Aging in Canada: State of the Art and Science

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Received July 17, 2012; Accepted October 17, 2012
Decision Editor: Rachel Pruchno, PhD

Canada shares many similarities with other industrialized countries around the world, including a rapidly aging population. What sets Canada uniquely apart is the collaborative approach that has been enacted in the health care system and the aging research initiatives. Canada has tremendous pride in its publicly funded health care system that guarantees universal coverage for health care services on the basis of need, rather than ability to pay. It is also distinguished as a multicultural society that is officially bilingual. Aging research has developed rapidly over the past decade. In particular, the Canadian Longitudinal Study on Aging is one of the most comprehensive research platforms of its kind and is expected to change the landscape of aging research.

Key Words: Public policy, Sociology of aging/social gerontology, Health care policy

Canada is an Iroquoian word kanata, meaning “village,” which conveys the organization of this northern country comprised of 10 provinces and 3 territories (Figure 1; Canadian Heritage, 2008). The population of Canada is relatively small given that it is the second largest country in geographic area in the world. The Canadian population currently stands at 34.3 million; it is projected to increase to 47.7 million by 2036. In terms of distribution, 81% of Canadians live in urban areas and 90% reside within 100 miles of the U.S. border. The huge northern territories are sparsely populated with a mere 100,000 people. Ranked eleventh in world economies, Canada is a prosperous country with a gross domestic product (GDP) of about $1.74 trillion (U.S. dollars).

A distinctive Canadian characteristic is the bilingual culture with approximately 22% speaking French and 58% speaking English as their mother tongue. Eight of the 10 provinces are Anglophone. Quebec, a Francophone province, comprises 24% of the Canadian population and 80% of Quebecois speak Canadian French as their native language (Corbeil, Chavez, & Pereira, 2010). New Brunswick, one of the three Maritime provinces, is the only province that is constitutionally bilingual with 33% speaking French.
Migration accounts for about two thirds of the total population growth in Canada. Ethnic diversity is increasing and by 2031, approximately 28% of the population will be foreign born and the numbers of minorities will double, making up the majority of the population in Toronto and Vancouver (Statistics Canada, 2011). The most common visible minorities include Aboriginals (4%), East Asians (4%), and Asians (3.9%).

Our goal in this article is to offer an overview of the state of the art and science of aging in Canada with a discussion of aging public policy focusing on retirement and health care, aging research and key funding priorities and some of the emerging issues affecting the lives of older Canadians.

Demographics of Aging

As in other developed countries, Canada’s population is aging. Life expectancy at birth for Canadians is 81 years, the fourth longest in the world (OECD, 2012). At the age of 65, life expectancy for men is 17.4 years and for women it is 20.8 years (Martin-Matthews, 2007). The number of Canadians aged 65 and older will rise from 14% (4.8 million) in 2010 to 25% (10.4 million) by 2036 (Statistics Canada, 2010). By 2056, 1 in 10 Canadians will be aged 80 or older (Martin-Matthews, 2011). By 2015, for the first time in Canadian history, there will be more older adults (aged 65 and older) than youth (aged 15 and younger; Martin-Matthews, 2007; Figure 2).

Several communities on Vancouver Island, British Columbia offer natural laboratories for studying aging with some of the oldest populations in Canada. For example, Qualicum Beach (47.2%), Parksville (37.1%), Sidney (36.9%), and Nanaimo (30%) have disproportionately older populations from an influx of retirees attracted to the milder climate (Statistics Canada, 2011). The demographic density in these communities offers a unique opportunity to study aging and to pilot test policies, programs, and services for older Canadians.

Key Public Policy and Aging Issues

The National Framework on Aging (Health Canada, 1998) states that “Canada, a society for
all ages, promotes the well-being and contributions of older people in all aspects of life.” The framework identifies five core values: dignity, independence, participation, fairness, and security. A Seniors Policies and Programs Database (http://www.canadabenefits.gc.ca) offers online access to information on local and federal policies and programs relevant to older adults in areas that include health, social housing, income support, programs, and information services.

**Retirement System**

Concerns about increasing costs of public pensions and health care dominate the discourse about Canada’s aging population. The Canadian retirement system is based on private pensions, personal savings, and the public pension system. The public pension system has two tiers: Old Age Security (OAS) and the Canada Pension Plan (CPP). OAS is the cornerstone of the Canadian retirement system—it provides a monthly payment ($540 per month in 2012) to all citizens aged 65 and older. OAS is not contingent on employment history and does not require the person to be retired. By 2036, OAS payments are projected to quadruple.

The CPP is earnings related and funded through employee (49.5%) and employer (49.5%) contributions. It is fully funded and actuarially sound over the long term. In 2012, legislated changes to the CPP will provide workers with incentives to delay retirement. At present, those who retire at age 60 face a 30% lower retirement benefit than if they wait until age 65; by 2016, this early retiree reduction will increase to 36%. Moreover, those who delay retirement and applying for CPP will get a bonus of 42% if they wait until age 70 to collect benefits.

The company-sponsored pension plan system faces significant challenges in future years (Leonard, 2011). Currently, 92% of defined benefit (DB) plans are in deficit. DB plans represent the desired Canadian standard but they are declining as employers favor the more predictable and economical defined contribution plans, which shift the risk of loss more directly to individuals and their accounts (Certified General Accountants Association of Canada, 2010).

**Health Care Expenditures**

A defining feature of Canada is the publicly funded health care system guaranteeing universal coverage for medically necessary hospital and physician services that are provided on the basis of need, rather than ability to pay (Romanow, 2002). About 70% of Canadian health care spending is financed by the government versus 46% in the United States (OECD, 2012). In 2012, the average per capita spending for health care in Canada was US$4,363 compared with US$7,960 in the United States (Squires, 2012).

Canadians refer to their health care system as “medicare” but it is really a collection of 13 independent provincial single payer, public health insurance plans (Marchildon, 2005). The federal government retains separate responsibility for the health care of First Nations, Veterans, National Defense, and inmates in federal prisons. The Canada Health Act (CHA) of 1984 defines the five

![Figure 2. Age pyramid of Canada.](image-url)
principles of medicare—public nonprofit administration, comprehensive benefits, universal access, portability between the provinces, and accessibility (i.e., no co-pay, deductibles, or annual limits). Provinces receiving federal support are required to uphold these principles to receive federal support. The provinces decide what additional services (e.g., drug coverage, home care, and residential care/nursing home) they will cover and how those services will be financed (premiums and/or general taxation), administered, and delivered. Most provinces administer and deliver services through a regional health authority. Efforts to integrate and coordinate services across the continuum of care are complicated by a separate funding authority for physicians who practice autonomously from regional health authorities in their own private practices.

In 2011, total spending on health care in Canada reached $200 billion, accounting for 11.6% of Canada’s GDP and 38% of provincial/territorial government spending (Canadian Institute for Health Information, 2011a). Overall, hospitals account for 29% ($55.3 billion)—the largest share of public health care expenditures. Payments to physicians take up 14% ($26.3 billion)—the second largest share of total health dollars (Canadian Institute for Health Information, 2011a). Administrative costs account for only 1% of total public health care costs.

Currently, older adults account for about 45% of provincial health care expenditures (Canadian Institute for Health Information, 2011c). Population aging is a modest contributor driving health care costs; other factors including health service use patterns and technology are more significant (Constant, Petersen, Mallory, & Major, 2011). Still, the general perception that the aging population is a cause of rising health expenditures is hard to dispel (Canadian Health Services Research Foundation, 2011; Canadian Institute for Health Information, 2011b). Administrative costs account for only 1% of total public health care costs.

Emerging Issues on Aging

Efforts to address gaps and transform the health care system for an aging population have focused on the following areas: integration of health care, health promotion/disease prevention efforts, and technologies to support care for older adults in diverse settings. The current Canadian health care system was designed for acute and episodic care and does not easily support collaboration and ongoing communication across different levels of care and providers (Canadian Academy of Health Sciences, 2010). An integrated health care system designed to address chronic illness and continuing care needs is needed to ensure better health outcomes.

In addition, healthy aging requires prevention and effective self-care management of chronic conditions. Timely access to primary care is essential to prevent hospitalizations. Health promotion efforts are focusing on older adults to address issues such as fall prevention in residential/nursing homes; influenza prevention; and development of guidelines for hypertension, diabetes, depression, and cancer (CIHI, 2011).

Gerotechnologies are enabling Canadians to live at home longer and more safely. Aging-in-place technologies include remote monitoring, medication management, and fall detector systems (Alberta Health Services, 2011). By 2016, a nationwide electronic health record (EHR) will be implemented. The EHR will make communication and coordination of care among providers easier; improve transitions between settings; and offer easy access to complete and detailed health information on each individual.
Gerontological Research and National Data Sets

Research on aging in Canada is influenced by the priorities set by the Canadian Institutes of Health Research (CIHR) and its Institute of Aging (IA), the research foci of the major academic research centers in the country, and the particular research interests of Canadian researchers.

Canadian Institutes of Health Research

Established in 2000, CIHR is the major funder of health-related research in Canada. Each of its 13 institutes has a scientific director and an advisory board. CIHR focuses on four areas: Research Capacity (i.e., supporting researchers); Knowledge Creation (i.e., supporting best ideas); Targeted Initiatives; and Program Planning and Process (CIHR, 2011). In 2010, the CIHR budget was just over $1 billion and an additional $100 million was leveraged through partners. In 2010–2011, CIHR awarded 3,872 grants with an average grant amount of $134,000 with about $122 million (14%) of CIHR funds invested in aging-related research (Martin-Matthews, 2011).

CIHR supports several broad cross-cutting initiatives. One of these, entitled Signature Initiatives, is designed to address health and heath system research priorities. Among the topics identified as being of high importance are “a focus on chronic disease,” “international collaborations concerning Alzheimer’s Disease,” and “equity for Aboriginal people” (retrieved from http://www.cihr-irsc.gc.ca/e/43632.html).

CIHR also supports Strategic Initiatives which focus on a specific research agenda. These involve collaboration between at least two of the institutes as well as partnerships with other agencies and organizations. The Canadian Longitudinal Study on Aging (CLSA) is of one the major Strategic Initiatives. The Institute on Aging officially launched the CLSA study in 2009 to develop a national longitudinal research platform. The CLSA will follow approximately 50,000 Canadian men and women between the ages of 45 and 85 every 3 years for a period of at least 20 years. It is believed that the CLSA will be one of the most comprehensive research platforms of its kind undertaken to date, not only in Canada but around the world” (retrieved from http://www.cihr-irsc.gc.ca/e/18542.html). The Principal Investigators are Drs. Parminder Raina (McMaster University), Christina Wolfson (McGill University), and Susan Kirkland (Dalhousie University). Eleven Universities are involved in data collection and a team of more than 200 coinvestigators and collaborators from 26 Canadian universities are collaborating on this innovative, multidisciplinary study.

The IA provides competitive research funds and training grants on an annual basis to support aging research. In 2010, total IA funds were allocated as follows: biomedical research (34.4%, $2.7 million); clinical research (33.4%, $2.6 million); health systems and services investigation (18.6%, $1.4 million); and social, cultural, environmental, and population health research (13.5%, $1.1 million; CIHR, 2011).

The 2007–2012 IA strategic plan identifies five priority areas: healthy and successful aging; biological mechanisms of aging; cognitive impairment in aging; aging and maintenance of functional autonomy; and health services and policy relating to older people. During 2010–2011, CIHR invested approximately $26.1 million in Alzheimer’s disease and related dementia research. Since 2006, IA has held an annual Summer Program in Aging to bring together invited interdisciplinary research trainees for advanced research training on aging.

The Social Sciences and Humanities Research Council (SSHRC) is another national funding agency that provides substantial aging-related research in Canada. SSHRC’s goal is to advance research and training in the humanities and social sciences. In 2011, SSHRC awarded $332 million in awards to 4,381 new grants; fellowships and scholarship awards; and 118 new partnerships with industry, government, and NGOs. Information on the portion of these grants focusing on aging research is not available.

In addition to federal agencies that fund health research, a number of provinces have health-related research foundations. Examples include the British Columbia Michael Smith Foundation for Health Research, the Alberta Heritage Foundation, the Saskatchewan Health Research Foundation, and the Manitoba Health Research Council. These funding bodies are a valuable source of research support to those studying the issues associated with aging.

Gerontological researchers in Canada employ a range of national data sets. The most commonly used ones are summarized in Table 1. These data sets are used to identify trends and policy implications. Most of the data sets exclude persons living on Indian reserves and people living in nursing homes. Some university libraries have data centers that carry full sets of certain data, a practice that enhances use by students and faculty.
<table>
<thead>
<tr>
<th>Data set</th>
<th>Dates</th>
<th>Brief description</th>
<th>Issues</th>
<th>How to access more info</th>
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<tbody>
<tr>
<td>Discharge Abstract Database</td>
<td>Annual</td>
<td>Collected by Canadian Institute of Health Information Hospitalization records based on discharge data</td>
<td>All provinces except Quebec and non-Winnipeg region of Manitoba Lack of standardization in data coding and collection methods apparent (Raina)</td>
<td></td>
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<tr>
<td>CCHS</td>
<td>2001, 03, 05, 07 then annually</td>
<td>Cross-sectional survey to collect info on health status, health care utilization and health determinants of Canadians</td>
<td></td>
<td>Public use microdata file For more information, contact Health Statistics Division Client Services Unit at <a href="mailto:hd-ds@statcan.gc.ca">hd-ds@statcan.gc.ca</a> <a href="mailto:chms-ecms@statcan.gc.ca">chms-ecms@statcan.gc.ca</a></td>
</tr>
<tr>
<td>Canadian Health Measures Survey</td>
<td>2007</td>
<td>Collects data on physical measures, blood and urine measure and indoor air quality. Samples stored</td>
<td>Covers people between 6 and 79 years of age. Excludes on-reserve, Canadian forces and some remote regions</td>
<td></td>
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<tr>
<td>General Social Survey</td>
<td>1995 and annually</td>
<td>Collects information on social trends and living conditions and the impact of social policy on Canadians Sample survey with cross-sectional design</td>
<td>Noninstitutionalized persons age 15 and older</td>
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<tr>
<td>Provincial Physician billing databases</td>
<td>Annual</td>
<td>All physician billing</td>
<td>Wide variations in privacy and consent requirements across provinces</td>
<td>Provinces and territories</td>
</tr>
<tr>
<td>Provincial prescription drug plan databases</td>
<td>Annual</td>
<td>All billable medications</td>
<td>Wide variations in privacy and consent requirements across provinces</td>
<td>Provinces and territories</td>
</tr>
<tr>
<td>Census</td>
<td>Every 5 years up to 2011</td>
<td>Population data</td>
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*Note: CCHS = Canadian Community Health Survey.*
Gerontology Centers, Associations, and Consortia

Approximately 44 Gerontology Research and Education Centers (GREQ; http://www.sfu.ca/grc/links/gero_centres/) are located across the country. Approximately 15 centers have research as their primary mandate with diverse foci that include psychology of aging, aging and the built environment, age-friendly communities, mobility and fitness, health and disease in later life, health care systems research, family caregiving, and end of life issues. Interdisciplinary teams operate in most of the centers and many have formed collaborative partnerships with outside agencies such as provincial health ministries, local health authorities, the Alzheimer Association, Arthritis Society, and many other aging-related organizations.

There are three major national associations for gerontology researchers in Canada. The Canadian Association of Gerontology (CAG) was founded in 1971 and currently has more than 250 members. The mission of CAG is to improve the lives of older Canadians through the creation and dissemination of knowledge in gerontological policy, practice, research, and education. Five divisions within CAG reflect the range of interests of the members: Educational Gerontology, Health and Biological Sciences, Psychology, Social Policy & Practice, and Social Sciences. CAG publishes a quarterly refereed journal entitled The Canadian Journal on Aging.

The Canadian Geriatrics Society (CGS), initially called the Canadian Society of Geriatric Medicine (CSGM), was formed in 1981 with the goal of promoting excellence in the medical care of older Canadians through geriatric/gerontology research and practice. CGS hosts an annual meeting and publishes a quarterly refereed journal entitled Geriatrics Today: Journal of the Canadian Geriatrics Society.

The Canadian Gerontological Nurses Association (CGNA), founded in 1988, has the mission “to address the health of older Canadians and the nurses who participate with them in health care.” CGNA promotes excellence in gerontological nursing practice across national and international boundaries. CGNA promotes standards and competencies for practice and publishes a quarterly refereed journal entitled Perspectives (retrieved from http://www.cgna.net/).

Conclusion

Canada’s program of aging research, education, and public policy has developed rapidly in the past decade. The CIHR IA partners with a variety of organizations to develop the strategic plan for aging research at 5-year intervals. The next IA strategic plan will be released in 2013. Canada is committed to addressing the challenges of population aging through collaborative action involving researchers, practitioners, and seniors. Excellence in aging research and knowledge informed action are the processes by which Canada will improve the health and quality of life of older Canadians.

References


8 The Gerontologist