Healthy Aging in Canada:
A New Vision, A Vital Investment

A Discussion Brief
Prepared for the
Federal, Provincial and Territorial
Committee of Officials (Seniors)

Participating Governments:
Government of Alberta
Government of British Columbia
Government of Manitoba
Government of New Brunswick
Government of Newfoundland and Labrador
Government of Northwest Territories
Government of Nova Scotia
Government of Nunavut
Government of Ontario
Government of Prince Edward Island
Government of Quebec *
Government of Saskatchewan
Government of Yukon
Government of Canada

Members of the Healthy Aging and Wellness Working Group
British Columbia
Canada
Manitoba
Newfoundland & Labrador
Nova Scotia
Ontario

Acknowledgements
This brief and its complementary report were prepared for the Healthy Aging and Wellness Working Group of the Federal/Provincial/Territorial (F/P/T) Committee of Officials (Seniors). The working group would like to thank Peggy Edwards and Aysha Mawani from The Alder Group who researched and drafted the larger report and prepared this brief.

The opinions expressed in this document are those of the authors and do not necessarily reflect the position of a particular jurisdiction.

Également disponible en français sous le titre:
LE VIEILLISSEMENT EN SANTÉ AU CANADA: UNE NOUVELLE VISION, UN INVESTISSEMENT VITAL

* The government of Quebec contributed to the present document by sharing information and best practices, however, it is not taking part in the joint initiatives mentioned in the document because it assumes full responsibility for activities pertaining to health and social services.

HEALTHY AGING IN CANADA:
A NEW VISION, A VITAL INVESTMENT

About This Brief

This brief was prepared for the Healthy Aging and Wellness Working Group of the Federal/Provincial/Territorial (F/P/T) Committee of Officials (Seniors) to enable discussion, debate and decisions on how to move forward to promote healthy aging in Canada.

The brief provides a strong new vision for healthy aging in Canada and suggests five key focus areas for action (the what). It provides the rationale and evidence for investing in healthy aging (the why). Lastly, it describes three essential mechanisms for action and suggests some key opportunities for moving ahead (the how).

A longer complementary paper that expands on the concepts and evidence in this brief is also available. It is written for all people who develop, influence and implement policies and practices that affect the well-being of Canadians aged 65 and over. These include ministers responsible for seniors, other government decision-makers at all levels and in a variety of sectors; the nongovernmental sector (including senior's groups); service providers in health, recreation, housing and social development; and older Canadians themselves.

Contents

1. A New Vision for Healthy Aging

Each of us is aging. And as a population, Canada is aging faster than ever before. Today, there is a more informed recognition of the important contribution that older people make to their families, communities and nation. There is also a growing understanding of the diversity of Canadian seniors in terms of age groupings, levels of independence, and ethnocultural backgrounds. Women and men experience aging in different ways and women far outnumber men in the oldest age categories (80-plus). For both men and women, there are significant differences between life at age 65, 75 and 85-plus. These groups are also heterogeneous, reflecting diverse values, educational levels and socioeconomic status. Canada is in a unique position due to immigration and Aboriginal Peoples in terms of ethnic, racial and linguistic diversity among the older population.

Today, older Canadians are living longer and with fewer disabilities than the generations before them. At the same time, the majority of seniors have at least one chronic disease or condition. Our health care system primarily focuses on cure rather than health promotion and disease prevention. Redirecting attention to the latter is required in order to enable older people maintain optimal health and quality of life. It will also help to manage health system pressures.

The evidence is clear. Older adults can live longer, healthier lives by staying socially connected, increasing their levels of physical activity, eating in a healthy way, taking steps to minimize their risks for falls and refraining from smoking. But there are real environmental, systemic and social barriers to adopting these healthy behaviours. Some relate to inequities as a result of gender, culture, ability, income, geography, ageism and living situations. These barriers and inequities need to be and can be addressed now. Through a combination of political will, public support and personal effort, healthy aging with dignity and vitality is within reach of all Canadians.

It is time for a new vision on healthy aging – a vision that:

- ***values and supports the contributions of older people;***
- ***celebrates diversity, refutes ageism and reduces inequities; and***
- ***provides age-friendly environments and opportunities for older Canadians to make healthy choices, which will enhance their independence and quality of life.***

Building on a Solid Foundation

This vision for healthy aging builds on several key concepts and plans previously endorsed by the Ministers Responsible for Seniors:

The National Framework on Aging sets out an overall vision: "Canada, a society for all ages, promotes the well-being and contributions of older people in all aspects of life" (Health Canada, 1998). The vision for healthy aging seeks to further specify how this will play out by providing age-friendly environments and opportunities for older Canadians to make healthy choices, which will enhance their independence and quality of life.

Five principles identified by the National Framework on Aging underpin this vision: dignity, independence, participation, fairness and security (Health Canada, 1998). These principles provide a common set of values for all jurisdictions that are consistent with the United Nations principles for older persons (United Nations General Assembly, 1991).

Planning for Canada's Aging Population: A Framework was developed by the F/P/T Committee of Officials (Seniors) to guide governments across Canada as they develop policies and programs for their aging populations. It outlines three pillars for action: health, wellness and security; continuous learning, work and participation in society; and supporting and caring in the community. The vision and framework for action presented in this document builds specifically on the pillar related to "health, wellness and security".

2. A Vital Investment

Today, people aged 65 and older make up some 13 percent of the Canadian population. By 2031, there will be approximately nine million seniors, and they will account for 25 percent of the total population.[3] If left unaddressed, the aging of the population will have social, economic and political impacts that will far outweigh the costs of investing in healthy aging now. In addition to the demographic imperative, there are several other important reasons to invest in healthy aging:

1. Seniors make a significant contribution to the richness of Canadian life and to the economy. Older people provide a wealth of experience, knowledge, continuity, support and love to younger generations. The unpaid work of seniors makes a major contribution to their families and communities. Some 69 percent of older Canadians provide one or more types of assistance to spouses, children, grandchildren, friends and neighbours.[4] Many grandparents care for their grandchildren on a part- or full-time basis; and increasing numbers of Canadian grandparents are raising their grandchildren on their own.[5] As caregivers to spouses, family, friends and neighbours, seniors are a vital force in reducing health care and social service costs. Civil society programs benefit from the voluntary contributions of a large and growing number of retired seniors with valuable knowledge and skills. In addition, seniors are the largest per capita donors to charity.[6]

Older Canadians also make an important contribution to the paid economy. More than 300,000 Canadians 65 or older were in the labour force in 2001.[7] As demographic shifts reduce the ratio between the proportion of employed and unemployed Canadians (i.e., children and retired people), governments and some employers are encouraging individuals to work longer. Remaining in the workforce and actively participating in civic affairs depends, in large part, on staying in good health.

An Essential Economic Contribution

In 1998, some 42 percent of Canadians aged 55-64 and 44 percent of Canadians over 65 spent an average of 2.2 hours a day as volunteers. The economic value to our communities is thought to be $60.2 billion each year.[8]

It has been estimated that it would take almost 300,000 full-time employees at a cost of $6 billion per year to replace the work of the 2.1 million Canadians who care for seniors with long-term health problems. [9] The majority of these caregivers are middle-aged and older women.

2. Healthy aging can delay and minimize the severity of chronic diseases and disabilities in later life, thus saving health care costs and reducing long-term

care needs.[10] In 2003, seniors' needs accounted for more than 44 percent of all provincial government health spending, as well as 90 percent of expenditures in long-term care institutions.[11] Experts believe that the health care costs of population aging will be manageable within the context of a growing economy – especially if the mental and physical problems due to chronic diseases and injuries can be prevented or delayed until the very end of life. This phenomenon, referred to as the "compression of morbidity" can be a direct outcome of healthy aging and its many benefits. Thus, the World Health Organization suggests that "a key aim of government policy should be to enable and encourage people to stay physically active throughout the life course, to remain socially connected in later life, to establish healthy eating patterns and have access to healthy food choices, and to refrain from risky behaviours such as smoking, overeating and activities that can lead to falls and injuries".[12]

Costs and Savings Associated with Falls

It is estimated that fall-related injuries in Canada among those 65 and older cost the economy $2.8 billion a year.[13] The Public Health Agency of Canada estimates that a reduction in falls by 20 percent could result in 7,500 fewer hospitalizations and 1,800 fewer permanently disabled seniors; as well as national savings of $138 million annually.[14]

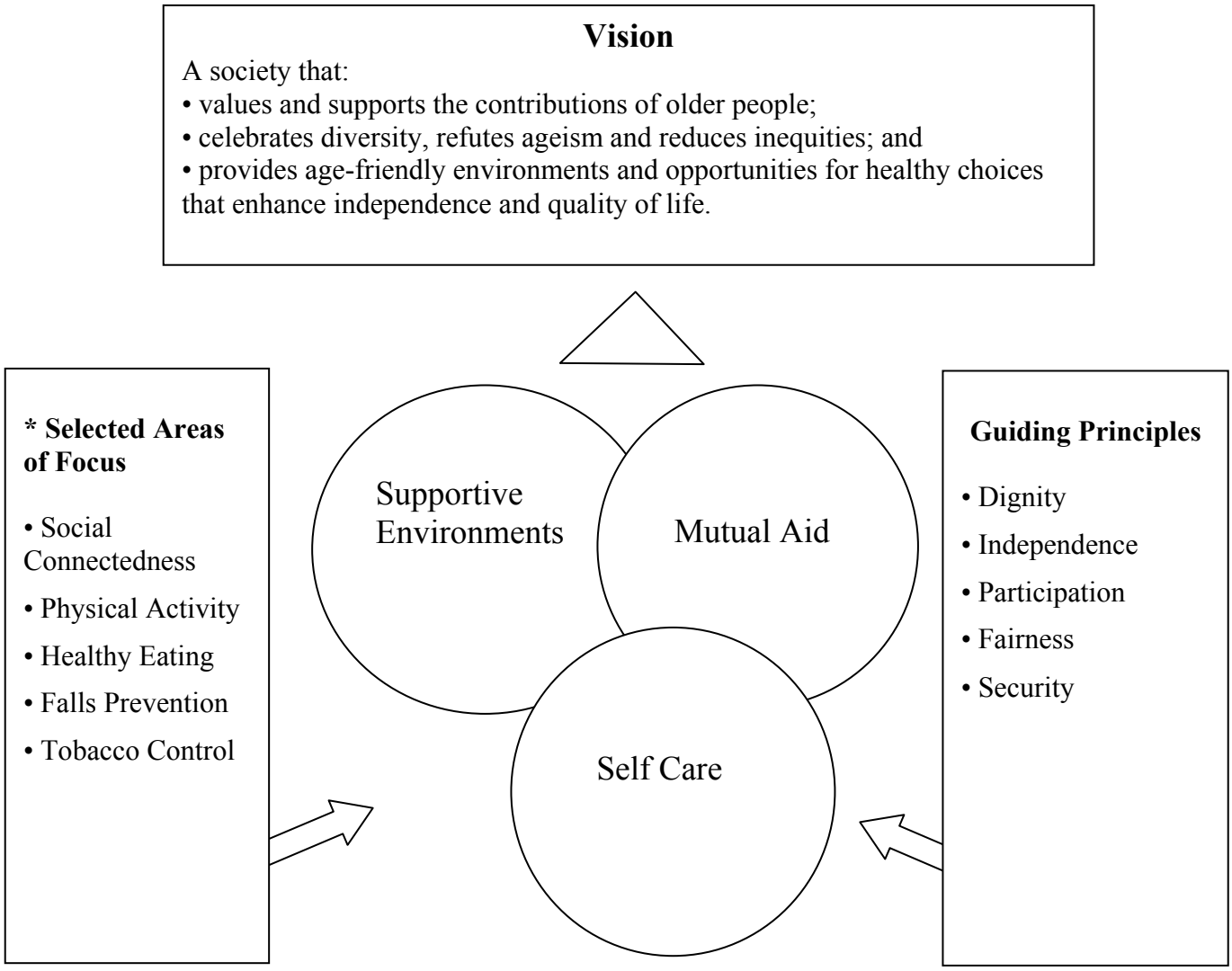
3. The evidence compels us to build on existing opportunities, to put in place interventions that are known to be effective, and to show leadership by supporting innovative approaches. Experience provides us with some models and successful interventions that can be replicated in different settings. In addition, there are opportunities to build on existing strategies in aging and healthy living that are already underway in most provincial/territorial, federal and local jurisdictions. Some of these promising practices and opportunities are further explored in the longer report that accompanies this brief.

Canada's capacities in community-based research as well as new opportunities for collaborating with the World Health Organization provide opportunities to develop further knowledge and show leadership at provincial/territorial, national and international levels.

4. Canadians of all ages believe that efforts to enable seniors to remain healthy and independent are "the right thing to do". Established values such as independence and interdependence, social justice, and respect for families with multiple generations help to define Canadian society. Further, as a signatory of the 2002 International Plan of Action on Ageing, Canada has made a clear commitment to "enhancing life-long physical and mental health and well-being, maintaining independent living and expanding the participation of older persons in society".[15]

Investing in healthy aging is not an "either-or proposition" that sets up competition for resources between the young and old. Rather, it is part of a life course approach that makes strategic investments at different times and transitions related to age. It is never too late to invest in people's health. For example, with the assistance of interventions that are tailored to them, seniors who smoke can learn to quit and thus enjoy the immediate and long-term health benefits of a smoke-free lifestyle.[16] In addition, investments in an "age-friendly" environment usually benefit the old and young at the same time.

3. Achieving the Vision



** These five focus areas are the first to be addressed within the healthy aging strategy. Other areas (e.g., elder abuse, income disparities, literacy and lifelong learning) may be addressed later or in other collaborative strategies.*

Three key mechanisms can be used to pursue the new vision for healthy aging:

1. ***Supportive environments*** refers to creating policies, services, programs, and surroundings that enable healthy aging in the settings where older Canadians live, work, learn, love, recreate and worship. Healthy public policies that create supportive environments go beyond the health sector and often involve collaborative action with sectors such as transportation, housing and fiscal policy. All levels of government are involved in the creation and management of supportive environments, as well as the nongovernmental and private sectors, and institutions such as universities, hospitals, workplaces and long-term care facilities.

   Some examples of supportive environments are the creation of "age-friendly" communities that facilitate social interaction for seniors and provide safe, attractive places to walk and be physically active; accessible transportation that encourages social engagement; smoke-free public places; senior-friendly restaurants and grocery stores that enable and encourage healthy eating; and policies that reduce inequalities related to socioeconomic status. Involving older people in all levels of planning, implementing and evaluating supportive environments is essential for success.

2. ***Mutual aid*** refers to the actions people take to support each other emotionally and physically, and by sharing ideas, information, resources and experiences. Encouraging mutual aid means recognizing and supporting seniors' efforts in volunteerism, self-help groups, caregiving and the informal support family members provide to each other. Mutual aid is also a reciprocal process across generations. As the proportions of young and old in Canada continue to change, supporting intergenerational relationships becomes especially important for the health of our society as a whole.

3. ***Self-care*** refers to the choices and actions individuals take in the interest of their own health; for example, an older person choosing to get active, to join a community organization or to safety-proof his or her home. Culture, gender, socioeconomic status, skill level, relationships and access to reliable, culturally-sensitive information all influence self-care.

   To make healthy choices and carry through with those choices, older people need tailored, accessible information and help learning skills for healthy aging. For example, providing cultural- and gender-responsive information on appropriate types and levels of exercise is important. However, many seniors do not have the skills they need to undertake a safe and effective exercise regime. Helping them learn activities such as cross-country skiing, home exercises and dancing enables them to actively participate with pleasure and confidence.

These three mechanisms are supported by:

- training leaders and professionals in health, recreation, urban planning and other sectors that influence opportunities for healthy aging;

- building community capacity for healthy aging among seniors' groups, services and centres serving seniors, as well as in intergenerational programs and practices; and

- supporting a research and knowledge development agenda, and the transfer of what is learned in ways that policy-makers, leaders, seniors and their families can understand and use.

4. Five Key Focus Areas: The Evidence Base

While recognizing that healthy aging depends on all of the broad determinants of health (including income, housing, protection from abuse, etc.), in 2005 the F/P/T Ministers Responsible for Seniors endorsed the need for action on five key issues, based on their impact on seniors health, the availability and effectiveness of interventions, the costs associated with treatment for health problems associated with these factors, and their potential to reduce health inequities. These areas of focus are social connectedness, physical activity, healthy eating, falls prevention and tobacco control.

Social Connectedness

Investments in healthy aging require careful consideration of the social, emotional and mental determinants of health. Mental health promotion—including social connectedness—is intimately related to seniors' well-being and functional status. Social connectedness has a positive effect on well-being and one's ability to cope effectively with change and life transitions. It also affects other health behaviours. For example, seniors who are isolated and lonely tend to eat poorly; people are more likely to exercise if a friend or family member accompanies them.

Data from the Canadian Community Health Survey show that seniors who report a strong sense of community belonging are 62 percent more likely to be in good health, compared to 49 percent who feel less connected.[17] Daily social support and involvement has also been shown to influence positive self-perceptions of health among seniors living in the community and in health care institutions.[18] The Gerontological Society of America notes that the health benefits for older adult volunteers can include a decreased incidence of heart disease, diabetes and cardiovascular disease, and improved mental health.[19]

Older adults are vulnerable to a decline in social networks and support due to synergistic factors such as retirement, physical changes including declining health and increases in disability, sensory loss, mobility restrictions, and the loss of loved ones and other relationships.[20] Social isolation and exclusion due to ageism and racism substantially increase the risk of poor health and loneliness, and may even act as predictors of death.[21, 22] Older women who care for spouses and others who are ill or frail may be at high risk for the negative health consequences associated with isolation caused by their caregiving duties.

While older Canadians have choices around social connectedness, it is an enabling environment, with family and community supports, that often makes it possible and desirable for seniors to be active participants in their communities. Decision-makers can help foster social networks for older

people by supporting a range of opportunities for social engagement, including volunteerism, "age-friendly" designs in the built environment that foster social engagement, lifelong learning, employment, recreation, and civic participation. Policies, services and programs need to address the barriers that restrict or limit social engagement by older adults, and encourage social connections among and between generations.

Physical Activity

The physical, mental and social benefits of physical activity are cumulative when sustained over time and incorporated into activities of daily living.[23,24] The association between good health and leisure-time physical activity is particularly strong for seniors, even when socioeconomic factors and the number of chronic conditions are taken into account. Data from the Canadian Community Health Survey show that 67 percent of seniors who are active three or more times a week are in good health, compared to 36 percent who are infrequently active. Participating in regular physical activity is also associated with enhanced mental health, improved odds for staying healthy over time and of recovering from poor health.[25] Despite these benefits, seniors (and particularly older women) remain the most inactive segment of the population.

Supportive socioeconomic and physical environments play a major role in enabling seniors to integrate physical activity into their daily lives.[26, 27] For example, safe pedestrian crossings, well-maintained sidewalks and access to indoor walking programs in winter enable seniors to walk on an everyday basis. Moderate activity, such as walking and gardening, may be the most important thing seniors can do to maintain mobility and prevent disability.[28, 29] The challenge and the opportunity is to make physical activity more accessible and attractive to older Canadians of all ages, abilities and interests.

Healthy Eating

Healthy eating provides essential energy and nutrients for general well-being, the maintenance of health and functional autonomy, and a reduced risk for chronic diseases at older ages. Seniors require fewer calories but more nutrients to promote and protect health, and contribute to independence, self-efficacy and quality of life.[30,31] A recent survey found that 62 percent of seniors who reported consuming fruits and vegetables at least five times a day were in good health compared with 52 percent of seniors who consumed fewer fruits and vegetables.[32]

Like younger Canadians, the prevalence of overweight and obesity is increasing in the older population as a result of an excess consumption of calorie-rich foods combined with physical inactivity. Obesity rates among

older adults aged 75-plus have surged, reaching 24 percent in 2004, compared to 11 percent for this same age group in 1978/79. However, obesity rates did not increase significantly among adults aged 65 to 74. Overweight tends to be higher among middle-aged and older men as compared to women; however, women have higher obesity rates compared to men.[33]

Excess body weight increases one's risks for chronic diseases, injuries and compromised health. In 2005, 55 percent of seniors whose weight was in the healthy BMI range were in good health, compared to 46 percent of seniors who were obese.[34] New research also suggests that obesity is predictive of dependency in midlife and older age, which in turn, is predictive of eventual institutionalization.[35]

At the same time, malnutrition among seniors is often unrecognized and does not always receive the attention it deserves. Seniors (and particularly those age 75-plus) face a number of barriers to healthy eating that can lead to malnutrition, including poor oral health, inadequate finances, isolation, chronic illnesses and compromised nutrient absorption.

Healthy eating and nutrition policies need to address the multiplicity of factors that affect older adult food choices; their unique nutritional needs; the determinants of nutrition status (e.g., underlying health conditions and consumption patterns); and their vulnerability to deficiencies and nutritional problems.[36,37] There is still limited consensus on optimal weights for seniors in Canada; this is a key area for further research.

Falls Prevention

Unintentional injuries among older adults account for a significant burden in both human and economic terms**.** The major cause of injury among seniors in Canada is falls. Among older adults, injuries due to falls threaten independent living, autonomy, mobility, functional ability and health status. Injuries can precipitate institutionalization and even death. If a fall does not lead to an injury, it can still result in increased and on-going fear, and a curtailment of activities (such as regular exercise), both of which can have negative consequences for overall health status and function, and increase the risk for future falls. Seniors who are injured from a fall seldom recover fully. They often experience chronic pain, reduced mobility, loss of independence and confidence, and a compromised quality of life.[38,39]

Older adult women typically sustain more injurious falls and have higher rates of fall-related hospitalizations. Women are also at greater risk than men for breaking a bone as a result of a fall, due in part to lower bone density after menopause and higher rates of osteoporosis.[40]

Fall-related injuries in Canada among those 65 and older have been estimated to cost the economy $2.8 billion a year.[41] Rehabilitation and recovery periods are typically longer and more cumbersome for older adults who have experienced an injurious fall – up to twice as long for falls when compared to all other causes of hospitalization for older adults. This results in a high resource burden on the health care system.[42] The human and business case for falls prevention is clear. What is needed is a political commitment to a comprehensive approach to implementing effective combinations of interventions all across the country.

Tobacco Control

Tobacco use and exposure to second-hand smoke is associated with the development and progression of numerous chronic diseases, mobility restrictions, disability and a decline in physical function. Cigarette smoking is implicated in eight of the top 14 causes of death for adults 65 years of age or older.[43] Deaths from smoking result in, on average, a loss of 15 years of expected life. In addition, seniors with heart disease, asthma and other chronic health problems are particularly vulnerable to the risks associated with exposure to second-hand smoke. Happily, it is never too late to quit. Quitting can enhance quality and length of life, and reduce the risk of disease, decline and death.[44,45]

Older adults are an important audience for smoking cessation. However, interventions directed specifically to older adults are almost non-existent in Canada. There is a need to develop a variety of targeted interventions to help older people quit smoking and document what works, while taking into account the economic and environmental barriers to quitting among seniors. Smoking cessation programs tailored to seniors and smoke-free spaces are essential to health protection and the promotion of healthy aging.

5. Moving Forward

This section suggests some opportunities for all stakeholders to act now, in pursuit of the new vision for healthy aging.

1. ***Embrace a vision of healthy aging*** that values and supports the continuing contributions of older people; celebrates diversity, refutes ageism and reduces inequities; and provides opportunities for older Canadians to make healthy choices, which will enhance their independence and quality of life.

2. ***Fund and evaluate national, provincial/territorial and local initiatives*** that foster age-friendly supportive environments, mutual aid and self-care. Consult with seniors' groups, community agencies and seniors themselves about priorities for action. ***Work with the voluntary sector*** and especially with alliances representing several stakeholder groups (e.g., the Active Living Coalition for Older Adults) ***and with the private sector*** to develop supportive age-friendly environments, mutual aid and self-care among older people.

3. ***Build on existing opportunities to promote healthy aging on a partnership basis.*** Some examples include provincial strategies such as ActNow BC and 2010 Legacies, Manitoba's "Advancing Age: Promoting Older Manitobans", "Giving Older People a Voice" in Nova Scotia and Ontario's "Active 2010"; the Pan-Canadian Integrated Strategy on Healthy Living and Chronic Diseases; the ongoing work of the F/P/T Ministers Responsible for Sport, Physical Activity and Recreation; the Canada Senior Games; and the national disability agenda. Some of these opportunities are explored in the complementary report to this brief. Others need to be identified and pursued within specific jurisdictions.

4. ***Participate in and support international efforts to promote healthy aging.*** There are a number of opportunities for international collaboration. These include working with the World Health Organization (WHO) on falls prevention and participation in a global demonstration project on age-friendly cities. Portage La Prairie, Manitoba, Saanich, British Columbia, Sherbrooke, Quebec, and Halifax, Nova Scotia, will serve as official participants in the WHO's Age Friendly Cities Project. Canada also has a unique opportunity to expand and test this intervention in smaller communities.

5. ***Re-orient health and social services to better promote healthy aging through enhanced efforts in health promotion and disease prevention and control.*** This could include incentives for primary care physicians and nurses to counsel seniors at risk for isolation, reduced physical activity, falls, compromised nutrition, and tobacco use and exposure; subsidies for seniors who wish to take a smoking cessation program or have a fitness or nutrition assessment; and increasing the roles of public health workers and staff in assisted living facilities in enabling healthy aging among seniors with disabilities and chronic diseases. Increase support for community-based social services that enable healthy aging.

6. ***Document and share promising practices.*** There have been numerous but scattered efforts to document and share interventions, case-studies, projects, policies and programs in healthy aging. Currently, there is no Canadian library or portal for documenting and sharing promising or best practices. The creation of such a clearinghouse could be an inexpensive and worthwhile initiative.

7. ***Create and promote national guidelines for healthy aging***. Increase awareness and use of Canada's Physical Activity Guide to Healthy Active Living for Older Adults. Create a similar guide for healthy eating as a complement to the revised Canada's Food Guide to Healthy Eating. Explore the creation of national guidelines related to seniors and tobacco, falls prevention and social inclusion.

8. ***Develop a core of ambassadors for healthy aging.*** There are many seniors across Canada who are actively engaged in healthy aging initiatives and seen as leaders in their communities. Recognizing, formalizing and supporting a team of such "ambassadors" at the provincial/territorial level could be an effective way to increase awareness and support for healthy aging.

9. ***Strengthen intergenerational ties*** through "conversations" between generations, and policies and programs that support grandparenting and intergenerational activities in the broader community. This will require partnerships among sectors that promote well-being throughout the lifecourse.

10. ***Support a knowledge development agenda.*** Integrated efforts in the development, synthesis, translation and exchange of knowledge on healthy aging are required to guide policies and practices. This agenda needs to address research gaps and support a solution-oriented, collaborative approach involving academics and researchers in the community, seniors, and research institutions such as the Canadian Institutes for Health Research (Institute of Aging), the Canadian Fitness and Lifestyle Research Institute, the Canadian Centre for Active Aging.

References

1. Health Canada for the Federal, Provincial, Territorial Ministers Responsible for Seniors (1998). *National Framework on Aging*. www.hc-sc.gc.ca/seniors-aines/nfa-cnv/nfaguide2_e.htm

2. United Nations General Assembly (1991). *United Nations Principles for Older Persons*. Office of the United Nations High Commissioner for Human Rights. www.ohchr.org/english/law/olderpersons.htm

3. Statistics Canada (2005). *Population Projections for Canada, Provinces and Territories, 2005 to 2031*. www.statcan.ca/Daily/English/051215/d051215b.htm

4. National Advisory Council on Aging (NACA) (2001). *Seniors in Canada: A Report Card*. Ottawa: NACA, http://www.naca-ccnta.ca/report_card

5. Statistics Canada (2001). *Grandparents and Grandchildren. Results of General Social Survey*, www.statcan.ca

6. National Advisory Council on Aging (NACA) (2001). *Seniors in Canada: A Report Card*. Ottawa: NACA, http://www.naca-ccnta.ca/report_card

7. Statistics Canada (2001). Canada's Aging Population. Ottawa: Health Canada, http://www.hc-sc.gc.ca/seniors-aines.

8. Statistics Canada (1998). *Overview of the Time Use of Canadians in 1998.* Catalogue no. 12F0080XIE. www.statcan.ca/english/ freepub/12F0080XIE/12F0080XIE.pdf

9. Keating N, Swindle J, Foster D. (2005). *The Role of Social Capital in Aging Well. Social Capital in Action Thematic Policy Studies*. PRI Project. Social Capital As A Public Policy Tool.

10. Laditka J. (2001). Providing behavioral incentives for improved health in aging and medicare cost control: A policy proposal for universal medical savings accounts. *Journal of Health and Social Policy*, 13(4), 75-90.

11. Canadian Institute for Health Information (CIHI), Statistics Canada (2005). *National Health Expenditure Trends 1975–2005*. Ottawa: CIHI, http://www.cihi.ca

12. World Health Organization (WHO) (2005). *Preventing Chronic Diseases: A Vital Investment.* Geneva: WHO.

13. Scott V, Peck S, Kendall P. (2004). *Prevention of falls and injuries among the elderly: A special report from the Office of the Provincial Health Officer.* Victoria: BC Ministry of Health Planning.

14. Public Health Agency of Canada (PHAC). (2005). *Report on Seniors' Falls in Canada*. Division of Aging and Seniors. Ottawa: Minister of Public Works and Government Services, Canada.

15. United Nations (2002). *Madrid International Plan of Action on Ageing. Madrid.* www.un.org/esa/socdev/ageing/waa/a-conf-197-9b.htm

16. Health Canada (2002c). *Tobacco Use and Smoking Cessation Among Seniors*. Division of Aging and Seniors. Minister of Public Works and Government Services: Canada.

17. Shields M, Martel L. (2006). Healthy Living among seniors. *Health Reports* Supplement, 8: 7-20. Statistics Canada, Catalogue 82-003.

18. Ramage-Morin, PL (2006). Successful Aging in Health Care Institutions. How Healthy Are Canadians? *Health Reports*, 16: 47-56. Ottawa: Statistics Canada.

19. Gerontological Society of America (2005). *Civic Engagement in an Older America.* The National Academy on an Aging Society: Washington, D.C. http://www.agingsociety.org/agingsociety/Pages percent20from percent20Geron-NLSept05.pdf

20. Powell, S. (2004). Meeting the Mental Health Needs of Seniors. *Stride Magazine*. www.stridemagazine.com/articles/2004/q1/mental.health/

21. Wilkins K (2006). Predictors of Death in Seniors. How Healthy Are Canadians? *Health Reports*, 16: 57-66. Ottawa: Statistics Canada

22. World Health Organization (WHO) (2003). *The Social Determinants of Health: The Solid Facts*-Second Edition. www.who.dk/document/e81384.pdf

23. Shields M, Martel L. (2006). Healthy Living among seniors. *Health Reports* Supplement, 8: 7-20. Statistics Canada, Catalogue 82-003.

24. Health Canada (2002). *Physical Activity and Older Adults*. Division of Aging and Seniors. Ottawa: Minister of Public Works and Government Services Canada. www.phac-aspc.gc.ca/seniors-aines/pubs/workshop_healthyaging/pdf/physical_activity_e.pdf

25. Shields M, Martel L. (2006). Healthy Living among seniors. *Health Reports* Supplement, 8: 7-20. Statistics Canada, Catalogue 82-003.

26. Health Canada (2002). *Physical Activity and Older Adults*. Division of Aging and Seniors. Ottawa: Minister of Public Works and Government Services Canada.

27. Active Living Coalition for Older Adults (ALCOA) (1999). *Moving Through the Years: A Blueprint for Action for Active Living and Older Adults*. Toronto: ALCOA http://www.alcoa.ca/e/whatsnew/blueprint.pdf

28. LaCroix AZ, Guralnik JM, Berkman LF, et al. (1993). Maintaining mobility in late life. II. Smoking, alcohol consumption, physical activity, and body mass index. *American Journal of Epidemiology*, 137(8): 858-69.

29. Leveille SG, Guralnik JM, Ferrucci L, et al. (1999). Aging successfully until death in old age: opportunities for increasing active life expectancy. *American Journal of Epidemiology*, 149(7): 654-64.

30. Dietitians of Canada (1998). *Eat Well, Live Well … For a Lifetime! A Resource Manual for Health Professionals.*

31. Health Canada (2002). *Healthy Aging: Nutrition and Healthy Aging*. Division of Aging and Seniors. Ottawa: Ministry of Public Works and Government Services, Canada.

32. Shields M, Martel L. (2006). Healthy Living among seniors. *Health Reports* Supplement, 8: 7-20. Statistics Canada, Catalogue 82-003.

33. Tjepkema M. (2005). Measured obesity: adult obesity in Canada: measured height and weight. *Nutrition: Findings from the Canadian Community Health Survey.* Ottawa: Statistics Canada. http://www.statcan.ca/english/research/82-620-MIE/2005001/pdf/aobesity.pdf

34. Shields M, Martel L. (2006). Healthy Living among seniors. *Health Reports* Supplement, 8: 7-20. Statistics Canada, Catalogue 82-003.

35. Wilkins K, de Groh M. (2005). Body Mass and Dependency. Health Reports. (17)1. Ottawa: Statistics Canada.

36. Payette H, Shatenstein B. (2005). Determinants of healthy eating in community-dwelling elderly people. *Can J Public Health,* 96 (Supplement 3): 27-31.

37. Raine K. (2005). Determinants of healthy eating in Canada: An overview and synthesis**.** *Can J Public Health,* 96 (Supplement 3):S8-S14.

38. Public Health Agency of Canada (PHAC). (2005). *Report on Seniors' Falls in Canada*. Division of Aging and Seniors. Ottawa: Minister of Public Works and Government Services, Canada.

39. Health Canada (2002). *Healthy Aging: Prevention of Unintentional Injuries Among Seniors*. Division of Aging and Seniors. Ottawa: Minister of Public Works and Government Services, Canada.

40. Public Health Agency of Canada (PHAC). (2005). *Report on Seniors' Falls in Canada*. Division of Aging and Seniors. Ottawa: Minister of Public Works and Government Services, Canada.

41. Scott V, Peck S, Kendall P. (2004). *Prevention of falls and injuries among the elderly: A special report from the Office of the Provincial Health Officer.* Victoria: BC Ministry of Health Planning.

42. British Columbia Ministry of Health (2005). Healthy Aging through Healthy Living: Towards a Comprehensive Policy and Planning Framework for Seniors in B.C.: A Discussion Paper. Victoria: B.C. Ministry of Health. http://www.healthservices.gov.bc.ca/cpa/publications/healthy_aging.pdf

43. Health Canada (2002c). *Tobacco Use and Smoking Cessation Among Seniors.* Division of Aging and Seniors. Minister of Public Works and Government Services: Canada.

44. U.S. Department of Health and Human Services (2004). The Health Consequences of Smoking: A Report of the Surgeon General. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health.

45. LaCroix A, Omenn G. (1992). Older Adults and Smoking. *Clinical Geriatric Medicine*, (8)1: 69-87. Seattle: Center for Health Studies, Group Health Cooperative of Puget Sound.