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Douglas Andrews, FCIA, and Lori J. Curtis

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Challenges Faced by Canadian Women in the Alone Stage of Retirement[1]

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Abstract

We define the "alone stage of retirement" (ASR) and present statistics regarding those living in Canada in the ASR. Among those living in the ASR, there are more women than men, and on average women tend to be poorer than men. We analyze the effect and cost of improving the Guaranteed Income Supplement in two different ways. We discuss existing international options to age in place. We raise concerns regarding current long-term care practices to effect improvements that will require additional funding, and make recommendations on how additional financing might be found.

1. Introduction

Canadians are living substantially longer without increasing years of work; a longer retirement must be resourced within a stable working life. The literature recognizes three stages of retirement: early (ages 65–74), middle (ages 75–84), and late (ages 85-plus). Resource needs follow a U-shaped pattern: they are high in the early stages while seniors are active, lower in the middle stage as retirees enjoy home routines, and higher again in the later stage, as health declines and daily living activities become more difficult.[2] On average women expect to live longer than men, and those that marry tend to marry men who are older than themselves.

Female baby boomers, more than previous cohorts, either divorced or did not marry (Curtis and Rybczynski 2015). Moreover, frequently the male in the couple was the primary earner with higher savings and pension income, and couples traditionally spent more while both were alive, without sufficient planning as to how long wealth and other resources may continue.

Additionally, most people tend to underestimate their expected lifetime.[3]

Hudon and Milan (2016) report that there were approximately 8,100 centenarians living in Canada in 2015, and this is projected to double by 2031. The fastest-growing age group in Canada is 90 years and over. Women outnumber men in the older age groups (over 88% of

[1] This research was made possible by a grant from the Canadian Institute of Actuaries, which facilitated the production of two papers for the 2020 Living to 100 Symposium (L100S) of the Society of Actuaries. One paper, entitled How Amending Old Age Security Would Improve the State of Canadian Women Living in the Alone Stage of Retirement (Curtis and Andrews 2020), quantifies the financial challenges that many Canadian women living in the ASR are likely to face, and compares them to their male counterparts. The second paper, entitled Health and Social Care Analysis Regarding the State of Canadian Women Living in the Alone Stage of Retirement (Andrews and Curtis 2020), describes some of the non-financial challenges that many Canadian women in the ASR will face, and analyzes three specific issues and proposes policy initiatives. Taken together these two papers provide a substantive outline of what an "average Canadian woman living in the ASR" may experience financially and otherwise. We thank the discussants and participants at the L100S for their suggestions, which have helped in the preparation of this paper. The timing of this paper has been affected by Covid-19. In the prior papers we relied on Statistics Canada data from a public-use database, and our intention was to update our calculations using the master files available at the Southwestern Research Data Centre. Due to Covid-19, access was not possible.

[2] For example, see https://discover.rbcroyalbank.com/discover-the-three-stages-of-your-retirement-journey-pay-uf/.

[3] And some do no long-term planning at all.

centenarians are women). However, the improvement of life expectancy of men (3.6 months per year) in Canada has been increasing at a faster rate than that of women (2.4 months per year) (Hudon and Milan 2016), contributing in part to the small decrease in the proportion of women in the ASR in Canada (Milan et al. 2012, as cited by Hudon and Milan 2016).

After a long period of stability, senior poverty[4] rates are increasing in Canada, particularly for women. But the statistics are more dismal for those living alone.

About 216,000 persons aged 65 years and older, or 3.5% of the senior population, lived in poverty in 2018, little changed from 2017. The poverty rate was 1.7% for seniors living in families and 7.9% for unattached seniors.[5] Despite these statistics, there has been little focus on the ASR in general or the late stage of retirement specifically.

There is a growing proportion of baby boomer women who will end up living alone at older ages with limited incomes when health and daily activity issues become more burdensome. Towards the end of the middle stage and into the late stage of retirement, many women will find themselves alone and having to cope with both financial and non-financial issues – we call this "the alone stage of retirement" (ASR). Covid-19 has also revealed other risks for the elderly, including those in the ASR who live in care facilities.

This paper is focused on needs of individuals in the ASR[6] with respect to financial welfare (Section 2) and housing and care[7] (Section 3). In Section 4, the paper provides policy suggestions: first, regarding revisions to the Guaranteed Income Supplement (GIS) designed to fill financial gaps and raise individuals above the poverty line for those immediately in need; second, with respect to long-term care (LTC). Section 5 suggests areas for future research. Section 6 summarizes our analysis and concludes.

For brevity and ease of reading, the paper discusses new literature cited here but refers the reader to the other two papers for literature discussions contained therein.

[4] Canada did not have an official poverty rate until 2018. Prior to that, several measures of poverty or low income were used by researchers and advocacy groups. Statistics Canada used the low-income cut-off (LICO) to define low income in Canada and did not refer to poverty. Researchers tended to use an unofficial poverty measure consistent with those used in the poverty literature (1/2 median income adjusted for family size – similar to the after-tax low-income measure, or ATLIM). Herein, disparities in poverty rates reported from the literature are due to different measures reported as found in the literature. In our analyses, we report two measures that are clearly explained in Section 2 regarding data, their analysis, and our methodology. In addition, poverty rates for different subgroups in the population (e.g., senior males, senior females, senior females living alone) are very different. We attempt to be clear on which measures we are using and which groups we are discussing.

[5] www150.statcan.gc.ca/n1/daily-quotidien/200224/dq200224a-eng.htm

[6] Although we focus our analysis on women in the ASR because they outnumber men and we wish to draw special attention to their situation, we do have compassion for men living in similar circumstances and recognize that measures we propose have equal application to men.

[7] Regarding the social needs and the potential uses of robotics in addressing the needs of those in the ASR, see Andrews and Curtis (2020).

2. Financial issues

The financial issues that concern us are: the level of income likely to be available to the average Canadian in the ASR – considering the Canada Pension Plan (CPP), Old Age Security (OAS), the GIS, private pensions, and other income support programs – compared to the typical level of expenditures needed to meet a basic level of living, which is relative to the market basket measure (MBM) in Canada. The MBM includes expenses such as food, clothing and footwear, transportation, shelter, and other costs of daily living. We examine the income from sources such as private pensions, the CPP, and OAS for individuals in this stage of retirement. We compare it to the MBM to describe the status of women living alone in retirement compared to other groups, including men living alone and couples. We also compare the income to the low-income measure (LIM), the internationally recognized relative poverty measure, to provide a longitudinal comparator.

2.1 DATA AND METHODOLOGY

In this report we analyze data taken from the latest Canadian Census, using the 2016 public-use microdata file (PUMF; Statistics Canada, 2019a). The Census, collected every five years, is the primary source of demographic data in Canada. It contains information important for this report, including age, sex, relationships of household members (including marital or common-law status), housing, income and income sources, and LIMs. The data used were collected using the long-form survey. One-quarter of Canadians filled in the long-form survey in 2016.

Importantly, income data were obtained from personal income tax and benefits files; thus they are accurate and do not suffer from issues of missing data and reporting error as survey data often does. Our sample includes all individuals 65 years of age or older who are classified as living in a household in one of the provinces. We do not include individuals living in the territories.

Indicator variables signalling whether households were living below the after-tax LIM (ATLIM) and the MBM measures were provided in the data. These indicator variables were used to calculate the proportions of seniors in different stages of retirement living in poverty as measured by the different poverty measures. We examine the income sources reported in the data[8] for all seniors living alone and for those living in poverty. We then calculate a poverty gap or the amount of income necessary to lift the individuals to the poverty line as a basis for analyzing income programs to alleviate poverty in the ASR.

The ATLIM and MBM poverty cut-offs were not provided in the data. To calculate the ATLIM and the MBM gaps, we use tabular data providing the ATLIM and MBM cut-offs as calculated by Statistics Canada (Statistics Canada 2019b, 2019c, 2019d). In these tables, both the ATLIM and MBM measures are provided for different household sizes; we use only measures available for single households. The ATLIM is provided for Canada as a whole. The MBM measures are provided for 50 different geographic areas and are different for those who own their homes (no mortgage payments). However, due to data limitations we were only able to match 22 geographical areas that are available in the public-use data. Matching the MBM

[8] Some income sources are not well reported: retirement income, for example. We use the observations in the data with the caveat that they might not be representative of the population due to under-reporting.

measures to the data necessitated aggregating some geographic areas. This was done using population-weighted averages of the MBM measures to match the 22 geographic areas available in the public-use data. The cut-offs were then compared to the after-tax total income available to those in our sample.[9] After analyzing this information, we use Census information on OAS receipt to estimate the cost impact of the proposed changes.

2.2 ASSESSING THE GAP

The following sources of income may be available to someone in Canada age 65 or older: a CPP pension, an OAS pension, a GIS to the OAS pension, pensions from private sources related to employment, and private savings perhaps related to employment. The income measures in the data include after-tax total income,[10] income from OAS and the GIS,[11] the CPP,[12] private retirement income,[13] and total government income transfers.[14] Total government income captures all government transfers as there are various income support programs available that differ by province of residence. For example, in Ontario, Canada's most populous province, an individual may be entitled to receive income from Ontario Works and from the Ontario Disability Support Program (ODSP), if a person has a qualifying disability and needs help with living expenses, and from the Ontario Guaranteed Annual Income System if income from all sources is still below a set threshold. Otherwise, individuals are generally responsible for paying for their living expenses. However, for individuals with qualifying disabilities or living in LTC institutions, additional subsidies from the provinces may be available.

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[9] HRSDC and Statistics Canada use "disposable income" to calculate the MBM (see footnote 6). This measure is not available in the data. For seniors the relevant deductions from income that we cannot adjust for are non-insured but medically-prescribed health-related expenses such as dental and vision care, prescription drugs, and aids for persons with disabilities. These could be substantial for some – thus our poverty gap may be thought of as a lower bound and not representative of seniors with large medically necessary expenditures. Approximately 7% of the seniors in our sample would have higher gaps if we could measure disposable income.

[10] "'After-tax income' refers to total income less income taxes during [the] reference period. Income taxes refers to the sum of federal income taxes, provincial and territorial income taxes, less abatement where applicable. Provincial and territorial income taxes include health care premiums in certain jurisdictions." www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop004-eng.cfm

[11] OASGI is defined "as Old Age Security pension and Guaranteed Income Supplement paid to persons aged 65 years and over, and to the Allowance or Allowance for the Survivor paid to 60- to 64-year-old spouses of [OAS] recipients or widow(er)s by the federal government." www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop104-eng.cfm

[12] CPP is defined as "[b]enefits received during the reference period from the [CPP] or Québec Pension Plan in the form of retirement pensions, survivors' benefits and disability benefits. It does not include lump-sum death benefits." www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop008-eng.cfm

[13] "Private retirement income" refers to any income "associated with employer or personal retirement pensions, benefits or savings plans. It includes ... employers' registered pension plans ..., pooled registered pension plans ..., and matured registered retirement savings plans (RRSPs) in the form of a life annuity, a fixed-term annuity, a registered retirement income fund (RRIF) or an income-averaging annuity contract; pensions paid to widow(er)s or other relatives of deceased pensioners; pensions of retired civil servants, Canadian Armed Forces personnel and Royal Canadian Mounted Police (RCMP) officers; annuity payments received from the Canadian Government Annuities Fund, an insurance company, etc. It does not include lump-sum death benefits, lump-sum benefits or withdrawals from a pension plan or RRSP or refunds of over-contributions." www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop194-eng.cfm

[14] "Total government income" refers to "all cash benefits received from federal, provincial, territorial or municipal governments during the reference period. It includes: [OAS] pension, [GIS], Allowance, or Allowance for the Survivor; retirement, disability and survivor benefits from [the CPP] and Québec Pension Plan; benefits from Employment Insurance and Québec Parental Insurance Plan; child benefits from federal and provincial programs; social assistance benefits; workers' compensation benefits; Working Income Tax Benefit; Goods and Services Tax credits and Harmonized Sales Tax credits; other income from government sources," or an income-averaging annuity contract. www12.statcan.gc.ca/census-recensement/2016/ref/dict/pop037-eng

2.2.1 DATA ANALYSIS

Tables 1A and 1B respectively provide the sample size of the entire population of seniors and of seniors living alone, by sex and age band. Table 1C shows our study population – single households 65 years of age and older – by sex, for the age bands and stages of retirement examined in the study. Of note is the fact that senior women outnumber senior males by more than 2 to 1 in the early years of retirement, and that grows to more than 3 to 1 at over 85 years of age or in the late stage of retirement. This is of note as the tables in the remainder of the paper present proportions of given populations, but readers are advised to keep in mind the substantial difference in the sample sizes across the sexes as well as the differences in proportions.

Table 1A

POPULATION OF SENIORS BY AGE FROM CANADIAN CENSUS 2016

Age	Female (%)	Male (%)	Total
65–69	998,085 (52)	917,415 (48)	1,905,500
70–74	698,560 (52)	647,463 (48)	1,346,023
75–79	512,931 (54)	436,230 (46)	949,161
80–84	351,611 (54)	289,562 (46)	641,173
≥85	308,062 (61)	192,474 (39)	500,536
TOTAL ALL	**2,859,249**	**2,483,144**	**5,342,393**

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a).

Table 1B

POPULATION OF SENIORS WHO LIVE ALONE BY AGE FROM CANADIAN CENSUS 2016

Age	Female (%)	Male (%)	Total
65–69	241,610 (62)	148,962 (38)	390,572
70–74	209,568 (67)	102,379 (33)	311,947
75–79	184,593 (72)	70,485 (28)	255,078
80–84	155,030 (73)	57,091 (27)	212,121
≥85	168,979 (77)	51,726 (23)	220,705
TOTAL ALL	**959,780**	**430,643**	**1,390,423**

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a).

Table 1C

STUDY SAMPLE SIZE BY AGE AND ASR FROM CANADIAN CENSUS 2016

Age	Female (%)	Male (%)	Total
65–69	6,481 (62)	3,977 (38)	10,458
70–74	5,627 (67)	2,749 (33)	8,376
75–79	4,973 (72)	1,889 (28)	6,862
80–84	4,181 (73)	1,537 (27)	5,718
≥85	4,560 (77)	1,389 (23)	5,949
ASR			
Early	12,108 (64)	6,726 (36)	18,834
Middle	9,154 (73)	3,426 (27)	12,580
Late	4,560 (77)	1,389 (23)	5,949
TOTAL N	**25,822 (69)**	**11,541 (31)**	**37,363**

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a).

Table 2 presents the proportion of seniors who live alone and in poverty in Canada by the ATLIM (most consistently used in the literature and internationally) and the MBM (Canada's official poverty line). Note that the proportion living in poverty is substantially reduced when changing the measure from the ATLIM to the MBM (by half in all but the youngest age group). The poverty rate drops from between 25% to 39% when using ATLIM to 10% to 23% when using the MBM poverty line, depending on age and sex.[15] Second, the two measures result in different trends. ATLIM poverty rates increase slightly for females as they age, and fall for males as they age. The MBM shows poverty rates falling substantially for both sexes. These trends are statistically significant. Further, a slightly higher proportion (not absolute number) of males live in poverty in the youngest age group, while the proportion of women living in poverty is substantially higher in the oldest age groups using either of the poverty measures (recall that senior females living in poverty always outnumber senior males).

Table 2

PROPORTION OF SENIORS WHO LIVE ALONE AND IN POVERTY IN 2016 BY AGE GROUP

Age	Female mean (st. dev.)	Male mean (st. dev.)	Female mean (st. dev.)	Male mean (st. dev.)
65–69	.337 (.473)^	.376 (.484)*	.213 (.409)^	.232 (.422)*
70–74	.366 (.482)^	.372 (.484)^	.185 (.388)^	.172 (.378)^
75–79	.381 (.486)^	.349 (.477)*^	.163 (.369)^	.145 (.352)^
80–84	.369 (.482)^	.294 (.456)*^	.158 (.365)^	.131 (.338)*^
≥85	.387 (.487)^	.250 (.433)*^	.151 (.358)^	.103 (.304)*^
TREND	**Increases~**	**Decreases~**	**Decreases~**	**Decreases~**

Notes: * indicates significant difference between females and males; ^ indicates significant difference from the early ASR; ~ indicates trend is significant.

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a).

Table 3 shows the proportion of seniors who live alone and in poverty by stage of retirement. The information is presented by sex (male, female) and grouped by stage of retirement (early: 65–74, mid: 75–84, late: 85 or older). The trends are even clearer in Table 3 than in Table 2. When measured by ATLIM the proportion of females living in poverty grows across the ASRs while the proportion of men in poverty falls. The proportions fall for both sexes when using the MBM poverty line. A higher proportion of males than females live below the poverty lines in the earliest stage of retirement, but this reverses in the middle stage of the ASR, and the

[15] We are not the first to show the discrepancy of the poverty measures for seniors. See, for example, www.progressive-economics.ca/2018/03/09/how-to-measure-and-monitor-poverty-lim-vs-lico-vs-mbm/.

difference grows in the final stage of the ASR. Combining the data from Tables 1 and 3, in absolute terms the number of females living in poverty is close to double that of males in the early stage, triple in the middle stage, and quadruple that of males in the late stage of the ASR.

Table 3

PROPORTION OF SENIORS WHO LIVE ALONE AND IN POVERTY IN 2016 BY STAGE OF RETIREMENT

	ATLIM		**MBM**	
ASR	**Female mean (st. dev.)**	**Male mean (st. dev.)**	**Female mean (st. dev.)**	**Male mean (st. dev.)**
Early	.351 (.471)	.375 (.484)*	.200 (.400)^	.208 (.406)*
Middle	.375 (.484)^	.325 (.468)*^	.161 (.367)^	.139 (.346)*^
Late	.387 (.487)^	.251 (.433)*^	.151 (.358)^	.103 (.304)*^
TREND	**Increases~**	**Decreases~**	**Decreases~**	**Decreases~**

Notes: * indicates significant difference between females and males; ^ indicates significant difference from the early ASR; ~ indicates trend is significant.

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a).

Next, we examine the composition of seniors' incomes. For those in each stage of retirement (early, middle, late), Table 4 presents the ratio of the four most substantial sources of Canadian seniors' incomes for all seniors (top panel) and those living in poverty (middle panel by MBM and bottom panel ATLIM): OAS/GIS (total income from both OAS and the GIS), CPP, all government transfers including OAS/GIS and CPP, and private pension incomes. Of note is that for the entire population of seniors, government transfers make up over 60% of seniors' incomes, on average, while private incomes make up less than half.[16] As women move into the later stages of retirement, they become more dependent on government transfers than do their male counterparts. Men have substantially more private retirement income, on average, than do women in the middle and late stage of retirement. For those living in poverty, the dependence on government transfers is even more sizeable. For those reporting any government transfers, they are almost exclusive in their after-tax income; growing from slightly over 90% of after-tax income in the early stage of retirement to over 95% in the late stage. It is interesting that sex is not a statistically significant differentiating factor for seniors living in poverty, according to the MBM measure, when it comes to sources of income; both males and females depend heavily on government transfers if they live in poverty.

[16] See footnote in table for explanation of why the proportions of sources of income do not add up to 1.0.

Table 4

INCOME SOURCES FOR SENIORS WHO LIVE ALONE IN 2016 BY STAGE OF RETIREMENT AND POVERTY STATUS^

	Early		Middle		Late	
Income source	**Female mean (st. dev.)**	**Male mean (st. dev.)**	**Female mean (st. dev.)**	**Male mean (st. dev.)**	**Female mean (st. dev.)**	**Male mean (st. dev.)**
OAS/GIS	.360 (.256)	.361 (.260)	.381 (.240)	.342 (.233)*	.389 (.230)	.309 (.204)*
CPP	.240 (.127)	.241 (.140)	.269 (.119)	.276 (.130)*	.283 (.120)	.305 (.131)*
All Gov	.609 (.294)	.612 (.313)	.666 (.272)	.634 (.291)*	.686 (.263)	.628 (.277)*
Private	.489 (.280)	.503 (.296)*	.430 (.271)	.484 (.287)*	.369 (.253)	.437 (.272)*
Poor by MBM						
OAS/GIS	.695 (.224)	.656 (.232)	.754 (.174)	.722 (.180)*	.770 (.166)	.735 (.185)*
CPP	.248 (.223)	.295 (.243)*	.224 (.192)	.278 (.204)*	.216 (.160)	.282 (.223)*
All Gov	.913 (.193)	.920 (.181)	.943 (.140)	.954 (.130)	.954 (.116)	.957 (.129)
Private	.269 (.274)	.239 (.267)	.216 (.253)	.224 (.319)	.193 (.239)	.239 (.345)
Poor by ATLM						
OAS/GIS	.637 (.201)	.621 (.199)*	.633 (.171)	.615 (.169)*	.620 (.166)	.587 (.171)*
CPP	.258 (.173)	.278 (.188)*	.278 (.145)	.309 (.160)*	.287 (.129)	.342 (.157)*
All Gov	.908 (0.167)	.918 (.160)*	.928 (.120)	.949 (.098)*	.924 (.107)	.943 (.100)*
Private	.201 (0.191)	.176 (.189)*	.149 (.154)	.126 (.151)*	.125 (.129)	.127 (.154)
TREND	**Increases~**	**Decreases~**	**Decreases~**		**Decreases~**	**Decreases~**

Notes: ^ Proportion of income for those that report the income source. Proportions do not add up to 1.0 as not all seniors report all types of income. Private retirement income was particularly poorly reported (reported as not applicable or not stated). * Proportions for females are significantly different than for males.

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a).

Finally, we present the mean gap by poverty measure, stage of retirement, and sex. Table 5 demonstrates that the average gap between the ATLIM and MBM poverty lines falls as retirement progresses for both poverty measures and both sexes. This indicates that either incomes are growing as individuals age (there are tax benefits and subsidies that increase as people age) or individuals who were in couples join the ASR as their spouses die and those individuals are wealthier, on average, than those who were alone in earlier stages of retirement. In addition, those living to older ages may be wealthier (the health literature clearly demonstrates that the wealthier are healthier and live longer than those who are not, at all points in the income distribution).

Table 5 also indicates that the gaps do not differ significantly across the sexes in general.

If we focus on the MBM gap, the gap for females in the early stage of retirement is about $30 lower than their male counterparts. Male and female gaps are within a few dollars for the middle and late stage. The average gap as measured by the MBM for all females living alone is $261, for all males living alone is $293, and the average gap for all seniors living alone is $271.[17] Recall that the MBM measure provides a notion of the ability to purchase a basket of needed goods and services, so, on average, seniors living alone are $271 short of being able to purchase a basket of goods deemed necessary.

Table 5

MEAN MONTHLY POVERTY GAP+ FOR SENIORS LIVING ALONE BY STAGE OF RETIREMENT

	ATLIM		**MBM**	
ASR	**Female mean (st. dev.)**	**Male mean (st. dev.)**	**Female mean (st. dev.)**	**Male mean (st. dev.)**
Early	350 (298)	361 (314)	290 (306)	320 (327)*
Middle	.269 (243)^	250 (240)*^	228 (261)^	223 (296) ^
Late	238 (212)^	224 (212)^	217 (238)^	221 (237)^
TREND	**Increases~**	**Decreases~**	**Decreases~**	**Decreases~**

Notes: + Poverty gap measures the difference between the poverty line and household income for those with income below the poverty line. * indicates significant difference between females and males. ^ indicates significant difference from the early ASR. ~ indicates trend is significant.

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a).

[17] The average gaps have been calculated by the authors and are not shown in the table.

3. Housing and care

3.1 INTERNATIONAL MODELS DATA

As well as the income challenges outlined in the previous section, those in the ASR may face a range of other challenges.[18] Throughout the period of the ASR there will be requirements for housing and accommodation. Most individuals prefer to age in place for as long as possible, remaining in their own home. However, at some point the home may prove unsuitable, perhaps being too large to be maintained or inconveniently located for access to family and caregivers, or because a higher level of in-accommodation care (or even institutional care) is required. The first part of this section presents some specific examples of different international models that combine housing and care characteristics, but is not an exhaustive list. It discusses how access to such a model may be limited if income or wealth is insufficient. The second part of this section discusses some recent experience and information regarding LTC in Canada. The third part of this section provides a brief conclusion.

3.1.1 HOUSING FOR LIFE IN CANADA

As part of this research, we contacted several providers of seniors' living facilities and did site visits. The Village of Winston Park in Kitchener, Ontario, which is part of the Schlegel Villages chain,[19] provides a continuum of care, from independent living through to institutionalized LTC,[20] within one complex divided into separate neighbourhoods; i.e., a facility to call home as one moves from little need for assistance to moderate care, to LTC, and finally end-of-life care. This appears to be the care model for those in the ASR to be emulated.

Some other providers are delivering similar approaches or have plans to be able to deliver comparable services in the future.

However, in investigating the cost of such care, we think it is likely to be affordable for only those living at the upper end of the wealth distribution. We estimated that for a stay in Winston Park of about 20 years, starting with an independent lifestyle with minimal need for assistance with activities of daily living and a continuing deterioration to LTC and death, would require a net worth on entry of at least $1 million.[21]

At a conference held at the University of Waterloo, Professor Nashir Samanani[22] described an innovative model of care in place at the Generations Calgary in Alberta. It blends childcare and senior care in one campus to encourage high-quality social interactions across generations, providing for multi-generational living, including a care complex able to

[18] See discussion in Andrews and Curtis (2020).
[19] Founded by Ron Schlegel, who has made significant contributions to aging research at the University of Waterloo.
[20] In Canada, the delivery and regulation of LTC is a provincial or territorial responsibility, and there are differences in requirements and standards across the provinces and territories. But in Ontario, where this facility is located, the government sets a maximum daily charge for LTC, and those with income concerns can apply for reductions; i.e., government subsidies. Other than LTC as described above, medically necessary services covered by the Canada Health Act, such as physicians' visits, and drugs covered under the terms of the Ontario Drug Benefit Plan, the costs associated with the accommodation would be the responsibility of the resident.
[21] Authors' calculations not shown here.
[22] Speaking on March 25, 2021, in a session entitled "Innovative models for care of older adults" at the Conference on Aging, Covid-19 and the Adoption of Health Technology.

accommodate those with the full range of care requirements. It provides living conditions suitable for adults and families, so families could live with or near other family members needing or expected to need some care.

This setting provides opportunities for volunteer engagement, which might be a path to make living in this community affordable on a long-term basis.

3.1.2 THE NETHERLANDS: *STICHTINGS*

On further investigation, we found that there is a continuum of care model in the Netherlands that is more affordable at the patient level, from which Canada might learn. "Patient level" is important to note, as we found that the Netherlands has one of the higher tax rates within the Organisation for Economic Co-operation and Development, considerably higher than Canada. Certainly, the question of what services should be provided by government is one for the people of each country to consider. Our view is that the timing and extent of health and LTC requirements are not readily foreseeable; with an aging population the ability of the majority of individuals to be able to save sufficiently for their own requirements is precarious; and the Canada Health Act (CHA), which provides for necessary health care for all, should include this type of care. So, we would support greater government involvement to ensure that care with dignity is provided throughout life for all individuals.

The following anecdotal evidence regarding the Netherlands provides a description of a continuum of care desirable for those in the ASR:

> Soon after my father's passing in late 2005, my mother started showing early signs of memory loss. They lived in the small village where I was born which had some elder-care options, but my brother and his wife decided it would be better for her to move to their (somewhat bigger) town where she could enter an assisted living facility within walking distance of their home. That was the start of the journey.[23] The housing units are designed for independent living with full kitchens, but there is daily follow-up to ensure medications are being taken, and general monitoring for any obvious changes in health status.
>
> She was very happy at this facility, but after a few years and some further cognitive assessments it was clear that a higher level of care was required.
>
> This prompted a move to another similar elder-care facility,[24] but this one offered a separate dementia ward, which is normally the end of the line. In this small town all the health care facilities are conveniently located in the same general area, so the move was very easy.

Both facilities are non-profit *stichtings*[25] a Dutch legal entity akin to a foundation, which appear to be overseen by government at the municipal or city level. Individuals desiring government support are required to undergo an evaluation, which is physical, mental, and financial. The required level of care is delivered, but individuals pay for care in accordance with an

[23] http://www.deulenpas.nl/
[24] https://www.innoforte-zorg.nl/ik-zoek-een-woning/lorentzhuis.aspx
[25] https://en.wikipedia.org/wiki/Stichting

assessment of their ability to pay. On this model the required level of care is available throughout life but there may not be much of an estate on death, if any. However, there are private care options available at much higher costs for those who want an alternative option, usually housed in gorgeous old mansions in spectacular settings.[26]

3.1.3 RETIREMENT VILLAGES

The concept of retirement villages is one that is newly emerging and has gained momentum both in the UK and Australia (Crisp et al. 2013; Jian et al. 2014; Mayhew et al. 2017; Pacione 2012). They could be either privately owned, shared-ownership, or rental housing. Retirement villages generally encompass the following four main characteristics: residents are no longer in full-time employment, age-specific populations are grouped together in the same geographic location, there is a sense of collectivity through shared group interests and activities, and lastly the experience enhances autonomy while ensuring security (Pacione 2012).

Established in 1914, Whiteley Village is a retirement village managed by the Whiteley Homes Trust, a registered charitable organization (Mayhew et al. 2017). It provides a variety of services, from home help, nursing, and palliative care to end-of-life care. Unlike many other retirement villages in the UK that rely on residents who are self-funding and from high-income backgrounds, admission into Whiteley Village requires applicants to have a low level of income and assets, and therefore they tend to come from a low-socio-economic background. Whiteley Village offers three types of accommodation: Almshouses (cottages for independent living), Huntley House (an extra-care facility for those who would like to be independent but require more support), and lastly Whiteley House (a person-centred residential and nursing home).

Mayhew et al. (2017) found statistically significant evidence to suggest that upon entering Whiteley Village at an age of 65 to 69, female residents experienced a significant boost to their longevity in comparison to women of the same age range in England and Wales. However, they were unable to show statistically significant evidence for their male counterparts.

3.1.4 CONTINUING CARE RETIREMENT COMMUNITIES

Continuing care retirement communities (CCRCs), typically not-for-profit organizations, are age-segregated living communities for seniors that offer a range of care services and living arrangements aligned with various stages of the aging process, all centred around the concept of “aging in place” (Lee and Severt 2018; Shippee 2009; Sweem and Stowe 2012). CCRCs have seen a recent uptake in the US and other countries, such as Israel, as both the proportion and needs of the aging population continue to grow (Ayalon 2015). CCRCs combine aspects of LTC, which range from active or independent-living communities to assisted living, skilled nursing, and memory care. In addition to health services, CCRCs also provide support for daily activities such as housekeeping, transportation, social engagement, and dining (Gaines et al. 2011). Commonly, many older adults first move into a CCRC following the loss of a spouse, and are

[26] Personal experience related by Peter VanderPlaat.

those who seek to find companionship (Ayalon 2018; Koren and Ayalon 2019).

CCRCs are meant to provide older adults with the resources to navigate various stages of aging, while maintaining a familiar setting. Studies showed that movement into a CCRC greatly improved social engagement and social ties among residents (Heisler et al. 2003; Jenkins et al. 2002; Krout et al. 2002). However, these results are much more muted once residents move within a CCRC (Ayalon 2015). Although the goal of CCRCs is to emphasize a continuum of care, as cited by Ayalon (2015), residents who are required to transition across levels of care within a CCRC may experience "environmental discontinuity."

According to the New York State Department of Health,[27] payment to a CCRC consists of two components: an entrance fee and a monthly fee. Generally, entrance fees start at approximately $115,000 US while monthly fees begin at approximately $2,100 US for a single independent-living unit.[28]

Individuals must select one of the following three contracts: life-care contracts (Type A), modified contracts (Type B), and fee-for service contracts (Type C) (Department of Health, New York State 2019). The extensive life-care contract entails the highest fees in comparison to other contracts; however, it offers a full range of services, such as unlimited assisted living, medical treatment, and skilled nursing care, all with little to no additional cost.[29] An additional aspect to be considered in the extensive life-care contract is whether the up-front entry fee is non-refundable, gradually refundable over time, or partially or fully refundable.[30] The modified contract includes a limited group of services. If the services delivered are beyond those contracted, higher monthly fees will be charged. In a fee-for-service contract, although the initial entrance fee may be lower than other contracts, residents in this contract pay for very specific services, such as assisted living, emergency or short-term nursing, or memory care, depending on their requirements. Residents in this contract are required to pay for long-term nursing care at daily rates.

3.1.5 THE EDEN ALTERNATIVE

Another form of integrated approach is the Eden Alternative, which describes itself as a non-profit 501(c)3 organization.[31] It originated in the US about 20 years ago and has spread to 10 other countries, including Canada and the UK. Its website[32] describes it as a principles-based philosophy that changes culture to create elder-centred communities. Part of the philosophy is the ongoing journey to establish a "human habitat." Education plays an important role. Training programs are offered, and communications are maintained through newsletters and conferences. The model attempts to address the loneliness, helplessness, and boredom experienced by elders living in traditional settings by engaging the elders in the decision-making and care activities, as well as engaging other family members, children, and other

[27] Regulation in the US varies by state, so for brevity we cite only New York information.
[28] www.health.ny.gov/facilities/long_term_care/retirement_communities/continuing_care/
[29] www.aarp.org/caregiving/basics/info-2017/continuing-care-retirement-communities.html
[30] The extent to which the up-front fee for extensive contracts are refundable can vary between communities. www.caregiverslibrary.org/Caregivers-Resources/GRP-Care-Facilities/HSGRP-Continuing-Care-Retirement-Communities/Continuing-Care-Retirement-Communities-Article
[31] www.edenalt.org/about-the-eden-alternative/
[32] www.edenalt.org

caregivers in sharing caring with the elders. It can be applied to home or community-based care, as well as to LTC settings.

Research that it cites[33] found successes in LTC settings that follow these principles, such as decreasing behavioural incidents, pressure sores, and staff absenteeism. When the principles were used in extended care, the successes noted appear to relate to the operation of the facility and include reduced turnover among staff, decreased overtime, and fewer employee injuries. In home settings, the research found improved outlooks and positive changes in relationships among participants.

The approximate cost for an Eden Alternative home-stay ranges from $4,000 to $12,000 US per month. The US national average cost is $6,360 per month.[34] These costs cover the full range of care. Non-care costs in this calculation include: meals, activities, pets, gardens, children's playgrounds, etc. In the US, Eden Alternative homes are funded either through Medicaid or private pay or both, as are traditional nursing homes.

Such a pricing structure limits access to those who are well-off or well-insured, or, for facilities that accept Medicaid, to those who qualify for it and to homes that have space for a Medicaid-eligible individual.

3.2 LTC IN CANADA

LTC facilities provide around-the-clock (i.e., 24/7) nursing care, supervised primary medical care, and assistance with daily activities and interests (CIHI 2020b). LTC[35] homes are licensed, regulated, and funded by the Ontario Ministry of Health and Long-Term Care. Publicly funded LTC homes can be either privately or publicly owned. Privately owned LTC homes can be divided further into not-for-profit and for-profit organizations. In Ontario, there are a total of 626 LTC homes, of which 46% are publicly owned and 54% privately owned – 28% of homes are private for-profit, 23% are private not-for-profit, and 3% do not belong to either of the categories (CIHI 2020b).

Recent data indicate a significant increase in the proportion of residents with more acute needs; for example, over the period of 2013 to 2018, the proportion of LTC residents who required extensive support rose from 79 to 86%.[36] The Ontario Long Term Care Association (2019a) suggests that stricter criteria for admission into LTC homes over the years has led to individuals entering care at a later stage of both their physical and cognitive impairment and at a later stage of dementia.

3.2.1 AGE AND DEMOGRAPHICS OF RESIDENTS IN LTC HOMES

For the fiscal year 2019–2020, the average age of a female resident was 85, while the average age of a male resident was 80 (CIHI 2020c). In all, 54.6% of residents were over 85 years of age. Women represented 66.8% of all residents in care. The proportion of seniors aged 95

[33] Ibid.

[34] www.payingforseniorcare.com/nursing-home-alternatives

[35] In Canada, LTC is a provincial responsibility, so there are some differences by province. For succinctness of discussion, we reference only Ontario.

[36] Associate Professor Carrie McAiney stated at the University of Waterloo Conference on Aging, Covid-19, and the Adoption of Health Technology on March 24, 2021, that, on average, 70% of those in LTC have dementia.

and over admitted into an LTC home in Ontario has increased since 2011 (Ontario Long Term Care Association 2019a).

3.2.1.1 RESIDENTS IN THE ALONE STAGE OF RETIREMENT

Generally, the vast majority of seniors who live in institutionalized care, 83.9%, live alone. Census data show that individuals who had lost their partner were more likely to enter an institutionalized care setting (Milan et al. 2012). Data indicate a small difference in the proportion of women aged 65 to 74 who lived alone (82.5%) compared to their male counterparts (81.3%). Among residents aged 85 and over, the proportion of women who lived alone was far higher than the proportion of men who lived alone – 92.2% compared to 70.6% respectively (Milan et al. 2012). Although living alone significantly increased the odds of entering institutionalized care for women, it was not as strong a predictor for men. LTC residents who reported as living alone tended to be Canada-born and suffering from poor health.

3.2.2 BENEFITS, QUALIFICATIONS, AND VOLUMES OF STAFF AND INSPECTIONS IN LTC FACILITIES

Public health inquiries over the recent years show a significant shortage of personal support workers (PSW) and nurses in certain areas (Ministry of Long-Term Care 2020). To satisfy the care needs of the growing aging population, for every 15,000 beds, 20% more care staff, such as registered nurses (RNs), registered practical nurses (RPN), and PSW, will be required (Ontario Long Term Care Association, 2019a). Under the Long-Term Care Homes Act of 2007, all LTC facilities in Ontario must fulfil the following staffing requirements: an administrator; a director of nursing and personal care; a medical director; an attending physician, or RN in the extended class; and lastly at least one RN on duty at all times (Ministry of Long-Term Care 2020). PSW represent the largest proportion of employees in LTC homes; 41% of work full-time, 48% part-time, and 10.7% "casually." The average hourly wage of PSW in the LTC sector is $21.41[37] (Ministry of Long-Term Care 2020). Remarkably, PSW are not a requirement for staffing an LTC facility and are not a regulated service provider.

The average hourly wage of RNs, RPN, and Registered Nurse Practitioners was $38.05, $27.02, and $58.56 respectively. Approximately 30% of RNs and RPN hold two or more jobs in different facilities. However, among all LTC homes 76.1% of registered professional employees said they would prefer full-time employment. Data from 2018 show that 43% of PSW left the sector due to burnout as a result of short-staffed institutions (Ministry of Long-Term Care 2020).

3.2.3 COST, REQUIREMENTS, AND SUPPORT FROM THE GOVERNMENT FOR LTC FACILITIES

A report (Deloitte LLP and affiliates 2021) commissioned by the Canadian Medical Association projects that by 2031 Canadians' needs for LTC and home care will have increased from 2019 levels by 59.5% and 53% respectively, and that the cost for LTC and home care will nearly double, from $29.7 billion in 2019 to $58.5 billion in 2031. This gives an indication of the magnitude of funding required. The following paragraphs describe financing and support at

[37] Wages vary based on whether the long-term care facility is private or publicly owned, and if privately owned, if it is for-profit or not-for-profit. Moreover, $21.45 may be a livable wage if received for full-time employment, such as 35 to 40 hours per week, but inadequate if only received for 15 to 30 hours per week for part-time or casual employment.

the individual level in Ontario.

In Ontario, Community Care Access Centres determine who is eligible for LTC through assessments (Ontario Long Term Care Association 2019b). The provincial government provides facilities funding for supplies needed for nursing and personal care, resident social and recreational support services, and for raw food required to prepare meals. Additional funding is provided by the government to LTC facilities for equipment to prevent falls. However, the government does not pay the full cost, and this cost is shared with residents. Residents are expected to pay an out-of-pocket accommodation or "room and board" fee.[38] The accommodation fee is used for non-care staff, mortgages, utilities, and other building expenses.[39] The maximum accommodation rate is the same in all LTC homes across Ontario.

Those unable to pay for a basic room may be eligible for a subsidy of up to $1,891.31 per month, offered through the Long-Term Care Home Reduction Program. To qualify for this subsidy, one must be receiving all of the following benefits for which one is eligible: OAS, the ODSP (for those ineligible for OAS), and the GIS. Eligibility for the subsidy could also depend on one's net income. In 2018, the province of Ontario spent $4.28 billion on LTC (7% of the overall health budget), which translates to an approximate daily cost of $149.95 per resident (Ontario Long Term Care Association, 2019b).

3.2.4 COVID-19 AND LONG-TERM CARE

During the first wave of the pandemic and up to the end of May 2020, LTC facilities and retirement homes accounted for more than 80% of all Covid-19 deaths in the country (CIHI, 2020b). In Ontario, LTC deaths represented over 70% of all Covid-19 deaths (CIHI, 2020a). A public inquiry into LTC at the height of the pandemic revealed that when Covid-19 outbreaks would occur, staffing decreased significantly as many contracted the virus or refused to work due to safety concerns as a result of the lack of availability of personal protective equipment. PSW represented the greatest proportion of staff with missing shifts (Ministry of Long-Term Care 2020). It was also revealed that staff working multiple part-time jobs at different care homes likely resulted in the spread of Covid-19.[40]

While deploring Canada's performance during Covid-19 with respect to those in LTC, Estabrooks et al. (2020) state that there are deep, long-standing causes underlying this performance, and they list 13, including the following:

1. Canada has failed to confront present and future financing of LTC.
2. Canada has failed to optimize integration across community, continuing care, and acute care sectors.

[38] As of July 1, 2019, the maximum accommodation rate for Ontario LTC homes ranges from $1,850 to $2,640 per month. Costs depend on the age of the home and if the room is private, semi-private, or shared. For a long-stay basic room plan the maximum rate is $62.18 per day or $1891.31 per month.

[39] www.ontario.ca/page/get-help-paying-long-term-care

[40] COVID-19, our response, repercussions, unintended consequences, policy blunders, etc., will be the subject of much future research. It was not even a consideration when we proposed this research and did our initial work. This section is not comprehensive but is intended to provide some background.
https://www.health.gov.on.ca/en/pro/programs/publichealth/coronavirus/docs/directives/LTCH_HPPA.pdf

3. Canada has not used data to manage the LTC sector effectively.
4. Canada has failed to look at LTC accreditation and regulation in a whole systems way, with best practices underpinning regulation.
5. Levels of regulated staff in nursing homes have been systematically reduced.
6. The unregulated workforce that provides upwards of 90% of direct resident care in nursing homes has no voice.
7. Canada has provided inadequate support and training for the paid nursing home workforce, managers, and leaders in the LTC sector, and dietary, laundry, and housekeeping staff.
8. Canada has generally failed to acknowledge the profound inequities and inequalities faced by many older Canadians, which are exacerbated in nursing homes.
9. Older Canadians with dementia living in nursing homes are rendered voiceless.
10. Canada has systematically failed to deal with the consequences of population trends in aging, dementia prevalence, and fewer family caregivers for older adults.

3.3 IN SUMMARY

It seems some will go without necessary, respectful care (as is currently the case[41]) unless we can put in place a system of continuous care throughout the ASR: a system delivering services from assistance with activities of daily living, through deteriorating physical and mental conditions (including cognitive impairment and dementia), through LTC, to end-of-life palliative care. Such a support system needs to be available for those in need, including those with limited or no wealth. To be affordable, the care will most likely have to run on a non-profit or similar basis, which means it will have to be government-provided or heavily regulated.

Otherwise, the system will likely be fragmented, siloed, and not patient-centric; as it is now.

[41] www.ohrc.on.ca/en/time-action-advancing-human-rights-older-ontarians/elder-care

4. Policy proposals

4.1 CLOSING THE FINANCIAL GAP

In Curtis and Andrews (2020) we discuss three ways to close the financial gap, quantified in Table 5. Here we focus on the cost of increasing the GIS in order to improve the situation of those living in poverty, and show the estimated impact of the proposed action.

In subsection 2.2.1, we presented statistics showing the proportion of single households aged 65 and older that were living below the poverty line by gender, age, and stage of retirement, and the estimated monthly gap for those living in poverty. For the purpose of analysis, we illustrate the impact on senior poverty and estimate the cost of two proposals for change to the GIS described subsequently. In Tables 6 through 9, we show the impact of these changes on the proportion of seniors living below the poverty line and the poverty gaps. We estimate the cost of these changes using population information from the 2016 Census as described previously.

We analyzed the impact of increasing the GIS by $290 per month and $217 per month. These amounts were selected for analysis as follows. The monthly income needed to eliminate, on average, the largest poverty gap for women is $290 (the early stage of retirement). The additional monthly income to erase the average gap for the most vulnerable women, those living alone in the late stage of retirement, is $217.

Because the GIS is only payable to those in need, these subsidies would be tax-free supplements to the OAS paid to seniors living below the MBM poverty line. The tax-free subsidy would not affect the other government transfers received by the seniors (the subsidy is not meant to make seniors worse off by inadvertently reducing other needed subsidies or tax breaks).

Tables 6 and 7 show the impact of a $290-per-month supplement. Table 6 demonstrates that the proportion of seniors living alone in poverty drops substantially for both males and females in all stages. Table 7 shows that for those who were poor pre-supplement, the average poverty gap disappears for females in the early stage of retirement and becomes negative for both men and women in the middle and late stages (showing that enough of this population moved above the poverty line to outweigh the income gaps of those who remained). Men in the early stage of retirement continue to experience a small gap, on average. For those who remain in poverty after the supplement, the mean gap grows. This indicates that those remaining in poverty post-supplement had very low incomes and, on average, remain far below the poverty line even after being provided with an extra $290 per month. Tables 8 and 9 present the picture for a lower government supplement of $217 per month. The poverty rates are reduced substantially. Those remaining in poverty post-supplement still have sizable gaps.[42]

[42] The average gaps shown in Tables 7 and 9 may be confusing. The reported average gap is for those remaining in poverty. The proposed subsidy lifts those close to the poverty line (before subsidy) above it, so those remaining below the line were far below the line before the subsidy (i.e., their gap was large), thus those remaining below the poverty line have a larger subsidy have a larger average gap.

Table 6

MBM POVERTY RATE PRE- AND POST-INCOME SUPPLEMENT ($290) BY ASR

	Poverty rate before		Poverty rate after	
ASR	**Female mean (st. dev.)**	**Male mean (st. dev.)**	**Female mean (st. dev.)**	**Male mean (st. dev.)**
Early	.200 (.400)	.208 (.406)	.045 (.207)	.054 (.227)
Middle	.161 (.367)	.139 (.436)	.022 (.147)	.015 (.121)
Late	.151 (.358)	.103 (.304)	.016 (.126)	.010 (.100)

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a) and study results.

Table 7

MEAN MONTHLY POVERTY GAP+ FOR THOSE LIVING IN POVERTY PRE- AND POST-INCOME SUPPLEMENT ($290)

	Poor pre-supplement		Poor post-supplement	
ASR	**Female mean (st. dev.)**	**Male mean (st. dev.)**	**Female mean (st. dev.)**	**Male mean (st. dev.)**
Early	0 (306)	30 (326)	361 (303)	376 (309)
Middle	-62 (261)	-67 (296)	340 (312)	429 (424)
Late	-73 (238)	-69 (237)	324 (274)	327 (330)

Note: + Poverty gap measures the difference between the poverty line and household income for those with income below the poverty line.

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a) and study results.

Table 8

POVERTY RATES BEFORE AND AFTER INCOME SUPPLEMENT ($217) FOR SENIORS LIVING ALONE BY RETIREMENT STAGE

	Poverty rate before		Poverty rate after	
ASR	**Female mean (st. dev.)**	**Male mean (st. dev.)**	**Female mean (st. dev.)**	**Male mean (st. dev.)**
Early	.200 (.400)	.208 (.406)	.062(.240)	.070 (.255)
Middle	.161 (.367)	.139 (.436)	.037(.189)	.027 (.163)
Late	.151 (.358)	.103 (.304)	.031 (.173)	.019 (.138)

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a) and study results.

Table 9

MONTHLY POVERTY GAPS+ BEFORE AND AFTER INCOME SUPPLEMENT ($217) FOR SENIORS LIVING ALONE BY STAGE OF RETIREMENT (MBM MEASURE)

	Poor pre-supplement		Poor post-supplement	
ASR	**Female mean (st. dev.)**	**Male mean (st. dev.)**	**Female mean (st. dev.)**	**Male mean (st. dev.)**
Early	73 (306)	103 (326)	328 (313)	359 (321)
Middle	11 (261)	6 (296)	266 (302)	290 (387)
Late	0 (238)	4 (237)	232 (264)	229 (296)

Note: + Poverty gap measures the difference between the poverty line and household income for those with income below the poverty line.

Source: Authors' calculations using 2016 Census of Population [Canada] PUMF (Statistics Canada 2019a) and study results.

The cost of these two changes is as follows. If only seniors living in poverty were provided with the $290 supplement, it would cost the government $1.17 billion. The $217 supplement would cost $875 million.

To put these expenditures in perspective, consider the following: the Canadian government spent $48 billion on elderly benefits and $22 billion on children's benefits in 2016.[43] GDP in Canada in 2016 was approximately $2.24 trillion;[44] hence, the proposal to increase the GIS by $290 per month would be only a marginal increase in the cost of benefits – an additional cost of approximately 0.05% of GDP in 2016[45] or an increase in benefits to the elderly of less than 2.5%.

4.2 ADDRESSING DEFICIENCIES IN LTC PROVISION

Kissick (1994) is credited with referring to the "iron triangle" to illustrate the trade-offs within health care. The three sides are cost, access, and quality. The argument is that when one side is changed there will be an impact on at least one of the other sides. This is the situation faced in trying to address the deficiencies in LTC provision.

LTC is included in the health services to be provided by the provinces. The provinces receive the Canada Health Transfer in respect of health services, which the provinces frequently argue is inadequate and should be increased more substantially.[46] If the provinces are underspending to deliver LTC, then as expected from the iron triangle there will be a decline in access or quality. Complaints from the public typically focus on deteriorating or inadequate quality of care, although access to care is also a complaint. Certainly, the high death rates experienced by those in LTC facilities during Covid-19 speak to inadequate quality of care.

Common suggestions regarding how to improve quality of care include the following:

- Hire a sufficient number of adequately trained-staff necessary to provide higher quality.
- Hire staff into full-time employment, with adequate pay and benefit packages that include paid-sick leave, so they do not have to work in more than one facility or go to work when sick.
- Governments should pay better attention to monitoring the quality of care delivered, and take stronger enforcement action when inadequate quality is found.

We support the foregoing suggestions but recognize that to deliver them there will be an increase in aggregate cost.[47] To manage higher aggregate costs for LTC there needs to be increased public revenues (typically through higher or new taxes), reduced spending in other areas, increased government deficits, or some combination of these approaches. Given the magnitude of government deficits incurred in responding to the health and economic needs accompanying the response to Covid-19, we suspect that there will be little appetite for even greater government deficits once the pandemic is deemed to be under control. Thus the policy suggestions we propose are in the first two areas.

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[43] budget2016-en.pdf

[44] www.statista.com/statistics/263574/gross-domestic-product-gdp-in-canada/

[45] Some qualifications are in order. Our poverty rates and gaps are likely a lower bound as we were not able to calculate health expenditures and so were not able to calculate the exact income figure that should be used for the MBM measure of poverty.

[46] The Canada Health Transfer is increasing in aggregate each year, but the provinces request even greater amounts of transfer.

[47] Unless access were extremely curtailed, which we do not support.

4.2.1 INCREASED TAXES

McCabe et al. (2020) have called for comprehensive tax reform. We agree that the tax system could be reformed to provide for a heavier tax burden to be borne by those earning the highest incomes or who are the wealthiest. Such discussion is beyond the scope of this paper. We discuss two specific areas in which some reform might be achieved, without the effort and time required for comprehensive reform, where some of the burden of the reform would be borne by the age group for which we have advocated greater spending.

Most LTC is delivered to those aged 65 or older. As noted by Estabrooks et al. (2020), Canada has failed to plan for its financing. In subsection 4.1 we argued for an increase in the supplement to certain particularly needy people, also in that age group. Here we ask what tax reform might this group bear that might offset in part additional LTC costs.

Canada has one of the world's best-designed income support programs for seniors. Through OAS, it provides a demogrant to those aged 65 or older who meet residency requirements, a form of basic income. But beginning with net income, before adjustments, of approximately $79,000, it claws back OAS at a rate of 15%, thereby removing the basic income for those least in need of such additional income. Additionally, there is the GIS that supplements OAS for the truly needy.

Despite this excellent design, changes to the program might be made to reduce amounts paid to those with other income sources, without reducing the amounts paid to the needy, and adding the supplement to the GIS already described. One might reasonably reduce the level at which the claw-back begins, perhaps to approximately $61,000,[48] which approximates the Year's Maximum Pensionable earnings in 2021. One might also increase the claw-back rate, say to 30%, so those with net incomes above approximately $85,000 would receive no OAS. Given that the GIS would continue to supplement OAS, such a reform would not subject anyone to poverty. Moreover, a demogrant is not an efficient payment since it goes to those who qualify by age and residency regardless of need, whereas spending directed to LTC addresses the needy.

In Section 3 we discussed LTC in the context of housing. In the context that while the strong desire is to age in place, with ever-increasing life expectancies the probability that some care will be needed beyond what can be delivered at home increases. One tax expenditure that might be reformed is the capital gains exemption on the sale of one's principal residence. Ways suggested to reform it would include treating the capital gains on the sale of the home like any other capital gains on the sale of an investment, or treating the capital gains above some threshold[49] like ordinary capital gains (which might be politically more palatable for the

[48] We do not have access to data to enable us to calculate the impact of such changes, so the numbers in this paragraph are used only for illustration. In developing a sound policy proposal, data on income levels and the impact of the claw-back would be invaluable. Changing the claw-back rate will raise issues regarding the marginal effective tax rates (METR) faced by affected individuals and the impact of any disincentives to work generated by such METR. Particular care must be taken to evaluate the consequences on those living alone as they cannot rely on returns to scale in household expenses and are not eligible for some tax advantages (e.g., income splitting).

[49] The threshold might be a lifetime capital gains exemption on the sale of a principal residence or might be a threshold on each sale of a principal residence.

government introducing such a reform).

There are many other tax reforms that might be considered, but these two are taxes on those with an ability to pay.[50]

4.2.2 SPENDING REFORMS

As with tax reform, there are many ways that spending might be revised. We focus on two areas closely related to LTC.

In subsection 4.2.1 we discussed amending OAS claw-back rates to make OAS expenditures more efficient. One might also argue for a change to OAS, such as the age at which it begins. A previous Canadian government proposed increasing the age for OAS eligibility to 67 over time. As Canadians' life expectancy continues to increase, one might consider continuing age increases to OAS eligibility. If the age of OAS eligibility were increased, it would be important to ensure that provincial social assistance programs and/or the federal GIS were modified so that the needy aged 65 and older continued to qualify for adequate support.

The rollout of the Covid-19 vaccines across Canada has been watched with interest by many Canadians. One cannot help but remark upon how complex the Canadian health care system is. Many describe it as 13 individual health care systems, because there are 13 provincial or territorial governments involved in the planning and implementation of health care. In addition, with the exception of the Nunavut and the Yukon territories, which have only one each, the provinces and Northwest Territories have multiple health regions or authorities involved in decision-making and administration, and some of these regions and authorities have subdivisions. While the segmented approach is meant to provide health care as needed by particular populations, it can lead to silos that do not communicate effectively, interdivisional issues that add complexity to service delivery, and the creation of separate bureaucracies that add cost and undermine efficiency, which taken together reduce the quality of the patient experience. Our view is that rethinking the design of these systems could reduce spending without reducing quality.

[50] As noted above, we would prefer tax changes that are borne most heavily by those with higher incomes and the wealthiest. We oppose changes that are intended to improve the lot of those below the poverty line at the expense of those immediately above the poverty line and do not extend to rest of the income distribution.

5. Areas for further research

The focus of this paper is on the financial state of women in the ASR. We have tried to quantify the financial gap that many women in the ASR will face, and have identified the cost to improve the GIS to close poverty gaps for these women. However, there are many important areas of research related, or ancillary, to this paper that need exploring. In this section we identify a number of these areas.

We intended to focus solely on women in the ASR as it was our hypothesis that their living situations were much more precarious than their male counterparts. The number of women living in poverty certainly outweighs substantially the number of men living in poverty; up to four times as many women live in poverty depending on the stage of the ASR. However, the poverty rates and gaps do not differ by sex as much as hypothesized. As male life expectancy increases, there will be a rising number of men in the ASR. Continuing to assess their situation and closing gaps for them will be important too. Increasing the GIS would benefit both women and men.

Traditionally women have provided care for their partners. As the number of men living in the ASR rises, the care burden and expense for such men must be addressed.

Much more research is needed regarding the impediments that women face compared to males of comparable ages and backgrounds that lead to different financial outcomes. It is well documented that women tend to earn less than men while employed, are more likely to take leaves for caring responsibilities (both for a child and others), have different attitudes to risk than men (that has financial implications with respect to return on investments), and have longer life expectancies than men (see, for example, Curtis and Rybczynski 2015). Despite these differences being documented, our Canadian society has been very slow to change meaningfully to mitigate the financial challenges that these differences place on women. More research is required on how to implement measures and programs to mitigate these financial challenges.

Another reason that women in the ASR may experience financial gaps is that they may have relied on their spouses to manage the household funds and investments, leading to a lack of financial literacy, and poor budget planning and money management, in respect of their joint-life expectancies and financial requirements. Much more research is required on how families plan and spend. Moreover, there is a need for financial education for couples and seniors, and as the literature shows, particularly for women.

There are at least two poverty measures used commonly in Canada: the LIM for international comparisons and the new poverty standard, which is an MBM. Yet there are other poverty measures that might be used; these might produce different results. Milligan (2008) constructs head-count measures of income and consumption poverty. With respect to the elderly, he finds that measures of poverty using income may be distorted by income disparities, especially regarding the higher-income elderly. He also finds that the results for the elderly are sensitive to how housing flows are imputed. Furthermore, he finds differences between income poverty and consumption poverty measures and he raises questions regarding our poverty objective with respect to the elderly, most of whom are not working,

compared to those who work. There is more research that could be done to study the measurement of poverty among the elderly.

Although the number of people currently in the ASR is small, Canada has an aging population, in part due to increasing life expectancy. In future years the number in the ASR will likely increase. Some time in LTC is a realistic expectation for the elderly who reach the ASR. MacDonald et al. (2020) use a microsimulation population model to produce projections to 2050 to quantify two risks associated with LTC: public spending, and the magnitude of unpaid informal care by close family relatives. This latter aspect of care seems to be incorporated in our system of LTC, but is unlikely to be an available component for those in the ASR.

While the CHA ensures all eligible residents receive reasonable access to all medically necessary hospital and physician services free at the point of delivery, the provinces and territories have control over what is deemed medically necessary. Although home care has become an important aspect of health care, it is not deemed a core medical service and as such is not subject to the CHA. As a result, home care services are not subject to first-dollar coverage (Johnson et al. 2018) or federal oversight through the CHA. There is not even a common understanding of what home care entails; definitions differ not only across Canada but also across countries, so comparisons of funding and expenditures are difficult (CIHI 2007, 2019). The exclusion needs to be reconsidered.

We need an open discussion about how we as a Canadian society plan to deliver LTC in the future, what portion of such care will be financed publicly, what portion should the individual and or the family be expecting to bear, and how do we most effectively deliver and finance such a system.

Study of the system of LTC insurance in Germany may be informative. It requires mandatory participation. Financed on a pay-as-you-go basis, there have been increasing premiums required, which are shared by employees and their employers. The system provides for both public and private provision and insurance.

Finally, the income data available for this study had some limitations; the use of Statistics Canada's master files that contain more specific income information would assist in making better projections. As noted, we have not accessed these files because of health concerns regarding the use of the Southwestern Research Data Centre.

Although creating the social infrastructure to mitigate financial inequities for seniors would produce a better social income, it does not ensure that seniors will lead a life of dignity.

Andrews (2008) suggests that a life of dignity also requires human physical capital, social capital, and the ability to make life choices. Much more research is necessary regarding factors that contribute to social capital.[51] In this paper we discuss some housing arrangements, because this is a consideration for everyone living in the ASR and it has financial implications. However, our discussion merely introduces some different international examples. There are many other areas for potential research regarding how seniors might organize their lives to share their abilities and strengths with others to enhance

[51] In Andrews and Curtis (2020) we discuss some of these issues, such as social prescribing and the use of robotics, but this is a vast subject.

communal well-being in a financially beneficial fashion, such as age-friendly communities or home care in a community setting.

Andrews (2008) also raises the question of what support can seniors, particularly those in the ASR, reasonably expect from other family members. This question is affected by cultural traditions, declining birth rates, and an aging population.[52] Moreover, regardless of cultural tradition, the heaviest caregiving responsibilities tend to fall to women. When society chooses to make caring for elderly family members a family responsibility, we should understand the implications for our notion of a just and equal society, asking such questions as: what does this mean for women's participation in the labour market, and is this a decision based on privilege that creates greater inequities for those lacking wealth? There is research in this area, but more would contribute to our understanding of the choices we have in policy-making.

[52] This latter factor impacts the number of people living in the ASR, but also the age of the potential caregiving group and their physical abilities and stamina to deliver care.

6. Conclusions

In this paper we present statistics that show that senior women outnumber senior men of a comparable age in all stages of retirement and this effect increases with age. Due to a number of factors, a large percentage of women can be expected to live in the ASR. An aging population is projected to increase women's experiences in the ASR. Women living in the ASR are more likely to live in poverty than are those seniors not so categorized, regardless of the poverty measure. Our study has also found that there is a growing number of men, although substantially smaller than the number of women, who are doing relatively poorly, and that situation should be monitored.

One policy approach to reducing poverty among those living in the ASR would be to increase the GIS. We analyze two different levels of additional subsidy and estimate the annual cost of such levels to be approximately $1 billion initially (based on 2015 data). Although the estimate of the impact is not likely to be precise due to data limitations discussed previously, we believe that such a cost is affordable, and urge governments to act promptly on this information to improve the lot of some of Canada's most vulnerable seniors.

Our review of housing alternatives suggests that in Canada, only those with significant wealth may have the option to live in a facility in which they can receive a continuum of care as they age and their needs for care change. The examples from the Netherlands of *stichtings* or from the UK of Whiteley Village provide guidance on how Canada might develop a more affordable approach to aging in place than exists currently.

The high numbers of infections and deaths due to Covid-19 that have occurred among those residing or working in LTC facilities have raised the public's attention regarding the quality of LTC. We understand that changes to improve quality will come at a cost. We suggest ways in which taxes might be increased or spending reduced, specifically in areas relating to the elderly and/or health care. There are many other avenues for comprehensive tax or spending reform, but these are beyond the scope of this paper.

This paper has identified the ASR and some of the challenges faced by those living in it. We hope it will increase public awareness that will lead to improved conditions and outcomes for Canadians who find themselves in this vulnerable stage.

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Canadian Institute of Actuaries
360 Albert Street, Suite 1740
Ottawa, ON K1R 7X7
613-236-8196
head.office@cia-ica.ca

cia-ica.ca
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