

AGE-WELL Challenge Areas

Core Research Program 2020-2025: Request for Proposals

Introduction

Towards meeting AGE-WELL's vision and mission, the network's main goal is to support great research, development, and innovation that will have real-world benefits for older Canadians and caregivers. Below we outline the eight Challenge Areas in which AGE-WELL will invest across all of its programming from 2020-2025. This document aims to help researchers, partners and stakeholders to consider the key areas that AGE-WELL wants to address.

How AGE-WELL defined its Challenge Areas

The Challenge Areas presented here are a result of an extensive review and consultation process carried out across the AGE-WELL Network, with its members, partners and the general public. The AGE-WELL National Innovation Hub in New Brunswick focusing on policy—*Advancing Policies and Practices in Technology and Aging (APPTA)*—conducted a review of Canadian provincial policy priorities relating to older adults, while the STAR Institute at Simon Fraser University engaged in an environmental scan of national and international policy documents. The two teams, working with AGE-WELL's Network Management Office, created a preliminary list of 18 Challenge Areas that were presented at five local consultations across Canada (Vancouver, Edmonton, Winnipeg, Toronto, Montreal) in 2018. The broader AGE-WELL community was also consulted through an online survey that was open to the general public. Feedback from approximately 1,000 stakeholders through the in-person consultations and online survey was used to prioritize the final set of eight Challenge Areas.

AGE-WELL Challenge Areas

The following eight Challenge Areas were identified by our stakeholders as being critical in supporting older Canadians and caregivers. The Challenge Areas meet key criteria outlined above and need to be addressed over the next five to seven years. These are areas where technology-based solutions can make a difference by meeting the needs of older adults and caregivers. Each Challenge Area includes examples of technology-based solutions, services, and policies and practices that could be integrated into project proposals. Please note these examples are not exhaustive and are meant to spark ideas within your team.

As demographics continue to shift, and technology advances, new challenge areas will inevitably arise. AGE-WELL will be actively engaged in monitoring and ensuring that we are on the leading edge in addressing these challenges.

1. Supportive Homes and Communities

Aging in place is about being able to live independently in one's own home and community through appropriate supports and services, including the design of physical spaces and the use of technology within the environment. Helping older people to 'age in place', and for caregivers to have access to the supports needed within their own communities benefits their quality of life and also provides a more appropriate and cost-effective alternative to residential long-term care. While aging in place may bring social, psychological and health benefits, there can also be a significant downside. Living at home in old age can be a place of negative experiences, such as neglect, isolation and loneliness. There is often a lack of culturally appropriate community care, suitable and affordable housing, and family support. Being safe and secure at home and in local communities can be improved by age-friendly design to reduce risks for accidents and injury and to provide rapid responses when a person needs help.

Solutions proposed for this RFP should be technology oriented. Examples of technologies, services, and policies and practices in this challenge area include:

Technologies:

- Smart homes
- Socially assistive robots
- Fall detection systems
- Home monitoring systems
- Sensors
- Novel age-friendly environmental design

Services:

- Initial home and personal needs assessment including installation and ongoing troubleshooting service
- Flexible, supportive and affordable housing options (e.g., care-ready design)
- Community supports (e.g., home adaptations, meal services, and personal care)

Policies and Practices:

- Supporting rural and less-resourced communities
- Supporting Indigenous communities
- Developing age-friendly communities and environments
- Informing local by-laws and polices (e.g., height of handrails, depth of stairs)

2. Health Care & Health Service Delivery

While most older adults enjoy active and healthy lives, declining health is a reality for many Canadians as they age. Providing equitable access to the best possible health care, that meets the needs of older adults and caregivers, is at the core of this challenge area. This is especially true in a complex environment with different health systems across the country. Solutions and services in this challenge area will aim to transform preventative, acute and long-term care by moving towards a proactive approach to health care that is focused on the needs of older adults and caregivers, driven by timely data and research, and making better use of the financial resources and human capital already in place.

Solutions proposed for this RFP should be technology oriented. Examples of technologies, services, and policies and practices in this challenge area include:

Technologies:

- Assessment tools
- Medication management systems
- Rehabilitation devices
- Digital platforms that capture the care experience
- Activity-monitoring and predictive systems for disease

Services:

- Training programs to accompany new technologies
- Data management services
- Telemedicine
- System navigation

Policies and Practices:

- Implementing learning health systems
- Equitable access to health care services
- Integrating technologies into infrastructure

3. Autonomy & Independence

Most people want to continue to live independently in their own homes and communities as they grow older. Age-related changes can undermine a person's ability to live independently and carry out everyday activities and tasks—i.e. both basic and instrumental activities of daily living. Developing solutions and supports to help people to live independently and to be able to complete these activities has major benefits for their well-being and self-esteem, and reduces demands on health and social services. In addition, providing supports that help caregivers to ensure that the person they are caring for can maintain their independence without constant intervention is critical.

Solutions proposed for this RFP should be technology oriented. Examples of technologies, services, and policies and practices in this challenge area include:

Technologies:

- Assistive technology
- Smart clothing
- Stick-on hip protectors
- Rehabilitation devices
- Voice assistants for prompting and reminding
- Remote monitoring systems

Services:

- Delivery models for assistive devices
- Education and training on how to use devices independently

Policies and Practices:

- Equitable access to assistive technologies
- Integrating technologies into infrastructure
- Ethics, privacy and confidentiality

4. Cognitive Health & Dementia

Cognitive decline and dementia in later life is something that impacts the lives of many older Canadians and their families. In the absence of a cure, this Challenge Area is focused on delaying the onset of cognitive decline through promoting healthy and active lifestyles, and early diagnosis in order to help older adults and their caregivers plan for the future. A key component is engaging and supporting caregivers who provide the vast majority of day-to-day care for individuals experiencing dementia.

Solutions proposed for this RFP should be technology oriented. Examples of technologies, services, and policies and practices in this challenge area include:

Technologies:

- Diagnostic and predictive tools
- Wandering detection
- Locator and GPS tracking devices
- Virtual exercise systems
- Remote monitoring systems
- Prompting and reminding systems
- Social and support robots

Services:

- Online service that allows volunteers to help look for missing persons
- Training on new diagnostic tools
- Customer support for home-based virtual exercise systems

Policies and Practices:

- Consumer guideline for choosing a locator device
- Amending missing persons legislation to include older adults
- Changing practice to adopt new diagnostic tools

5. Mobility & Transportation

Mobility is essential for older adults' continued health, social participation and quality of life. Older adults and caregivers require convenient and appropriate options to meet their mobility and transportation needs, both within and outside their homes and communities. The main means of transportation for most adults is driving. While most seniors continue to drive safely, many have to stop due to declining physical, mental or sensory abilities. Older adults experiencing physical and mental disabilities can also face significant challenges in moving around their homes and neighborhoods. Access to other modes of transportation such as public transit and new 'on-call' services is becoming even more critical to support the mobility needs of older adults and caregivers.

Solutions proposed for this RFP should be technology oriented. Examples of technologies, services, and policies and practices in this challenge area include:

Technologies:

- Smart wheelchairs
- Self-driving cars
- Age-friendly street design (lighting, signage)
- In-vehicle safety and monitoring systems

Services:

- Local transportation for older adults
- Training for service operators on how to better assist older adults
- Age-friendly customer service and assistance programs
- On-call transportation services

Policies and Practices:

- Moving from federal codes of practice for accessibility to regulation to support an inclusive transportation system
- Creating new regulations that improve transportation for older adults

6. Healthy Lifestyles & Wellness

Promoting healthy behaviours enable older adults and caregivers to maintain and improve their physical and mental health, and well-being. Living a healthy lifestyle is not just about making conscious choices about nutrition, exercise and self-management of health issues. It is also about the social, economic and contextual factors or social determinants of health that contribute to health outcomes. These include income and social status, education and literacy, employment and working conditions, physical environments, social supports, access to health services, gender and culture.

Solutions proposed for this RFP should be technology oriented. Examples of technologies, services, and policies and practices in this challenge area include:

Technologies:

- Wearables
- Health and fitness applications
- Sensors to track vital signs and monitor sleep
- Virtual exercise systems

Services:

- Physical activity programs that are inclusive of older adult needs and preferences
- Online communities
- Respite services

Policies and Practices:

- Improving health promotion practices
- Equity in access to services across geographical and cultural dimensions

7. Staying Connected

Social participation is about staying engaged at home, work and in the community. Civic engagement through volunteering, leisure, religious and cultural activities can improve the well-being of older adults and increase the social and human capacity of their communities. However, social participation often decreases with age as a result of impairment, disability or illness. Older people are at risk of social isolation if they live alone or face significant life events, such as the death of a spouse. Reduced contact with family or friends may also lead to various adverse physical and emotional outcomes. Developing initiatives to counteract social isolation will help older Canadians and caregivers to enjoy a better quality of life and remain active participants in society and the economy. While technology has the potential to help, many low-income seniors do not have access to the digital infrastructure.

Solutions proposed for this RFP should be technology oriented. Examples of technologies, services, and policies and practices in this challenge area include:

Technologies:

- Digital social games
- Digital storytelling
- Mobile applications
- Social and tele-presence robots
- Smart homes

Services:

- Support for online platforms and applications
- Training and tutorials on how to use new technologies

Policies and Practices:

- Technology adoption into community and long-term care organizations
- Intergenerational programming and practices
- Improving access to digital infrastructure for low-income and marginalized groups

8. Financial Wellness & Employment

Financial wellness in later life is crucial for older adults and caregivers, as well as society as a whole. Despite the image of the wealthy baby boomer, many people face financial hardship as they grow older. Low income has implications for health and social engagement and increases the risk of experiencing further challenges including homelessness. Supporting people to remain in the workforce as they age or while providing care to a loved one will contribute to their financial well-being. Supportive workplaces, training and education initiatives will help people to remain in the workforce and allow organizations to recruit and retain workers in key areas such as health care and other labour-intensive industries. Further supports and accommodation for caregivers in the workforce are also needed to help them balance their paid work and care work roles.

Solutions proposed for this RFP should be technology oriented. Examples of technologies, services, and policies and practices in this challenge area include:

Technologies:

- Financial assessment tools
- Financial software programs
- Mobile applications
- Remote monitoring systems
- Cyber-security systems and tools
- Supportive and age-friendly workplace technologies

Services:

- Education, skills development and re-training programs
- Financial consulting services

Policies and Practices:

- Realistic, cost-of-living-appropriate pensions
- Workplace accommodation policy for caregivers
- Financial security and safety practices