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Ounce of Prevention is Worth a Pound of Cure: Seniors' Care After COVID-19

Drawing on the lessons learned during the pandemic, and assessing the challenges of the future, the author issues a call for action to address the needs of Canada's growing senior population.

Rosalie Wyonch

About The Author

Rosalie Wyonch
is a Senior Policy Analyst
of the C.D. Howe Institute.

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Daniel Schwanen
Vice President, Research

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The Study In Brief

The COVID-19 pandemic has highlighted long-existing and well-known challenges in the seniors' care sector. This *Commentary* summarizes the impacts of COVID-19 on Canadian seniors, ongoing challenges in seniors' care and promising investment and policy avenues for future improvement and modernization.

Prior to the pandemic, Canada had long waitlists for long-term care (LTC) homes and had fewer homecare providers than the international average. This shortage of homecare and lack of availability of LTC beds has resulted in patients occupying beds in acute-care settings instead. These settings are less equipped to meet seniors' various care and quality-of-life needs and are more expensive than more appropriate settings.

As of October 2021, almost one of every 20 people over the age of 80 had been infected with COVID-19 and about 1 percent died. For those over 60, some 250,000 were infected with COVID-19 and about 25,650 died, according to preliminary case data.

Post-pandemic, expansions of capacity in both residential care (LTCs and retirement homes) and homecare will be needed to ensure that Canadians are able to receive care that is appropriate to their needs. Major investments and significant changes should be made in the LTC sector, whether public or private, to mitigate the risks of future infectious disease outbreaks. Among them: reducing occupancy per room; increasing staffing levels to provide surge capacity and care continuity during crisis situations; and ensuring staff are trained and prepared to rapidly implement infectious disease protocols.

Achieving these changes, however, will require significant investments in upgrading existing infrastructure, constructing new facilities, as well as increasing spending to support higher wages and more workers. An estimate factoring in the increased costs of upgrading and expanding infrastructure, increasing staffing levels and the aging population projects that spending on institutional care would have to nearly quadruple to 4.2 percent of GDP by 2041 from 1.26 percent in 2018, which is fiscally infeasible. Innovation will be needed, in areas ranging from the provision of care to the funding and organization of the system.

International experience provides examples of innovation. Two-thirds of OECD countries provide cash benefits to family caregivers, cash-for-care allowances for recipients or periods of paid leave for informal caregivers. Belgium, for example, uses a voucher-based model of subsidizing various homecare and other services and gives legal recognition of "informal carers." The German LTC system prioritizes cost containment through a combination of enabling seniors to live independently for as long as possible, emphasizing the role of informal care alongside formal health and homecare and treating institutional inpatient care as a last resort. Denmark focuses on "reablement" – emphasizing user-centred, preventative care focusing on maintaining the skills to live independently.

Increasing staffing ratios, investing in technology and improving coordination are other pieces of the puzzle. Doing any one of those things will have positive implications for senior care but are not enough alone to ensure sustainability and quality over the long term. The current system requires fundamental change to ensure that policies, care pathways, incentive mechanisms and funding align with the preferences and care needs of Canadian seniors.

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Canadian seniors were disproportionately affected by COVID-19, and the pandemic has highlighted long-existing and well-known challenges in the seniors' care sector.

Ensuring Canadian seniors have access to high-quality appropriate care to meet their future needs will require addressing the pre-existing conditions that contributed to the severity of COVID-19. Both expansion and modernization of senior care will be required to address perpetual waitlists and staff shortages. Improvements to infrastructure will also have to occur.

This *Commentary* summarizes the impacts of COVID-19 on Canadian seniors, ongoing challenges in seniors' care and promising investment and policy avenues for future improvement and modernization. The risk of a corona-virus outbreak among seniors, particularly those living in congregate settings, was illuminated two decades ago by the SARS pandemic. Although Canada subsequently developed emergency response plans for infectious disease emergencies, these plans focused on the hospital setting and did not adequately prepare residential care homes or community providers to manage COVID-19. Prior to the pandemic, Canada had long waitlists for long-term care (LTC) homes and had fewer homecare providers than the international average. This shortage of homecare and availability of LTC beds results in patients occupying beds in acute-care settings that are less equipped to meet their various care and quality-of-life needs and are more expensive than if care were provided in a more appropriate setting.

Expansions in both residential and homecare will be needed to ensure that Canadians are able to receive care that is appropriate to their needs. Seniors' care must also consider patients' preferences, and with the majority of people wishing to age in place, ensuring they have the necessary supports to maintain their health and quality of life while staying in their homes should be a priority. Clearly, efficient use of existing human and physical resources, along with significant investments in LTC and home and community care will be required to meet the needs of Canadian seniors.[1]

Increasing staffing ratios, investing in technology and improving coordination are other pieces of the puzzle. Doing any one of those things will have positive implications for senior care but are not enough alone to ensure sustainability and quality over the long term. The current system requires fundamental change to ensure that policies, care pathways, incentive mechanisms and

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1 Dementia is a major contributor to the growing need for LTC. In 2016, more than two-thirds (69 percent) of LTC residents had dementia and 87 percent suffered from some cognitive impairment. In addition, LTC residents with dementia are likely to require substantial assistance with activities of daily living (82 percent), suffer from health instability (59 percent) and can be more prone to exhibiting aggressive behaviour, depression or wandering. In other words, their care needs are intensive, and there are significant challenges to providing their care (CIHI 2021a).

Key Concept Explainer

Glossary for Seniors' Care Providers:

Long-Term Care Homes (nursing homes):
LTC homes are formally part of the public healthcare system. Residents generally have significant cognitive or physical care needs exceeding levels that could be provided in their homes. These are government-subsidized homes with various types of operators: charitable organizations, municipalities, corporations, partnerships and sole proprietors. Nursing homes may be either for-profit or non-profit. Charitable and municipal homes are non-profit.

Retirement Residences. Retirement homes and independent living facilities generally function peripherally to the public healthcare system. They are typically privately owned residences whose rates are not subsidized by government. Seniors pay for rental accommodation care and services while living independently with minimal to moderate support. Residents might receive publicly covered homecare or other medical services in but are generally healthier than the residents of LTC homes and have lower needs for ongoing care and support.

Community Care: is delivered in private homes, retirement communities, residential or long-term care homes and community clinics. It can involve homecare or residential care.

Homecare: Care provided by professionals or by family members, friends, etc. that allows a person who is aging or has other special needs to stay in their home (aging in place). Services range from personal care, and household chores to cooking, money management and healthcare.

Residential Care: The community residential care sector encompasses a range of living options for people, primarily seniors, with different support needs. With varying terminology across the country, residential care facilities can include lodges, assisted living, supportive housing and long-term care homes. Other terms across Canada are nursing and personal care homes.

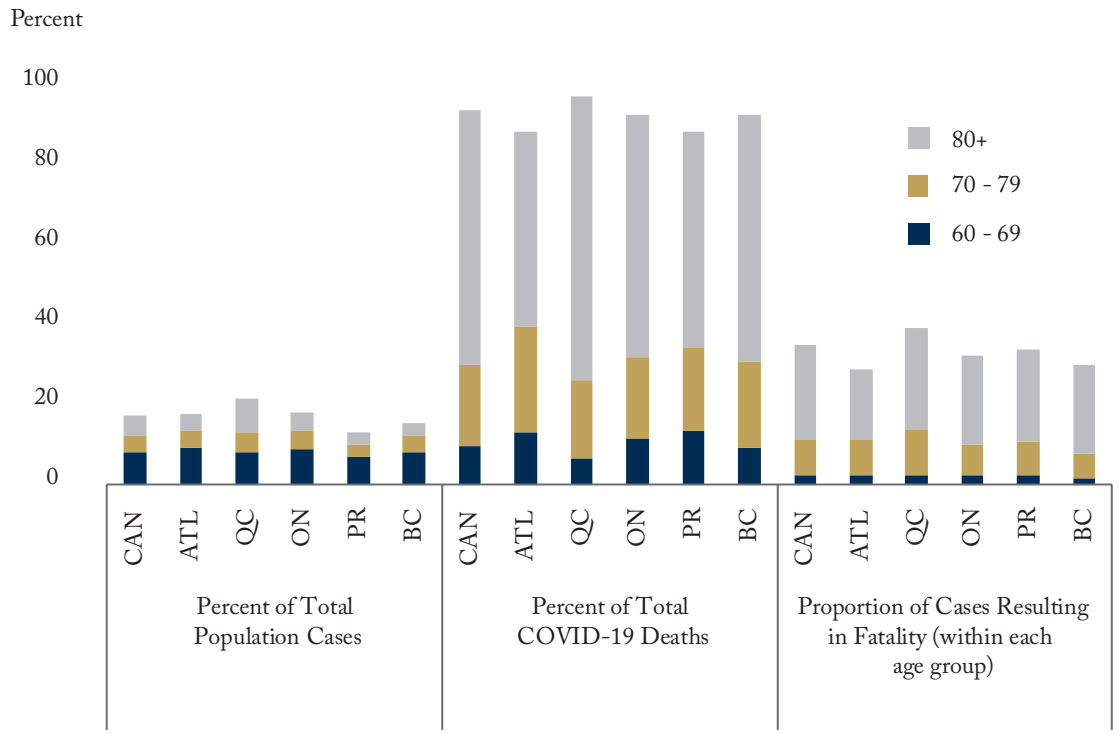
Sources: Canadian Institute for Health Information (CIHI); Ontario Ministry of Health and Long-Term Care; ORCA Retirement Living.

funding align with the preferences and care needs of Canadian seniors.

Overall, a change to the status quo is required to make strategic use of limited resources and ensure that care is appropriate for seniors' needs. Gaps in the availability of home and community care should be addressed and infrastructure investments should be directed toward improving and maintaining existing LTC residences to ensure they are able to achieve high infection and prevention control levels.

Although increasing the number of LTC beds is also necessary, governments should explore means of utilizing the existing supply of retirement home spaces to provide care more efficiently and possibly more equitably to those now admitted prematurely to LTC. Addressing cost barriers through subsidies or benefits for low-income seniors could ensure more equitable access to independent and assisted-living residences. A similar strategy could be used to increase the provision and uptake of various

Figure 1: COVID-19 Cases and Deaths, by Age and Region



Sources: PHAC, retrieved Oct. 29, 2021; author's calculations.

homecare services. As the senior population continues to age and care needs continue to increase, ensuring equitable access to high-quality and appropriate care presents a significant practical and fiscal challenge. All available strategies that optimize the use of government resources, enable choice while supporting equitable access, and leverage private resources and infrastructure to address gaps in the supply of care should be considered.

COVID-19: Impact on Seniors

There is still uncertainty about the full effects of COVID-19 on Canadian communities, seniors and healthcare workers. It is, however, clear that COVID-19 has disproportionately affected Canada's senior population.[2] At time of writing, people aged 60+ accounted for 17.4 percent of COVID-19 cases but 93.9 percent of COVID-19 deaths (Figure 1). Case mortality rates also increase with age: 23.2 percent of cases were fatal for people over the age of 80 relative to 2.2 percent

2 Older individuals are more likely to have chronic illnesses, immunodeficiencies or other health-risk factors that contribute to both the likelihood of infection and the severity of illness.

Table 1: Seniors Affected by COVID-19 in Canada, Percent of July 2020 Population

		Canada	Atlantic	Quebec	Ontario, Nunavut	Prairies, NWT	BC, Yukon
60-69	Deaths	0.06	0.01	0.06	0.06	0.09	0.03
	Cases	2.63	0.27	2.68	2.87	3.64	2.07
70-79	Deaths	0.19	0.02	0.29	0.18	0.24	0.09
	Cases	2.16	0.20	2.55	2.21	3.01	1.63
80+	Deaths	1.03	0.06	1.89	0.88	1.01	0.49
	Cases	4.46	0.37	7.49	3.91	4.93	2.29
Total (60+)	Deaths	0.27	0.02	0.46	0.25	0.29	0.13
	Cases	2.81	0.26	3.48	2.85	3.67	1.96

Sources: Public Health Agency of Canada (2021) and Statistics Canada (a), retrieved Oct 29.2021; author's calculations.

and 8.7 percent for people in their 60s and 70s, respectively.[3]

As of October 2021, almost one of every 20 people over the age of 80 had been infected with COVID-19 and about 1 percent died (Table 1). For those over 60, some 250,000 were infected with COVID-19 and about 25,650 died, according to preliminary case data.

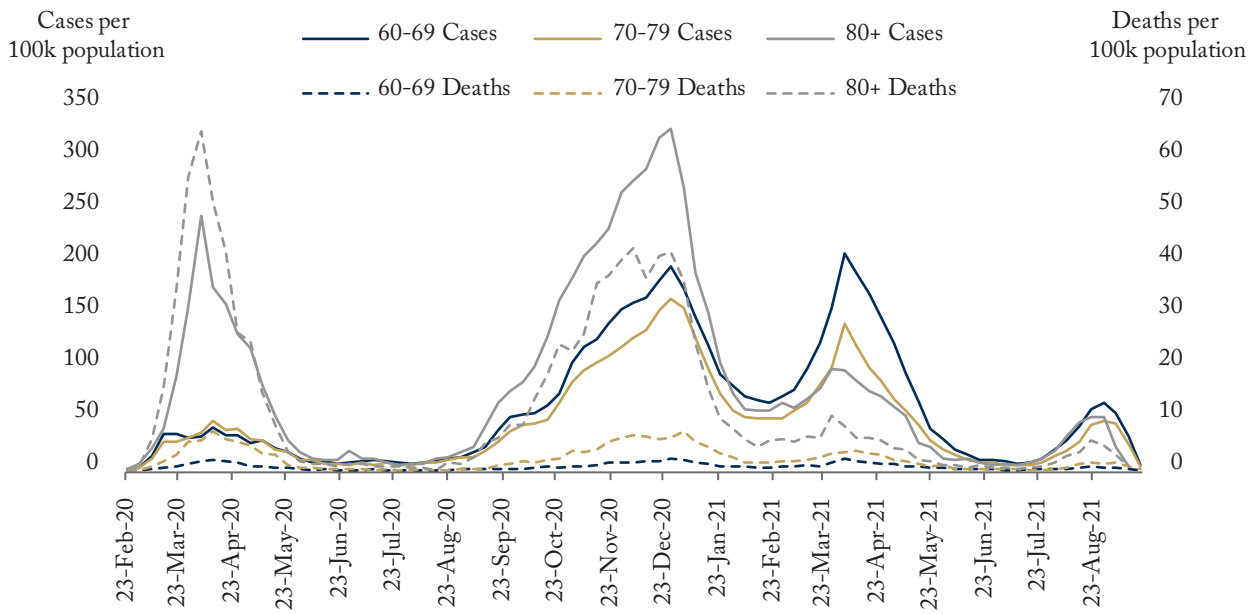
Over time, successive waves of the pandemic have affected older Canadians differently. The first and second waves had the most severe impacts on people over 80.[4] Case rates and mortality were significantly lower during the third wave for this age group, reflecting their high vaccination rates due to public health policy prioritizing the frail elderly and residents of congregate care settings for vaccination. During the third wave, case and mortality rates for the population 80+ peaked at less than one-half the levels reached during the pandemic's first two waves (Figure 2). For the population aged 60-79, however, the third wave was about as severe as the first two in terms of population case and mortality rates. Although the fourth wave is ongoing as 2021 comes to an end, preliminary case and mortality data suggest that case rates are lower than previous waves for the population 60-79 years of age, likely reflecting increasing vaccination rates.

Alternative mortality measures provide further insights into the pandemic's direct and indirect impacts. Excess mortality, a measure of unexpected deaths in a particular period, is useful in measuring both direct and indirect effects of a health crisis. In 2020, mortality rates increased for all age groups compared to previous years. COVID-19 appeared to be the main driver of increased mortality for

3 The case fatality rate for those under 60 years of age is about 0.13 percent, according to preliminary case data as of Oct. 26, 2021.

4 Though mortality rates were lower during the second wave, this could be reflective of a better ability to treat the disease and/or that the first wave was particularly deadly for the most frail and elderly. It could also be reflective of more comprehensive testing and case identification.

Figure 2: Weekly COVID-19 Case and Mortality Rates, Canada, By Age



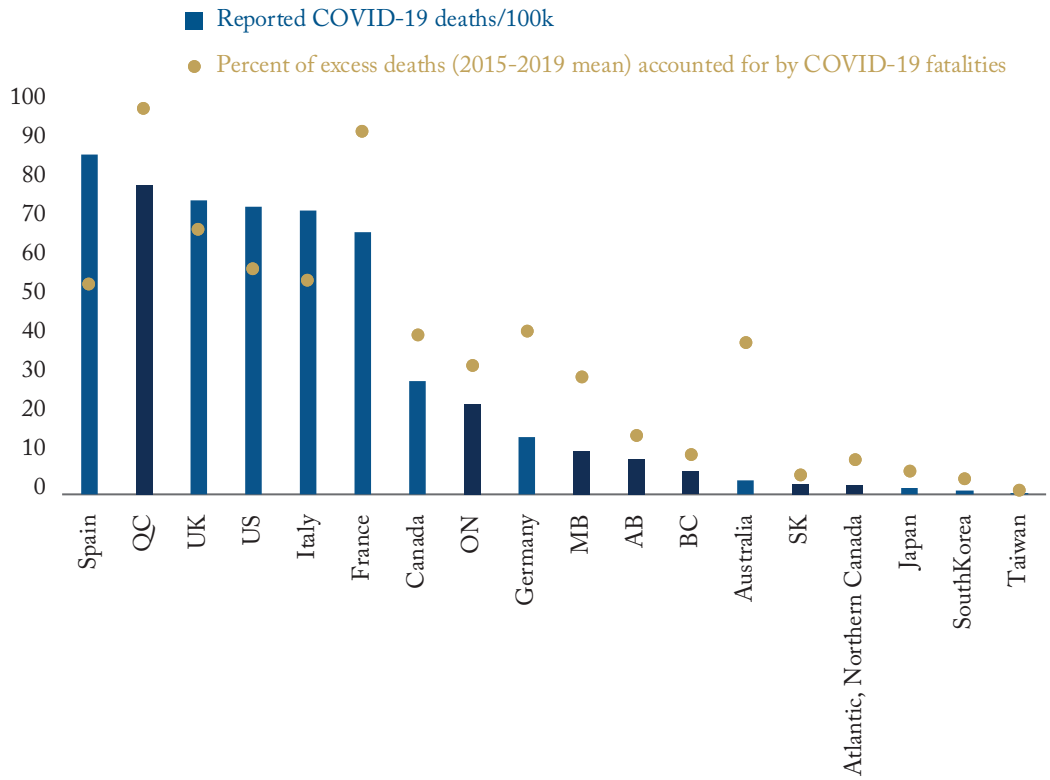
Sources: PHAC (2021) and Statistics Canada (a), retrieved Oct. 29, 2021; author's calculations.

the older population. For younger age groups, both COVID-19 and unintentional poisonings (including overdoses) contributed to increased mortality. Overall, from March 2020 to June 2021 there were 6.7 percent more deaths than would be historically expected, absent a pandemic (Statistics Canada b. 2021).

Recent research analyzing excess mortality data suggests that at least two-thirds of deaths caused by COVID-19 in communities outside of LTC may have been missed in the pandemic's first year (Moriarty et al. 2021).[5] These new estimates provide a fundamentally different picture of the pandemic's progression in Canada along with important insights for how seniors were affected. In particular, they show that many clinically frail older adults died of COVID-19 in their own homes, that racialized and low-income communities were

5 The analysis uses the US Centers for Disease Control and Prevention method of adjusting death estimates for specific causes of death (top 10 historical causes of mortality in Canada) and also controls for toxic opiate and stimulant-related deaths to estimate the proportion of excess mortality likely attributable to COVID-19. Nov. 28, 2020 is the last date for which cause of death reporting is >95 percent complete for Canada, the minimal completeness to detect an overall 5 percent increase in all-cause mortality (COVID-19 Resources Canada, 2021).

Figure 3: Estimated Excess Deaths and COVID-19 Fatalities, by Country and Region (Feb. 1 – Nov. 28, 2020)



Source: Moriarty et al. 2021, Table 1.

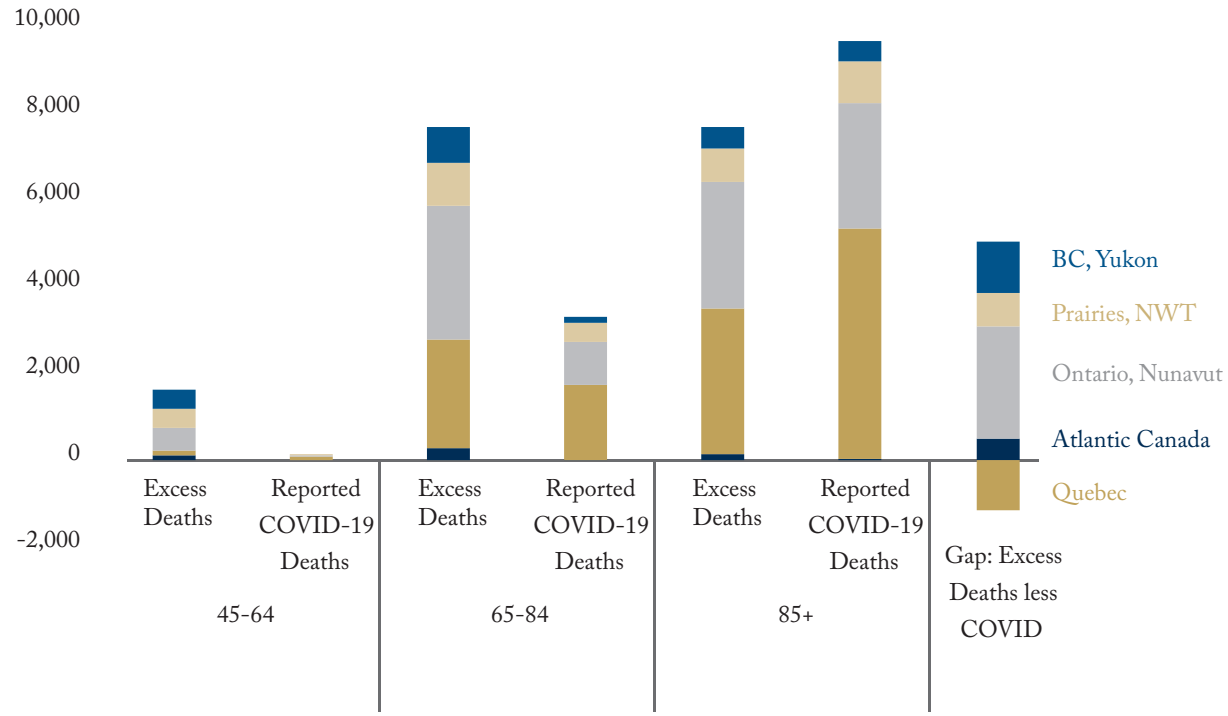
more affected[6] and that more deaths occurred in the working age population (45-64 years) than suggested by official case and mortality statistics.

Excess mortality statistics also provide insights about how Canada compares internationally and differences between provinces with respect to managing the pandemic (Figure 3). While it appears that Quebec had the highest case mortality rate and proportion of cases and deaths occurring in the population over 60 years of age (Figure 1), it is possible that the province was better at identifying and reporting COVID-19 deaths than other provinces (Figure 3). Although Quebec had the highest COVID-19 mortality rate among Canadian regions (79.29/100K population), 99 percent of excess mortality in the province from Feb.1 – Nov. 28, 2020 is accounted for by officially reported COVID-19 fatalities.

In contrast, Ontario had a much lower COVID-19 fatality rate (23.34/100K population),

6 There are a number of reasons for the impact on racialized and low-income communities, including higher population density, lower testing rates and higher proportions of essential workers, recent immigrants and multi-generational households.

Figure 4: Comparison of Reported COVID-19 Fatalities and Estimated Excess Mortality, by Region, Age Group (Feb. 1 – Nov. 28, 2020)



Source: Moriarty et al. 2021.

but only one-third of its excess deaths are accounted for by COVID. Similarly, Alberta and BC had lower fatality rates and a lower proportion of excess deaths attributed to COVID than Ontario and Quebec. These observations suggest that there are likely a significant number of COVID-19 cases and fatalities that are not identified in official case data and that some provinces were more prone to missing pandemic cases and deaths than others.[7]

Undercounting of cases and deaths in official statistics varies with age and likely with socioeconomic factors in addition to by region. Across Canada, about 6,000 excess deaths (62 percent) were not reported as COVID-19 deaths

7 The recalibrated view of the COVID-19 epidemic in Canada shows that regions that seemed relatively unscathed until the fall of 2020(everywhere except Quebec and Ontario) in fact experienced a per-capita death rate much closer to that of Ontario. Per-capita excess deaths in Quebec were twice the national average, instead of the three-fold difference that appeared in reported COVID-19 fatalities (Moriarty et al. 2021a).

for the population aged 45-84 (Figure 4).[8] In Quebec, 70 percent of excess deaths were reported as COVID-19-related for the same age group. In the rest of Canada, only 26 percent of estimated excess mortality in this age group was reported as caused by COVID-19. Conversely, reported COVID-19 fatalities are higher than excess death estimates for the population at least 85 years of age in most regions, except BC (91 percent) and Atlantic Canada (20 percent).

These observations suggest that the majority of COVID-19 cases and deaths in the population 45-84 are likely missed in official estimates, which fundamentally alters the picture of the pandemic's effect on seniors. Official estimates show that the majority of COVID-19 deaths in Canada occurred in LTC and retirement homes during the pandemic's first two waves. In the first wave (March 1 to Aug. 31, 2020), 79 percent of COVID-19 deaths were LTC and retirement home residents with an initial case fatality rate of 34 percent. By Feb. 15, 2021, official estimates show that 69 percent of COVID-19 deaths were LTC or retirement home residents and that case fatality rates had declined slightly to 27 percent (CIHI 2021 a). Compared to its international peers, Canada had a similar proportion of COVID-19 cases occurring among LTC and retirement home (RH) residents (17.5 percent compared to OECD average of 15.7 percent) and a similar case fatality rate for LTC and RH resident cases (Canada: 35.3 percent; OECD: 31.8 percent).

However, early estimates showed 81 percent of all Canadian COVID-19 deaths were LTC or RH residents (as of May 25, 2020), a much higher proportion than in peer countries with an average of 37.8 percent (CIHI 2021b).[9] The most likely explanation for this discrepancy is that a large number of COVID-19 cases and deaths in Canada were uncounted outside these institutional settings. It is also possible that Canada over-counted resident deaths: some sources reported total deaths in residential care (whether or not they are related to COVID-19). In addition, low rates of testing early in the pandemic meant that some residents who died remain "suspected" cases of COVID-19 and without post-mortem testing (Comas-Herrera et al. 2021). A large number of uncounted COVID-19 cases and deaths in the community, however, would also explain the age discrepancies between excess mortality estimates and official COVID case counts.

Collectively, these comparisons and observations from various sources of COVID-19 data suggest that:

- There is significant uncertainty about the true effects of COVID-19 on Canada's senior population and that case and mortality data are likely most complete in hospitals and the congregate residential settings of LTC and retirement homes.
- Information about the effects of COVID-19 on seniors in community settings is incomplete, providing a biased impression that seniors living in the community were much less impacted than they were: only four in 10 excess deaths in the general population aged 65 to 84 were attributed to COVID.
- Although Quebec appeared to have the highest rate of cases and fatalities and the highest case-

8 At the time of writing, November 2021, cause-of-death reporting was insufficiently complete to draw conclusions for the time period following Nov. 28, 2020. As cause-of-death mortality statistics become more complete, the proportion of excess mortality accounted for by COVID-19 for the population 45+ has increased from 53 percent to 72 percent for the period Feb. 1 – Nov. 28, 2020. However, the number of excess deaths unaccounted for by official COVID-19 cases (6,850) has remained relatively unchanged. See Statistics Canada (2021a) and Moriarty et al. (2021b) for updated data and analysis as it becomes available.

9 As of Oct. 26, 2021, LTC and RH resident deaths accounted for 54 percent of total COVID-19 fatalities.

Table 2: COVID-19 in LTC and Retirement Homes, by Province and Territory

	LTC Homes (#)		Retirement Homes (#)	Homes Affected by a COVID-19 Outbreak (percent)	Resident Cases (#)	Resident Deaths (#)	Proportion of COVID-19 Fatalities (confirmed cases, percent)	Case Fatality Rate (percent)
	Public	Private						
NL	39	1	85	4.8	8	0	0	0.0
PEI	9	10	20	2.6	0	0	0	NA
NS	12	72	50	11.9	269	58	59	21.6
NB	0	70	398	6.8	244	39	37	16.0
QC	387	53	1775	50.2	26,171	8,125	71	31.0
ON	100	527	769	67.6	18,950	4,543	47	24.0
MT	71	54	136	33.7	1,744	489	40	28.0
SK	119	42	241	40.5	453	123	15	27.2
AB	86	100	392	76.1	7,161	1,396	46	19.5
BC	108	200	84	45.4	3,149	816	39	25.9
Territories	16	0	3	5.3	0.0	0.0	0	NA

Note: COVID data updated Oct. 26, 2021.

Sources: CIHI 2021c, NIA LTC tracker.

fatality rate for the senior population, it also has the most complete mortality information. Recalibrated estimates using excess mortality statistics provide a significantly different, more regionally equitable picture: provinces that seemed relatively unscathed likely undercounted more than those that appeared to be worst hit.

COVID-19 and Residential Care for Seniors

Retirement homes and independent living facilities generally function peripherally to the public healthcare system – residents might receive publicly covered homecare or other medical services but are generally healthier than the residents of LTC homes and have lower needs for ongoing care and support. LTC homes, on the other hand, are formally part of the public healthcare system.[10] Residents generally have significant cognitive or physical care needs exceeding levels that could be provided in their homes. Each province has different policies and regulations governing home and community care and LTC for seniors. For instance, they differ in organizational structures,

10 While some homecare is publicly provided and LTC is included in provincial insurance plans, these services are not provided for in the *Canada Health Act*.

incentives, access to care and in almost every other measurable factor.

Despite significant efforts, almost half (49 percent) of Canada's LTC and retirement homes have experienced an outbreak resulting in at least 15,589 resident and 32 staff deaths, as of Oct. 26, 2021 (Table 2). Care homes in Quebec, Ontario and Alberta were particularly hard hit. In Quebec, almost half of homes experienced an outbreak, and they appear to have been more severe on average than elsewhere in Canada: more than 70 percent of COVID-19 deaths were LTC/RH residents and three of 10 such cases resulted in fatality. In Ontario and Alberta, more than 60 percent of homes experienced a COVID-19 outbreak. Care homes in the territories and Atlantic provinces were relatively less affected by COVID-19, likely in part due to lower population case counts (less community transmission) and lower density populations, reducing potential spread.[11] More recently, Newfoundland and Labrador and New Brunswick have been more severely impacted, though resident cases and fatalities, as well as the proportion of homes that have experienced an outbreak remain low relative to provinces outside the Atlantic Bubble.[12]

In general, a combination of factors including higher rates of chronic illness, frailty or ill health contributes to infection risk and severity of disease. As a result, residents of LTC and retirement homes, and seniors in general, are more susceptible to COVID-19 infection (and other infectious respiratory illnesses) and are more likely to have an infection become severe or deadly.[13] LTC residents are the most vulnerable within the senior population – they have the most complex care needs and likely suffer from more than one chronic mental or physical illness. To provide necessary care, frontline staff has close contacts with many residents and patients throughout the day. Enforcing infection control protocols becomes more complex if higher proportions of residents suffer from dementia or have other cognitive/behavioural difficulties: new procedures might cause significant confusion or be difficult for residents to follow and prolonged isolation could cause significant distress for patients.

The World Health Organization declared COVID-19 a pandemic on a Wednesday, March 11, 2020. By the following Monday, all provinces had implemented restrictions on visitors to LTC (CIHI 2021b). By the end of April, all provinces implemented policies or recommended against staff working in multiple facilities, especially facilities in active outbreak.[14]

Many experts and pandemic working groups identified the risk to residents of institutional care settings early in the pandemic.[15] Although there was some variation in the recommendations on how best way to prevent and manage outbreaks, there was broad consensus on a number of issues:

11 Nova Scotia had one particularly devastating outbreak at an LTC/RH facility early in the pandemic and, as a result, has relatively higher case and mortality numbers than other Atlantic provinces.

12 Five of six facility outbreaks in Newfoundland and Labrador occurred and were resolved between July 26 and Oct. 26, 2021. In New Brunswick, 44 percent of facility outbreaks have occurred since July 26, 2021, accounting for one-quarter of resident cases and more than one-third of resident deaths since the beginning of the pandemic.

13 Patients over the age of 65 have the highest rates of hospitalization and death for influenza and account for 70 percent of related hospitalizations and about 90 percent of deaths. Patients 80 years of age and older account for one-half of influenza deaths, and 10 percent of those hospitalized for the infection died in 2019/20 (FluWatch 2020).

14 For more information about the policies implemented to address COVID-19 risks in LTC, see Dunning et al. 2021 and CIHI 2021e (Timeline of COVID interventions in Canada).

15 See, for example, National Institute on Aging (2021b.), C.D. Howe Institute 2020, OLTCA 2021.

- restrict non-essential visitors;
- limit care providers from working in multiple care settings;
- provide personal protective equipment (PPE) for all care providers and frontline staff; and
- implement strong infection and prevention control procedures for staff and residents.

Despite the implementation of these and other public health policies, many LTC and retirement homes suffered COVID-19 outbreaks. While prevention and control were high priority, limited information about the disease, a lack of testing and tracing, and limited use of PPE, in part due to global supply shortages, all hampered efforts to control the virus in the community during the first waves of COVID-19. It is worth noting that the policies that were generally recommended were preventative in nature, designed to keep COVID-19 out of retirement and LTC homes and prevent it from spreading if it did enter. There was much less clarity or guidance about what to do if these preventative measures failed. Inevitably, with uncontrolled community transmission, COVID-19 had opportunities to enter institutional care settings and, once there, spread like wildfire.[16]

In addition to being home to the most vulnerable populations, there are many LTC challenges that likely hampered the ability to prevent outbreaks and manage infections when they occurred. With long waitlists resulting in high occupancy rates, there was limited flexibility to isolate cases to particular wards or areas within congregate care settings to contain the spread of infection. Staffing shortages and gaps meant that there was limited capacity to manage COVID-19 while also providing regular volumes of care. Workers employed part-time at multiple facilities were at high risk of exposure and could also be infection vectors spreading COVID-19 among facilities.[17] Restrictions on visitors, who routinely provide informal care like feeding and bathing residents, further increased the burden on staff and contributed to resident distress. In some facilities, residents share rooms or bathroom and shower facilities, providing a vector for infection spread. In addition, older homes might not have had adequate ventilation and air-filtration systems, possibly allowing for airborne transmission in the facility and worse patient outcomes.

A combination of factors stretched already limited personnel resources to the breaking point: including exposure to COVID-19 requiring isolation, trade-offs with family and other caregiving responsibilities, workers transitioning sectors or leaving the labour force, and public health restrictions reducing the flexibility of labour and the availability of unpaid caregiver support. In Quebec, for example, 9,500 healthcare workers were "absent" from work in late April 2020 (Laframbroise 2020). About 4,000 of these had been diagnosed with COVID-19. With many workers off due to exposure or illness and others not showing up,[18] the military was deployed to make up for staffing shortfalls in some provinces. In some cases, hospitals deployed staff or took over the management of LTC homes. Other measures included policies increasing flexibility to employ

16 This was particularly prevalent in the early stages of the pandemic, before all preventative policies were fully implemented.

17 In addition, part-time workers are less likely to have access to extended health and other benefits, meaning they might not have the supports necessary to take time off work to get tested and isolate prior to eligibility for emergency government income-support.

18 Such behaviour is a rational choice to not expose themselves to a highly risky and potentially deadly environment for the wages offered. The individual toll and stress that providing care in quickly evolving and uncertain pandemic circumstances, while also having to isolate from family and loved ones, is difficult to fathom and certainly affected the choice of every healthcare worker whether to continue working throughout the pandemic, or not.

temporary/agency workers to fill staffing gaps, pandemic pay increases and extension of additional health benefits to part-time health workers and emergency training courses to increase the available health labour force.

While emergency measures were certainly necessary to address the evolving situation and manage the most severe outbreaks, they did little to address the longer-term staffing and other challenges in the residential-care sector. It is nearly impossible, at this point, to determine which public health and labour policies were the most effective, how effective individual policies might have been in isolation and which might have had negative unintended consequences that undermined their usefulness. Different combinations of public health and residential care policies to contain the pandemic were implemented across the country and each province entered the pandemic with a different baseline, making comparing and contrasting various policies and results extremely challenging.[19]

Fiscal Reality and the Value of Private Care

Following the COVID-19 pandemic's abatement, significant changes should be made in the LTC sector to mitigate the risks of future infectious disease outbreaks. Foremost among them are reducing occupancy per room, increasing staffing levels to provide surge capacity and care continuity during crisis situations, and ensuring staff are trained and prepared to rapidly implement infectious disease protocols. Achieving these changes, however, will require significant investments in upgrading existing infrastructure, constructing new facilities, as well as increased ongoing costs to support higher wages and more workers. The Canadian Medical Association estimates that the total annual cost of expanding the LTC workforce to an international standard of 8.2 care workers per 100 seniors could range from $9 billion to $14 billion, depending on wage rates (Drummond, Sinclair and Bergen 2020).[20] In addition, as Canada's population continues to age and the babyboomers surpass 80 years of age, LTC costs are expected to grow immensely. Not only will there be more seniors requiring care, the costs of providing care will increase as people age.

A recent projection factoring in the increased costs of upgrading and expanding LTC infrastructure, increasing staffing levels and caring for a growing aging population estimates that spending on institutional care will increase to 4.2 percent of GDP by 2041 from 1.26 percent in 2018 (Drummond Sinclair and Bergen 2020). To put this increase into context, 2018 healthcare spending on physicians, other professionals, prescribed drugs, public health and administration totalled 4.16 percent of GDP. In addition, hospital spending was 3 percent of GDP. Meanwhile, Canada's spending on LTC increased by only 0.1 percent of GDP during the previous decade, 2007-2017 (Drummond, Sinclair and Bergen 2020). Over the same period, total health spending grew from 10.3 percent to 11.5 percent of GDP, and the population over 75 years of age grew by 24 percent to 2.6 million people (CIHI 2021d). If healthcare spending were to continue to grow relative to GDP at a similar rate to

19 Estimating the effect of different policies across regions and other factors affecting pandemic outcomes will certainly be an ongoing area of research for many years to come. With the current state of health data related to the pandemic (incomparable, incomplete, non-standardized, disaggregated or unavailable) and new information continuing to emerge, it will likely be many years before we have a full understanding of the COVID-19 virus, its variants and how government policy affected epidemiology.

20 The estimate is based on a standard of 8.2 care workers per 100 seniors.

Table 3: Senior Residences* Vacancy and Rent by Province (2021)

	Vacancy Rate (percent)	Average Monthly Rent ($)	Increase in Senior Housing Stock from 2020 (percent)	Change in Monthly Rent from 2020 (percent)
BC	12.5	3541	2.7	5.3
AB	26.8	3,047 (Edmonton) – 4,140 (Calgary)	11	9.9
SK	22.4	3,116	1.7	0.4
MB	8.7	2,844	0.7	-0.2
ON	19.6	3,999	3.8	3.5
QC	12.8	1,922-3,653 (level of care distinction)		
Atlantic		2,878	5.7 (27% in Halifax)	1

*Includes private and non-profit senior residences mandating fewer than 1.5 hours of care per day, offering onsite meal plans and having at least 50 percent of residents over the age of 65.

Source: CMHC 2021.

the past 20 years, it would increase from about 11.5 percent of GDP in 2019 to 14.6 percent in 2040 – 3.1 percentage points. Even with healthcare spending growing at historical rates, nearly every dollar of new spending would need to be directed toward senior care for the next 20 years to achieve the projected infrastructure and staffing goals.

Clearly, structural and efficiency-improving reforms will need to take place if the goal of providing accessible, equitable and high-quality care for Canadian seniors is to be achieved. Simply put, upgrading infrastructure, increasing staffing levels and providing for the care needs of a growing senior population would require unprecedented, and fiscally infeasible investment in seniors' care.

The rather dismal projection presented above does not consider expansions to the care provided to seniors, considerations of ownership, nor the mix of public and private investment in the sector. It is simply the investment required to maintain the status quo and address existing well-known issues.

Growth in overall healthcare spending since 2000 has been relatively evenly divided between public and private sources. In 2018, private insurance and out-of-pocket payments made up about 30 percent of total healthcare spending, up from 24 percent in 2000. Public spending on health institutions (other than hospitals), however, has not kept pace with private spending.

As it is, if total public healthcare spending grows at a similar rate (relative to GDP) to the past two decades, that increase would not be sufficient to cover the improved status quo for the senior population, even if no other area of public spending on healthcare grows relative to the economy.

There are 2,076 LTC homes and 3,953 retirement homes in Canada (Table 2). More than half of LTC homes (54.4 percent) and the majority of retirement homes are privately owned and operated. There is no consistent ownership pattern across the country: in five provinces, the majority of LTC homes are privately owned and operated,

with the other provinces having majority public ownership. All LTC homes in the Territories are publicly owned. Both publicly and privately owned LTC homes provide ongoing care for some of the most vulnerable members of society. In addition, there is no clear difference in pandemic outcomes across countries related to their models of funding – public, private or mixed – although countries with centralized regulation and organization of LTC generally had lower numbers of COVID-19 cases and deaths (CIHI 2020a).

Inadequate provision of seniors' care also has impacts on family caregivers and the economy. Nearly all (96 percent) individuals receiving homecare in Canada also have an unpaid caregiver (normally a family member). More than one in three of these caregivers is in distress. Distressed caregivers provide an average of 37 hours per week of assistance with personal care activities like bathing, feeding, toilet use and getting in and out of bed (CIHI 2020b). If these caregivers have to reduce the amount they work or leave the labour force to provide care for a loved one, this can have long-term implications for their careers and earning potential in their lifetimes. It also has negative effects on the economy due to the shrinking of the labour force.

Research has shown an increase in burden-of-care issues observed among informal care providers, whose workload has increased dramatically over recent decades (OECD 2020). Institution-based care solutions can contribute to reducing that burden (Rapp, Apouey and Senik 2018). The pandemic significantly increased the quantity and level of informally provided care: 12 percent of unpaid caregivers in Canada started their responsibilities as a result of the pandemic (Carers Canada 2021). The amount of care they provided also increased on average by 9.8 hours per week with the carers expecting this to increase a further 26.6 hours.

Individuals requiring support that don't have a caregiver in the home are much more likely to be admitted prematurely to LTC homes. Indeed, about one in nine new entrants could potentially have been cared for at home. These new residents were more likely to have previously lived alone or in a rural area where formal and informal supports are less likely to be available (CIHI 2020b). Several factors are contributing to reducing the availability of informal caregivers: birth rates have been declining over the past few decades; more mobility is observed across society; there are more nuclear families; and the number of working women has been growing (Drummond, Sinclair and Bergen 2020).

Independent living, retirement homes and seniors' communities somewhat bridge the gap between living independently at home (likely with support) and admission to a LTC home. Meanwhile, vacancy rates in seniors' residences have been increasing in the past few years, likely as a result of COVID-19. In Quebec, 17 percent of the population at least 75 years of age lives in a seniors' residence, compared to 5 percent in Ontario. Notably, Quebec has the lowest average rent for seniors' residences, while Ontario has the highest (Table 3). In general, retirement homes and seniors' residences require significantly more out-of-pocket costs than publicly covered homecare or the capped room-and-board co-payments in LTC homes, which are generally provincially subsidized for low-income seniors. While many seniors prefer to remain in their homes for as long as possible, retirement homes can provide support in the form of meal plans and basic assistance with daily living activities and prevent premature entry to LTC, if seniors have the funds to support themselves.

COVID-19 required significant government financial stimulus to support people and businesses disrupted by the pandemic and public health restrictions. The economic disruptions have reduced government revenues and will put a strain on budgets for years to come. Still, gaps in the availability of home and community care should be addressed, and infrastructure subsidies and investments should be directed toward improving and maintaining existing LTC residences to ensure they are able to achieve high infection-and-

prevention control levels. Although expansions in the number of LTC beds are also necessary, governments should explore means of utilizing the existing supply of senior residence spaces in retirement homes to provide care more efficiently and, possibly, more equitably to those who are currently prematurely admitted to LTC.

Addressing cost barriers through improved subsidies or benefits for low-income seniors could ensure more equitable access to independent and assisted-living residences. A similar strategy could be used to increase the provision and uptake of various homecare services. As the senior population continues to age and care needs increase, ensuring equitable access to high-quality and appropriate care presents significant practical and fiscal challenges. All available strategies that optimize the use of government resources, enable choice while supporting equitable access, and leverage private resources and infrastructure to address gaps in the supply of care should be considered.

Chronic Conditions in Senior Care: International Comparisons

Prior to the pandemic, seniors' healthcare had many chronic challenges that made addressing COVID-19 outbreaks while also providing regular care extremely difficult and, at times, impossible. This section uses published literature and comparative international statistics to benchmark Canada's senior care performance along various dimensions. In particular, Canada has fewer care providers than many other countries; it spends less than many on seniors' care and relatively more on residential/institutional care settings than on care delivered in the community or patient homes.[21]

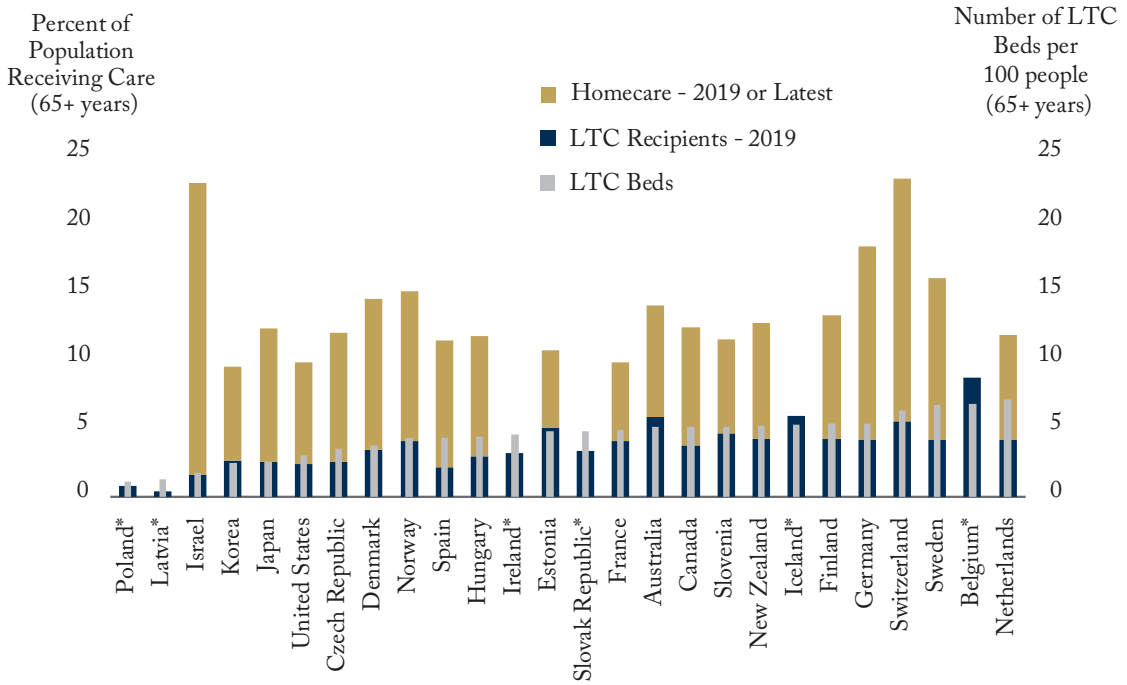
Comparing the resources, financing and structure of LTC provision in Canada to that in other countries illuminates gaps in Canadian senior care and can provide insights into how other countries have acted to address or mitigate similar challenges. Generally, there are three broad categories of LTC systems based on the scope of entitlement and number of systems/programs involved in service provision: universal coverage under a single program, mixed systems and means-tested safety-net schemes (OECD 2011). Canada has a mixed system of universal and means-tested benefits that varies by province and is financed by multiple levels of government (via federal transfers, general provincial tax revenues and, in some cases, health-specific tax revenues and municipal budgets). Research comparing structure and financing of LTC systems generally groups Canada with New Zealand, Switzerland, Greece and Spain (OECD 2011, Colombo 2012).

Physical and Financial Resources

At first glance, LTC in Canada appears to have comparable amounts of beds and financial resources. Canada has an about-average number of LTC beds relative to the size of the senior population, but fewer than some countries including New Zealand, Finland, Germany and Switzerland. It also has a comparable proportion of the senior population receiving LTC care and homecare relative to international peers (Figure 5). It spends more per capita than the OECD average for funding LTC, but spends less than other OECD countries as a proportion of GDP. The proportion of health spending for inpatient LTC is above average.

21 This section relies primarily on OECD data. Spending comparisons utilize purchasing-power parity in USD. See OECD LTC Resources and Utilization for more information about data sources and methodology.

Figure 5: Seniors Care Utilization and Resources



* Home and community care spending data are unavailable.

Source: LTC utilization and resources, health expenditure and financing – OECD (2019, or latest available).

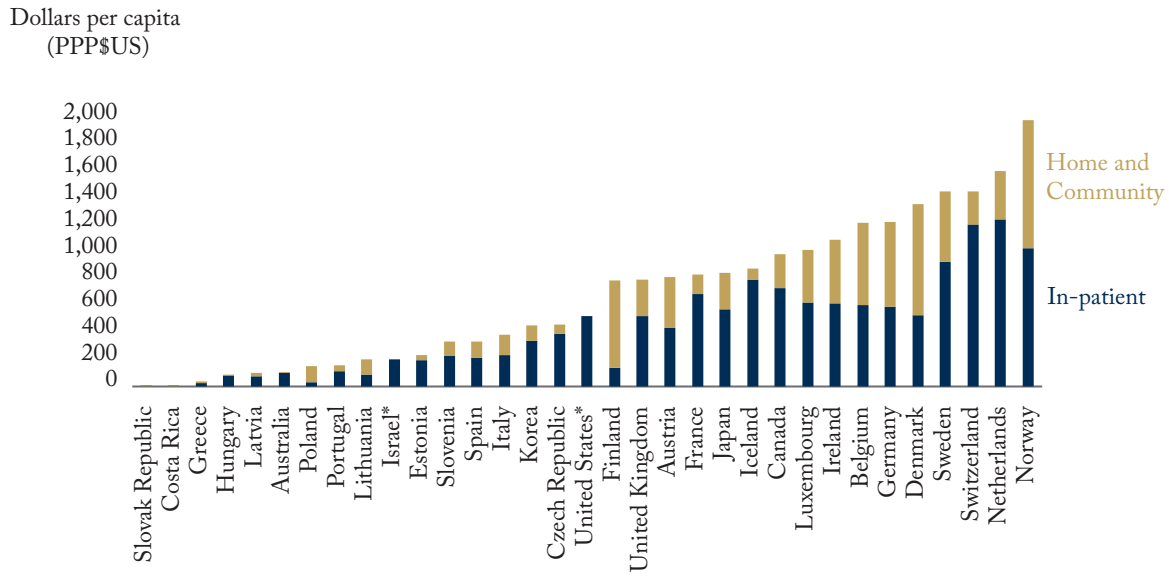
However, per capita spending on homecare and other outpatient and day program services falls below the international average (Figure 6).

In general, countries that direct higher proportions of health spending to senior care than Canada also spend more per capita on homecare, outpatient care and day programs for seniors.[22] For example, Germany spends slightly more (about US$190 per capita) than Canada on senior care, but a higher proportion of German seniors receive care in LTC homes and in community settings: 18.4 percent of people 65+, relative to 12.5 percent in Canada. Similarly, Switzerland spends about the same per capita as Canada on home and community care but almost twice as many seniors receive such care in Switzerland: 17.1 percent of people 65+, relative to 8.7 percent in Canada.

Despite Canada having an average number of LTC beds relative to the senior population among OECD nations, there are long waitlists for institutional LTC homes. In 2016, there were about 255,000 LTC-home beds with 263,000

22 Switzerland is an exception – compared to Canada, it spends more per capita on senior in-patient care and has a higher proportion of its population receiving LTC services. Relative spending on in-patient and outpatient care is similar to Canada.

Figure 6: Spending on Seniors Care, 2019 or Most Recent Available



* Home and community care spending data are unavailable. PPP = Purchasing Power Parity.

Source: LTC utilization and resources, health expenditure and financing – OECD (2019, or latest available).

urgently needed: there were 8,400 people in hospital as alternate-level-care patients whose care needs could be met elsewhere if services were available (Drummond Sinclair and Bergen 2020). In 2019/20, the median waiting time to move into a LTC home in Ontario was 5.3 months when previously living in the community and three months when previously residing in hospital (HQO). Wait times have increased 17.7 percent and 50 percent respectively since 2014/15 in the province.

Comparing Canada's spending and physical resources for LTC with other OECD countries shows average spending on seniors' care overall, but below-average spending on home and community care. All countries providing care to a higher proportion of the senior population than Canada spend more per capita on home and community care, and all except Switzerland spend proportionally more on home and community care relative to in-patient care.

Conversely, some countries provide in-patient LTC to higher proportions of their senior populations but spend less per capita than Canada on in-patient LTC (Finland, Germany and France, for example).[23] But there are more examples of countries that provide in-patient care to more seniors than Canada and also spend more on this care per capita.[24] These comparisons suggest that:

23 Notably, out-of-pocket costs of homecare are higher than Canada in France but not in Finland or Germany (OECDa).

24 These countries generally also spend more per capita than Canada on senior care as well as in total healthcare expenditures.

Overall, LTC in Canada appears to be about average in terms of spending, number of beds relative to population size and proportion of the population receiving care. However, waitlists and shortages for institutional care beds are common, resulting in the inefficient use of hospital resources.

Canada underspends both nominally and proportionally on home and community care relative to peer countries.

There is potential to learn from the countries that deliver in-patient care to a higher proportion of their senior populations for similar or lower spending than Canada. But with few countries falling into this category, the potential for savings is likely quite limited.

Similarly, Canada can learn from examples in other countries and their experiences with COVID-19 to improve management of infectious disease outbreaks by strategically investing in modernizing and expanding LTC infrastructure.

Human Resources

In Canada, as in many other countries, the growth in the number of nurses and personal support workers (PSW) providing institutional, residential, home and community care has not kept pace with the growth of the senior population. The number of care workers per 100 Canadian seniors has declined from 4.1 in 2010 to 3.4 in 2019, well below the OECD average of five (OECD 2019, 2020). The number of LTC workers relative to the senior population has been declining on average across OECD countries, but is more pronounced in Canada over the past decade (OECD 2020, Figure 1.5).

Canada has a well-below-average number of care workers relative to the senior population receiving care (Figure 7). But it has a slightly above-average number of nurses and PSWs in institutional settings, with 1.26 residents per worker (Figure 7A). However, in the home and community care setting, Canada is far below the international average, with 17.4 people receiving care per worker (Figure 7B).[25] Indeed, it has the lowest proportion of its LTC workers providing care at home and in the community among the countries for which data are available (OECD 2020, Figure 2.3).

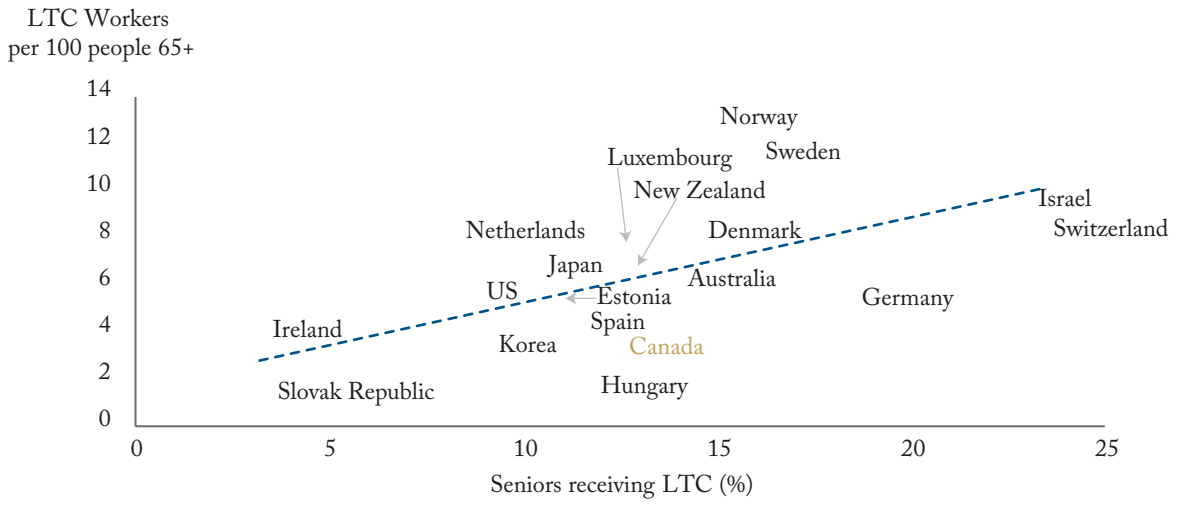
Long-term care does not happen in isolation from the rest of the healthcare system. Those receiving LTC likely also have a family physician or general practitioner, might have chronic conditions requiring specialist care, and can be admitted to hospitals for acute or emergency circumstances. Survey results show that one out of seven seniors in Canada saw at least four doctors in the previous 12 months and most seniors (82 percent) report that their family doctor helps coordinate their care, more than the international average of 77 percent (CIHI 2018). Timely access to care for seniors, especially from specialist physicians, remains a significant challenge in Canada.[26] Relative to OECD countries, Canada has an above average number of general practice physicians and nurses, but fewer specialist physicians per capita (Wyonch 2021).

The clinically ideal number of medical practitioners relative to population size depends on the needs of the population and is extremely difficult to quantify. There is in Canada, however, clearly a lack of specialist physicians relative to population needs in some critical practice areas.

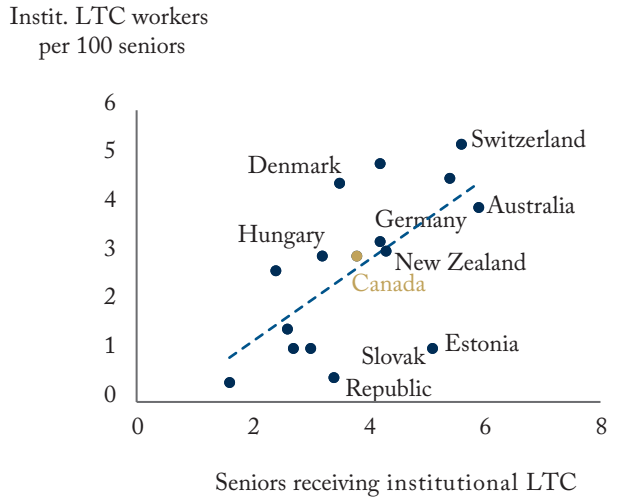
25 Canada ranks last in this category among OECD countries for which data are available. However, caution should be used when interpreting the results in Figure 7B. Home and community care data are limited to few countries and inconsistent years.

26 Canada is below the international average for obtaining same- or next-day primary care appointments. As well, a majority of seniors are unable to access non-emergency medical care after-hours, and Canada has the longest wait times for specialists among Commonwealth countries (58 percent wait at least four weeks for an appointment).

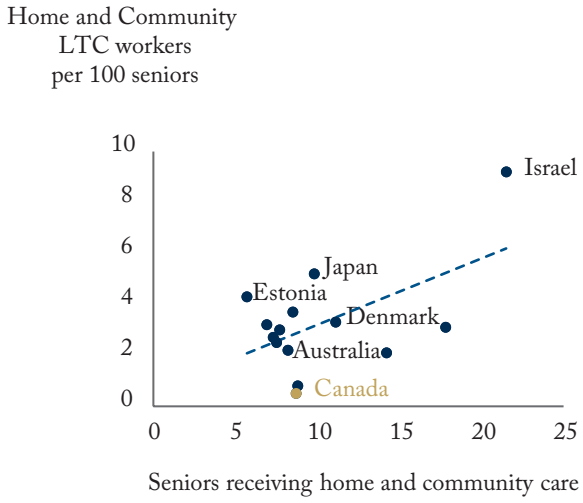
Figure 7: Senior Care Workers Relative to Population Receiving Care



7A: LTC in Institutions: Workers Relative to Residents

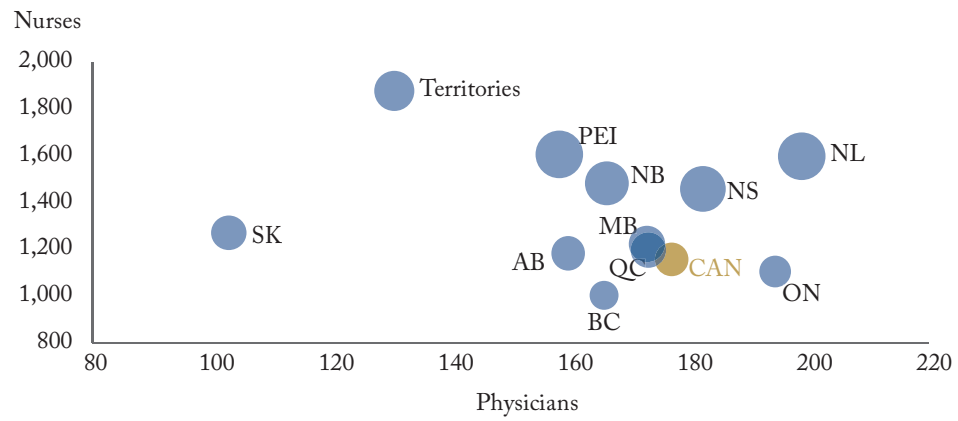


7B: LTC at Home and in the Community: Workers Relative to Population Receiving



Sources: OECD Health Utilisation and Resources (2019, or latest available); author's calculations.

Figure 8: Health Workforce per 100,000 Population, by Province



Note: Size of bubbles indicates total health workforce size, including other health professionals and occupations. No data available for nurses' density in Nunavut.

Source: CIHI Canada's Healthcare Providers, Physicians in Canada, Nurses in Canada Datatables (2019).

For example, there are only 304 geriatric specialists (11.7 per 100,000 Canadians 75+) to provide care for Canada's more than 6.1 million seniors (Wyonch and Drummond 2020).[27] There are only 18 pain medicine specialists in the country, which would seem to be an extremely small number given the ongoing opioid epidemic.

National results can also obscure important inter-jurisdictional variation. There are no pain medicine specialists whatsoever in the Territories, Saskatchewan, Manitoba, New Brunswick, PEI and Newfoundland and Labrador. Alberta and Nova Scotia have but one each. The Territories have an above-average number of nurses, but significantly fewer doctors, per capita, than the Canadian average (Figure 8). Saskatchewan has a relatively small healthcare workforce and the fewest physicians per capita; BC has the fewest nurses.

Addressing labour shortages or imbalances in the supply of health practitioners and care providers in the general health system is beyond the scope of this *Commentary*. But they are important to consider for a number of reasons. Despite Canada having an above-average number of nurses per capita, it has below-average levels of care providers working in LTC suggesting that recruitment and retention of staff is more challenging in seniors' care than in other healthcare areas.[28] In addition, the more populous provinces generally have fewer nurses per capita and smaller healthcare workforces,

27 For comparison, there are 48.8 pediatricians per 100,000 Canadians under 15 years of age.

28 Notably, Canada also has an above-average number of family physicians per capita.

meaning that staffing shortages in institutional, home and community LTC likely cannot be filled from the existing pool of health workers.[29]

Increasing employment in seniors' care and addressing shortages over the long term will be a significant challenge. First, the pandemic put severe strain on LTC workers and other frontline medical professionals with many unable to work due to exposure, illness, increased family responsibilities or simply leaving the occupation and choosing to work in a lower-risk environment. In addition, LTC workers earn less than if they were employed in other parts of the healthcare sector, making retention difficult (Wyonch and Maqbool 2020, OECD 2020). Across countries, part-time, shift and temporary employment arrangements in LTC occur at double the rate of the general economy. In Canada, part-time and temporary workers are less likely to have access to extended health benefits, paid sick days and other employee benefits. In addition, the majority of LTC workers report being exposed to physical risk factors at work, and nearly one-half (46 percent) report being exposed to situations that can generate high psychological stress prior to COVID-19 (OECD 2020 Figure 1.8).

Although these challenges will certainly be difficult to overcome, there are a number of ways to increase employment and retention of LTC providers. First, immigration can reduce shortages: about one-third of LTC workers in Canada are immigrants, well above the OECD average of ~20 percent (OECD 2020, Figure 2.6). Furthermore, international migration has contributed more than one-third of the increase in the number of nurses per capita in Canada from 2000 to 2016 (Wyonch 2021).

Women represent more than 90 percent of the LTC workforce in Canada.[30] While this could be considered a challenge, employment in the sector could expand by targeting more equal gender representation. In addition, training requirements for PSWs represent a low barrier to entry relative to other health professions. In Ontario, colleges offer 12-month training programs with entry requirements of a secondary school diploma or aptitude testing for those without a high-school diploma in some cases. Nursing professions have significantly higher barriers to entry, require passing registration exams and maintaining good standing with the relevant provincial regulatory body.[31]

Possibly one of the most important factors in increasing employment and retention is addressing job quality. Across countries, higher incomes for nurses are correlated with better health outcomes and more nurses per capita (Wyonch 2021). Increasing wages, reducing the proportion of employees working on a temporary, part-time or shift basis and extending health coverage and other employment benefits would all have a positive impact. Enabling these changes should be a priority for provincial governments as they modernize policy and regulations for the LTC sector. Overall, addressing shortages in the LTC workforce will require regulatory approaches that balance patient needs with the practical challenges of recruiting and retaining the workforce that provides patient care.

Examples of Innovative Senior Care Policies

The short-term challenges presented by COVID-19 and the longer-term challenge of ensuring high-quality, accessible and fiscally sustainable healthcare for an aging population are not unique to Canada. This section provides examples of international policies that aim to address the gaps identified by

29 For example, 80 percent of LTC homes in Ontario reported difficulty filling shifts, and 90 percent experienced challenges recruiting staff (OLTCA 2021).

30 Women make up an overwhelming majority of LTC workers in all countries.

31 See the Canadian Nurses Association for more information.

international comparisons with Canadian LTC and with senior care more generally. Given that different types of LTC systems have different advantages and disadvantages, the international examples have been selected to highlight policies that could address Canada's relative disadvantages: a lower proportion of the population receiving care, low investment in and utilization of home and community care, and high barriers to access and choice of care.

Denmark

Seniors' care policy in Denmark prioritizes community care over residential care. The push toward de-institutionalization originated in the 1970s, and there has been no new construction of traditional care institutions since 1984. Policy has evolved over the years and now focuses on "reablement" – emphasizing user-centred, preventative care focusing on maintaining the skills to live independently (WHO 2019). People age 75 and older are entitled to an annual "preventative" visit from a case manager employed by the municipality. Assessments to evaluate an individual's needs and assist with planning for independent living consider the person's functional ability, life satisfaction, home conditions and include reviews of medication, rehabilitation support and referral to healthcare providers, if needed (EuroCarers).

Those requiring formal homecare are assessed by homecare managers, and the resulting care plan forms a service contract. Particularly innovative to this approach: there are no pre-defined categories of dependency. Individuals are assessed on a continuum and services provided are based on their specific needs. All eligible individuals have free choice of care providers. These include senior citizen residences, gated communities, assisted living units and nursing homes. Nursing homes may be conventional or in the form of subsidized, non-profit housing for the elderly, with residents responsible for paying the rent of their chosen accommodations. Day-care centres are available to those who do not wish to move permanently.

Denmark also employs a number of policies tailored to prevention and maintaining independent living, including a focus on establishing a larger stock of age-friendly houses and securing investment in better physical infrastructure to make communities more age-friendly. There has also been an expanded emphasis on rehabilitation and promoting the use of technologies that enable citizens to remain independent for longer time periods.

Belgium

Seniors' medical services are organized at the federal level while personal care services are organized at the regional/provincial level. Regions are responsible for the financing and regulation of in-kind and cash benefits, as well as organizing the provision of LTC. Reimbursement for the medical aspects of LTC is provided by the federal compulsory health insurance scheme. The federal level is also responsible for the total LTC budget, overall capacity planning, fees and level of public intervention. Generally, available services include personal support for daily living activities, medical nursing homecare, day care and short-stay respite beds, as well as admission to residential care homes for severe needs. Individuals are responsible for costs not covered by public health insurance or social security benefits. Homecare recipients generally pay for 15 percent-to-20 percent of the costs. At the federal level, there are means-tested cash benefits to support seniors with care needs and a monthly allowance for LTC residents.

Belgium also utilizes somewhat unique policies: a voucher-based model of subsidizing various homecare and other services and legal recognition of "informal carers." The service voucher system provides regionally subsidized means of payment,

allowing individuals to pay a low rate for household work.[32] Each adult living in Belgium can buy up to 500 service vouchers per year, with higher thresholds up to 2,000 vouchers annually for those with disabilities, or parents of children with disabilities. Vouchers are low cost (nine to 10 euros each) and are eligible for a 30 percent income tax credit. The system has become a substantial element in home help for seniors. Vouchers can be used for activities both inside and outside the home, including cleaning, preparing food, shopping and providing supervised transport for persons with low mobility.

Since 2014, informal caregivers can request formal recognition from the national health insurance system. Legal recognition of informal care providers helps quantify how much informal care is being provided and allows for targeted policy interventions to assist caregivers (OECD 2011). Informal caregivers have access to a number of benefits, including paid care leave (fulltime up to 18 months), flexible working conditions and maintaining access to social assistance benefits associated with labour market attachment. Insurance providers are responsible for checking that beneficiaries comply with specific criteria regarding the carer-care recipient relationship. Informal carers provide non-professional help in cooperation with at least one care professional and provide at least 20 hours of care per week.

Germany

Germany spends more on healthcare and senior care per capita than Canada but spends less on inpatient LTC. It has a similar level of staff providing care in institutions (relative to the number of patients) but has 2.5 times as many workers per recipient in homecare (Figure 7A, B). The German LTC system prioritizes cost containment through a combination of enabling seniors to live independently for as long as possible, emphasizing the role of informal care alongside formal health and homecare and treating institutional inpatient care as a last resort (EuroCarers). The focus on cost containment means that there are specific criteria determining the "need for care"[33] and capping of benefits.

To qualify for care, individuals must have care needs in excess of 90 minutes per day for at least six months. In general, there are three types of LTC available to seniors: a care allowance (cash benefit supporting informal care), homecare services from a health professional (in-kind benefit) or residential care.[34] The vast majority of senior care is privately provided: 99 percent of homecare and 96 percent of residential care.[35]

A unique feature of the German senior care system is financing: universal coverage for LTC insurance in addition to public social assistance systems delivered at the municipal level to cover additional costs. Since 1995, Germans have been

32 Originally designed as an employment policy to improve opportunities for low-skilled workers, this voucher system illuminates a largely undocumented sector of labour, provides opportunities for unemployed workers to move toward regulated occupations and improves the work-life balance of users by making it easier to outsource household tasks.

33 Level 1 consists of at least 90 minutes of care per day, Level 2 at least 180 minutes and Level 3 at least 300 minutes. If care needs are well above Level 3, it is possible to apply for further assistance.

34 In addition, Germany has been systematically moving for more than a decade to single-occupancy rooms with private bathroom facilities for nursing home residents. Generally, the goal is to have private bedroom and bathroom facilities for each resident. Multiple-occupancy rooms can be used by people who choose to live together or for short-term stays. Although this increases privacy and supports infection prevention and control, it reduces the total number of spaces.

35 Two-thirds (65 percent) of homecare providers and 42 percent of LTC homes have for-profit ownership.

enrolled in either public or private LTC insurance that provides coverage for care in the form of services, cash or a combination of the two. If beneficiaries choose to receive in-kind benefits, insurance providers help with care coordination by providing information about the quality and costs of available services and supporting case management. Providers negotiate contracts with regional insurance providers and municipal social assistance services. All providers are entitled to contracts as long as they meet national quality standards.

Insurance benefits are paid at standard rates related to level of care need. If services exceed these costs, recipients pay the difference. Municipal social insurance can further assist in paying for coverage of these costs, particularly for low-income individuals. The government also provides subsidies for voluntary complementary private LTC insurance. Cash benefits can be used to pay family members for informal care, and informal carers have access to social benefits if they provide more than 14 hours of assistance per week. The vast majority of seniors choose cash benefits (80 percent) representing nearly two-thirds (64 percent) of LTC insurance expenditures.

Call to Action: Innovation is the Only Solution

Ensuring that Canadian seniors are able to access high-quality, equitable and affordable healthcare as they age is going to be a significant challenge, as will addressing the issues exposed during COVID-19. Modernizing existing LTC infrastructure, expanding capacity to accommodate lower-occupancy rooms while the population requiring care grows and recruiting many more care providers will be required. As illustrated in the previous section, the investments required to achieve those goals without significant change to the status quo are very likely unaffordable and would not be fiscally sustainable. Innovation will be needed, from the provision of care to the funding and organization of the system.

COVID-19 and Infectious Disease Outbreaks

During the pandemic, the policies implemented at LTC and retirement homes across the country and public health restrictions controlling community spread were all emergency preventative measures. As long as there is COVID-19 circulating in the community, however, the senior population remains at risk. Those living in a community setting must interact with others for many regular activities like getting groceries. Those living in residential care facilities can be more isolated from active community transmission but have ongoing care needs and will still interact with healthcare providers, support workers, other staff and possibly visitors on a daily basis.

As we emerge from the worst of the COVID-19 crisis, there are opportunities to learn from our experience and those of other countries to improve government and health sector responses to future infectious disease outbreaks. There is still significant uncertainty about the effects of COVID-19 in the community, in part due to insufficient capacity for testing, tracing and isolation of close contacts. For example, New Zealand implemented a large range of non-pharmaceutical interventions and prioritized testing, tracing and isolation of potential cases in its pandemic response. By late April 2020, the time from onset of symptoms to isolation was -2.7 days, meaning people were isolating before becoming ill.[36] From mid-April onwards, higher-risk groups were targeted for tests to avoid undetected or asymptomatic circulation of the virus

36 By late April, as well, the time from onset of symptoms to notification had been reduced from 9.7 days to 1.7 days, and the time from onset to isolation from 7.2 days to –2.7 days (Robert 2020).

in the community. Notably, a COVID-19 tracer app was implemented in May 2020 and depended on scanning QR codes in physical locations – it did not have a Bluetooth contact tracing feature until December 2020.

Although significant improvements in testing and tracing have been made in Canada throughout the pandemic, strategies varied by province and were not sufficient to prevent successive waves of infection from circulating in the community. A bluetooth-based COVID-19 alert app was first piloted in Ontario in July 2020. By July 2021, fewer than one in five Canadians had downloaded the app, compared to more than half of New Zealanders (Leavitt 2021, NZ Ministry of Health). Despite low population usage and limited functionality compared to some other countries' versions, Canada's COVID-19 alert app is credited with preventing a number of cases and deaths: between 6,284 to 10,894 cases and 57 to 101 deaths from March to July 2021 (Leavitt 2021).

To ensure that future infectious disease outbreaks can be contained from reaching epidemic levels, Canada should develop its testing, tracing and infectious disease surveillance/early-warning system. The capacity for testing and tracing has expanded over the course of the pandemic, but early backlogs in resulted in COVID-19 needlessly circulating in the community, posing a constant risk and preventing returns to more-normal economic activities. A critical factor in preventing similar results in future crises is being prepared to quickly scale up capacity to identify and contain cases before a virus becomes uncontrolled in the community. Ensuring both the organizational structures and resources to mobilize an emergency response in time will require significant planning, intergovernmental cooperation and government will. Most importantly, these efforts cannot wait until a crisis has already begun as was the case with COVID-19.

No matter how much prevention and tracing are done, there is always a heightened risk of infectious respiratory disease affecting seniors and, in particular, residents in institutional care settings. Preparedness can also be heightened in the prevention and management of outbreaks by improving on existing policies and procedures, and learning from others. In Hong Kong, for example, public health prevention and control measures were highly effective at preventing COVID-19 from entering senior care homes: the first infections were reported in July 2020, following an easing of restrictions in June and less than 1 percent of residents were affected as of September 2020 (See Box for discussion of Hong Kong's COVID-19 response; Chow 2020).[37]

Hong Kong's success can be traced back to the three-tier emergency response system implemented following the SARS epidemic in 2003 that had a significant effect on senior care homes in Hong Kong – 19 percent of all deaths were LTC residents (Lum et al. 2020), and 72 percent of cases in this population were fatal (Chow 2020). The subsequent response system has since been activated for human swine flu in 2009, avian influenza in 2010, 2012 and 2013, and in 2015 for Middle Eastern Respiratory Syndrome. Both the emergency response system and the population have had significant practice with infection prevention and control. Since 2003, all staff have been required to wear masks during outbreaks of influenza within homes. Every seniors' care home must appoint a nurse or health worker responsible for implementing infection control measures. SARS

Canada's SARS experience was much different – 438 cases resulting in 44 deaths with almost one-quarter of infections affecting healthcare workers.

37 As of Sept. 23, 2020, in Hong Kong there were 5,050 total confirmed cases of COVID-19 and 132 people had been infected across 16 homecare outbreaks. See Chow 2020.

The epidemic was centered in hospitals, and the majority of cases were in the Greater Toronto Area. As a result, Canada's development of emergency infectious disease response policies and plans following SARS focused on hospitals and urban areas. It did not prepare the broader healthcare sector to manage and prevent infection in epidemic circumstances. Notably, senior and residential care facilities are not mentioned in the National Advisory Committee on SARS report and its recommendations other than noting that in Ontario there were no coordinated outbreak protocols for LTC facilities and community-based providers Naylor 2003). The report raises, but does not answer the questions:

- Do other Canadian provinces have such protocols?
- Are they harmonized to permit interprovincial coordination in the event of a national outbreak?
- Has Health Canada taken a leadership role in creating template protocols and facilitating their adoption?

As COVID-19 made clear, those questions remained unanswered when a national outbreak occurred, and the answer to all three turned out to be no. Infectious disease control and prevention will likely be a major priority for the new National LTC Services Standards[38] now under development by three independent standards associations. Clearly, implementing new standards that improve responses to infectious disease outbreaks in LTC homes would significantly improve outcomes for senior residents and healthcare workers. But it is also important to consider international experiences and how the LTC sector integrates with the broader healthcare system to ensure that residents and healthcare workers facing crisis-level outbreaks are properly protected.

Recent meta-analysis of research on interventions in nursing homes and LTC facilities provides insights about the most effective COVID-19 prevention and control methods prior to mass vaccination efforts (Dykgraaf et al 2021).[39] The results suggest that:

- Serial universal testing of residents and staff is crucial – it is associated with declining new case numbers and early detection of COVID-19. Initial symptom screening was relatively ineffective due to the potential for asymptomatic or pre-symptomatic transmission.
- Ventilation and environmental management were significant factors in the severity of outbreaks – open-plan designs and insufficient ventilation allowed for more transmission.
- Capacity was critical in individual facilities and within the healthcare system – facilities with less crowding and higher nurse-to-resident staffing ratios had lower transmission rates. Facility-level leadership, intersectoral collaboration and policy that facilitated access to critical resources were all enablers of success.

Improving Canada's future response to infectious disease emergencies by addressing the issues highlighted by COVID-19 will require: innovation on early detection, testing and tracing systems; upgrades and expansions to LTC infrastructure to reduce risk and improve crisis management capacity; and policy and regulatory innovation to ensure that Canada has resilient supply chains for critical medical supplies as well as treatment and prevention innovations. Achieving these targets will require strategic investments in physical and digital infrastructure but, with limited resources for new investment and a growing population

38 See National LTC Services Standard.

39 Given the nature of the pandemic, the research included in the meta-analysis is mostly observational with no randomized control-trial evidence available.

Box 1: Response to COVID-19 in Hong Kong Seniors' Care Homes

In response to COVID-19, Hong Kong public health authorities issued the first guidance for care homes on Jan. 28, 2020 and implemented many policies similar to those in Canada. Physician visits were reduced, visitors restricted and non-essential medical visits suspended. Government resources were mobilized to procure additional PPE and temporary staff. Residents were obligated to wear masks in public but remained mostly in their rooms.

Other policies went significantly further than those implemented in Canada. All staff and residents had their temperatures checked daily, and anyone with signs of fever or respiratory illness was not allowed to work. Staff always wore masks (Lum et al. 2020). To prevent hospital-to-care-home transmission (or vice versa), community geriatric care teams were formed to support care homes and reduce the need for residents to use public clinics (Chow 2020).

Quarantine measures were much stricter than in Canada – care residents would be quarantined either within homes or in special facilities, while staff and their family members were quarantined in ordinary quarantine facilities. These measures are somewhat draconian and would not be politically tenable in Canada, which never implemented strict lockdown or quarantine measures and depended more on voluntary self-isolation. However, they are worth mentioning as the strict quarantines likely contributed significantly to the prevention of COVID-19 outbreaks and widely circulating community spread. (As a small geographical region with high population density, Hong Kong has a higher risk of community spread becoming uncontrollable.)

requiring care, it will also require innovative resource management and broader policy changes to improve coordination among healthcare sectors involved in the care of seniors.

Coordinating for High-value, Continuous Care

More than three-quarters (78 percent to 91 percent) of Canadians would prefer to receive care and continue living in their homes as they age, but only one-quarter (26 percent) expect that they will be able to do so (Sinha 2020, March of Dimes 2021). As previously discussed, Canada is below average among its peers for the number of providers relative to the senior population receiving care, particularly in home and community care. The capacity of LTC homes is limited and will likely be constrained further to account for changes to address risks of high-occupancy rooms highlighted by COVID-19. A shortage of LTC beds and homecare providers results in alternate level of care patients occupying hospital beds or putting significant strain on unpaid caregivers and the broader economy, as a result of reduced labour participation.

Canada also falls below the international average in terms of timely access to family physicians and specialists as well as access to non-emergency care outside standard business hours. With some people ending up in LTC when they could be cared for elsewhere and others waiting in hospital beds for LTC, there is clearly a need to better match patients with support resources. In addition, underinvestment in home and community care and a shortage of LTC beds means there is likely a shortage of care overall.

Receiving inappropriate levels of care relative to needs affects people's health and has implications for the value of healthcare spending. Hospitals are not optimized for looking after people with chronic disease: patient mobility is restricted

(especially so during the pandemic), people become deconditioned from daily living activities and can have trouble reintegrating to life at home. Patients might become ill with hospital-acquired infections, or their care needs might not be met if they have inconsistent access to care while living at home.

For its part, homecare has lower public costs for a number of reasons including the average recipient having less severe needs and many people having informal care providers or paying out of pocket for private care services to supplement those provided publicly.[40] While expansions to the scope and availability of these services would inevitably increase costs, ensuring access to appropriate care while also preventing people from occupying an acute care hospital bed or premature admission to LTC has both quality-of-life and likely cost benefits. According to the Canadian Medical Association, about $2.3 billion of annual health spending could be better spent (Simpson 2014).

The first and foremost priority should be addressing care-provider shortages and improving the coordination of care among physicians, specialists, nurses, PSWs, other health professionals and residential care homes. Addressing labour shortages requires addressing root causes. Relatively low-wage work, likely involving exposure to physical and mental-health risk factors, and a high proportion of workers being part time and less likely to have extended health benefits are likely contributing factors. Indeed, almost 60 percent of Ontario PSWs are employed on a part-time or casual basis. Even prior to COVID-19, about one-quarter of PSWs with two or more years of experience would leave the sector every year, although some go to other parts of the healthcare system (Ontario Ministry of Long-Term Care 2020).

More than one-third of nurses work part-time even though three-quarters would prefer fulltime work (Marrocco 2021). Increasing wages and improving job quality through opportunities for more fulltime employment, career progression and benefits would likely increase employment and improve retention. Given the challenges in the sector and current dependence on part-time workers, achieving these goals will require strategic reforms to the delivery, funding and structure of seniors care.

In addition, the culture of LTC, both at the systemic and individual home level, is currently oriented toward regulatory compliance. As a result, workers might prioritize regulated tasks or administrative activities at the expense of resident outcomes. Such a culture can add to stress and prevent people from raising concerns for fear of being non-compliant (Ministry of Long-Term Care 2020). Adapting performance measures and oversight approaches could drive a cultural shift toward continued quality improvement for both residents and workers.

Many seniors are treated by multiple physicians and receive varied healthcare services including personal support, services from allied health professionals and specialists for chronic or complex conditions. They may pay for private treatments or receiving care in LTC.[41] Coordinating all of this care is logistically difficult and involves many people and organizations – care homes, different physician offices, hospitals, pharmacies, local public health authorities and patient families. Ensuring that electronic health records are available to those who require the information and ensuring continuity among care locations is critical to facilitating optimum care. In many cases, family physicians might not have access to specialist notes

40 In Ontario, about 150,000 people purchase additional homecare service to supplement public coverage, equivalent to about 8.4 percent of the population aged 70+.

41 LTC homes have physicians that are able to visit patients onsite and provide 24-hour care. Residents will likely receive primary care in the LTC home, as opposed to continuing to receive care from their previous (external) primary care provider.

or treatment plans, and external care providers may not be made aware of changes to the treatment plans of other providers. In such a situation, it is left to patients and family members to communicate this information.

Technology, for example in the form of virtual care and secure, transferrable electronic health records, is a critical tool to improving care coordination. Virtual care can facilitate remote physician-patient contacts and improve monitoring of conditions. Electronic health records ensure that all providers can remain up to date on the full picture of a patient's health and treatment plans, reducing the burden on individuals and families in coordinating and communicating this information. There is also the potential for assistive technologies to support seniors living at home longer.

Technology can also improve labour productivity. Healthcare workers assisted by various tools such as patient monitoring, organizational software and physically assistive technologies can reduce the time or energy required to perform their duties. This allows them to be more productive and provide care to more patients in the same amount of time.

Meeting the care needs of Canada's senior population, while also being respectful of their autonomy and preferences to age in place, will require significant changes to where and how care is provided. Increasing staffing ratios, investing in technology and improving coordination are vital pieces of the puzzle. Doing any one of those things would have positive implications for senior care but would not be enough to ensure sustainability and quality over the long term. The current system requires more fundamental change to ensure that policies, care pathways, incentive mechanisms and funding align with the preferences and care needs of Canadian seniors.

Policy Discussion and Conclusion

The COVID-19 pandemic had devastating effects on the senior population worldwide. Ensuring Canada's most vulnerable residents are both sufficiently protected during another infectious disease crisis and have access to high-quality, appropriate care regardless of prevailing circumstances will require improving pandemic preparedness and response strategies while also addressing the longer-term challenges to seniors' care. Overall, many of these challenges, made fatally obvious by COVID-19, are well known and long-standing.

There have been at least 80 commissioned reports in Canada on senior care from 1998 to 2020 (Wong et al. 2021). The most common recommendations are to increase funding to improve staffing, direct care and capacity. The vast majority of reports focus on residential LTC while substantially fewer focus on home and community care, or care for older adults in general. Beyond increasing funding, the most common recommendations are to: standardize, regulate or audit LTC quality of care; improve education and training for staff, contractors and agencies; and standardize or reform staffing mixes.

Following the COVID-19 pandemic, significant changes should be made in the LTC sector to mitigate the risks of future infectious disease outbreaks. Among them: reducing occupancy per room; increasing staffing levels to provide surge capacity and care continuity during crisis situations; and ensuring staff are trained and prepared to rapidly implement infectious disease protocols. Achieving these changes, however, will require significant investments in upgrading existing infrastructure, constructing new facilities, as well as increasing spending to support higher wages and more workers.

Some of these investments are already being made. The federal government has implemented numerous funding and program initiatives. They include: support for residential care homes to address gaps in infection prevention and control preparedness; a fund for provinces and territories to support infrastructure upgrades; and funding for Health Canada to support development and implementation of LTC standards. Provinces are also adapting. For example, Ontario last year committed to increasing the hours of direct

care provided to residents and increasing staffing levels to meet this standard.[42]

However, care costs increase with age, and Canada has a growing and aging senior population. An estimate factoring in the increased costs of upgrading and expanding infrastructure, increasing staffing levels and the aging population projects that spending on institutional care would have to nearly quadruple to 4.2 percent of GDP by 2041 from 1.26 percent in 2018. Even if healthcare spending grew at historic rates, nearly every dollar of new investment would need to be directed toward senior care for the next 20 years to maintain an improved status quo.

A failure to keep up with seniors' growing care needs also has affects on their families and society more broadly. Nearly all (96 percent) of individuals receiving homecare in Canada have an unpaid caregiver (normally a family member) supplementing that care. More than one in three informal caregivers is in distress. Individuals requiring support that don't have a caregiver are much more likely to be admitted to LTC homes prematurely. About one in nine new entrants to LTC could potentially have been cared for at home. Receiving inappropriate levels of care relative to needs affects people's health and has implications for the value of healthcare spending.

Canadian governments could also do more to support informal care providers. Two-thirds of OECD countries provide cash benefits to family caregivers, cash-for-care allowances for recipients and/or periods of paid leave for informal caregivers. Some countries (Australia and Germany) also provide counselling/training services for informal caregivers. Belgium is unique in providing legal recognition of informal care providers and their compensation via insurance in addition to other social assistance benefits.

In Canada, during the pandemic, the federal government provided cash benefits to those who had to take time off work to care for sick relatives, but there was little accountability associated with care levels or requirements. Long-term policies should incorporate support resources for unpaid carers and accountability for providing adequate levels of care.

Expansions in both residential and homecare will be needed to ensure that Canadians are able to receive care that is appropriate to their needs. Seniors' care must also consider patients' preferences. With almost everyone wishing to age in place, ensuring they have the necessary supports to maintain their health and quality of life while staying in their homes should be a priority. Clearly, efficient use of existing human and physical resources, along with significant investments in LTC and home and community care will be required to meet the needs of Canadian seniors. The current system requires fundamental change to ensure that policies, care pathways, incentive mechanisms and funding align with the preferences and care needs of Canadian seniors.

Provincial governments might also want to consider implementing versions of policies used internationally to increase employment and, by extension, homecare provision. The Belgian voucher system and the German approach of providing cash benefits and allowing beneficiaries to arrange for their own support services are both promising options. Maintaining independent living can be facilitated by improvements and expansions in homecare and support for informal caregivers. The Danish model that prioritizes prevention

42 The Ontario government also recently announced funding to double the number of inspectors for LTC homes and reform the inspection process. Investments are being made to train and up-skill nurses and PSWs. Starting in 2022/23, there is promised additional funding to hire 225 additional nurse practitioners in the LTC sector.

and provides services tailored to meet individual needs is an aspirational goal to work toward. Supportive policies promoting the adoption of assistive technologies and the development of age-friendly infrastructure show a broader policy focus on maintaining seniors' integration in their communities and enabling independent living for longer periods of time.

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