can be a key factor in undermining independence in later life. Developing solutions and supports to help older adults to live independently has major benefits for their well-being and self-esteem, and reduces demands on the caring services. Solutions are also about supporting the families that are actually the biggest providers of support to older adults in the community.

What are the issues?

- How do we define autonomy and independence across different older adult populations, e.g., those with physical disabilities compared to those with cognitive deficits?
- How to maintain autonomy in a way that respects older adults but also keeps them safe as they age and as their needs change over time?
- How do we identify when an older adult’s level of independence or autonomy changes?
- How do we ensure older adults are financially stable and autonomous so that they can remain independent and stay living on their own?
- How do we ensure there are communities friendly to older adults by being accessible to those with physical and mental disabilities?

Policy Priorities

- Promote healthy lifestyles to help seniors live independently and actively for longer.
- Provide resources and supports for the self-care and self-management of various health conditions.
- Create inclusive age-friendly environments and communities that reduce barriers.
- Develop assistive technologies to remain independent throughout life.
- Provide accessible and accurate information on health and social services, and community supports.

Potential impact

Social impact:
- Improving older adults’ sense of autonomy and independence can improve their quality of life.
- If older adults are more independent this can lessen pressure on caregivers.
- Independent older adults have more opportunities to be involved in the community by participating in more programs and events.

Economic impact:
- Finding ways to maintain independence and autonomy can lessen the economic burden on the health care system and health care workers.
- Improving autonomy and independence means older adults can keep working.
- Increased creation and production of products that may aid older adults in living a more independent life.

Science impact:
- Finding ways to improve autonomy and independence in seniors may lead to knowledge about how to improve independence in other populations, e.g. populations with disabilities.
- Improving independence and autonomy means there will be more older adults who qualify for typical aging or other health-related studies.
What are the opportunities for technology and innovation to address these issues?

- Robotic technology that aids in instrumental activities for daily living (IADLs) for older adults still living in the community.\(^1\)
- Technologies that easily aid in connecting older adults with family and friends by means of a telepresence system that makes it seem like the person you are communicating with is in the room with you.\(^1\)
- Technologies, such as apps, which help prompt or remind older adults about medications and appointments, and receiving medical care through “telepresence systems.”\(^1\)
- Technology will further the ability of older adults to be independent and autonomous by giving them the tools to find services and resources on their own.

Find out more

Envisioning the future for older adults: autonomy, health, well-being, and social connectedness with technology support:\(^1\): discusses the importance of developing technologies for older adults in 2050, and explores challenges and possible solutions to developing these technologies.

Active ageing: a policy framework in response to the longevity revolution: this report outlines ways to best include older adults in their communities in social, economic, cultural, spiritual, civic, physical and economic arenas.

The right to autonomy, health and independent living: discusses basic rights of older adults and ideas of how these rights should be upheld, i.e., how older adults should maintain the right to decide where they live and have the care they need to be safe and accessible.

Home and community preferences of the 45+ population: investigates issues for middle aged and older adults regarding their home and community life based on a survey done in 2010 that asked people over the age of 45 what they prefer and want for their home and community.

Key statistics

- 73% of older adults responded with “strongly agree” when asked if they would prefer to stay in their home for as long as possible.\(^3\)
- 56.4% of adults 65 and older reported living with a spouse in a home, based on a Statistics Canada 2011 Census of Population.\(^4\)
- 56.5% of older adults aged 90 and over reported living in private households (i.e., their own home, with a spouse or on their own, etc.).\(^4\)
Autonomy and Independence

Country exemplar - Norway

HelpAge International Global AgeWatch Index 2015: insight report

- HelpAge is an international network that aims to support and advocate for all older adults.
- Their 2015 report provided information as to which countries are the best to grow old in, as well as information regarding income security, health status, capability, and enabling environments for older adults across various countries.
- HelpAge rated Norway as the second-best country overall to grow old in.
- Norway is ranked second (after Luxembourg) in income security, and first in capability.

- Capability in this report refers to the ability of older adults to be employed and the general educational status of older adults.
- Being first in capability means that older adults will have the means to make a living and to be financially independent and autonomous from their family and friends by having the opportunity to be employed for longer.
- Being first in capability also means that older adults are more educated, and that they have more opportunity to be qualified to work in higher paying positions and therefore continue to support themselves.
- Being second in income security is partly due to the higher educational status and higher rates of working older adults, but it is also due to the country giving high priority to financially supporting older adults who cannot support themselves.

Financial Assistance in Norway

- Financial assistance is provided to ensure the financial independence of all adults (18+) in Norway.
- They assess needs on an individual basis and use this to provide enough financial support to help people become financially independent and autonomous.

Supplementary allowance in Norway

- Norway has a comprehensive program in place to financially support older adults who are in need, and to provide them the means to be independent even when they are not able to provide for themselves.
- They provide financial support to adults aged 67 or older who cannot provide for themselves through employment, savings, or social security.
- This is used to ensure older adults are able to make ends meet, i.e., pay bills.
- This program specifically supports older adults who have not been in Norway long enough to receive a retirement pension, or who do not receive a pension large enough to support themselves.
- This program is also needs-based in that each individual person is assessed and given an amount based on their circumstance, i.e., if they have a partner who is employed, or they have a savings account.

“Devices exist to support selfcare and home care. Population ageing is a powerful driver of technological innovation and, in turn, technology is changing what it means to be an older person.”

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Aging in Place and Supportive Homes and Communities

Summary of key issue
Aging in place means being able to live independently in one’s own home and community. Aging in place positively affects older adults’ quality of life and also provides a more autonomous and cost-effective alternative to residential long-term care. However, while it brings social, psychological, and health benefits, it may also have a significant downside on an everyday level. Living at home in old age may trigger various negative experiences, such as neglect, isolation, and loneliness. There is often a lack of culturally appropriate community care, appropriate and affordable housing, and family support.

What are the issues?

- How is an age-friendly environment in a community perceived by older adults with various demographic and health backgrounds?
- How do we create an age-friendly environment that collectively meets different needs?
- How do we develop, sustain and support mechanisms and services that meet the various physical, mental, social, and cultural needs of older adults and help them to remain living independently in their homes and communities?
- What systems and supports need to be developed to ensure that older adults have accessible and affordable housing options?
- How do we develop technologies that are useful to and adaptable by community-dwelling older adults to help them live independently in their homes and communities?
Policy Priorities

- Offer flexible, supportive, and affordable housing options (e.g., care-ready design).
- Develop and provide community services to enable older adults to live at home and socially engage in their community for as long as possible (e.g., home adaptations).
- Support the development and implementation of age-friendly environments.
- Involve older adults in determining priorities for policies and services.
- Provide both older adults with chronic health conditions and their informal caregiver with the tools and support needed to manage those health conditions.
- Help health care professionals to design and implement age-friendly care services.
- Improve access to information about community care options and support.
- Provide culturally appropriate community services and supports.
- Address the particular needs of rural and remote communities.

Potential impact

Social impact:
- Increase and enhance older adults’ independence and social participation in their communities.
- Raise social awareness of what it means to age gracefully and with dignity in one’s home and what support and services are needed to make this a reality.

Economic impact:
- Heighten demand for service and support systems to meet the various needs of older adults who seek to stay in their homes, and those of their caregivers.
- Increase employment in the service and industry sectors that play a role in assisting older adults to live independently in their homes and communities.

Science impact:
- Necessitate research into and development of home care and user-centered services that will help stakeholders understand the various needs of both community dwelling older adults and their caregivers.
- Increase the need to develop user-centered technology designs that facilitate aging in place.

What are the opportunities for technology and innovation to address these issues?

- Devices that ensure older adults’ safety and security around a house (e.g., fall alert and detection systems; activity sensors, which can track an older adult’s movements and report them to a caregiver).
- Devices and apps that help older adults manage health (e.g., smart watches, a wearable technology that can collect health data; a digital pill dispenser and/or pill counters, which helps older adults to manage medication intake independently).
- Assistive technologies and devices that help older adults with activities of daily living (e.g., elevators, kitchen aids, communication devices).

Find out more

10 priorities towards a decade of healthy ageing: identifies 10 action priorities for attaining objectives of global strategies and presents an action plan on aging and health developed by the World Health Organization.

Active ageing: a policy framework in response to the longevity revolution: presents a policy framework based on active ageing.

Thinking about aging in place: provides guidance for older adults to succeed in aging in place, developed by the Government of Canada.

Key statistics

- Over 85% of Canadian Association of Retired Persons (CARP) members surveyed (2,924) planned to age in place.
- In 2012, 2.2 million Canadians, or 8% of the Canadian population, aged 15 years and over received care at home. Older adults were the largest group of care receivers.
Aging in Place and Supportive Homes and Communities

Country exemplar - Australia

Aging in place

Many older populations prefer to age in place. Affordable price, comfort, good location and the feel of emotional attachment lead to this choice. Older Australians usually express high levels of satisfaction when staying in their own home. However, their changing physical needs lead the aging population to make necessary modifications to their current home, and that can be expensive. The decision between aging in place and moving away highly depends on the location, health, and financial status of the older population.

“Technology may support aging in place, but questions have been raised on the readiness of community-dwelling older adults to use these technologies.”
The idea of aging in place is found to be more challenging for older adults that are non-outright owners. The economic condition of non-outright owners in Australia is expected to limit their choice of aging in place. Nevertheless, Australia’s older populations that are outright owners are likely to have a stable socioeconomic status allowing them to age in place. The majority of the older population in Australia are known to be outright owners and the percentage value is estimated to be 72% for lone persons and 84% for couples in 2009 - 2010.7

The focus of the Australian Commission8

1. Different forms of housing strategies that accommodate the needs of aging households.
2. Provide housing in well-planned locations with access to the local and regional infrastructure.
3. Diversifying housing types by considering disabilities and financial status as a way to encourage older people to own a house.
4. Affordable housing to support moderate - and low - income households.
5. Developing social housing as a way to reduce homelessness and meeting the needs of households that face challenges in having a home.

“Living independently as long as possible contributes to that feeling of being in control, which breeds happiness and a better quality of life.”2
Summary of key issue

Older adults require convenient and appropriate options to meet their mobility and transport needs. Driving is their main means of transportation. However, many older adults have to stop driving due to declining physical, mental, or sensory abilities. Characteristics of the community in which older adults live may also pose challenges. These can be, for example, what buildings are accessible and community mapping which can provide an understanding of where there are, for example, unsafe areas or an area where health services can be found. Very frail older adults and those with physical and mental disabilities can face significant challenges in moving around in their homes and neighborhoods. Improving transport and mobility is essential for older adults’ continued health, social participation, and quality of life.

Potential impact

Social impact:
- Aging adults will be more independent and able to manage their time better.
- The older adults will be able to access more resources with ease, which will result in a stronger community.
- People of all ages within the community are safer.

Economic impact:
- Increased creation of jobs from the implementation of age-friendly designs.
- Older adults will be able to work longer if they can easily travel to work.

Science impact:
- Life-changing products can be designed that are informed by the transport and mobility requirements of older adults.
- Future generations of researchers can be trained on the specific needs of the aging community in relation to transport and mobility.

What are the opportunities for technology and innovation to address these issues?
- Technologies that help older adults move around in their homes and community.

Policy Priorities

- Better access to convenient and affordable public transport.
- Developing alternative transportation options, such as bicycling, walking, ride sharing.
- Making driving and mobility aids safer.
- Managing driving cessation and restrictions.
- Maintaining and restoring mobility in aging.
- Enhancing mobility aids.
- Supportive designs for mobility in aging: housing, communities, and transportation.

What are the issues?

- How do we make the world of transport and mobility accessible to all generations while still being efficient with time and funding?
- How can we make transport accessible to older adults living in remote and/or underdeveloped regions?
- How can we make older adults more independent and minimize the amount they rely on others for transportation?
- How do we make the transition from driving to public transit more appealing?
- How do we prevent the aging population that is unfit to drive from driving without discriminating against them?
consultations: these compiled consultations by the Canadian Institutes of Health Research aided in determining guiding principles, priority research areas, and identified some challenges that could be faced during uptake and application of research.

Profile of seniors’ transportation habits (Statistics Canada): this article covers the issues older adults face when obtaining transportation. It focuses on varying forms of transport and how mobility affects social participation.

Older Canadians on the Move: this panel study covers the aging population’s transport needs and examines different modes of transportation.

Find out more

Managing mobility - Transportation in an aging society: this brief discusses seniors’ transportation needs and the inadequacy of current transport services and infrastructure to meet those needs. How demographic differences affect mobility.

Mobility in Aging Initiative: priorities for research and research-advancing activities identified through consultations: these compiled consultations by the Canadian Institutes of Health Research aided in determining guiding principles, priority research areas, and identified some challenges that could be faced during uptake and application of research.

Key statistics

- “Driving is the primary mode of transport for most Canadian older adults.”
- Individuals age 85 or older, 31%, rely on driving as their main form of transport.
- Fewer than 8% older adults rely on public transit.
- Fewer than 5% walk or cycle.
- American older adults, that is 23%, experience mobility or ambulatory problems.
Transport and Mobility

Country exemplar - United States of America - County of San Mateo

Senior Mobility Initiative

- This initiative helps older adults within the County of San Mateo to move freely around the city. Problems related to aging make it difficult to use services such as public transportation or driving within the city.
- The initiative also aims to provide older adults with resources that enable them to participate in exercise groups and mobility-based exercise groups more specifically.
- The initiative led to the development of the Senior Mobility Guide.

Senior Mobility Guide

- Information on transportation options for seniors.
- Updated annually.
- Print and online versions available.
- Also available in Chinese and Spanish to be more accessible to those who do not speak English as a first language.
- This guide also includes driver safety tips, shuttles and public transportation, walking routes, fitness, and other mobility topics.
- Providing this type of guide that is up-to-date and accessible is important for older adults trying to navigate their environment as they age.
- However, this resource may not be feasible in larger cities where the transportation systems can vary quite significantly from one area to the next.
- This program works well as a test run. Trying a pilot of it in a larger city would shed light on some elements that might need to be adjusted.

Shuttles and public transportation

- The guide lists information regarding different kinds of public transportation available in the County of San Mateo. It also provides information as to the reduced rates that are available for these services.
- There is also information regarding transportation specifically for older adults, such as what times of the day it is free of charge or available at a low-rate.
- Information is provided regarding local transportation.

Driver safety

- The guide gives information on driver safety such as resources that are oriented specifically for older adult drivers.

Walking and fitness

- This section of the guide provides location information of walking and fitness groups that are available to older adults.
- It lists information such as prices, locations, and kinds of exercise.

“Mobility restrictions have consequences for the health and well-being of older adults, which often result in a cascade effect of continuing deterioration.”

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“Transportation policies and strategies for an aging society must strike a balance between maximizing benefits, minimizing risks, and respecting the rights and dignity of seniors and other citizens.”
What are the issues?

- How do we design and implement a sustainable personalized health care system for seniors that is not a one size fits all or cookie cutter approach?
- How do we successfully inform and connect older adults, (in various roles) to utilize preventative medicines and approaches?
- How do we unite and streamline all areas of an individual's health care to reduce redundancy and increase collaboration among all involved parties?
- How can we ensure a financially responsible and sustainable health care system that fulfills all Canadian's health care needs, while addressing our aging population?
Policy Priorities

Health care for seniors is very wide-ranging, with the following priority areas:
- Preventive health care, long-term care, end-of-life care, restorative care and rehabilitation.
- Medication management, personalized care, and home care.
- Caring for frail people and those with complex needs.
- Long-term/chronic disease management.
- Mental health (Note: Dementia and cognitive health is a separate key issue).
- Hearing and vision loss.

Potential impact

Social impact:
- Providing effective health care that meets the needs and wants of older adults and allows basic physical needs to be met while facilitating higher order social and cognitive needs for better quality of life.

Economic impact:
- The development of a personalized health care tool could reduce the amount of money spent on redundant treatments, resources, and time.
- Better health at the individual level can lead to healthier productive communities (reduced sick days, social participation, etc.).

Science impact:
- Potential to follow the changes in health of older adults in longitudinal studies with the implementation of personalized health care.
- E-health and big data collection creates potential for large population health studies.
- Further development of evidenced-based, person-centered care for promoting, improving, and sustaining older adults’ health.

What are the opportunities for technology and innovation to address these issues?

- Big data analytics and artificial intelligence machine learning are helping to identify and prescribe appropriate and optimal courses of healthcare.
- Further development of electronic records/results available to both health care providers and recipients.

Find out more

Personalized healthcare/Personalized medicine: Government of Canada / Canadian Institutes of Health Research website linking to current initiatives of personalized health care and e-health strategies.

Future Care for Canadian Seniors: A Status Quo Forecast: detailed report for the Conference Board of Canada examining how health care for seniors is projected to change in the next 20+ years.

Seniors are less satisfied with quality of health care: news report from CBC News with interpretation of international survey results.

Care costs for seniors expected to more than double by 2026: CBC News report commenting on the care costs projected in the coming years for older adults.

National Seniors Strategy: webpage detailing five principles to shape policies related to seniors’ health care.

Key statistics

- The Canadian Medical Association predicts that, by the year 2036, fully 62% of health budgets in Canada will be spent on the elderly.\(^1\)
- In 2014 seniors (aged 65 years and older) constituted about 16% of the population, but consumed almost 46% of all public-sector health care dollars spent by provinces and territories.\(^2\)
Healthcare for Seniors

Country exemplar - European Union: Telehealth Project

- Currently in the European Union there is a health care project called KRISTINA.
- The aim is to research and develop technologies as a mediator regarding questions related to health care.
- This project was considered and developed to support older adult migrants in care homes and in their own homes.

What is KRISTINA?

- A knowledge-based information agent with social competence and human interaction capabilities.
- Intended to be a virtual agent for health and care needs.
- Using technology, KRISTINA aims to bridge:
  - Cultural and language barriers of new migrants.
  - Understandings around how the health care system of the region operates.
- These goals hope to be achieved through implementing artificial intelligence design:
  - Dialogue management for culture-specific contexts.
  - Communication analysis of multiple European dialogues.
  - Culture-specific gesture, mimics facial expressions.
  - Semantic representation and reasoning.

Where has KRISTINA been tested?

Case study for interaction with older adult migrants.
- Used as a personal assistant for Turkish elderly migrants in home for elderly.
  - Assisted with prescriptions and daily routine reminders.
  - Communication mediator between care personnel and older adults.
  - Coach and information for family members.
Case study for communication for older adult migrants.
- Used as a communication tool between care personnel and Polish migrants.
  - Medical background information and related health conditions.
  - Instructions of care.
  - Specific inquiries about the health state and behavior of patient.
“Responding to [older adult health care] needs in an efficient and sustainable manner will require collaboration among the diverse mix of public and private stakeholders that make up the continuing care sector.”

“Nearly 33 per cent of Canadian seniors said they were dissatisfied with the quality of the health care they received.”
Health Service Organization and Delivery

Summary of key issue

Health services are about the way we organize and provide care and support to meet the health needs of the older population. One of the major challenges facing countries across the world is how we can create sustainable services in the face of increasing numbers of older people. In many ways the problem is more about making better use of the financial resources and human capital that are already in place, ensuring equitable access and delivering care that is responsive to individual needs and preferences to age at home in familiar communities.

What are the issues?

- With available resources how do we ensure a well-functioning organization and delivery of health care that includes motivated, skillful providers, sustainable infrastructure and technology, as well as strong evidence-based policies?
- How can we maximize and further develop the use of e-health and other technologies in order to streamline health care organization and delivery?
- How can we work towards modifying the current status quo of health care delivery to reflect the needs and wants of seniors to “safely age in place”?
- How do we create and develop a health service and support system that allows the formal health care sector, family caregivers, non-profit sector, and direct-to-consumer market to collaborate in providing proactive services?

Policy Priorities

- Develop sustainable and innovative policy and service initiatives that include technology that are aligned with the challenges and opportunities of the longevity revolution.
- Move from reactive to proactive services where there is a better balance between restorative, preventative, and community-based care, as well as acute and long-term residential care.
- Ensure best and evidence-based practices in health care and high levels of professionalism, skills, and training across the caring services.
- Ensure that formal health care sector, family caregivers, the non-profit sector and the direct-to-consumer market work interdependently.

Potential impact

Social impact:
- Sustainable and meaningful health care delivery supports both the physical and social well-being of the individual.
- Raise awareness of the current landscape and unsustainable nature of Canada’s health care delivery to motivate policy and research changes.

Economic impact:
- Increase efficiency and productivity of health care organizations, reducing costs of delivery for providers and receivers.
- Growth of the development and technology sector to improve health care delivery, in addition requiring training and jobs to operate new technological developments.

Science impact:
- Push for research that evaluates the need for change and what areas can be changed to maximize successful health care delivery.
- Continued development of evidence-based results that advocate for preventive medicine over reactive medicine.

What are the opportunities for technology and innovation to address these issues?

- Canada Health Infoway is a current platform for e-health collection.
- Development and use of technologies that will increase the quality and capacity of care for
Canadians, i.e.; robotic surgeries, e-health records for collaboration, software to track at home care.

Find out more

World Health Organization - health systems and service delivery: describes health systems delivery and offers links to how they are being implemented, and advocates for changes globally.

The state of seniors health care in Canada: report created by the Canadian Medical Association evaluating the current situation of senior’s health care and outlining potential policy changes.

10 priorities for a decade of action on healthy ageing: the World Health Organization identifies 10 key priorities and areas for change and implementation of health care delivery for aging.

National Seniors Strategy for Canadians: informational site providing evidence for areas of health care delivery that would benefit from change.

Key statistics

- 75% of surveyed Canadians say “the health care system is so complicated they don’t know who to trust.”
- During the last 15 years (i.e., between 2001 to 2016) provincial governments saw increases in health care spending at an unmatched pace compared to growth in other programs and the Gross Domestic Product. During this period, health care spending grew by 116.4 percent.
Universal Health Care: Long Term Care Insurance Model

- In the year 2000 the Japanese government implemented Long-Term Care Insurance.
- Under this system all residents over the age of 40 years old are required to pay into mandatory insurance premiums.
- These premiums go towards paying for about 50% of long-term health care services while corporate and personal taxes cover the rest.
- The Long-Term Care Insurance model is separate from the medical insurance system.

Long Term Care Insurance Model: In Practice

- Seniors and their caregivers obtain access to services first through their local Community Care Access Center.
- From there a care coordinator will conduct standardized assessments to determine what service level the individual will be eligible for.
- Based on the service level an individual could receive up to $55 to over $4,300 per month for care services.
- Individuals, however, do not receive direct cash as the funding can only be used towards services.
- The services can be selected based on what is available in the community and what the individual feels is needed.
- Examples:
  - At home nursing care.
  - Occupational therapy or Physiotherapy.
  - Housekeeping and meal preparation.
  - Community engagement.

Country exemplar - Japan

- Japan is well-known for record setting longevity and “health life span” of the elderly.
- It is the country with the overall oldest population in the world, needing to respond to health care curve earlier than other nations.
- Strategies for handling the healthcare needs of the aging population have been developed and many countries are looking to Japan as an example of successful aspects that can be implemented within their own countries.

“Canada’s health care system was not built to meet the challenges of our aging population. Canada’s Medicare system was established to deal largely with acute, episodic care for a relatively young population.”
Key Issues in Aging

Long Term Care Insurance Model: Limitations

- Although individuals can choose their own services, these may not be reflective of what is actually needed or could overuse services they don’t necessarily need.
- As the population continues to age, the maximum amount people are eligible for these services has decreased.
- While this system works well for urban areas, rural areas are still limited in the amount of services available.
- While the burden on the need for families to provide care (especially for women) has decreased, the majority of care is still being provided by families.

“Canadians expect health care professionals, particularly doctors, nurses, health researchers and scientists, to play a greater role in improving the health care system.”
Caregiving

Summary of key issue

Care for older adults is provided by both family members and by paid professional care workers. Providing care has become increasingly demanding due to the increased level and complexity of health conditions. Family caregivers often face challenges in juggling paid work, caregiving, and other family responsibilities. They need support, resources, and tools to provide care to ensure quality of life of their loved ones as well as themselves. Key issues in paid caregiving are recruitment and retention of care staff and the delivery of high quality care and support.

What are the issues?

- What policies for improving support for caregivers could be developed and implemented that reflect the vast needs and differences of both the caregiver and those that need care?
- How do we shift away from cultural and/or societal stereotypes that expect women to take on the caregiving role?
- How do we responsibly mobilize and distribute financial resources to support education and training of paid caregivers while also recognizing the financial needs of unpaid family caregivers?
- What training, education, support systems, or other technologies need to be utilized for caregivers to ultimately improve the quality of care they provide?

Policy Priorities

- Provide all caregivers with ongoing, support, practical education, and information to support their caregiving practice, in addition to their physical, financial, and psychosocial well-being.
- Develop and provide adequate working conditions and remuneration for paid caregivers to recognize the value of their work and reinforce their dedication to the profession and role.
- Shift societal and cultural expectations imposed on women to be a caregiver, in order to promote a culture of sharing caregiving responsibilities across gender and generations.

Potential impact

Social impact:

- Training and education for new, existing, and potential caregivers could reduce the stigma surrounding the need for caregiving and to improve the level of service delivered to individuals needing care.
- Supporting the needs of the caregivers benefits their well-being and ultimately the well-being of the individual receiving care.

Economic impact:

- Expanded market and job availability for professional caregivers.
- Reduced financial “burden” on family caregivers enabling spending in other sectors.

Science impact:

- Further understanding and development of evidence-based materials to support caregivers and those to whom they provide care.
- Development of new technology/tools and services within business sector to meet caregiver needs.

What are the opportunities for technology and innovation to address these issues?

- Development of one-stop technology; medication tracking, nutrition, activity, wants, and needs. Establishing an easy to use interface for those needing care to participate in their own care.
- Family Caregiver Alliance’s online article: Digital
technology for the family caregiver.\(^1\)
- American Association of Retired Persons, *AARP Bulletin* article: Caregiving help from tech breakthroughs.\(^2\)

**Find out more**

**Future care for Canadian seniors:** a primer on nursing supply and demand: a report from the Conference Board of Canada on the need for future nursing resources and training.

**Carers Canada:** an organization supporting caregivers, connecting them with resources and information.

**Seniors for Seniors:** Canadian organization committed to increasing engagement and supporting peers.

**Advancing Collective Priorities - A Canadian Carer Strategy:** Canadian priorities for changing and supporting the experience of caregivers.

**International Alliance of Carer Organizations:** international collection of global caregiver facts and data.

**Key statistics**

- Unpaid continuing care to older adults was provided by an estimated 5.3 million Canadians in 2011.\(^3\)
- Between 2011 and 2026, Canadian older adults requiring paid and unpaid continuing care supports is projected to increase by 71%.\(^3\)

“Carers…come from all walks of life - all ages, all genders and all income levels.”\(^4\)
Caregiving

Country exemplar - The Netherlands

- Within The Netherlands there is a Dementia Care Village. It is a self-contained community to support persons with dementia to live safe and independent lifestyles.
- Living spaces and activities are tailored to meet the interests, wants, and needs of the individuals.
- The facilities and amenities used by the residents are also available to surrounding neighborhoods.

Hogeweyk - The Dementia Care Village

- The facility is designed as a “neighborhood” where exiting living quarters leads to “outdoor” spaces.
- The facility is completely, however, self-contained and “outdoor” spaces are still within the facility.
- There is only one main gate to monitor the safety of the persons with dementia.
- Within the facility are various community engagement opportunities: theaters, supermarkets, restaurants, hair salon, concert halls, gym, community center, parks, bar, and a boulevard for walking.
- There are additionally medical facilities such as an outpatient clinic and physiotherapy.

Hogeweyk - Maintaining lifestyle

- The village has 23 houses for 152 persons with dementia.
- Every household has a group living environment of 6 - 8 residents.
- Residents manage their own households together with the support of staff members.
- Home décor and design is also based on how the resident previously lived and what they valued.
- The hope is that by maintaining a familiar lifestyle residents will be challenged to remain active in daily life by recognizable life cues and incentives.
- Residents are free to move both within the village and their home space at their own convenience.

Hogeweyk - Recognition

- Hogeweyk has been awarded multiple national and international awards for its implementation and delivery of care.
- “Hospitality and Care” Award 2010.
“Supporting personal support workers and people who care for their loved ones is not only an important priority for this government, it is the right thing to do.”5
Safety, Security, and Abuse

Summary of key issue

Everyone has the right to feel safe and secure, free from abuse and discrimination. Seniors may be a vulnerable population due to potential cognitive and physical weaknesses. Training workers on elder care and identifying elder abuse, while also providing easily accessible resources on how to identify and report violence, may help older adults feel comfortable and safe. It may help them avoid being taken advantage of in the future. Being safe and secure at home and in local communities can be improved by designing mobility-friendly spaces to reduce risks of accidents and injury as well as to provide rapid responses when help is needed. While in many cultures, older adults are esteemed within society and their families, in other parts of the world some older adults are persecuted and victimized.

What are the issues?

- How do we identify groups of older adults that may be at higher risk of abuse, without stigmatizing or stereotyping them?
- How do we ensure accurate and proper training for older adults about their rights?
- How do we ensure safety for older adults living in the community?
- How do we create guidelines for professionals who regularly communicate with older adults, so that these professionals can identify security issues and be able to properly and respectfully address them?
- How can we create policies and regulations that give older adults the right to keep their safety and security without sacrificing their independence?

Potential impact

Social impact:
- Ensuring the safety, security, and absence of abuse for older adults will create a space where older adults can have a higher quality of life.
- Encouraging a society that ensures the safety of older adults today ensures the safety of adults as they age in the future.

Economic impact:
- Ensuring a safe and secure environment for older adults may give them the stability to maintain employment or active volunteer roles.
- Creating a safe and secure community for older adults may mean that there will be fewer people requesting help from social or emergency services.

Science impact:
- If older adults are safe and secure in their environment, they may feel more inclined to participate in community research initiatives. This means that the data collected from communities ensuring the safety of older adults will be more accurate and generalizable.
- More knowledge in this area can lead to better responses from professionals when older adults reach out for help.

Policy Priorities

- Provide resources to identify and report discrimination, violence, and abuse.
- Help older adults feel secure, confident, and safe in their homes and neighborhoods.
- Ensure that basic security remains a right and not a privilege.
- Raise awareness of abuse and the rights of seniors.
- Provide proper support to people who suffer from discrimination, violence, and/or abuse through developing responsive systems.
What are the opportunities for technology and innovation to address these issues?

- Telecare and telehealth services: supporting those with disabilities or illnesses to manage their own medication or care.¹
- Fall-prevention lighting: lights walkways to increase visibility and reduce falls.²
- Home motion-detection sensors: alerts a caregiver if the older adult is being less active than normal.²
- Webinar for caregivers and older adults on how to recognize abuse or security issues.

Find out more

Positive ageing - starts now!: National Positive Ageing Strategy (Government of Ireland): describes the importance of having a growing older adult population and creating a culture that is inclusive and fulfilling for this population.

HelpAge International Strategy to 2020: HelpAge is an organization that aims to aid older adults across the world to live more “dignified, healthy and secure lives.”

Elder abuse: this Royal Canadian Mounted Police website gives a definition of elder abuse and various links to other resources.

Elder abuse: it’s time to face the reality (Employment and Society Development Canada): gives detailed information as to what elder abuse is and what one can do if witnessing it.

Key statistics

- 1 in 5 Canadians report that they know an older adult who they believe might be being abused.³
- The most common type of elder abuse reported is financial abuse.⁴
- Research shows that 13% of Canadians (aged 55+) reported having been emotionally abused by their spouse (or ex-partner).⁴
- In 2009, about 107,000 older adults reported having been emotionally or financially abused by either a child, caregiver, family member, or friend in the past five years.⁴

“Often, more than one type of abuse occurs at the same time.”³
Safety, Security, and Abuse

Country exemplar - Tanzania (United Republic of Tanzania)

Witchcraft
- Approximately 500 older women are murdered per year due to witchcraft\(^5\) accusations.
- Older women are typically the ones accused of witchcraft as opposed to men mainly because women are of a lower social status in this country.
- A lack of education in these communities leads to older women being used as scapegoats to explain events the community cannot understand, control or explain, i.e., wells drying up, crops dying, etc.
- More education across other areas of the United Republic of Tanzania have led to lower rates of witchcraft persecutions as they are better able to identify where problems or issues arise and how to fix them.

- This combination of abuse, old age, and low social status makes it very difficult for older women to get help and remain safe in their community.
- This violence towards older women has become the norm in this community, and this has a devastating impact on the treatment of older adults in general.
- If the community believes it is necessary to persecute older women due to an unfounded accusation of witchcraft, then it is likely not a safe environment for older adults in general.

Sukumaland
- A community in the United Republic of Tanzania\(^5\) that is rural, poor, and has limited education.
- The northern region of this community is demanding more input and leadership from the government concerning the issue of persecuted older women who are accused of witchcraft.
- The government of Tanzania is reluctant to acknowledge any existing beliefs of witchcraft, but is increasingly discussing the topic in public forums.
- Even if older women in the community are not persecuted for suspected witchcraft, they are often pushed out or leave their communities for fear of suspicions that may develop in their community.
- When they leave their communities, they are often pushed out into a space where they are not safe.
- For example, when a man dies his wife inherits his land. However, others in the community use this opportunity to accuse the wife of being a witch, and then take her home.
- This is partly due to the fact that land is becoming scarce in this country, and when there is only an older woman living on a piece of land, others take advantage of that circumstance and steal land from her, typically by harming or killing her and claiming their actions were due to her being a witch.\(^6\)
- Organizations such as HelpAge are trying to tackle this problem of unsafe older women.
- HelpAge aims to do this by addressing low education and poverty.
- HelpAge also aims to change beliefs and attitudes towards witchcraft thereby trying to reduce this violence directly.

“Wellbeing is a positive physical, social and mental state. It requires that basic needs are met, that individuals have a sense of purpose and feel able to achieve goals that are important to them and that they can participate in society and live lives that they value.”\(^1\)
Equity, Diversity, and Inclusion

Summary of key issue

How do you achieve fairness for the way all members of a community are treated? You ensure that equity, diversity, and inclusion are a part of every element of society. This means, for example, everyone has the same opportunities for employment, irrespective of race, ethnicity, gender, sexual orientation, age, religious or political beliefs, and socioeconomic status. Significant parts of the population, however, may not have the same opportunities to receive services and support. This may happen even when these interventions and products are specifically aimed at helping people. A solution to this challenge is ensuring that products and services are inclusive and are culturally appropriate. This is critical for everyone in the community.

What are the issues?

- How do we ensure that older adults can access opportunities that other populations have access to, i.e., employment opportunities?
- How do we maintain equal opportunities for older adults in the workplace as they age?
- How do we ensure older adults are included in all aspects of the community?
- How do we create health care and social systems that are diverse enough to include all populations of older adults, e.g., immigrant older adults, persons with disabilities, etc.?

Potential impact

Social impact:
- Diversity enlarges our world view and teaches us about different ways of living.
- Senior’s different experiences benefit policymaking, services, research, and a community’s quality of life.
- Bringing together a diverse group of individuals increases a community’s culture and knowledge base.
- Including older adults in policy decision making and the creation of other regulations may ensure these changes are effective and meaningful.

Economic impact:
- Inclusion in employment opportunities creates a diverse and productive workforce.
- An equal opportunity, inclusive workforce may keep, depending on their level of independence, older adults healthier longer thereby reducing their need for health care sector services.

Science impact:
- Giving older adults opportunities to remain active in the community means that they may be more likely to participate in research.
- Inclusion in research can make research results more applicable and relevant to the general population and the population of older adults being studied.

Policy Priorities

- Ensure diversity and participation in policy making and decision-making.
- Ensure that an equity, diversity, and inclusion agenda is part of all policies, services, and programs in order to identify and reduce inequalities.
- Involve stakeholders (older adults, families, caregivers) when developing products and services.
- Improve research and data collection by making it more inclusive of diversity.
- Ensure equal access to persons of all ages to affordable, effective, timely information, resources, and healthcare for all needs.
What are the opportunities for technology and innovation to address these issues?

- Technology should aim to aid older adults to find ways to become included in their community, i.e., apps or resources that can let them know what type of activities and/or groups are available.
- Older adults can stay informed about their rights regarding equity and diversity through, for example, an information database about policies and regulations in their community.

Find out more

*Active ageing: a policy framework in response to the longevity revolution:* outlines ways to best include older adults in their communities in social, economic, cultural, spiritual, civic, physical, and economic arenas.

*Positive ageing—starts now!: National Positive Ageing Strategy (Government of Ireland):* describes the importance of having a growing older adult population and creating a culture that is inclusive and fulfilling for this population.

*HelpAge International Strategy to 2020:* HelpAge is an organization that aims to aid older adults across the world to live more “dignified, healthy, and secure lives.”

*Age-friendly communication: facts, tips, and ideas:* gives advice on how to communicate with older adults in a way that is meaningful, effective, and appropriate.

Key statistics

- In 2001, 7% of Canada’s older adults identified as being a member of a visible minority (i.e., nonwhite, exclusive of aboriginal identities), an increase from past census surveys.²
- From 2011 to 2016, the number of older adults aged 85 years and older rose to 19.4%.³
CISP specifically targets older adults (55 years and older) who are immigrants or refugees to Canada. This program offers various supports and aids for older adults and is free of cost. This means that any older adult immigrant who has the ability to get into contact with coordinators of this program will be able to use these services. The goal of this program is to help older immigrants become accustomed to their new home by improving their English and other skills that assure their independence.

Some of CISP’s programs include:

- Computer classes
- Civic education
- Fitness classes
- Knitting
- Reading club
- First language supportive counselling
- Referral to other community services or resources

What does this mean for immigrant or refugee older adults and the community?

Older adults have a free and accessible resource to help them develop skills necessary for everyday success, such as language, social, or computer skills. They also have access to social groups for both physical health and mental health wherein they can practice their new skills. Programs like this help older immigrants and refugees to be active in their community, and to experience a higher quality of life in Canada.
“While families and communities may value their older members, in many societies across the world a negative view of later life predominates. Old age is primarily viewed as a time of loss and vulnerability.”

... “People are growing old in a world which is increasingly unequal, but also one where the demand for participation in decision-making and accountability is ever stronger.”
Aging Workforce

Summary of key issue

Canada has a rapidly aging population with major implications for the workforce, including labour shortages and recruitment and retention of workers in key areas such as healthcare and other labour-intensive industries. Supporting people to remain in the workforce as they age is a major challenge to 21st century societies and economies. Recruiting and retaining senior workers will require age-friendly workplaces and practices, including retraining and re-skilling, health promotion and supportive working environments.

What are the issues?

- How do we support older workers in the labour market while their physical and cognitive abilities change?
- How do we help to improve skills and overcome some older workers’ unfamiliarity with technology?
- How do we design age-friendly workplace environments for older workers while also considering the needs of young workers?

Policy Priorities

- Define the role of the institution (public and private) in promoting the participation of older workers.
- Promote flexible workplace practices and conduct risk assessments that take into account age-related factors.
- Promote active living, healthy eating, stress management, and work-life balance initiatives.
- Determine the role of technology in helping senior workers in the workforce (e.g., re-design of workstations and the assistance of artificial intelligence).
- Outline prospective training and development programs that will help older workers to remain productive.
- Identify possible strategies for reducing a generation gap in the workforce while promoting an age-blind meritocracy.

Potential impact

Social impact:
- The involvement of older workers in the labor market will assist in overcoming their isolation by promoting social participation.
- Rise in retirement age is likely to reduce the dependency of older workers on family members and communities.
- Retaining older workers in the workforce allows them to preserve their skills and utilize their experience.

Economic impact:
- The participation of older adults in the workforce is expected to improve their finances and their purchasing power.
- Assisting older workers to remain in the workforce will help offset rising expenditures from pension payouts and it will overcome shortages in labor supply while improving economic productivity.

Science impact:
- Research that widely explores the challenges of an aging workforce is likely to change the perception in hiring older workers.
- Developing technological tools that have a higher impact on the performance of the older workers.
What are the opportunities for technology and innovation to address these issues?

- Automation and robotics to help seniors keep working and contributing to the workforce longer.
- Further development of technological tools that could prevent injuries and support workplace safety for the older employees.
- Develop and promote training that would prepare older workers for later life career changes and technology-based employment.

Find out more

The impact of aging on labour market participation rates: this Statistics Canada report looks at the implications of an aging workforce.

A guide to managing an aging workforce: provides information for employers, managers, and supervisors about health and safety issues related to older workers.

Older workers: labor force trends and career options: offers practical ideas and advice regarding career options and opportunities in later life.

Key statistics

- The ratio of workers to retired people is expected to rise. In Canada, for example, the increase is estimated to be from 23.8% in 2015 to 38.5% in 2030.¹
- Population ageing considered as a global phenomenon, over the next century the older segment of the population will grow by over 300%, compared to the working age population that will increase by less than 50%.²
Aging Workforce

Country exemplar - New Zealand

- This report was completed by the government of New Zealand to accurately represent and understand the patterns and state of older adults across the country.
- New Zealand has reported a high proportion of its older adults as still active in the workforce.
- This is not due to older adults needing to work longer to support themselves, but more due to the fact that older adults are highly valued and included in workplaces across the country.
- The report found that almost 17.5% of the older adult population were working in 2015.
- It is also projected that between the years 2051 - 2061, 65% of men who are 65 - 69 years of age will still be working.
- By the year 2051, 12% of all older adults over the age of 80 are expected to be in the workforce.

Employment and Wages

- Older adults’ wages have increased more than inflation over the past few years and are projected to continue.
- In New Zealand, from 2011 to 2051, the amount of money earned by working older adults is projected to go from $2.8 billion to $18.2 billion.

What does this mean for older adults and the community?

- Creates tremendous opportunity for the workforce to be diverse by including older adults.
- This is due to companies and organizations recruiting older adults in their workplace, while viewing their years of experience as a valuable asset instead of being a drawback.
- This means that older adults will have a more equal opportunity to change jobs if they are unhappy with their current one without being fearful of not being able to find work somewhere else.
- This also means that older adults who have not been working or have already been retired can still have the opportunity to find a rewarding career or job without worrying about being discriminated against.
- As more older adults are included in the workforce employers will be better able to help older adults in their training and in maintaining their jobs as they age, making the workplace more inclusive.

The New Zealand Government is addressing the issue of older adults in the workplace. In reports such as The business of ageing: update 2015 they examine key issues such as helping businesses and the general public to realize the valuable contributions of older adults in society as well as their value as consumers.

“No need to wait any longer for the baby boom retirement shock to hit the economy - it’s already here, according to a new report on trends in Canada’s labour force.”

“As life expectancy increases and people work for longer, employers will have to learn how to manage workforces where there may be wide age differences.”
Financial Wellness

Summary of key issue

The proportion of older adults in countries’ general populations is increasing. The rise in the numbers of older adults may be accompanied by severe financial and social costs for government support systems. Older adults may also experience income inequality creating financial stress for them. The challenge that arises from this situation is how to encourage older adults to remain financially stable as they age. Two important questions are raised as a result: How can an individual maintain his or her financial status throughout his or her life? What is the role of governments in providing a reasonable financial plan to help overcome income inequality among older adults?

What are the issues?

- How can people better prepare themselves for retirement through better financial planning and saving over their life course?
- How can governments address growing financial inequalities within society and its effect on healthy aging?
- How to overcome financial abuse faced by older adults by people who have a close connection with them?
- How to assist the financial affairs of an older adult?
- What are the possible ways to support older adults without increasing the financial burden of the younger working population?
- How can policy be structured in a way to overcome higher spending commitments and lower tax revenue?
- How to mitigate the feeling of losing independence among older adults due to the financial constraints they experience?
Policy Priorities

- Identify methodologies that would reduce income inequalities among the population of seniors.
- Provide income, family, and community support so that older adults have their basic needs met (i.e., food, water, shelter, clothing, and health care).
- Define a strategy to assist in eradicating poverty and material deprivation among older adults.
- Provide affordable accommodation to counteract homelessness among older adults.
- Recommend financial consulting services for older adults to help them manage their income and wealth efficiently.
- Provide realistic, cost-of-living-appropriate pensions to allow seniors to meet their daily needs and preferences and to ensure that every citizen's pension fund is sufficient to see them through their life course.
- Have in place sufficient social protection benefits to reduce the risk of periods of poverty and promote a continuous working lifestyle as a way to maintain financial security.

What are the opportunities for technology and innovation to address these issues?

- Develop an age-friendly financial app that could assist older adults in their day-to-day financial situation, for example, supporting retirees in planning their retirement funds using record-keeping technology.1
- The use of e-health and m-health help to maintain the health of older adults and possibly reduce health care costs.2
- Educational plan in helping seniors get comfortable with the online banking system and as a way to overcome financial abuse.3

Find out more

Longevity and pension plan sustainability: the rising proportion of the population aged 65 and above leads to a longer payment period for pension.

5 components of a sustainable pension plan: sustaining the defined benefit pension plan via five key components (“shared governance”; “funding policy”; “long-term thinking”; “purposeful investing”; and, “understanding the value”).

What every older Canadian should know about financial abuse: financial abuse is a common form of abuse for many older adults in Canada.

Key statistics

- Most Canadians, 80%, believe the quality of health care services will decrease due to the increased demands stemming from baby boomers.4
- Since 2009 over 120 communities across British Columbia have received funding for Age-Friendly projects.5
Financial Wellness

Country exemplar - Canada

Pension Plan

Canada established the Canada Pension Plan and Quebec Pension Plan in 1966. These policies have contributed to lowering the rate of poverty for older adults. According to the Conference Board of Canada (CBoC) the poverty rate among the older adults is 6.7%. The CBoC states that this rate “is much lower compared to children and working-age population.”

Retirement financial checklist

- The Financial Consumer Agency of Canada has proposed a “retirement financial checklist” to assist retirees in managing their financial status. The checklist consists of 11 items that older workers should consider while planning their finances for retirement:
  - Updating their budget for their life as a retiree
  - Identifying available pension benefits and the pension benefits for which they qualify.
  - Find out the tax credits they are eligible for as a retiree.
  - Identify the insurance coverage that suits their needs best.
  - Learn more about the possibility of working while collecting a pension.
  - Find out if splitting a pension income with her/his spouse helps avoid paying a higher tax.
  - Educate themselves about financial fraud and how to avoid it.
  - Plan to hire a potential financial advisor to assist in financial planning should they become mentally or physically unable to manage.
  - Getting professional legal help in preparing a will.
  - Find out the available housing option for older adults.
  - Find out the cost of living or traveling outside of Canada.

“It costs families more to care for a frail older adult than to raise a child for the first 17 years of her life.”

“Losing independence is not something that anyone likes to think about, but needing help making legal and financial decisions can happen at any time and for a wide range of reasons.”
Silver Economy

Summary of key issue

The Silver Economy focuses on the significance of the growing number of older adults in many countries’ economies. It recognizes that older adults will have immense influence as consumers, users of health and other services, as well as workers and volunteers. In particular, the Silver Economy appreciates the effects older adults, as consumers, will have on commercial products and services. It is important to note that the customization of goods and services for older adults will need to consider their specific expectations such as in health care options and their lifestyles. In recognition of these potential business opportunities, private business and government are re-imaging consumer goods; housing; employment; financial services; leisure; tourism and travel; and direct-to-consumer health care products and services. The markets associated with the Silver Economy represent a robust growth market in the future.

What are the issues?

- The increasing number of older adults who are consumers is expected to change the economy in a way we could never have imagined.
- Identifying and responding to older adults’ needs is seen as a challenge as many industries often categorize older adults as vulnerable consumers.
- The rising number of the population aged 65 and older will influence policy making and decision-makers at all levels of government.

Policy Priorities

- Understanding changing consumer attitudes, needs, and preferences is essential.
- Creating sustainable health care services where there is a balance between formal state-mediated care and direct-to-consumer care.
- Universal design, regulations, standards, and guidelines need to be in place to ensure products and services are appropriate to the Silver Economy.
- When the proportion of older adults becomes the majority of the population there is the possibility their needs and perspectives will have a strong influence on government policies and decision-making.

Economic impact:

- Businesses have begun to use aging as a lens through which they view their strategic plans. They view older adults as providing commercial opportunities for their businesses’ bottom lines.
- Encourages workplace and workforce change. This can drive productivity while supporting shared values and sustainable partnerships with government and civil society.
- Companies must go beyond actual business opportunities. They must create overall approaches to being good corporate citizens to adjust to this demographic shift. They must strategically redesign their workplace to encourage and appeal to the older worker while remaining attractive to younger workers.

Science impact:

- Science needs research that focuses on understanding the processes related to aging and its effects on the consumption patterns of older adults.
- A healthy and financially secure older adult is a long-term consumer.
- Research and development into redesigning Web
portsals so they reflect the navigating preferences of older adults.

What are the opportunities for technology and innovation to address these issues?

- Designing e-medical tracking sheets to monitor the health of older adults¹ and provide education about the value of using the Internet to locate health-related information.²
- Promoting online platforms that facilitate ongoing learning, social engagement, and civic involvement that is accessible through a computer or other Internet-enabled device.³ For example, the use of online dating platforms as a way to encourage seniors to be socially active.

Find out more

*How 21st century longevity can create markets and drive economic growth:* business innovations have a role in re-imaging global society.
Silver Economy

Country exemplar - European Union

The Silver Economy Markets: The presence of the Silver Economy, along with the increasing proportion of older adults in Europe, is shaping the economic activity of European countries. This will be major influence in the European Union’s (EU) economic growth in both the public and private sectors. The Silver Economy in the EU has a substantial presence. It contributed €3.7 trillion in 2015 across all sectors of that economy. Euromonitor forecasts for 2020 that the Silver Economy’s purchasing power will be $12 trillion. Understanding the potential of the Silver Economy offers opportunities to expand the economy of the EU overall.

The Active Assisted Living (AAL) market

The development of the AAL market is encouraged in the EU. These four potential business case studies demonstrate various ways of meeting the needs of older adults in the EU:

1. Develop a robotics market ecosystem that supports older adults and their caregivers.
2. Information and Communications Technology (ICT) to monitor the health of older individuals in their homes.
3. Build smart homes that are aging friendly.
4. Develop tools and/or apps that can analyze the health and activity levels of older adults in their homes.

Develop the robotics market

- In 2016 robots and other devices in the European market that assist older adults were tallied at €13 billion. This is expected to grow in the future due to technological developments.
- Robots have the potential to play an important role in the day-to-day life of older adults:
  - Overcoming loneliness: as a companion reducing feelings of loneliness and isolation that many older adults face.
  - Medical assistance: assisting in physiotherapeutic exercises and medication compliance.
  - Assistant for care aides: robots can assist care aides in performing their task efficiently.

“...
“For all the talk of ‘crisis’ and ‘demographic cliffs,’ many business leaders, policy-makers, non-governmental organizations, academics, economists and others are recognizing that population aging can be, given the right strategic framework, a supremely powerful market driver.”
Global Issues

Summary of key issue

Population aging is a truly global issue and the majority of older people in the 21st century will live in lower - and middle - income countries (LMICs) with developing economies. Major global trends, such as population growth, rapid urbanization, changes of family social and cultural structures, have a major impact on the health and well-being of older people worldwide. Decision-makers often have limited access to information that is crucial to identify solutions for promoting and sustaining health and well-being of older adults. A lack of information is a major barrier to developing and evaluating policy and solutions at a global level.

What are the issues?

- How will countries with rapidly changing demographic structures, cultures, economies, and social institutions adapt to increasing numbers of older people?
- As a globally and culturally diverse society how do we best meet the health care and long-term care needs of today’s older adults, and improve the health outcomes of future generations?
- As a developed country how do we support and influence aging policies of other countries? Conversely, how do we best revise our own policies based on what we see globally?
- How can we collect global aging and health data in a way that is efficient, valid, and meaningful across countries and cultures? How can we mobilize knowledge generated from analyzing the data in a way that is beneficial at a global scale?

Policy Priorities

- Involve older adults in their decision-making process for developing and adopting age-inclusive policies and programs.
- Respond to global-level challenges such as disaster management and preparedness, climate change mitigation, war and displacement, ageism and stereotyping.
- Enhance global network for creating age-friendly cities and communities (e.g., support age-friendly research and evaluation).
- Develop and provide a range of education and training on aging and health for policy makers and other key stakeholders.
- Develop and implement new and efficient methods of collecting global data on health and aging.

Potential impact

Social impact:
- Better understanding and compassion for older adults across different regions and cultures, reducing stigmatization and ageism towards older adults.

Economic impact:
- Understanding global changes and patterns in aging helps to better plan for economic changes and forecasting financial horizons.

Science impact:
- Collaboration of institutions across the world for collection of comparable global data.
- Development of new institutions/initiatives in countries with limited aging data available to create and mobilize new information.

What are the opportunities for technology and innovation to address these issues?

- Global database for health and research developments to be accessed by supporting institutions.
- Countries can learn from each other’s experience,
including the idea of “frugal innovation” with great ideas and knowledge flowing from LMICs to richer countries.

Find out more


HelpAge International: an advocacy group that provides resources and information for aging with independence and dignity around the globe.

World’s aging population: a global challenge that benefits from a local approach: news story discussing the changes we are seeing globally with aging with suggestions to support these changes locally.

Key statistics

- “150 million people suffer financial catastrophe because of out-of-pocket healthcare expenditures, and the older population is among the most vulnerable. Yet one in four countries does not have a national policy or strategy for universal healthcare.”
- By 2050, there will be 64 countries where older people make up more than 30% of their population.
Global Strategy and Action Plan on Aging and Health

- Member states of the World Health Organization and its partners collaborated to develop a global action plan.
- The action plan is based on evidence and survey of member states and countries.
- The Strategy has two goals for the 2016 - 2020 date range:
  - “Five years of evidence-based action to maximize functional ability that reaches every person.”
  - By “2020 establish evidence and partnerships necessary to support a Decade of Healthy Ageing from 2020 to 2030.”

Global Strategy and Action Plan on Aging and Health: Priorities

1. Commitment to healthy aging raising awareness for healthy aging globally in all countries, with the intent to provide evidence for policy changes to support older adults and their abilities.
2. Aligning health systems with the needs of older populations.
3. Promoting a shift towards universal and integrated health care to support the needs and preference of older people.
4. Develop systems for providing long-term care.
5. The development of sustainable and affordable long-term care options in all countries.
6. Creating age-friendly environments. This involves physical and sociological elements to build supportive and accessible communities while also combating ageism.
7. Improving measurement, monitoring, and understanding.
8. Focused and integrated research that targets a large range of global ageing, health, and ethical issues.

Mid-point update of Global Action Plan

- An update of the progress and changes in the plan were assessed and presented on May 2018.
- 10 Indicators of progress were evaluated from member states.
  - These indicators focused on policy changes to support age-friendly communities, deter age-based discrimination, and health statuses.
  - Since implementation there has been a shift in focal points, policies, and legislation towards aging and health.

“The world faces a shortfall of more than 4 million health workers and 57 countries, mostly in Africa and Asia, have insufficient workers to provide minimum standards of care.”

Organization exemplar - World Health Organization

Global Strategy and Action Plan on Aging and Health

- The WHO recognizes that the global landscape of population structure is changing.
- In response governments, technologies, public opinions, gender norms, and other areas need to change to successfully respond and proactively plan for these population changes, especially in regards to health.
- A global strategy was developed and implemented in 2016.
“The challenges presented by aging populations may be a global issue but it’s interesting (although maybe not surprising) that some of the very best approaches for addressing them start in our own neighborhoods.”³
References

An Aging Population

3. Financial Times. (2018). Britain’s population set to grow larger, older and more diverse. Retrieved from https://www.ft.com/content/1c924e00-7e25-11e5-a1fe-567b37f80b64.

Overcoming the Digital Divide


Lifelong Learning


Healthy Lifestyles

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Social Participation


Social Isolation and Loneliness


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services/.

Cognitive Health

Autonomy and Independence


Aging in Place and Supportive Homes and Communities


Transport and Mobility


Healthcare for Seniors


Health Service Organization and Delivery


Caregiving


Safety, Security, and Abuse


Aging Workforce


Equity, Diversity, and Inclusion


Financial Wellness


The Silver Economy


Global Issues


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3. Healthy Lifestyles
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4. Social Participation
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6. Cognitive Health
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9. Transport and Mobility
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