

COVID-19 Living Evidence Profile #2

(Version 1: 26 February 2021)

Questions

- What is known about preventing and managing COVID-19, outbreaks of COVID- and about supporting renewal in long-term care homes?

Background to the question

The long-term care sector has been hard hit by the COVID-19 pandemic in Canada and in many other high-income countries. This has led to many questions about how long-term care homes can improve the prevention and management of COVID-19 outbreaks as well as how to support the renewal in long-term care homes as a whole based on lessons learned from the pandemic and about challenges that preceded it. As such, there are many activities that crisis management and renewal plans will need to consider, which we summarize in the framework below. We use this framework to organize key findings from evidence documents and experiences from other countries and from Canadian provinces and territories.

Organizing framework

- **Preventing infections**
 - Vaccinating staff and residents (e.g., allocation rules, communications, administration, and monitoring)
 - Adhering to infection-prevention measures (e.g., washing hands, wearing masks, physical distancing, temporal distancing, and disinfecting surfaces)
 - Adjusting resident accommodations, shared spaces and common spaces (e.g., single-occupancy rooms, no or minimally shared bathrooms, meals taken in rooms not dining hall, and improvement to HVAC systems)
 - Adjusting service provision (e.g., cohorting residents and staff and providing PT/OT services in resident rooms rather than clinics)

Box 1: Our approach

We identified research evidence addressing the question by searching the COVID-END [inventory of best evidence syntheses](#) and the COVID-END [guide to key COVID-19 evidence sources](#) in the 10-18 February 2021 period. We also searched: 1) [HealthEvidence](#); and 2) [Health Systems Evidence](#) (see Appendix 1 for the search terms used). We identified jurisdictional experiences by searching jurisdiction-specific sources of evidence listed in the same COVID-END guide to key COVID-19 evidence sources and by hand searching government and stakeholder websites. We selected eight countries (Australia, France, Finland, Germany, Netherlands, New Zealand, United Kingdom, United States) that are advanced in their thinking or are good comparators to the Canadian provincial and territorial approaches to long-term care.

We searched for guidelines that were developed using a robust process (e.g., GRADE), full systematic reviews (or review-derived products such as overviews of systematic reviews), rapid reviews, protocols for systematic reviews, and titles/questions for systematic reviews or rapid reviews that have been identified as either being conducted or prioritized to be conducted. Single studies were only included if no relevant systematic reviews were identified.

We appraised the methodological quality of full systematic reviews and rapid reviews using AMSTAR. Note that quality appraisal scores for rapid reviews are often lower because of the methodological shortcuts that need to be taken to accommodate compressed timeframes. AMSTAR rates overall quality on a scale of 0 to 11, where 11/11 represents a review of the highest quality. It is important to note that the AMSTAR tool was developed to assess reviews focused on clinical interventions, so not all criteria apply to systematic reviews pertaining to delivery, financial or governance arrangements within health systems or to broader social systems.

This first version of this living evidence profile was prepared over one week and will be updated monthly to provide evidence updates that can support long-term care crisis management and renewal.

- Restricting and screening staff and visitors (e.g., visitor policy changes, approach to and frequency of screening)
- Testing of residents and staff (e.g., approach to and frequency of testing)
- Isolating suspected or confirmed cases among residents (within same or different facility) and staff (at home or in alternative settings like hotels)
- Contact tracing among staff and visitors
- Supporting staff and residents (e.g., phones/tablets and internet connections for online interactions between residents and their families and caregivers; financial support to staff who must quarantine or isolate)
- **Managing outbreaks**
 - Adding or replacing administrators and staff (e.g., secondment of hospital administrators and medical or IPAC 'swat' teams; rotating in staff to avoid burn-outs)
 - Adhering to infection-control measures (e.g., donning and doffing personal protective equipment)
 - Making additional spatial, service, screening, testing, isolation and support changes
 - Transferring residents when their care needs exceed capacity in the home
- **Renewing delivery, financial and governance arrangements**
 - Improving access to care (e.g., number of homes and beds; waitlist management)
 - Improving safety and quality of care and more generally improving quadruple-aim metrics (e.g., quality standards; regular resident/family and staff surveys)
 - Changing service-delivery models (e.g., case management and care coordination; regular primary-care services; referral services)
 - Improving physical infrastructure (e.g., private rooms only; rooms grouped into 'pods' with dedicated staff; improving common areas and greenspace access; modern HVAC systems; and internet access for residents and staff)
 - Altering funding arrangements (e.g., overall funding model; targeted payments and penalties based on performance; and changes to covered providers, services and products)
 - Adjusting governance arrangements (e.g., licensure provisions, including whether for-profit entities can be licenced; accreditation standards; and reporting and auditing requirements)
 - Supporting greater integration of long-term care with other sectors (e.g., collaborative leadership and pooled funding for an attributed population)
- **Supporting residents (and their families and caregivers) and staff (and volunteers)**
 - Engaging residents, families and caregivers in self-management, care choices, care delivery, and organizational and policy decision-making (e.g., shared decision-making about care; patient, family and caregiver advisory councils; complaints-management processes)
 - Ensuring culturally appropriate living among residents (e.g., for Black, Indigenous and other people of colour)
 - Supporting technology-enabled living among residents (e.g., communication with family and caregivers, with staff, and with outside providers)
 - Ensuring an adequate supply of staff (e.g., staffing ratios; recruitment and retention initiatives; contracts with external agencies)
 - Optimizing skill mix among staff (e.g., training; task shifting or substitution; role expansion or extension; multi-disciplinary teams)
 - Ensuring the safety and satisfaction of staff and volunteers (e.g., workplace safety assessments; workplace violence-prevention initiatives; interventions to reduce burn-out)
 - Supporting technology-enabled care by staff (e.g., interoperable electronic health records; telehealth services; eConsultations and eReferrals)

- Remunerating staff (e.g., remuneration models for different types of staff, including full-time employment offers, reasonable wages, and paid sick leave; wage parity or other approaches to avoid unnecessary staff movements between sectors)
- **Promoting alternatives to long-term care**
 - Engaging residents, families and caregivers in shared decision-making about whether to enter long-term care
 - Enhancing the breadth and intensity of home and community care services to delay or avoid entry to long-term care
 - Supporting technology-enabled care at home (e.g., telehealth; remote monitoring systems; patient reminders)
 - Providing financial supports to avoid or delay entry into long-term care (e.g., retrofitting homes; expanding family and caregiver benefits)

What we found

Of the 179 evidence documents identified from our searches, we deemed 103 to provide highly relevant evidence in relation to one or more of the above activities, which include:

- 10 guidelines developed using a robust process (e.g., GRADE);
- 16 full systematic reviews;
- 19 rapid reviews;
- 8 guidelines developed using some type of evidence synthesis and/or expert opinion; and
- 50 single studies that provide additional insight.

We outline in narrative form below our key findings related to crisis management and renewal in long-term care homes from highly relevant evidence documents and based on experiences from other countries and from Canadian provinces and territories. We provide hyperlinks to the highly relevant evidence documents in Table 1, the type and number of all documents that were identified in Table 2, and a summary of experiences in other countries and in Canadian provinces and territories in Table 3.

For those who want to know more about our approach, we provide a detailed summary of our methods in Appendix 1. In addition, we provide all evidence documents identified from the searches in Appendix 2 (including their relevance to the categories in the organizing framework, key findings, and when they were conducted or published), and experiences with COVID-19 in long-term care homes from other countries in Appendix 3 and from Canadian provinces and territories in Appendix 4. Given the significant amount of literature that we found for this living evidence profile, we have prioritized highly relevant synthesized literature. As result, we did not extract detailed findings from single studies and instead list highly relevant primary studies (including their relevance to the highest-level categories in the organizing framework) in Appendix 5 and hyperlinked titles to evidence documents that were deemed of medium- or low- relevance to the question in Appendix 6. Documents excluded at the final stages of reviewing are provided in Appendix 7. These seven appendices are provided in a [separate document](#).

Key findings from highly relevant synthesized evidence documents

We provide below an overview of the key insights from the 53 documents containing synthesized research evidence that we deemed to be of high relevance according to the five domains of the framework.

We found three guidelines that provide evidence across many of the five domains of the taxonomy. Two guidelines cover many of the sub-domains included under preventing infections and managing outbreaks, with one focusing on [managing the COVID-19 pandemic in care homes for older people](#) and the other providing [guidance on COVID-19 in long-term care homes](#). In addition, a [WHO policy brief on preventing and managing COVID-19 in long-term care homes](#) also includes considerations related to long-term care renewal and addresses the domains of renewing delivery, financial and governance arrangements and supporting residents and staff.

Preventing infection

We found two guidelines (one from the [Public Health Agency of Canada](#) and one from the [U.K. Department of Health and Social Care](#)) that explicitly describe the prioritization of residents and staff within congregate living homes including long-term care homes.

Many evidence documents reiterate the importance of adhering to prevention measures, including wearing personal protective equipment by both staff and residents, washing hands, and enhanced cleaning protocols in long-term care homes. Two medium-quality rapid reviews found that increased prevalence of COVID-19 was associated with [homes having a greater number of beds](#), and homes that [are unable to isolate residents](#). Similarly, a low-quality rapid review [suggested disallowing three- and four- person rooms and seeking additional temporary space to accommodate residents from crowded homes](#).

In general, the evidence documents supported adjustments to resident accommodation that reduced their contact with one another and with different staff. One medium-quality rapid review suggested that this [could be accomplished by cohorting residents into smaller groups](#), while three guidelines supported easily implemented solutions including:

- [using private rooms as much possible](#);
- [increasing space between tables at meal times, replacing couches with chairs in media lounges](#), and
- [designating traffic patterns for individuals throughout the facility](#).

With respect to staff, two medium-quality rapid reviews and [one guideline](#) found that [limiting staff to a single facility](#) and [cohorting staff and residents may help to mitigate COVID-19 outbreaks](#).

Many long-term care homes reduced visitor access to essential visitors only, especially in areas where there was high community transmission in the surrounding areas. One low-quality rapid review noted that the [well-being of residents in long-term care homes was severely affected by visitor bans](#) throughout the pandemic, while a guideline developed using some type of evidence synthesis and/or expert opinion highlighted the [need for visitor restrictions](#) to balance the risks of COVID-19 against the risks of diminished well-being and quality of life of the residents. To help mitigate some of the risk, three guidance documents from the [Centres for Medicare and Medicaid](#), [WHO](#) and the [Government of Canada](#) all suggest using symptom screening for staff and visitors who enter long-term care homes. In addition, one low-quality rapid review [found that testing of all residents and staff can reduce COVID-19 transmission and support the prevention of outbreaks in long-term care homes](#). However few details were provided about the type or frequency with which tests should be administered.

To further prevent the spread of COVID-19, cross-cutting guidance documents suggest contact tracing among residents and staff to determine potential exposures. One low-quality rapid review found that [digital technologies can support contact tracing through the use of wrist-worn bracelets](#). When suspected or confirmed cases are found among residents, guidance and findings from rapid reviews [suggest isolating residents on their own whenever possible](#), or [cohorting residents with others who have been found to](#)

[test positive for COVID-19](#). With many evidence syntheses suggesting that staff exposed to residents with COVID-19 should quarantine for 14 days off site, with one medium-quality systematic review [noting a best practices for employers is to enforce sick leave with adequate compensation](#).

Guidelines from the National Institute of Ageing [encourage staff and family members to look for safe ways to engage with residents such as using tablets to communicate](#). In addition, the guidelines highlight the importance of flexibility among admission and deferral policies for placements in long-term care homes.

Managing outbreaks

There can be significant overlap among the evidence documents in their coverage of the preventing infections and managing outbreaks domains of the organizing framework depending on how ‘outbreaks’ are defined in long-term care homes (i.e., whether a single case or a cluster of cases). One medium-quality rapid synthesis [found that access to infection prevention and control specialists and outbreak-response teams reduced the size of outbreaks in long-term care homes](#). Additional changes to service provision were recommended, including designating separate teams of staff to care for residents who have suspected or confirmed COVID-19. In addition, a guideline developed using some type of evidence synthesis or expert opinion suggests that [advance-care planning should be undertaken with residents diagnosed with COVID-19 and their families to ensure residents’ preferences are taken into consideration during treatment](#). Limited evidence was found related to the effectiveness of moving residents to hospital during a long-term care home outbreak, with select jurisdictions (Canada and the U.S.) recommending the movement when isolation is not possible (internal document available upon request).

Renewing delivery, financial and governance arrangements

Findings from several evidence documents about the renewal of delivery, financial and governance arrangements combine lessons learned from the COVID-19 pandemic with broader and more long-standing evidence and insights about how to strengthen the delivery of long-term care. A medium-quality rapid scoping review identified a [wide-variety of health-service delivery and implementation strategies to improve models of care provided in long-term care homes](#). Some models of care were found to be supported by significant amounts of evidence, including those for dementia care, oral care, exercise/mobility, and optimal/appropriate medication use. This collection of evidence documents can help to inform questions about how to improve care models for residents across a continuum of services.

With respect to improving physical infrastructure, a low-quality rapid review found the [most important risk factors for COVID-19 outbreaks were older designs of long-term care homes, chain owners, and crowding of residents](#). Similarly, findings from an older medium-quality full systematic review [found that long-term care homes with higher percentages of private rooms may be associated with higher quality of life](#). These findings were reinforced by two systematic reviews related to governance and funding arrangements. One medium-quality systematic review found [increased odds of COVID-19 case outbreaks in for-profit compared to not-for-profit long-term care homes](#). One older medium-quality systematic review found [that for-profit nursing homes had worse outcomes in both employee and client well-being compared to not-for-profit homes](#).

Supporting residents and staff

Residents and families value their role in decision-making even after having entered a long-term care home. [Frequent communication with staff from a long-term care home](#) was found in one high-quality but older systematic review to help maintain their role in care. Another high-quality systematic review examined the [use of shared decision-making aids](#) and found that they achieved good outcomes among individuals with cognitive impairments, but noted that using these requires workers to be given the time, authority and skills to use them.

Mixed evidence was found with respect to the impact of staffing level on quality of care. While one older medium-quality systematic review found [no consistent evidence on the relationship between staffing levels in long-term care homes and quality of care](#), a medium-quality rapid review found that [increasing staffing levels, particularly of registered nurses, was consistently associated with reduced risk of COVID-19 infection](#). In addition, one medium-quality systematic review [found an association between low staffing levels and increased job strain and emotional exhaustion](#). The same review also found an association between poor work environment and staff burnout in long-term care homes. This finding was reinforced by an older medium-quality systematic review that [found facility resources and workload were associated with staff burnout](#).

One medium-quality systematic review found [the use of advance-practice nurses within long-term care homes, and extended-care parademics who were able to respond to acute care needs, reduced hospitalizations and emergency-department visits among residents](#).

On the other hand, technologies such as electronic health records have been found to support staff. One medium-quality systematic review found [that they enhanced clinical management, improved quality outcomes, and facilitated better decision making](#), while another medium-quality systematic review found [they improved access to and transfer of resident information as well as reduced medication errors](#). Despite the potential for support, a low-quality systematic review [found that long-term care homes do not consistently invest in health-information technology, under-invest in staff training to use the technology, and lack the necessary infrastructure to implement the technology](#).

Though we did not find highly relevant synthesized evidence on remuneration for staff or health care providers in long-term care homes, three rapid reviews found that paid sick leave among staff helped to prevent the spread of COVID-19 cases.

Promoting alternatives to long-term care

One medium-quality systematic review found that [tools such as dyadic counselling and talking mats](#) can help to engage older adults with dementia and their family members in decision-making about whether to enter long-term care.

A high-quality systematic review [compared those receiving home-based care services and those receiving long-term care](#) and found significant overlap in the distribution of physical and cognitive function, indicating that people could be cared for using either approach. One mechanism to allow people to stay at home longer is to enhance the services offered in the community. For example, a high-quality systematic review [found that having a multidisciplinary palliative-care team, early referral to palliative care, and an expressed preference to die at home increased the likelihood of the individual dying at home](#). Another mechanism to allow people to stay at home longer may be through the use of supportive technology, with a medium-quality systematic review finding that [older adults living at home benefitted from combined virtual visits with in-person visits in terms of both their ability to remain at home longer and their enhanced feeling of independence](#).

Key findings from the jurisdictional scan

We examined experiences with long-term care in eight comparator countries (Australia, France, Finland, Germany, Netherlands, New Zealand, United Kingdom, and United States), as well as all provinces and territories in Canada. Key insights from these countries and provinces and territories are presented below.

In searching government websites for documents, we noticed significant variation in terms used to refer to long-term care homes, with examples of terms including nursing homes, charitable homes, old-age homes, and convalescent-care homes. For consistency we have used the term long-term care home to refer to homes designed for adults who require access to on-site 24-hour nursing care, frequent assistance with activities of daily living, and monitoring for safety or well-being.

Key insights from preventing and managing COVID-19 and renewing long-term care in other countries

In terms of preventing infections, we found that:

- most countries prioritized long-term care residents and staff in the first wave of vaccinations, while New Zealand has developed three different vaccine roll-out plans with different priority rankings for long-term care residents and staff depending on the level of community transmission of COVID-19 at the time of deployment; and
- in countries' efforts to coordinate and provide guidance on COVID-19 prevention, the national or regional health authorities in many countries (Australia, Finland, Germany, New Zealand, U.K., and the U.S.) have produced guidelines to prevent infections in long-term care homes by addressing issues such as screening protocols, using personal protective equipment (PPE), ensuring use of hygiene and sanitization best practices, quarantining or restricting access when residents are symptomatic, and training staff in infection prevention and control practices.

Turning to managing outbreaks, we found that:

- to better track and control the spread of COVID-19, many countries (France, Germany, New Zealand, the U.K., and the U.S.) developed comprehensive protocols for contact tracing cases in long-term care homes and reporting them to regional or national authorities;
- to slow the spread of transmission between long-term care homes and communities, all countries developed additional protocols to mitigate transmission within long-term care homes and to the community, such as minimizing resident transfers, restricting resident movement within long-term care homes, and using additional PPE and;
- in Finland, the operation of long-term care homes is transferred to municipal health and social care associations when severe outbreaks occur.

In terms of renewing delivery, financial and governance arrangements, we found that:

- to help mitigate additional costs during the pandemic, some countries (Australia, France, and the U.K.) increased funding or provided direct supplementary funding for long-term care homes;
- these funds ranged from £600 million for infection control for long-term care homes in the U.K. (in addition to more than £4 billion since March 2020 for councils to allocate towards COVID-19 response, including in long-term care homes) to \$560 million in additional investments in long-term care homes more broadly in Australia;
- given the challenges of financing COVID-19 response efforts, several countries (Australia, Netherlands, and the U.S.) introduced funding models and programs to facilitate payment or reimbursement to long-term care homes;

- in order to ensure quality care and better responsiveness across long-term care homes during COVID-19, Australia, France, and New Zealand made changes to various regulations, quality standards, and monitoring systems; and
- guidance was released in the UK to strengthen supply chains for PPE and necessary supplies in long-term care homes.

Turning to supporting residents and staff, we found that:

- many countries developed systems for strengthening the long-term care workforce, including health-worker registries (Germany and the Netherlands), enhanced training systems to meet staffing needs (Germany, Netherlands, and the U.S.), and changes to provider remuneration or incentives (Australia, Germany, the Netherlands, and the U.S.);
- Finland is currently in the process of reforming legislation governing care for older adults, including in response to COVID-19, such as minimum thresholds for nurse/client ratios in long-term care homes; and
- New Zealand's National Outbreak Management Policy includes psychosocial support policies to protect staff, residents, extended families (whānau), and communities.

In terms of promoting alternatives to long-term care, we found that:

- to help reduce pressure on long-term care homes and provide care in preferred settings, several countries (Australia, Finland, and the U.S.) developed programs to support residents transitioning from long-term care homes to community care;
- to help support families caring for older adults in the community, some countries (Germany, the Netherlands, and the U.K.) are providing additional financial supports or professional respite services;
- in the U.K., a number of supports were developed to strengthen the home and community care workforce, including advice to local health authorities and National Health Service to support home care provision during COVID-19, remote training programs for paid and volunteer social-care workers, and better support for live-in-care, care-room (support for discharged patients by approved home owners in the community), and assisted-living models of care; and
- although New Zealand continues accepting referrals to long-term care homes as an essential service during COVID-19, specific protocols have been developed to delay admission to long-term care homes and instead provide care through home-support agencies and/or community-nursing services while waiting for COVID-19 test results.

Key insights from preventing and managing COVID-19 and renewing long-term care in other Canadian provinces and territories

In terms of preventing infections, we found that:

- all provinces and territories draw from and build on federal guidance on the care of residents in long-term care homes during COVID-19 to develop recommendations for prevention and control measures in long-term care homes, including visiting restrictions and protocols, PPE use, and restricting movement of long-term care staff across homes;
- all provinces and territories prioritize long-term care facility staff and residents in their COVID-19 vaccination roll-out plans;
- in January 2021, British Columbia began a pilot project for COVID-19 contact tracing using wearable devices to deliver real-time information to prompt individuals to quarantine as necessary;

- in Manitoba, automated contact tracing follow-up systems were established for healthcare workers, including those in long-term care homes; and
- employers and healthcare unions in Saskatchewan signed a agreement to support the creation of a labour pool to assist with staff cohorting.

Turning to managing outbreaks, we found that:

- in addition to guidance on outbreak control based on the Government of Canada’s guidance on the care of residents in long-term care homes during COVID-19, many provinces (B.C., Alberta, Saskatchewan, Ontario and Quebec) have formed specialized outbreak-response teams to support long-term care homes experiencing outbreaks; and
- in Ontario, the Long-term Care Incident Management System was established to make rapid decisions to organize efforts across providers and government to support for long-term care homes facing challenges related to COVID-19.

In terms of renewing delivery, financial and governance arrangements, we found that:

- in addition to funding infection and control initiatives, Saskatchewan announced investments of \$73 million towards the construction of two new long-term care homes and another \$7.2 million in priority renewal projects in existing homes;
- Ontario also made investments to long-term care facility renovations and minor repairs as part of their efforts to protect vulnerable seniors;
- to better support stable operations and facilitate agile decision-making to improve service quality and resident well-being, Quebec has implemented co-management models that allow the long-term care home leaders to draw on on ‘outside’ administrative and medical expertise;
- to better ensure the safety and well-being of residents and staff during the pandemic, Manitoba Health conducted modified reviews of all 125 licensed long-term care homes to assess minimum standards of safety and care; and
- in Ontario, the government is looking to improve resident care by committing to increasing hours of direct care for each long-term care facility resident to an average of four hours per day by 2025.

Turning to supporting residents and staff, we found that:

- across provinces and territories, efforts to support the long-term care workforce has included increases in provider remuneration or other financial incentives (B.C.; Alberta; Saskatchewan; Manitoba; Ontario; Nunavut), training initiatives (B.C.; Manitoba; Ontario) and registries to facilitate staff matching with long-term care homes (Ontario);
- to keep residents connected to their families, friends and other health providers, several provinces and territories (Alberta, New Brunswick, Prince Edward Island, Yukon and Northwest Territories) have developed initiatives to support socialization and care of residents through technology;
- to better understand the needs of long-term care facility residents and families during the pandemic, the Health Quality Council of Alberta conducted surveys and interviews from August to October 2020 with long-term care residents and family members to better understand and respond to their experiences and concerns; and
- to improve care in long-term care homes in the Northwest Territories, staffing was increased with the addition of two licensed practical nurses and two personal support workers in every facility.

In terms of promoting alternatives to long-term care, we found that:

- in September 2020, the federal government announced a commitment to work with provinces and territories to help people stay in their homes longer;
- to strengthen alternative models of care, several provinces (B.C.; Alberta; Manitoba; Ontario) have provided additional support for home and community care services;
- the Manitoban government has invested \$250 million to improve access to health services including moving the equivalent 21,000 'days of care' from acute homes into local communities; and
- in Newfoundland and Labrador, the Centre for Health Information has expanded their telehealth services during the pandemic to improve access to quality community and home-based care.

Table 1: Key findings from highly relevant documents related to preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes

Domains of preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes	Key insights from highly relevant evidence documents related to preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes
Preventing infections	
Vaccinating staff and residents (e.g., allocation rules, communications, administration, and monitoring)	<p><i>Findings from guidelines developed using a robust process</i></p> <ul style="list-style-type: none"> • Canada’s phased approach to immunization will prioritize residents and staff of congregate-living arrangements including long-term care homes (last updated December 2020; Public Health Agency of Canada) • Prioritization of COVID-19 vaccination in a guideline from the Department of Health and Social Care in the U.K. is given to residents in care homes for older adults and their carers (last updated 6 January 2021; Department of Health and Social Care)
Adhering to infection-prevention measures (e.g., washing hands, wearing masks, physical distancing, temporal distancing, and disinfecting surfaces)	<p><i>Findings from guidelines developed using a robust process</i></p> <ul style="list-style-type: none"> • Guidance from the Centres for Medicare and Medicaid emphasize working with state and local health departments to ensure a continuous supply of PPE for long-term care homes, as well as implementing requirements for staff to wear personal protective equipment and residents to wear masks that cover the nose and mouth (when it is safe to do so) whenever they are in shared spaces (last updated April 2020) • WHO guidance recommends ensuring standard infection prevention is practiced including wearing PPE, hand hygiene, enhanced cleaning, and in areas with known or suspected transmission of COVID-19 to implement universal masking policies for staff, visitors and residents (last updated January 2021) <p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • Mixed results were found for the implementation of hand hygiene and personal protective equipment among older adults in long-term care settings, however the authors note that the absence of evidence does not imply that these measures should not be implemented during the pandemic (last updated March 2020; AMSTAR rating 3/9) <p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • The most common recommendations in clinical practice guidelines on the prevention and control of COVID-19 include: establishing surveillance and monitoring systems; mandating the use of personal protective equipment; physically distancing or cohorting residents; environmental cleaning and disinfection; promoting hand and respiratory hygiene among residents, staff, and visitors; and providing sick leave compensation for staff (last updated July 2020; AMSTAR rating 6/9)

	<ul style="list-style-type: none"> • Surveillance, monitoring and evaluation of staff and resident symptoms and the diligent use of PPE were found to mitigate the risk of outbreaks and mortality within long-term care homes as were other interventions including the promotion of hand hygiene and enhanced cleaning measures (last updated November 2020; AMSTAR rating 7/10) • Significant reductions in the prevalence of COVID-19 infection among staff and residents were attributed to the use of PPE (last updated October 2020; AMSTAR rating 5/9) • Education and training in proper wearing of PPE, ensuring an adequate supply of PPE, and adhering to strict hand hygiene were best practices for support staff in long-term care homes (last updated October 2020; AMSTAR rating 5/9) • The effectiveness of infection-control measures is dependent upon several factors and a combination of strategies, with the most significant being: access to hand hygiene homes in the workspace; restricting visitation; rapid identification of cases among both staff and residents through testing; environmental decontamination; allocating staff to one facility for reducing spread across several locations; and providing psychosocial support for staff (internal document published June 2020 – available upon request; AMSTAR rating 0/9) • Most clinical practice guidelines for adults aged 60 years and older in long-term care settings recommended hand hygiene practices, wearing personal protective equipment, social distancing or isolation, disinfecting surfaces, droplet precautions, surveillance and evaluation, and using diagnostic testing to confirm illnesses (published March 2020; AMSTAR rating 7/9) <p><i>Findings from guidelines developed using some type of evidence synthesis and/or expert opinion</i></p> <ul style="list-style-type: none"> • The National Institute of Ageing (NIA) in Canada recommends an ‘Iron Ring’ set of actions including requiring the use of appropriate PPE by care providers and residents and providing training to support its use (last updated April 2020; National Institute for Aging)
<p>Adjusting resident accommodations, shared spaces and common spaces (e.g., single-occupancy rooms, no or minimally shared bathrooms, meals taken in rooms not dining hall, and improvement to HVAC systems)</p>	<p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • Social distancing and cohorting of residents may help to mitigate the risk of outbreak and mortality in long-term care homes (last updated November 2020; AMSTAR rating 7/10) • Increased facility size, greater number of beds and number of staff (and who work in multiple homes) were associated with an increase in the probability of COVID-19 cases and size of outbreak (last updated November 2020; AMSTAR rating 7/9) • Increases in the prevalence of COVID-19 infection among staff and residents was associated with inability to isolate infected residents, and infrequent cleaning of communal areas (last updated October 2020; AMSTAR rating 5/9) • Further measures that can be effective at preventing future outbreaks, hospitalizations, and deaths from COVID-19 in long-term care homes include disallowing three- and four-resident rooms while increasing temporary housing to support crowded homes (last updated January 2021; AMSTAR rating 0/9) <p><i>Findings from guidelines developed using some type of evidence synthesis and/or expert opinion</i></p> <ul style="list-style-type: none"> • Guidelines describe using single rooms when available, and to cohort patients with positive cases of COVID-19 into units, floor, or a wing (last updated April 2020)

	<ul style="list-style-type: none"> • Avoid shared activities within the same space and if this is not possible, residents and staff should perform hand hygiene before, during and after activities, with adequate spacing between residents (last updated March 2020; Vancouver Coastal Health Authority) • During meal times, residents should be distanced at least two meters apart and not facing each other, and when this is not possible, consider tray service or providing meals in shifts with appropriate sanitization between residents (last updated March 2020; Vancouver Coastal Health Authority) • Seating in TV/media lounges should be arranged in theatre style with maximum spacing between chairs (two meters on each side is ideal) (last updated March 2020; Vancouver Coastal Health Authority) • Long-term care homes should consider designating different zones including a transition zone for residents going to an acute care facility, a COVID-19 free zone, and a COVID-19 positive zone (if patients are being cared for within the facility) each with their own patterns of traffic and a hand sanitizing station between (last updated June 2020)
<p>Adjusting service provision (e.g., cohorting residents and staff and providing PT/OT services in resident rooms rather than clinics)</p>	<p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • Increase in the prevalence of COVID-19 infection among staff and residents was associated with hiring temporary staff and not assigning staff to care separately for infected and uninfected residents (last updated October 2020; AMSTAR rating 5/9) • Ensuring adequate staff to patient ratios (though no estimate is provided), limiting staff work locations, and cohorting of staff and residents are all best practices to prevent infection in long-term care homes (Last updated October 2020; AMSTAR 5/9) • Key aspects of palliative care were largely unaddressed in guidance provided to long-term care homes during the COVID-19 pandemic, including protocols for holistic assessment and management of symptoms and needs at the end of life (including stockpiling medications), education of staff concerning palliative care, referral to specialist palliative care or hospice, advance-care planning communication, support for family including bereavement care, and support for staff (last updated May 2020; AMSTAR rating 7/9) • A rapid review described the need to support advance care planning and provide psychological care for residents with dementia by, for example, providing information and explanations if concern is expressed, using reminders and visual instructions to explain the current situation, using reassuring language and gestures to help residents follow safety regulations, ensuring frequent interactions with residents and taking time to listen to how they are doing, maintaining consistent schedules whenever possible, stimulating movement and exercise, and avoiding the use of negative language related to the pandemic (last updated September 2020; AMSTAR rating 7/9) <p><i>Findings from guidelines developed using some type of evidence synthesis and/or expert opinion</i></p> <ul style="list-style-type: none"> • National Institute of Ageing recommends limiting movement of LTC care providers to one care setting wherever possible and simultaneously introducing incentives to do so, such as top-ups on pay (last updated April 2020; National Institute of Ageing)
<p>Restricting and screening staff and visitors (e.g., visitor policy)</p>	<p><i>Findings from guidelines developed using a robust process</i></p> <ul style="list-style-type: none"> • Guidance for the Centres for Medicare and Medicaid suggest using symptom screening for every individual that enters to the long-term care facility (last updated April 2020)

<p>changes, approach to and frequency of screening)</p>	<ul style="list-style-type: none"> • WHO guidance recommends the use of symptom surveillance and/or regular laboratory testing of all staff, residents and visitors in areas with cluster or community transmission (last updated January 2021; World Health Organizations) • Guidance from the Government of Canada for Indigenous long-term care homes recommends active screening for any new admissions or re-admissions as well as any visitors and staff entering the building (last updated April 2020) <p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • No evidence was found to suggest that visitors have introduced COVID-19 infections to care homes, however this finding may reflect that most care homes did not allow visitors during peaks of the pandemic (last updated November 2020; AMSTAR rating 0/9) • It was found that the wellbeing of residents in care homes was severely impacted during the period of visitor bans as demonstrated by high levels of loneliness, depression, and worsening mood of residents (last updated November 2020; AMSTAR rating 0/9) <p><i>Findings from guidelines developed using some type of evidence synthesis and/or expert opinion</i></p> <ul style="list-style-type: none"> • Visitor restrictions should balance the risks of COVID-19 infection with the risks of well-being and quality of life of the resident and should be frequently and transparently communicated to all residents and family members (last updated August 2020) • Measures to minimize the introduction of COVID-19 infection during visitations from relatives and caregivers should be implemented and may include requiring the wearing of masks and testing visitors if local incidence is high (more than 50/100,000 per week) (last updated January 2021)
<p>Testing of residents and staff (e.g., approach to and frequency of testing)</p>	<p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • There is emerging evidence that early detection of index cases through systematic testing of all residents and staff can support the prevention of outbreaks in long-term care homes (last updated December 2020; AMSTAR rating 3/9) • Mass testing was a primary measure implemented in long-term care homes to reduce COVID-19 transmission, and the effect on morbidity and mortality of residents, staff, and visitors (Last updated 3 November 2020; AMSTAR rating 7/9)
<p>Isolating suspected or confirmed cases among residents (within same or different facility) and staff (at home or in alternative settings like hotels)</p>	<ul style="list-style-type: none"> • WHO guidance recommends isolating suspected or confirmed cases of COVID-19 into single rooms, or if not possible, to cohort residents with other confirmed cases as well a 14-day quarantine for any staff that have been exposed (last updated January 2021) <p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • Residents that are suspected or confirmed to have COVID-19 should be isolated into separate wards (last updated December 2020; AMSTAR rating 3/9) • Though no research evidence was found in a rapid review on the effectiveness of cohorting residents, expert opinion suggests that cohorting suspected or confirmed cases of COVID-19 when single rooms are not available (last updated June 2020; AMSTAR rating 8/10) • Significant reduction in the prevalence of COVID-19 among residents and staff were attributed to self-confinement of staff who were suspected to have contracted COVID-19 (last updated October 2020; AMSTAR rating 5/9)

	<ul style="list-style-type: none"> • Isolation of staff suspected of contracting COVID-19 alongside promoting and enforcing sick leave with adequate compensation is a best practice for support staff in long-term care homes (last updated October 2020; AMSTAR rating 5/9) <p><i>Findings from guidelines developed using some type of evidence synthesis and/or expert opinion</i></p> <ul style="list-style-type: none"> • National Institute of Ageing recommends implementing testing and isolating procedures that include staff and residents that may be asymptomatic or have atypical presentations (last updated April 2020; National Institute for Aging) • Guidance from the European Geriatric Medicine Society recommends isolating those infected or have been in contact with those that are infected with COVID-19 (Last updated November 2020; European Geriatric Medicine Society)
Contact tracing among staff and visitors	<p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • Digital technologies for contact tracing systems, including wrist-worn technologies have shown to be promising in reducing infection rates and mortality (last updated December 2020; AMSTAR rating 3/9)
Supporting staff and residents (e.g., phones/tablets and internet connections for online interactions between residents and their families and caregivers; financial support to staff who must quarantine or isolate)	<p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • Prior to the pandemic there was evidence of substantial provision of unpaid care by volunteers in care homes, suggesting that visitor bans and restrictions may have resulted in a reduction in the quality and quantity of care provided to residents during the pandemic (last updated November 2020; AMSTAR rating 0/9) <p><i>Findings from guidelines developed using some type of evidence synthesis and/or expert opinion</i></p> <ul style="list-style-type: none"> • The National Institute of Ageing (NIA) in Canada recommends an ‘Iron Ring’ set of actions including implementing flexible admission and discharge policies for LTC settings to give residents and their families the flexibility to defer a placement offer, leave and return a care setting quickly based on what would best support their overall health and well-being (last updated April 2020; National Institute for Aging) • The National Institute of Ageing encourages staff and family members to look for safe ways to engage with residents without entering the home, such as using tablets to communicate with residents or visiting residents through the window of their rooms (last updated April 2020; National Institute for Aging)
Adding or replacing administrators and staff (e.g., secondment of hospital administrators and medical or IPAC ‘swat’ teams; rotating in staff to avoid burn-outs)	<p><i>Findings from guidelines developed using a robust process</i></p> <ul style="list-style-type: none"> • The American Geriatrics Society recommends authorizing the Department of Defense to work with the federal and state governments to coordinate the delivery and sharing of scarce resources across states, as well as working with local hospitals to provide additional supports to long-term care facility staff (last updated 29 April 2020; American Geriatric Society) <p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • Access to infection prevention and control specialists and outbreak response teams were found reduce the size of outbreaks in long-term care homes (last updated October 2020; AMSTAR rating 5/9) <p><i>Findings from guidelines developed using some type of evidence synthesis or expert opinion</i></p>

	<ul style="list-style-type: none"> • Guidance from the European Geriatric Medicine Society recommends appointing an infection prevention and control focal point in each long-term care facility (Last updated November 2020; European Geriatric Medicine Society)
Adhering to infection-control measures (e.g., donning and doffing personal protective equipment)	No highly relevant synthesized evidence identified
Making additional spatial, service, screening, testing, isolation and support changes	<p><i>Findings from guidelines developed using a robust process</i></p> <ul style="list-style-type: none"> • Guidance from the Centres for Medicare and Medicaid recommend using a separate team of staff when caring for residents that are suspected to have or have been in contact with COVID-19 as well as separating and moving residents into COVID-suspected and COVID-negative cohorts (last updated April 2020; Centres for Medicare and Medicaid) <p><i>Guidelines developed using some type of evidence synthesis and/or expert opinion</i></p> <ul style="list-style-type: none"> • Advance-care planning should be undertaken with residents who have been diagnosed with COVID-19 and should include discussions about preferences for mechanical ventilation, and prescriptions to support a pain management in a palliative approach should be made in advance for the problems that may arise (including sub-cutaneous forms of prescription drugs as oral dosages may not be possible) (last updated March 2020)
Transferring residents when their care needs exceed capacity in the home	<p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • Limited evidence was found about the effectiveness of moving residents to hospital during a long-term care outbreak, though two countries (Canada and Taiwan) and two geriatric societies (Canada and U.S.) have recommended moving residents to hospital or other setting when isolation is not possible in a long-term care home in the event of a COVID-19 outbreak (internal document published November 2020 – available upon request; AMSTAR rating 0/9)
Improving access to care (e.g., number of homes and beds; waitlist management)	No highly relevant synthesized evidence identified
Improving safety and quality of care and more generally improving quadruple-aim metrics (e.g., quality standards; regular resident/family and staff surveys)	No highly relevant synthesized evidence identified
Changing service-delivery models (e.g., case management and care coordination; regular primary-care services; referral services)	<p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • Implementing end-of-life supports within long-term care homes and condition specific pathways such as for pneumonia and dehydration, were found to reduce hospitalizations and emergency department admissions among residents (last updated February 2019; AMSTAR rating 7/9) <p><i>Findings from rapid reviews</i></p>

	<ul style="list-style-type: none"> • A rapid review identified a variety of models of care and interventions to improve quality of life, quality of care, and health outcomes for residents living in long-term care homes, which included many studies on dementia care, oral care, exercise/mobility, overall resident care, and optimal/appropriate medication use, and relatively fewer studies on hearing care, vision care, and foot care (last updated June 2020; AMSTAR rating 5/9)
Improving physical infrastructure (e.g., private rooms only; rooms grouped into ‘pods’ with dedicated staff; improving common areas and greenspace access; modern HVAC systems; and internet access for residents and staff)	<p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • Long-term care facility characteristics such as non-profit status, rural homes and homes with a higher percentage of private rooms may be associated with higher quality of life (last updated March 2012; AMSTAR 4/9) <p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • The most important risk factors for outbreaks in long-term care homes were the incidence rates of infections in the surrounding communities of the homes, older design of certain homes, and chain ownership, and crowding (last updated January 2021; AMSTAR rating 0/9)
Altering funding arrangements (e.g., overall funding model; targeted payments and penalties based on performance; and changes to covered providers, services and products)	<p><i>Findings from guidelines developed using a robust process</i></p> <ul style="list-style-type: none"> • The American Geriatrics Society recommends increasing payment to nursing homes caring for residents with COVID-19 and providing tax relief for nursing homes that provide paid family leave to homecare workers and support staff caring for older adults and people with disabilities (last updated April 2020; American Geriatric Society) <p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • For-profit nursing homes were found to have worse outcomes in both employee and client well-being compared to not-for-profit nursing homes (last updated October 2015; AMSTAR rating 7/9) • For-profit status long-term care homes had increased odds of case outbreaks than non-profit status long-term care homes (last updated November 2020; AMSTAR rating 7/9)
Adjusting governance arrangements (e.g., licensure provisions, including whether for-profit entities can be licenced; accreditation standards; and reporting and auditing requirements)	No highly relevant synthesized evidence identified
Supporting greater integration of long-term care with other sectors (e.g., collaborative leadership and pooled funding for an attributed population)	No highly relevant synthesized evidence identified
Improving access to care (e.g., number of homes and beds; waitlist management)	No highly relevant synthesized evidence identified
Improving safety and quality of care and more generally	No highly relevant synthesized evidence identified

improving quadruple-aim metrics (e.g., quality standards; regular resident/family and staff surveys)	
Engaging residents, families and caregivers in self-management, care choices, care delivery, and organizational and policy decision-making (e.g., shared decision-making about care; patient, family and caregiver advisory councils; complaints-management processes)	<p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • Practical interventions to support shared-decision making were found to have good outcomes for persons living with cognitive impairments, although implementing these types of resources in extended care environments such as long-term care homes would require workers to be given the time, authority and develop the skills to use these types of aids (last updated October 2016; AMSTAR 8/11) • Family caregivers value their role in decision-making and want to maintain this role even when individuals are placed in a residential settings, critical to this is frequent communication between staff and health professionals at the long-term care homes (last updated 2013; AMSTAR 8/10)
Ensuring culturally appropriate living among residents (e.g., for Black, Indigenous and other people of colour)	No highly relevant synthesized evidence identified
Supporting technology-enabled living among residents (e.g., communication with family and caregivers, with staff, and with outside providers)	No highly relevant synthesized evidence identified
Ensuring an adequate supply of staff (e.g., staffing ratios; recruitment and retention initiatives; contracts with external agencies)	<p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • No consistent evidence was found in examining the relationship between staffing levels and quality of care, with the exception of pressure ulcers where an increase in staff led to fewer ulcers among residents regardless of the staff member delivering care (last updated April 2013; AMSTAR rating 6/10) • An association was found between low staffing levels and increased job strain and emotional exhaustion as well as between a poor work environment (both physical infrastructure and job culture) and staff burnout (last updated August 2017; AMSTAR rating 4/10) • No evidence suggested that mix of licensed vocational nurses, registered nurses and licensed practical nurses and total nursing staff had no significant relationship with quality of life (last updated March 2012; AMSTAR 4/9) <p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • At the organizational level, increased staffing, particularly registered nurse (RN) staffing was consistently associated with reduced risk of COVID-19 infections (last updated November 2020; AMSTAR rating 7/10)
Optimizing skill mix among staff (e.g., training; task shifting or substitution; role expansion)	<i>Findings from full systematic reviews</i>

or extension; multi-disciplinary teams)	<ul style="list-style-type: none"> • The use of advance practice nurses and extended care paramedics in long-term care homes to respond to acute care issues were found to reduce hospitalizations and emergency department visits among residents (last updated February 2019; AMSTAR 7/9)
Ensuring the safety and satisfaction of staff and volunteers (e.g., workplace safety assessments; workplace violence-prevention initiatives; interventions to reduce burn-out)	<p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • Empowerment and autonomy at work as well as facility resources (such as the equipment and supplies available for caring) and staff workload were all factors associated with job satisfaction and burnout among staff at long-term care homes (last updated May 2013; AMSTAR rating 7/10)
Supporting technology-enabled care by staff (e.g., interoperable electronic health records; telehealth services; eConsultations and eReferrals)	<p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • Electronic health records demonstrated enhanced quality outcomes, improved management of clinical documentation and facilitate better decision making (last updated April 2017; AMSTAR rating 4/9) • Facilitators to the adoption of electronic health records in long-term care homes include access and transfer of resident information and reduced errors, while barriers include the initial investment cost and professional push-back on implementing a new s(last updated 2014; AMSTAR 4/9) • Health information technology has been increasingly adopted by long-term care homes, but many homes do not employ systematic processes to implement health information technology, underinvest in staff training and lack necessary to infrastructure to implement the technology (last updated 2018; AMSTAR rating 3/9) • Health information technology may facilitate teamwork and communication but does not appear to impact quality of care or resident health outcomes (last updated 2018; AMSTAR rating 3/9)
Remunerating staff (e.g., remuneration models for different types of staff, including full-time employment offers, reasonable wages, and paid sick leave; wage parity or other approaches to avoid unnecessary staff movements between sectors)	<p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • One of the most common recommendations in clinical practice guidelines on the prevention and control of COVID-19 was providing sick leave compensation for staff (last updated July 2020; AMSTAR rating 6/9) • Fewer staff sick leave days were associated with the probability of COVID-19 cases (last updated November 2020; AMSTAR 7/9) • Significant reduction in the prevalence of COVID-19 infection among staff and residents were in part attributed to sick pay to staff (last updated October 2020; AMSTAR rating 5/9)
Engaging residents, families and caregivers in shared decision-making about whether to enter long-term care	<p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • Dyadic counselling and communication tools such as talking mats can help to facilitate discussions and decision-making about older adults with dementia entering long-term care homes (last updated August 2018; AMSTAR rating 5/9)
Enhancing the breadth and intensity of home and community care services to	<p><i>Findings from full systematic reviews</i></p>

<p>delay or avoid entry to long-term care</p>	<ul style="list-style-type: none"> • Having a multidisciplinary home palliative care team, early referral to palliative care, and an expressed increased the likelihood of individuals dying at home, as did early referral to palliative care services (last updated 2013; AMSTAR rating 8/11) • When comparing those receiving home-based care services and those in long-term care, there was significant overlap in the distribution of physical and cognitive function, indicating that people could be cared for using either approach (last updated March 2012; AMSTAR 9/10) <p><i>Findings from rapid reviews</i></p> <ul style="list-style-type: none"> • Little evidence was found on how primary care and community nursing services for older adults can adapt during a pandemic, however findings suggested the need for timely communications of protocols and infection prevention measures among the care team, need for psychosocial, financial, and emotional support, training and skills development, and debriefing with staff to ensure resilience (last updated June 2020; AMSTAR rating 3/9)
<p>Supporting technology-enabled care at home (e.g., telehealth; remote monitoring systems; patient reminders)</p>	<p><i>Findings from full systematic reviews</i></p> <ul style="list-style-type: none"> • Older adults living at home can benefit from combining virtual visits with in-person visits to remain at home longer and to enhance feelings of independence, social inclusion and medication compliance (Last updated April 2013; AMSTAR rating 5/9)
<p>Providing financial supports to avoid or delay entry into long-term care (e.g., retrofitting homes; expanding family and caregiver benefits)</p>	<p>No highly relevant synthesized evidence identified</p>

Table 2: Overview of type and number of documents related to preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes

Type of document	Total (n=179)	Preventing infections	Managing outbreaks	Renewing delivery, financial and governance arrangement	Supporting residents and staff	Promoting alternatives to long-term care
Guidelines developed using a robust process (e.g., GRADE)	11	10	4	3	4	0
Full systematic reviews	31	3	0	13	18	5
Rapid reviews	26	18	4	7	2	3
Guidelines developed using some type of evidence synthesis and/or expert opinion	8	7	3	0	0	0
Protocols for reviews that are underway	21	10	9	1	6	2
Titles/questions for reviews that are being planned	6	5	0	0	0	2
Single studies that provide additional insight	76	49	21	7	3	0

*Some documents were tagged in more than one category so the column total does not match the total number of documents.

Table 3: Key findings and experiences related to preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes

Domains of preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes	Key insights from experiences of other countries and Canadian provinces and territories in preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes
Preventing infections	<p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other countries</i></p> <ul style="list-style-type: none"> • For many countries priority in vaccine campaigns was provided to long-term care residents (Australia; France; Finland; Germany; Netherlands; U.K.; U.S.) <ul style="list-style-type: none"> ○ New Zealand differed somewhat in their vaccine prioritization, developing 3 different vaccine roll-out plans with different priority rankings depending on the level of community transmission of COVID-19 at the time of deployment <ul style="list-style-type: none"> ▪ High-risk frontline health workers, such as those working in long-term care homes, are prioritized in the second or first groups depending on if community transmission is low or not • All countries have placed restrictions or protocols on visitations and external providers in long-term care homes during the pandemic (Australia; France; Finland; Netherlands; Germany; New Zealand; U.K.; U.S.) • Many countries’ national or regional health authorities have produced guidelines to prevent infections in long-term care homes, specifically, by addressing issues such as screening protocols, using personal protective equipment (PPE), hygiene and sanitization practices, quarantining or restricting access when residents are symptomatic, and training staff in infection prevention and control practices (Australia; Finland; Germany; New Zealand; U.K.; U.S.) <p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other Canadian provinces and territories</i></p> <ul style="list-style-type: none"> • All provinces and territories draw from and build on federal guidance on the care of residents in long-term care homes during COVID-19 to develop recommendations for prevention and control measures for long-term care • All provinces and territories have implemented visiting restrictions and protocols in long-term care homes • All provinces and territories prioritize long-term care facility staff and residents in their COVID-19 vaccination roll-out plans • In January 2021, British Columbia began a pilot project for COVID-19 contact tracing using wearable devices to deliver real-time information to isolate individuals as necessary

Domains of preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes	Key insights from experiences of other countries and Canadian provinces and territories in preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes
	<ul style="list-style-type: none"> • In Manitoba, automated contact tracing follow-up systems were established for health care workers including those in long-term care homes • Employers and healthcare unions in Saskatchewan signed to support the creation of a labour pool to assist with staff cohorting
Managing outbreaks	<p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other countries</i></p> <ul style="list-style-type: none"> • Protocols for contact tracing/reporting cases in long-term care homes were delegated to regional authorities in four countries (France; Germany; New Zealand; UK; U.S) • In Finland, operation of the long-term care facility was transferred to the municipal health and social care association when severe outbreaks occurred • Additional protocols to mitigate the transmission within the facility and to the community, such as minimizing transfers, restricting resident movement and using additional PPE (Australia; France; Finland; Germany; Netherlands; New Zealand; UK; U.S.) <p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other Canadian provinces and territories</i></p> <ul style="list-style-type: none"> • In addition to guidance on outbreak control based on the Government of Canada’s guidance on the care of residents in long-term care homes during COVID-19, many provinces (B.C., Alberta, Saskatchewan, Ontario and Quebec) have formed specialized outbreak response teams to support long-term care homes experiencing outbreaks • In Ontario, the Long-term Care Incident Management System was established to make rapid decisions to organize efforts across providers and government to better coordinate support for long-term care homes facing challenges related to COVID-19
Renewing delivery, financial and governance arrangements	<p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other countries</i></p> <ul style="list-style-type: none"> • Increased or supplementary funding for long-term care homes to prepare for or cover costs of expenses related to COVID-19 was provided in three countries (Australia; France; U.K.) <ul style="list-style-type: none"> ○ The additional funding ranged from £600 million for infection control for long-term care homes (in addition to more than £4 billion since March 2020 for councils to allocate towards COVID-19 response, including in long-term care homes) in the UK to \$560 million in additional investments in the long-term care sector more broadly in Australia • New funding models and programs to better facilitate payment or reimbursement to long-term care homes were established in three countries (Australia; Netherlands; U.S.) • Changes to have been introduced to regulations, quality standards and monitoring systems in three countries (Australia; France; New Zealand)

Domains of preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes	Key insights from experiences of other countries and Canadian provinces and territories in preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes
	<ul style="list-style-type: none"> • France’s Act about Adapting Society to an Aging Population addresses quality standards, surveillance, enforcement, and quality monitoring in long-term care • The New Zealand Ministry of Health’s action plan for the recommendations of the Independent Review of COVID-19 Clusters in Aged Residential Care includes strengthening communication and reporting systems, establishing continuous learning supports and aligning regulatory and contractual obligations for long-term care homes • In the U.K., guidance was released to strengthen supply chains for PPE and necessary supplies in long-term care homes and a U.K. study recommended that long-term care homes be reconfigured or create self-contained units to staff and resident movement low <p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other Canadian provinces and territories</i></p> <ul style="list-style-type: none"> • All provinces and territories received supplementary funding (a total of \$740 million) from the federal government to support long-term care, home care and palliative care during the pandemic as part of the Safe Restart Agreement announced by the Government of Canada in September 2020 • A national task force was convened to provide advice on preventing COVID-19 infection and improving outcomes in long-term care homes <ul style="list-style-type: none"> ○ The report identified five long-standing challenges in Canada’s long-term care sector and options for addressing these challenges • In addition to funding infection and control initiatives, Saskatchewan announced investments of \$73 million towards the construction of 2 new long-term care homes and another \$7.2 million in priority renewal projects in existing homes <ul style="list-style-type: none"> ○ Ontario also made investments to long-term care facility renovations and minor repairs as part of their efforts to protect vulnerable seniors • In Ontario, the government committed to increasing hours of direct care for each long-term care facility resident to an average of 4 hours per day by 2025 • To support stable operations and facilitate agile decision-making to improve service quality and resident well-being, Quebec has implemented co-management models that allow leadership to draw on administrative and medical expertise in long-term care homes • Manitoba Health conducted modified reviews of all 125 licensed long-term care homes to assess minimum standards of safety and care
Supporting residents and staff	<i>Key insights from preventing and managing COVID-19 and renewing long-term care in other countries</i>

Domains of preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes	Key insights from experiences of other countries and Canadian provinces and territories in preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes
	<ul style="list-style-type: none"> • Countries have developed various systems for strengthening the long-term care workforce, including health worker registries (Germany; Netherlands), enhancing training systems to meet staffing needs (Germany; Netherlands; U.S.) and changes to provider remuneration or incentives (Australia; Germany; Netherlands; U.S.) • Finland currently in the process of reforming legislation governing care for older adults, including in response to COVID-19 such as minimum thresholds for nurse/client ratios in long-term care homes • New Zealand’s National Outbreak Management Policy includes psychosocial support policies to protect staff, residents, extended families (whānau) and communities <p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other Canadian provinces and territories</i></p> <ul style="list-style-type: none"> • Across provinces and territories, efforts to support the long-term care workforce has included increases in provider remuneration or other financial incentives (B.C.; Alberta; Saskatchewan; Manitoba; Ontario; Nunavut), training initiatives (B.C.; Manitoba; Ontario) and registries to facilitate staff matching with long-term care homes (Ontario) • Several provinces and territories have developed initiatives to support socialization and care of residents through technology (Alberta; New Brunswick; Prince Edward Island; Yukon; Northwest Territories) • From August to October 2020, the Health Quality Council of Alberta conducted surveys and interviews with long-term care residents and family members to better understand and respond to their experiences during the COVID-19 pandemic • In the Northwest Territories, every long-term care facility increased staffing with the addition of two licensed practical nurses and two personal support workers
Promoting alternatives to long-term care	<p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other countries</i></p> <ul style="list-style-type: none"> • Programs to support residents transitioning from long-term care facility to community care have been established in two countries (Australia; Finland; U.S.) • Financial supports or professional respite services for family caregivers were establishing throughout the COVID-19 pandemic (Germany; Netherlands; UK) • While New Zealand continues accepting referrals to long-term care homes during COVID-19, specific protocols have been developed to delay admission to long-term care homes and instead provide care through home support agencies and/or community nursing services while waiting for COVID-19 test results

Domains of preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes	Key insights from experiences of other countries and Canadian provinces and territories in preventing and managing COVID-19, outbreaks of COVID-19 and about supporting renewal in long-term care homes
	<ul style="list-style-type: none"> • The U.K. developed a number of supports to strengthen the home and community care workforce, including advice to local health authorities and NHS to support home care provision during COVID-19, remote training programs for paid and volunteer social care workers and better supporting live-in-care, care room (support for discharged patients by approved home owners in the community), and assisted-living models of care <p><i>Key insights from preventing and managing COVID-19 and renewing long-term care in other Canadian provinces and territories</i></p> <ul style="list-style-type: none"> • In September 2020, the federal government announced a commitment to work with provinces and territories to help people stay in their homes longer • Several provinces (B.C.; Alberta; Manitoba; Ontario) have provided additional support for home and community care services • In Alberta, a private model of care called Community Care Cottages house between 10-12 residents to provide around-the-clock care • The Manitoban government has invested \$250 million to improve access to health services including moving 21,000 days of care from acute homes into local communities • In Newfoundland and Labrador, the Centre for Health Information has expanded their telehealth care services during the pandemic

Waddell K, DeMaio P, Wilson MG, Wang Q, Bain T, Bhuiya A, Alam S, Sharma K, Gauvin FP, Whitelaw S, Lavis JN. COVID-19 living evidence profile #2 (version 1): What is known about preventing and managing COVID-19 outbreaks and about supporting renewal in long-term care homes? Hamilton: McMaster Health Forum, 26 February 2021

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