

# Promising Best Practices Implemented in Long-Term Care Facilities During the COVID-19 Pandemic to Address Social Isolation and Loneliness: A Scoping Review



## RESEARCH

IDRISSA BEGO 

NEBILA JEAN-CLAUDE BATIONO

STEPHANIE COLLIN

DIANE TAPP 

JEAN RAMDÉ 

MARIE-PIERRE GAGNON 

ERIC NGUEMELEU TCHOUAKET 

DRISSA SIA 

\*Author affiliations can be found in the back matter of this article



## ABSTRACT

**Context:** Throughout the current COVID-19 pandemic, tremendous effort has been made to implement innovative practices to address social isolation and loneliness (SIL) in long-term care facilities (LTCFs), disproportionately affected by COVID-19. These interventions have not yet been synthesized. This review intended to gather the current promising best practices (PBPs) implemented in LTCFs to alleviate SIL in older persons during the COVID-19 pandemic as well as during the SARS and H1N1 pandemics, using an intersectional lens.

**Methods:** An extensive search was done in nine electronic databases. Arksey and O'Malley's framework was used to format the scoping review. Two independent reviewers screened citations for inclusion, blindly. The selection of articles was conducted blindly by two coauthors. Finally, 16 studies were analyzed out of 9,077 records.

**Results:** Two main themes of findings arose from this review. They comprised proximal PBPs directly addressing SIL in LTCF residents such as pseudo-contact interventions (e.g., chat from balcony or behind transparent barriers/glasses), remote communication tools (e.g., phone or video chat, voice mail/text messaging), and humanoid robots. Distal PBPs included measures implemented to prevent or mitigate the development of COVID-19, including COVID-19 screening approaches, outbreak preparedness, quarantining approaches for both residents and staff.

**Conclusion:** This scoping review found varied PBP implemented during the multiple waves of the COVID-19 pandemic as well as evidence supporting their effectiveness. The contribution of this study is significant as most of the PBP investigated should be prioritized by public policymakers or institutions to provide more satisfactory services to the elderly and their families.

## CORRESPONDING AUTHOR:

**Idrissa Beogo, RN, MBA, PhD**

School of Nursing, University of Ottawa, 451, Smyth Road, Ottawa, Ontario, K1H 8M5, Canada

[ibeogo@uottawa.ca](mailto:ibeogo@uottawa.ca)

## KEYWORDS:

COVID-19; promising best practices; social isolation and loneliness; long-term care facilities; older adults

## TO CITE THIS ARTICLE:

Beogo, I, Bationo, NJ-C, Collin, S, Tapp, D, Ramdé, J, Gagnon, M-P, Tchouaket, EN and Sia, D. 2022. Promising Best Practices Implemented in Long-Term Care Facilities During the COVID-19 Pandemic to Address Social Isolation and Loneliness: A Scoping Review. *Journal of Long-Term Care*, (2022), pp. 298–311. DOI: <https://doi.org/10.31389/jltc.138>

## BACKGROUND

Prior to the COVID-19 pandemic, social isolation and loneliness (SIL) was present in high numbers among certain groups. SIL was already high in superaged (>80 years old) Canadians, in about 50% of individuals living with comorbidities (e.g., physical or mental illness) or in marginalized groups, and in those experiencing loss (e.g., loss of employment, or a spouse) (National Seniors Council, 2014; National Seniors Council [NSC], 2017). Research indicates that the COVID-19 pandemic has heightened the presence of SIL, particularly for older adults living in long-term care facilities (LTCFs) (Inzitari et al., 2020) by severely impacting their quality of life (de Medeiros et al., 2020). Social isolation is the relative lack of social relationships and loneliness is defined as a subjective feeling of being isolated (Wenger, Daviesj, Shahtahmasebi, & Scott, 1996).

The COVID-19 virus poses a heightened risk of death for individuals aged 65 and older (Wu & McGoogan, 2020), resulting in a devastating death toll in nursing homes worldwide since the onset of the pandemic (United Nations, 2020). According to the 2016 Census, 6.8% of Canadians aged 65 years and older were living in a nursing home (NH) or residence for senior citizens (hereafter referred to as a seniors' residence, SR). This proportion jumps to 30.0% among Canadians aged 85 years and older (Statistics Canada, 2017; Statistics Canada [SC], 2017). SIL has been identified as a determinant of elderly health (Linehan et al., 2014) and a risk factor of premature mortality (Rico-Urbe et al., 2018) as well as poor health (cardiovascular, obesity, etc.) (National Academics of Sciences Engineering and Medicine, 2020; Shankar, McMunn, Banks, & Steptoe, 2011), psychiatric (depression, anxiety, etc.) (Evansa, Martyra, Collinsa, Brayne, & Clare, 2019) pathologies or functional limitations among individuals with diabetes (Corno & Burns, 2022).

Liotta et al. (Liotta, Marazzi, Orlando, & Palombi, 2020) discuss how increased social connectiveness during the pandemic was a powerful tool used to decrease SIL among NH residents. The use of the conventional Information Technology and Communication (ICT) platforms (Skype, FaceTime, etc.) currently offered by LTCFs to connect older adults with their families has also been shown to be very helpful (Y.-R. R. Chen & Schulz, 2016). The negative impacts of social isolation later in life have been widely reported, ranging from declining mental and physical health to reduced quality of life, increased mortality, and higher Medicare costs (Gardiner, Geldenhuys, & Gott, 2018; MacLeod et al., 2021).

Canadian LTCFs experienced the highest mortality toll due to COVID-19 among the Organisation for Economic Co-operation and Development (OECD) countries – double the average mortality rate (Canadian Institute for

Health Information [CIHI], 2020). In their pre-COVID-19 systematic review (2019–2020), Gardiner et al (Gardiner, Laud, Heaton, & Gott, 2020) estimated the mean prevalence of 'severe loneliness' to be 35% (95% CI: 0.14, 0.60). One pan Australian study revealed that 41% experienced loneliness and 33% experienced anxiety linked to COVID-19 (Brydon et al., 2021).

Thus, recent literature shows a vigorous involvement of families in hygiene care or emotional and social support (Bangerter, Van Haitsma, Heid, & Abbott, 2016). About 82% of LTCF residents require family involvement in care and activities of daily living (Canadian Institute for Health Information, 2016; Organisation mondiale de la santé, 2020), with one out of five Canadian families having spent at least 10 hours a week caring for a loved one in a LTCF before the start of the pandemic (Turcotte & Sawaya, 2015).

Prior to the pandemic, six categories of interventions were defined to prevent SIL, including anxiety, among older people: social facilitators, psychological therapies, health and social care, animal interventions, befriending interventions, and leisure (Gardiner et al., 2018). However, these interventions were all designed to take place in person. Over the different waves of the COVID-19 pandemic, restrictions regarding family visits and the varied lockdown and pseudo lockdown procedures put in place by LTCFs (Armitage & Nellums, 2020) heightened SIL among residents. Asides, Van der Roest (Van der Roest et al., 2020) showed an increase in severity of sadness, agitation, depression, anxiety, and irritability in residents even after their initial quarantine.

Many promising best practices (PBPs) were implemented in LTCFs, contributing to the prevention or diminishment of the virus. Based on the report published by the Canadian Foundation for Healthcare Improvement in July 2020 (Canadian Foundation for Healthcare Improvement, 2020), we defined a promising best practice as an innovative practice developed and successfully implemented to protect the LTCFs by reducing and/or lowering the community transmission of COVID-19 and combatting the different waves of the pandemic. As such, examples such as hand sanitizer availability or coordination with public health officials, are not considered to be PBPs because of their world-wide implementation.

This scoping review aims to present a synthesis of the PBPs and their significant effects on SIL among the residents of LTCFs. The review is extremely relevant within the current pandemic context and is valuable for several reasons: 1) it covers the last three recent and most important pandemics, namely the Severe Acute Respiratory Syndrome (SARS), the H1N1 and the current COVID-19 pandemic; (2) it updates the Chen and Schulz (Chen & Schulz, 2016) systematic review published in 2016; and (3) it identifies strategies they

may be quickly implemented, both during COVID-19 as well as post-COVID-19 pandemic, to strengthen the social connection between older adults residing in LTCFs and their families. These objectives are aligned with the urgent needs of managers and stakeholders to support COVID-19 research in Canada and internationally.

### THE CONCEPTUAL FRAMEWORK CONSIDERED: INTERSECTIONALITY

As the presence of SIL in LTCFs results in multiple proximal and distal intersecting factors (Figure 1), intersectionality will therefore be the overarching theory that guides the research process. It provides a lens through which to view, understand and interpret the complexities that contribute to healthcare inequities and considers how health issues are influenced by intersecting social factors, as opposed to considering social factors as acting in isolation, that overlap in a manner that can enhance negative health outcomes.

Figure 1 demonstrates how proximal and distal factors may intersect and overlap to result in SIL in older adults. In the context of COVID-19, LTCF residents' experiences of SIL were complex and comprised of multiple factors. Some are viewed as proximal factors, being associated to SIL in a more direct way, such as family support in continuing pre-per pandemic social connections. Others are viewed as distal factors, slightly more removed but still strongly contributing to SIL, including both upstream and downstream strategies: long lasting individual factors (e.g., comorbidities), managerial factors (e.g., performance factors), and infection prevention and clinical case management strategies. The performance factors of the proposed framework stem from a

healthcare performance framework published by the Québec government: accessibility of services, quality of services, optimization of resources, quality of care (Ministère de la Santé et des Services Sociaux, 2012, 2017).

The use of an intersectional lens corresponds well to the aim of our study, as it is used to portray and examine diverse patterns (social, geography, disability/ability, power relations and experiences...) intersecting and leading to SIL during the pandemic context (Hankivsky, 2014). We adapted the Intersectionality theory in considering (i) infection prevention strategies, (ii) performance management, (iii) cases management and (iv) capitalized social connection (Figure 1).

### METHODS AND ANALYSIS

Due to the novelty of the COVID-19 virus and its subsequent impact on the SIL of LTCF residents, we deemed the scoping review to be a more appropriate review methodology allowing for a preliminary portrayal of the extent of available evidence on PBPs in LTCFs during the COVID-19 pandemic. The methodological framework employed in this review was first introduced by Arksey and O'Malley (2005) and later enhanced by Levac (2010) and is comprised of six proposed steps: (1) identifying the research question; (2) identifying relevant studies; (3) selecting studies; (4) charting the data; (5) collating, summarizing, and reporting the results; and (6) developing a knowledge translation plan involving all stakeholders of the fields in order to present evidence-informed policy recommendations. The review's protocol was registered in Research Registry (reviewregistry1157, <https://www.researchregistry.com/browse-the-registry#registryofsystematicreviewsmeta-analyses/>).

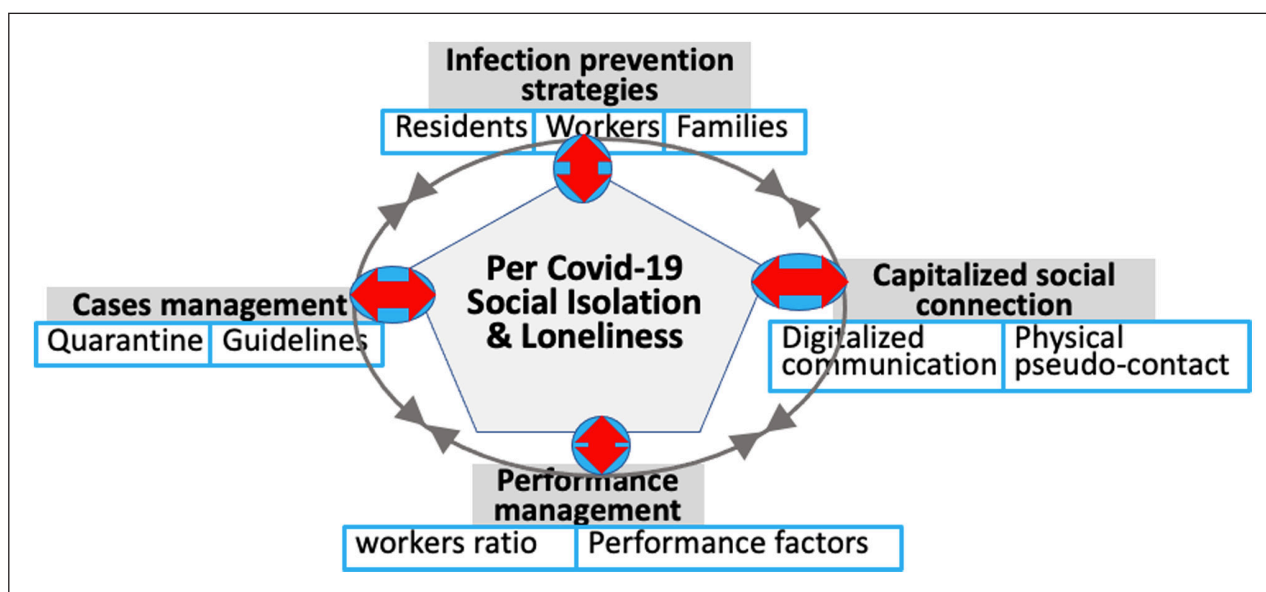


Figure 1 Intersectionality in addressing SIL in LTCFs over the Covid-19 pandemic.

## 1 – RESEARCH QUESTION

Our research questions were:

1. What are the current promising best practices implemented in LTCFs to alleviate SIL in older individuals during the COVID-19 pandemic and what were the promising best practices implemented in the previous SARS and H1N1 pandemics?
2. How did the use of these best practices reduce SIL among residents of LTCFs during the COVID-19, SARS and H1N1 pandemics?
3. What lessons, knowledge and recommendations might be learned and translated into interventions, including the use of digital interventions, to alleviate SIL in residents of LTCFs both during and after the COVID-19 pandemic?

## 2 – RELEVANT LITERATURE IDENTIFICATION

Following the PICOTS framework created for this review (Appendix 1), searches were conducted in scientific databases (BDSP, Medline-Ovid, EMBASE, CINAHL, Web of Science, PsycInfo, Cochrane, ScienceDirect and Scopus)

and grey literature databases (OpenGrey, Age UK, Google Scholar). Finally, the reference lists of selected key papers were searched by hand for relevant literature.

Studies were included if (a) participants were older adults ( $\geq 65$  years) residing in LTCFs and not living with major neurocognitive impairments, (b) interventions reported effectively addressed SIL during the major recent pandemics (COVID-19, H1N1 and SRAS), and (3) the publication languages were English or French. Search strategies were well-calibrated and adjusted to each database, after refined iterative processes to improve the likelihood of retrieving relevant articles (Appendix 2).

## 3- STUDIES SELECTION

The search yielded 9,077 papers published between 2003 and December 2021, which were then transferred into the Rayyan Intelligent Systematic Review (Ouzzani, Hammady, Fedorowicz, & Elmagarmid, 2016) platform for screening. After screening 200 references in a pilot test, the PI (IB) and one of the co-authors (NJ-C) independently screened the citations of all articles, adhering to the review’s screening algorithm (Figure 2). This was followed by the full reading of potentially relevant articles to confirm their relevance

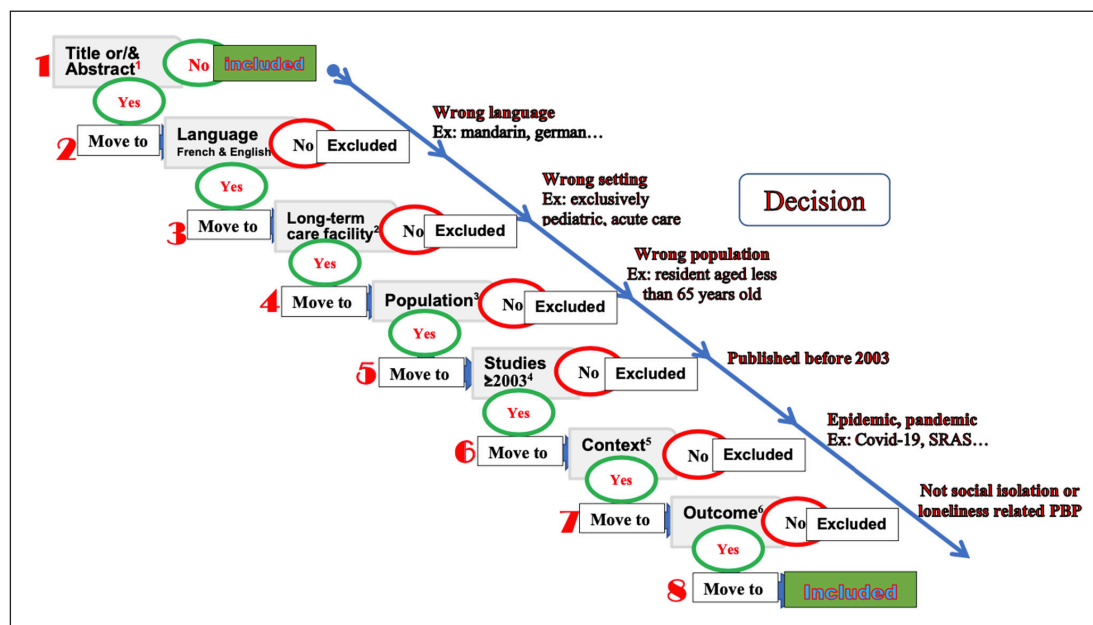
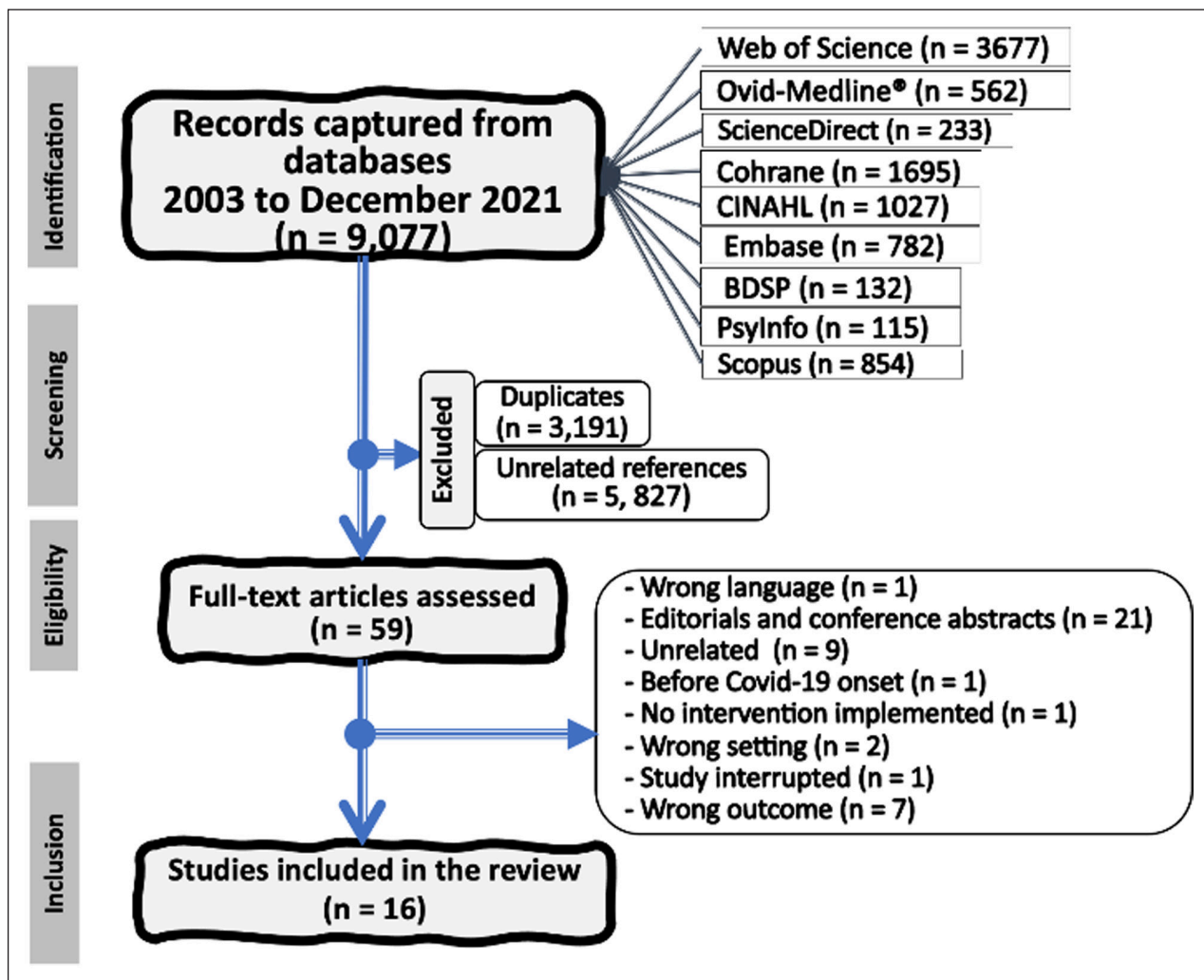


Figure 2 References screening algorithm.

**Legend:**

- <sup>1</sup> The reference has a TITLE or does not have a publication date or does not have an ABSTRACT.
- <sup>2</sup> **Long-term care facilities:** Nursing home, Assisted-living facilities, Long-term care facility, Home for the Aged, Retirement home. Excluded: Acute care, Hospital (medicine, surgery, intensive care, etc.) or clinics.
- <sup>3</sup> **Population:** all the residents of long-term care facilities. Excluded: elderly persons staying in community.
- <sup>4</sup> **Studies:** published in 2003-onward. Excluded: published before 2003 and in countries without LTCH system.
- <sup>5</sup> **Context:** COVID-19, H1N1, SARS epidemics.
- <sup>6</sup> **Outcome:** Promising Best Practices (PBP) including digital health aiming to reduce social isolation. LTCH: long-term care home.





**Figure 3** Prisma flow diagram illustrating the search strategy.

and determine final inclusion. Studies were eligible for inclusion if 1) they were related to older adults living in LTCFs, 2) their interventions were effective, original and aimed to prevent and/or address COVID-19 cases, and 3) they directly combatted SIL. For our review, we considered any type of study design (e.g., observational studies, randomized controlled trials and qualitative studies) as well as commentaries.

#### 4- DATA EXTRACTION

Data from the included papers were extracted based on a template created in Excel®, which had been discussed beforehand among coauthors.

As shown in Supplementary Table 1, the following data were extracted: **1.** study details (authorship, year of publication, and the setting); **2.** the study design, outcomes measured and the participants’ demographic; **3.** the intervention characteristics (duration, type of intervention); **4.** the results (evaluation of the effects of the intervention, as well as barriers and facilitators); and **5.** the conclusion.

## 5- RESULTS

### STUDY PARTICIPANTS

In total, 59 references were considered for plain text canvassing, and 16 studies were included (Figure 3). They had been published in journals across a wide range of health science disciplines. The studies included different types of LTCF populations: older people who reside in nursing homes (Dichter, Sander, Seismann-Petersen, & Köpke, 2020; Dolveck et al., 2021; Gilbert, 2020; Mo & Shi, 2020; Wammes et al., 2020), nursing facilities (Maggie Collison et al., 2020; Song et al., 2020), as well as geriatric acute care units, long-term care, and nursing homes (E. E. Office, M. S. Rodenstein, T. S. Merchant, T. R. Pendergrast, & L. A. Lindquist, 2020; Sacco, Léonart, Simon, Noublanche, & Annweiler, 2020). Several study designs were included in the review, as demonstrated in Supplementary Table 1. We organized the findings of the included studies into themes and further grouped them into natural clusters around certain topics. That is, we identified the following three key PBPs themes i) strategic approach (example) ii) COVID-19 prevention-related interventions (Primary and secondary), iii), COVID-19 free

interactive communication (pseudo-contact, ICT support to reduce SIL). None of the included studies were related to SARS or H1N1.

### BIBLIOMETRIC CATEGORIES

All included articles were published in 2020 or 2021. In terms of geographical distribution, there are five studies from the USA (Abbasi, 2020; Maggie Collison et al., 2020; Lipsitz et al., 2020; Mo & Shi, 2020; E. E. Office et al., 2020), two from France (Dolveck et al., 2021; Sacco et al., 2020), two from Germany (Dichter et al., 2020; Follmann et al., 2021), one from Canada (Siu, Kristof, Elston, Hafid, & Mather, 2020), one from South Korea (Song et al., 2020), one from Australia (Gilbert, 2020), one from the Netherlands (Wammes et al., 2020), one from Brazil (Moraes et al., 2020), and two scoping reviews that include articles from varied countries around the world (Bethell et al., 2021; Mobasser, Azami-Aghdash, Khanijahani, & Khodayari-Zarnaq, 2020).

Two main classes of findings arose from this review. First, there are PBPs related to preventive measures. Using an intersectional lens (see the framework), as contended by Dichter et al. (2020) and (Flatharta & Mulkerrin, 2020), they are interventions implemented to prevent or mitigate the development of COVID-19 (in the event of an outbreak). The second class includes interventions directly addressing the SIL of LTCF residents, considered proximal interventions. Three subareas are also presented (pseudo-contact, physical contact, and remote communication).

### COVID-19 PREVENTION-RELATED INTERVENTIONS

The COVID-19 pandemic resulted in the reorganization of care services, particularly in LTCFs, based on public health recommendations. Despite public health restrictions, families and LTCFs workforce prompted PBPs to address SIL experienced by residents. Of the best practices, Song et al. (2020) noted the implementation of systematic screening, temperature taking, and the suspension of external visits to detect possible cases of contamination as quickly as possible. Success was noted in systematic screening, as regular (twice daily) assignment of staff to specific residences or floors to help maintain prompt case detection and clinical management initiation (Song et al., 2020). These were supplemented through the prohibition of family visits and the isolation of staff and residents (Maggie Collison et al., 2020; Gilbert, 2020), as well as through the permanent presence of nursing staff (Dichter et al., 2020; Dolveck et al., 2021). Siu et al. (2020), in the province of Ontario, laid out the following strategies: 1) the active and passive screening of visitors and staff, 2) the establishment of respiratory isolation procedures, and 3) the encouragement of sick staff to take time off work. Finally, Dichter et al. (Dichter et al., 2020)

advocated for the availability of protective equipment for all involved parties.

At a strategic level, Maggie et al. (Maggie Collison et al., 2020) highlighted the development of a procedure guide, and the establishment of a team that is properly trained and prompt to intervene in case of need according to a well-defined framework (Dolveck et al., 2021; Gilbert, 2020). Framing guidelines were reported to be important PBPs to proactively prevent an outbreak and/or to address it. Additionally, all types of resource allocation and their timing were highlighted (Collison et al., 2020).

In addition to these primordial preventive measures (at the clinical microsystem level), facilities used certain practices when an outbreak occurred. These include quarantining positive or suspected cases (Song et al., 2020), breaking the chain of horizontal transmission through the '3-tier system', and isolating infected individuals (Collison et al., 2020). The '3-tier system' consists of forming three separate cohort groups according to one's COVID-19 test result (or COVID-19 situation) using different colors: positive (red), negative-cleared (green), and negative-exposed (yellow). This allows actions to be taken to prevent contamination among residents. The study by Moraes examined similar elements, although emphasis was given to PCR testing (Moraes et al., 2020). In addition to these interventions directly addressing the spread of the virus, seen as distal tools to combat SIL, this review found proximal approaches to address SIL.

### PROXIMAL APPROACHES TO ADDRESS SIL

Three main categories of solutions were implemented (1) pseudo-contact between people, (2) physical companionship and (3) total remote contact using ICT applications (Supplementary Table 2).

#### Pseudo-contact

The term pseudo-contact is coined to mean a physical contact from a distance. That is, included studies reported a wide range connection format that was implemented for the benefit of families who wanted to go on offering human warmth to their loved older adults while respecting social distancing measures. Pseudo-contact through glass or so-called 'window visiting' from the LTCF balcony was laid out by Mo and Shi (2020) and Abbasi (2020) in the USA, Follmann et al. (2021) in Germany and Gilbert (2020) in Australia. Behind a transparent barrier strategy was also used. In that case, family members were asked to stand behind and chat as reported by Wammes et al. (2020) in Netherlands and Gilbert (2020).

#### Physical companionship

In certain cases, when permitted, some residents spent time with care takers while following rules and guidelines, in aim of addressing SIL. For instance, in

Dichter et al. (2020) study, residents took a walk outside with their loved ones to get some fresh air and clear their minds. In similar vein, some LTCFs offered the possibilities to families to gather and chat outside in maintaining physical distance. That experience was very satisfactory in terms of communication (Wammes et al., 2020).

### Remote contact using ICT applications

Besides these physical contacts, virtual communication was overwhelmingly reported by the studies and varied tools employed. Several formats of communication between older adults in LTCFs and their families were observed, namely (i) phone chat, (ii) voice mail or text messaging, (iii) video chat, (iv) robot use. In Sacco et al. (2020) study, the participants tended to favor telephone calls—ordinary or cellular telephone—to interact with families, but in comparing it with video calls did not find a difference in terms of satisfaction ( $p = 0.10$ ). Other many included studies demonstrated the effectiveness of phone chatting with LTCFs residents and subsequently preventing their SIL (Abbasi, 2020; Dichter et al., 2020; Follmann et al., 2021; Mo & Shi, 2020; Mobasseri et al., 2020; Office, Rodenstein, Merchant, Pendergrast, & Lindquist, 2020; Wammes et al., 2020).

The second mode of social communication was remote communication through ICT applications that fostered both the relationships between residents and their families, and between residents and their health personnel. Three studies contended the impact of video chat in keeping the older adults connected with their families to subsequently addressing SIL (Gilbert, 2020; Mo & Shi, 2020; Sacco et al., 2020). Third, voice mail and text messaging were also shown to be effective in addressing SIL (Follmann et al., 2021; Gilbert, 2020; Mo & Shi, 2020). These technologies ensured a telepresence to minimize contact between people (caretakers, friends, and families), while maintaining social connections. The scoping review by Mobasseri et al. (Mobasseri et al., 2020) highlights three key usages:

- i) to order services: residents used a web-based ICT platform to order services including ordering meals remotely;
- ii) as a COVID-19 preventive tool: Beam Robot 9 was employed to reduce the unavoidable human-to-human contacts, especially care support workers, and to address challenges (ex. insufficient equipment and staff, absence of standards for infection diagnosis, complex needs of residents, staff members who work at more than one facility, untrained workers, and enforcement of quarantine) and;
- iii) for social capitalisation: ICT was used to maintain the social ties between residents and their loved ones in the community.

## DISCUSSION

This scoping review is part of a large interventional project funded by the Canadian Institute of Health Research (CIHR) aimed at addressing SIL that older adults experience in the context of LTCFs, with a specific goal of summarizing the PBPs implemented in LTCFs during both the COVID-19 pandemic and other recent pandemics.

First, the COVID-19 pandemic has challenged the health of populations in general, with a specific impact on the older adults in LTCFs in particular (Leontjevas et al., 2021). Indeed, the measures put in place have resulted in a disconnect between residents and their families, as well as between residents and their peers within the same LTCFs. It has also contributed to reduce contacts with the staff. This has heightened SIL in our study's population, a group which is already experiencing or at high risk for SIL.

At the same time, the literature is varied, both in terms of initiatives, as well as in the quantity and quality of studies. Based on the multidimensionality and complexity of SIL among older adults throughout the COVID-19 pandemic, we examined the PBPs implemented through an intersectional lens. Thus, findings showed that the PBPs that were developed embraced multiple layers, from the community level to the LTCFs, in terms of planning and intervention in the context of COVID-19. They have made it possible to both prevent potential outbreaks in seniors' residences and to slow down or limit the spread when an outbreak occurs. Given the vulnerability of the elderly, besides measures taken in LTCFs, the best approach combined community contamination prevention. In this review, despite the paucity of published literature – certainly due to the time lag for publication – a wide variety of 'bedside' PBPs to address SIL have been implemented to rule out COVID-19 and allow residents to maintain connections. For instance, the classification algorithm to prevent the spread of COVID-19 in nursing homes (González de Villaumbrosia et al., 2020).

Second, the heavy preventive measures put in place, play against addressing the 'Geriatric Giant Symptoms' described in 1965 by Prof. Bernard Isaacs, namely immobility, instability, incontinence and impaired intellect [cited by (Flatharta & Mulkerrin, 2020)]. Some authors highlight the impact of COVID-19 prevention or control measures on the elderly and their loved ones. Dichter et al. (2020) stated that 'the current infection control measures clearly have negative consequences, especially for a resident's mental health status as a result of social isolation'. Solutions were then proposed to allow these residents to maintain contact with loved ones. Chen's study that underscored the link between staff mobility LTCFs and the spread of COVID-19 (Chen, Chevalier, & Long, 2021) led managers to immediately reorganize staffing, through recruitment, improving staffing ratios, and ultimately assigning staff to one working site.

However, once cases were detected, measures such as restricting access to residences, systematic testing, and regular temperature taking helped to limit the spread of the disease within the residence.

The pinpointed PBPs helped lead to prompt decision making thanks to Task force formation (Dolveck et al., 2021; Gilbert, 2020), the development of a guideline (Maggie Collison et al., 2020) and the 3-tiered cohorting approach. The latter separates exposed individuals from unexposed negative-test individuals among residents, combined with standard measures such as contact and droplet precautions for staff in contact (within 1.5 m) with residents (Maggie Collison et al., 2020), staff self-quarantining and furloughing staff COVID-19-positive contact (Gilbert, 2020); single agency was solicited to replace permanent staff (Gilbert, 2020). Besides, tight guidelines including systematic screening of the entire facility's residents (and workers, including daytimes users), and several rounds of screening of the entire facility (Moraes et al., 2020; Song et al., 2020) has been shown to be effective. Other strategies were highlighted by Collison et al., such as relocation residents based on testing results, broad infection-control strategies according to the 3-tiered cohorting approach that allows the separation of exposed from unexposed negative-test individuals, and increasing the staffing ratios on the memory unit (Maggie Collison et al., 2020).

Third, based on the findings, managers, frontline healthcare workers, and families all played an important role in implementing PBPs to address SIL in LTCF residents and their interactions have remained active with residents. One of the most prevalent concerns experienced by these individuals, SIL was significantly heightened by the current pandemic. Thanks to the collaborative culture observed worldwide in recent years, LTCFs have increased the role of residents' families and strengthened their relationship with health workers (L. R. Bangerter, K. Van Haitsma, A. R. Heid, & K. Abbott, 2016).

As widely reported, vulnerable populations, namely residents in LTCFs, experienced disproportionately higher death rates during the COVID-19 pandemic (Akhtar-Danesh, Baumann, Crea-Arsenio, & Antonipillai, 2022). Survivors of the two first deadly COVID-19 pandemic waves, as well as those who live through future waves, will face SIL as a result of restrictive policies placed on LTCFs (e.g., residents being placed in solitary confinement for months, not allowing for residents to have personal contact with their loved ones who live outside the LTCF. As seen in this review, in a very recent knowledge synthesis, Choi and Lee (Choi & Lee, 2021) noted that robots (humanoid, animal and mobile) started to be implemented pre-COVID-19.

The public health restrictions have led to the restrictions related to numerous activities in LTCFs as well as outing activities for residents. Similarly, in a large survey comprised of 128 LTCFs, 79% of residents lacking social contact reported experiencing a deterioration in their health (Alzheimer's Society, 2020). Clearly as shown

in the present review (e.g., Mobasseri et al., 2020; Sacco et al., 2020; Wammes et al., 2020), the study of Fearn et al., 2021 contended that remote befriending project positively impacted residents and help to mitigate SIL and subsequent outcomes such as depression, stress, and the like. Befriending is a regular one-to-one conversation about topics concerning both parties (Balaam, 2015).

During the COVID-19 pandemic, LTCFs' residents had less contact with family/friends (Betini, Milicic, & Lawand, 2021) while group or one-to-one leisure activities (activity, support, internet training, home visiting, service provision) shown to reduce SIL (Dickens, Richards, Greaves, & Campbell, 2011; Windle, Francis, & Coomber, 2011) were interrupted. Only some of these activities were able to be adapted to a virtual format. That is, apart from pseudo-contact PBPs, such as discussing with a loved one by using a balcony (Abbasi, 2020; Gilbert, 2020; Mo & Shi, 2020) or behind glass (Follmann et al., 2021; Gilbert, 2020; Mo & Shi, 2020; Wammes et al., 2020), and interactive virtual forms of socialisation (Abbasi, 2020; Follmann et al., 2021; Mo & Shi, 2020; Mobasseri et al., 2020; Sacco et al., 2020; Wammes et al., 2020), many interventions were devoted to preventing or stopping the transmission of the virus.

The restrictions imposed upon older adults raised issues of human rights restriction (Litins'ka & Karpenko, 2020) particularly in nursing homes (Hartigan, Kelleher, McCarthy, & Cornally, 2021; Ladiesse, Léonard, & Birmelé, 2020). Abbasi's paper (Abbasi, 2020) pinpointed the effectiveness of pseudo-contact, notably balcony chatting, but further laid out a questionable therapeutic approach in the use of psychotics.

In addition to these proximal PBPs addressing the link between SIL and social interactions among LTCF residents, innovative interventions were also undertaken to either prevent or minimise the transmission of the virus in terms of COVID-19 prevention and case management. Prevention-related interventions that directly prevent outbreaks, subsequently ensure residents in breaking their fear; also contribute to reducing SIL among residents in the context of quarantine or congregation (Dichter et al., 2020).

## STRENGTHS AND LIMITATIONS

To the best of our knowledge, this is one of the first scoping reviews to examine the PBPs implemented in LTCFs during the COVID-19 pandemic. During the pandemic, it has become evident that technologies can be the lifeline between residents and their loved ones outside the LTCF, in addition to supporting overworked LTCF staff (Eghtesadi, 2020; Flint, Bingham, & Iaboni, 2020). In addition to the proximal PBPs offering interaction opportunities for residents and their families, the use of an intersectional lens of analysis laid out distal PBPs health interventions (e.g., screening and testing). It is worth noting that our review did not capture any literature describing PBPs implemented during the two last major pandemics, namely SARS (which took place in 2003) (Skowronski et al.,



2005) and H1N1 (which took place in 2009) (Alenzi, 2010). Despite the plausibility of the hypothesis that minority groups (sexual, linguistic, etc.) might be at an increased risk and therefore benefited from specific approaches, none of the studies provided evidence for this. None of the studies has neither informed on the interactions that residents without families have benefited. The low yield (16 studies) of this review is certainly due to the recency and on-going status of projects, as we came across several relevant protocols for ongoing studies.

Finally, as it could be seen, we did not find any studies on that subject dealing with SARS or H1N1; nor any studies devoted to COVID-19 immunisation, even though this action has critically decreased mortality among LTCF residents (Macchia et al., 2021).

## CONCLUSION

Greater efforts are required to further develop research on the barriers that older adults in LTCFs encounter, and to tailor initiatives that address SIL and strengthen infection control in LTCFs. This scoping review found two classes of approaches implemented to address SIL experienced by residents that included (i) *proximal strategies* such as remote connection, physical pseudo-contact or direct contact, and (ii) COVID-19 prevention-related interventions as distal PBPs. Given the substantial evolution of evidence over the pandemic, this study provided the opportunity to contextualize the interpretation of the results, and more importantly, to understand the possible evolution of PBPs based on the evidence. Internet access becomes essential to support social connectedness and enhance residents' quality of life and well-being, but LTCFs remain the least computerized of the health systems (Inforoute Santé Canada, 2020; Ontario Association of Residents' Councils, 2020; Saskatchewan Health Authority, 2019). Widespread adoption of various technologies in LTCFs has been largely impeded by limited wireless access (Eghtesadi, 2020). From lessons learnt from the COVID-19 epidemic, other efforts are needed to improve LTCFs' residents overall wellbeing including redesigning the architectural structure of buildings (e.g., single rooming policy) (Office of the Premier, 2020; Sinha, 2020; Stall, Jones, Brown, Rochon, & Costa, 2020) and increasing staffing levels in LTCF (Britten, 2020). Of all the lessons that the COVID-19 pandemic has taught us, as promoted by health policy makers elsewhere in the world, aging in place policies should be increasingly prioritized.

## DATA ACCESSIBILITY STATEMENT

The datasets generated and/or analysed during the current study, that would be necessary to interpret,

replicate and build upon the findings reported in the article, will be made publicly available as requested by the funding institution.

## ABBREVIATIONS

**LTCF:** Long-term Care Facility

**CFHI:** Canadian Foundation for Healthcare Improvement

**CIHR:** Canadian Institutes for Health Research

**SIL:** Social Isolation and Loneliness

## ADDITIONAL FILES

The additional files for this article can be found as follows:

- **Appendix 1.** Inclusion and exclusion criteria: Participants, Interventions, Outcome, Time and Setting (PIOTS). DOI: <https://doi.org/10.31389/jltc.138.s1>
- **Appendix 2.** Concept Plan. DOI: <https://doi.org/10.31389/jltc.138.s2>
- **Supplementary Table 1.** Full characteristics of the studies included in the review. DOI: <https://doi.org/10.31389/jltc.138.s3>
- **Supplementary Table 2.** Included studies characteristics. DOI: <https://doi.org/10.31389/jltc.138.s4>

## ETHICS AND CONSENT

As this scoping review is part of a 'Social isolation and loneliness project', we received ethical approval from the Ethics Committees for Research of the University of Ottawa (H-08-21-7314) the University of Moncton (dossier 2021-073) and the Research Ethics Board of the Primary Care and Population Health Research Sector of the CIUSSS of the Capitale-Nationale (2021-2303, \_SPPL).

## PATIENT INVOLVEMENT

No patient will be involved. Patients will not be invited to comment on the study protocol design and were not consulted as to how this work may inform patient-relevant outcomes or how a patient might interpret results. However, findings will be disseminated to the public and the healthcare professional networks via conferences, publications, and presentations.

## ACKNOWLEDGEMENTS

This paper stems from the research grant protocol of the PI's research program on aging and health technology, granted by the Canadian Institutes for Health Research

(CIHR) for the program ‘Implementation Science Teams – Strengthening Pandemic Preparedness in Long-Term Care’. We are grateful to the project partners namely: Réseau Compassion Network; Résidence Despins-Villa Aulneau; Jeffery Hale and Saint Brigid’s Home (Quebec); and Manoir Edith B. Pinet Inc. and Résidences Lucien Saindon (New Brunswick). Thanks go to Émilie Bélanger for her contribution to the language edition.

## FUNDING INFORMATION

This project is funded by the Canadian Institutes of Health Research (CIHR) for the program ‘Implementation Science Teams – Strengthening Pandemic Preparedness in Long-Term Care’ (Operating Grant funds: FRN 174865) [<https://webapps.cihr-irsc.gc.ca/decisions/p/main.html?lang=en#fq=%7B!tag=pinames%7Dpinames%3A%22Beogo%20%20Idrissa%20%20Lussier%20%20Daniel%22&sort=namesort%20asc&start=0&rows=20>]. The CIHR had no role in the process (study design, execution, data analyses, or publication of findings).

## COMPETING INTERESTS

The authors have no competing interests to declare.

## AUTHOR CONTRIBUTIONS

IB conceived the initial idea for the study, designed the search strategy, and is the guarantor of the review. IB, SD, NJ-CB, MPG and ETN were involved in drafting ideas and in a preliminary literature review and provided their expert input on LTCFs. They were also involved in revising drafts of the manuscript. NJ-CB lead data extraction and closely worked with IB to verify all details before submission. All authors read and approved the final version of the manuscript.

## AUTHOR AFFILIATIONS

**Idrissa Beogo, RN, MBA, PhD**  [orcid.org/0000-0003-1467-2169](https://orcid.org/0000-0003-1467-2169)  
École des sciences infirmières | School of Nursing, Faculty of Health Sciences, University of Ottawa, Ottawa, Ontario, Canada; Center of Research and Study for Health, National University Autonomous of Nicaragua, Managua (CIES UNAN-Managua), Nicaragua; Institut du Savoir Montfort, Ottawa, Ontario, Canada

**Nebila Jean-Claude Bationo, PhD**

Faculté des sciences de l’éducation, Université Laval, Québec, QC, Canada

**Stephanie Collin, PhD**

École des hautes études publiques, Université de Moncton, Nouveau Brunswick, Moncton, Canada

**Diane Tapp, RN, PhD**  [orcid.org/0000-0002-2818-0141](https://orcid.org/0000-0002-2818-0141)

Faculté des sciences infirmières, Université Laval, Québec, QC, Canada

**Jean Ramdé**  [orcid.org/0000-0003-2190-5848](https://orcid.org/0000-0003-2190-5848)

Faculté des sciences de l’éducation, Université Laval, Québec, QC, Canada

**Marie-Pierre Gagnon, PhD**  [orcid.org/0000-0002-0782-5457](https://orcid.org/0000-0002-0782-5457)

Faculté des sciences infirmières, Université Laval, Québec, QC, Canada; VITAM, Centre de recherche en santé durable, Université Laval, Québec, QC, Canada; Centre de recherche du centre hospitalier de l’Université Laval (CHU), Québec Canada

**Eric Nguemeleu Tchouaket, PhD**  [orcid.org/0000-0002-4309-0478](https://orcid.org/0000-0002-4309-0478)

Département des sciences infirmières, Université du Québec en Outaouais, Québec, QC, Canada; Université de Montréal, Département de gestion, d’évaluation et de politique de santé, Montréal, Québec, Canada

**Drissa Sia, MD, PhD**  [orcid.org/0000-0003-0044-8465](https://orcid.org/0000-0003-0044-8465)

Département des sciences infirmières, Université du Québec en Outaouais, Québec, QC, Canada; Université de Montréal, Département de médecine sociale et préventive, École de santé publique, Montréal, Québec, Canada

## REFERENCES

- Abbasi, J.** 2020. Social isolation—The other COVID-19 threat in nursing homes. *JAMA – Journal of the American Medical Association*, 324(7): 619–620. DOI: <https://doi.org/10.1001/jama.2020.13484>
- Akhtar-Danesh, N, Baumann, A, Crea-Arsenio, M and Antonipillai, V.** 2022. COVID-19 excess mortality among long-term care residents in Ontario, Canada. *PLoS One*, 17(1): e0262807–e0262807. DOI: <https://doi.org/10.1371/journal.pone.0262807>
- Alenzi, FQ.** 2010. H1N1 update review. *Saudi Med J*, 31(3): 235–246. DOI: <https://doi.org/10.5144/0256-4947.2010.246>
- Alzheimer’s Society.** 2020. Thousands of people with dementia dying or deteriorating – Not just from coronavirus as isolation takes its toll. *Alzheimer’s Society*, Available at <https://www.alzheimers.org.uk/news/2020-06-05/thousands-people-dementia-dying-or-deteriorating-not-just-coronavirus-isolation>.
- Arksey, H and O’Malley, L.** 2005. Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1): 19–32. DOI: <https://doi.org/10.1080/1364557032000119616>
- Armitage, R and Nellums, L.** 2020. COVID-19 and the consequences of isolating the elderly. *Lancet Public Health*, 20: S2468–2667. DOI: [https://doi.org/10.1016/S2468-2667\(20\)30061-X](https://doi.org/10.1016/S2468-2667(20)30061-X)
- Balaam, MC.** 2015. A concept analysis of befriending. *J Adv Nurs*, 71(1): 24–34. DOI: <https://doi.org/10.1111/jan.12553>

- Bangerter, L, Van Haitsma, K, Heid, A and Abbott, K.** 2016. 'Make me feel at ease and at home': Differential care preferences of nursing home residents *Gerontologist*, 56: 702–713. DOI: <https://doi.org/10.1093/geront/gnv026>
- Bethell, J, Aelick, K, Babineau, J, Bretzlaff, M, Edwards, C, Gibson, J-L, ... and McGilton, KS.** 2021. Social connection in long-term care homes: A scoping review of published research on the mental health impacts and potential strategies during COVID-19. *Journal of the American Medical Directors Association*, 22(2): 228–228. DOI: <https://doi.org/10.1016/j.jamda.2020.11.025>
- Betini, R, Milicic, S and Lawand, C.** 2021. The impact of the COVID-19 pandemic on long-term care in Canada. *Healthc Q*, 24(3): 13–15. DOI: <https://doi.org/10.12927/hcq.2021.26625>
- Britten, L.** 2020. Province announces 495 long-term care beds for seniors in Interior health region. *CBC News*. Available at <https://www.cbc.ca/news/canada/british-columbia/province-announces-495-long-term-care-beds-1.5647869>.
- Brydon, A, Bhar, S, Doyle, C, Batchelor, F, Lovelock, H, Almond, H, ... and Wuthrich, V.** 2021. National Survey on the Impact of COVID-19 on the Mental Health of Australian Residential Aged Care Residents and Staff. *Clinical Gerontologist*, 1–13. DOI: <https://doi.org/10.1080/07317115.2021.1985671>
- Canadian Foundation for Healthcare Improvement.** 2020. Reimagining care for older adults next steps in Covid-19: Response in long-term care and retirement homes what we heard. Available at <https://www.cfhi-fcass.ca/docs/default-source/itr/tools-and-resources/reimagining-care-for-older-adults-covid-19-e.pdf>.
- Canadian Institute for Health Information (CIHI).** 2016. Dementia in long-term care.
- Canadian Institute for Health Information.** 2020. Pandemic experience in the long-term care sector: How does Canada compare with other countries?
- Chen, MK, Chevalier, JA and Long, EF.** 2021. Nursing home staff networks and COVID-19. *Proceedings of the National Academy of Sciences – PNAS*, 118(1): 1. DOI: <https://doi.org/10.1073/pnas.2015455118>
- Chen, Y-RR and Schulz, PJ.** 2016. The effect of information communication technology interventions on reducing social isolation in the elderly: A systematic review. *J Med Internet Res*, 18(1): e18. DOI: <https://doi.org/10.2196/jmir.4596>
- Choi, HK and Lee, SH.** 2021. Trends and effectiveness of ICT interventions for the elderly to reduce loneliness: A systematic review. *Healthcare (Basel)*, 9(3). DOI: <https://doi.org/10.3390/healthcare9030293>
- Collison, M, Beiting, KJ, Walker, J, Huisinigh-Scheetz, M, Pisano, J, Chia, S, ... and Gleason, LJ.** 2020. Three-tiered COVID-19 cohorting strategy and implications for memory-care. *Journal of the American Medical Directors Association*, 21(11): 1560–1562. DOI: <https://doi.org/10.1016/j.jamda.2020.09.001>
- Corno, D and Burns, RJ.** 2022. Loneliness and functional limitations among older adults with diabetes: Comparing directional models. *Journal of Psychosomatic Research*, 110740. DOI: <https://doi.org/10.1016/j.jpsychores.2022.110740>
- de Medeiros, MMD, Carletti, TM, Magno, MB, Maia, LC, Cavalcanti, YW and Rodrigues-Garcia, RCM.** 2020. Does the institutionalization influence elderly's quality of life? A systematic review and meta-analysis. *BMC Geriatrics*, 20(1): 44. DOI: <https://doi.org/10.1186/s12877-020-1452-0>
- Dichter, MN, Sander, M, Seismann-Petersen, S and Köpke, S.** 2020. COVID-19: It is time to balance infection management and person-centered care to maintain mental health of people living in German nursing homes. *Int Psychogeriatr*, 32(10): 1157–1160. DOI: <https://doi.org/10.1017/S1041610220000897>
- Dickens, AP, Richards, SH, Greaves, CJ and Campbell, JL.** 2011. Interventions targeting social isolation in older people: A systematic review. *BMC Public Health*, 11(1): 647. DOI: <https://doi.org/10.1186/1471-2458-11-647>
- Dolveck, F, Strazzulla, A, Noel, C, Aufaure, S, Tarteret, P, de Pontfarcy, A, ... and Diamantis, S.** 2021. COVID-19 among nursing home residents: Results of an urgent pre-hospital intervention by a multidisciplinary task force. *Braz J Infect Dis*, 25(1): 101039. DOI: <https://doi.org/10.1016/j.bjid.2020.11.004>
- Eghtesadi, M.** 2020. Breaking social isolation amidst COVID-19: A viewpoint on improving access to technology in long-term care facilities. *J Am Geriatr Soc*, 68(5): 949–950. DOI: <https://doi.org/10.1111/jgs.16478>
- Evansa, IEM, Martyra, A, Collinsa, R, Brayne, C and Clare, L.** 2019. Social isolation and cognitive function in later life: A systematic review and meta-analysis. *Journal of Alzheimer's Disease*, 70(70): S119–S144 S119 DOI: <https://doi.org/10.3233/JAD-180501>
- Fearn, M, Harper, R, Major, G, Bhar, S, Bryant, C, Dow, B, ... and Doyle, C.** 2021. Befriending older adults in nursing homes: Volunteer perceptions of switching to remote befriending in the COVID-19 era. *Clinical Gerontologist*, 44(4): 430–438. DOI: <https://doi.org/10.1080/07317115.2020.1868646>
- Flatharta, TÓ and Mulkerrin, EC.** 2020. Back to basics: Giant challenges to addressing Isaac's "Geriatric Giants" post COVID-19 crisis. *The Journal of Nutrition, Health & Aging*, 24(7): 705–707. DOI: <https://doi.org/10.1007/s12603-020-1425-1>
- Flint, AJ, Bingham, KS and Iaboni, A.** 2020. Effect of COVID-19 on the mental health care of older people in Canada. *International Psychogeriatrics*, 32(10): 1113–1116. DOI: <https://doi.org/10.1017/S1041610220000708>
- Follmann, A, Scholleman, F, Arnolds, A, Weismann, P, Laurentius, T, Rossaint, R and Czaplík, M.** 2021. Reducing loneliness in stationary geriatric care with robots and virtual encounters – A contribution to the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(9). DOI: <https://doi.org/10.3390/ijerph18094846>

- Gardiner, C, Geldenhuys, G and Gott, M.** 2018. Interventions to reduce social isolation and loneliness among older people: An integrative review. *Health Soc Care Community*, 26(2): 147–157. DOI: <https://doi.org/10.1111/hsc.12367>
- Gardiner, C, Laud, P, Heaton, T and Gott, M.** 2020. What is the prevalence of loneliness amongst older people living in residential and nursing care homes? A systematic review and meta-analysis. *Age Ageing*, 49(5): 748–757. DOI: <https://doi.org/10.1093/ageing/afaa049>
- Gilbert, GL.** 2020. COVID-19 in a Sydney nursing home: A case study and lessons learnt. *Med J Aust*, 213(9): 393–396. e391. DOI: <https://doi.org/10.5694/mja2.50817>
- González de Villambrosia, C, Martínez Peromingo, J, Ortiz Imedio, J, Álvarez de Espejo Montiel, T, García-Puente Suárez, L, Navas Clemente, I, ... and Barba Martín, R.** 2020. Implementation of an algorithm of cohort classification to prevent the spread of COVID-19 in nursing homes. *J Am Med Dir Assoc*, 21(12): 1811–1814. DOI: <https://doi.org/10.1016/j.jamda.2020.10.023>
- Hankivsky, O.** 2014. Intersectionality 101. Available at <https://bccampus.ca/wp-content/uploads/2020/07/Hankivsky-Intersectionality101-2014.pdf>.
- Hartigan, I, Kelleher, A, McCarthy, J and Cornally, N.** 2021. Visitor restrictions during the COVID-19 pandemic: An ethical case study. *Nurs Ethics*, 28(7–8): 1111–1123. DOI: <https://doi.org/10.1177/09697330211005078>
- Inforoute Santé Canada.** 2020. Sondage national des infirmières et infirmiers du Canada 2020-Utilisation des technologies de santé numériques au travail. Available at <https://infoway-inforoute.ca/en/component/edocman/resources/reports/benefits-evaluation/3812-2020-national-survey-of-canadian-nurses-use-of-digital-health-technology-in-practice>.
- Inzitari, M, Risco, E, Cesari, M, Buurman, BM, Kuluski, K, Davey, V, ... and Prvu Bettger, J.** 2020. Editorial: Nursing homes and long-term care after COVID-19: A new era? *The Journal of Nutrition, Health & Aging*, 24(10): 1042–1046. DOI: <https://doi.org/10.1007/s12603-020-1447-8>
- Ladiesse, M, Léonard, T and Birmelé, B.** 2020. Freedom in retirement home, facing confinement. *Ethique Sante*, 17(3): 147–154. DOI: <https://doi.org/10.1016/j.etiqe.2020.07.001>
- Leontjevas, R, Knippenberg, IAH, Smalbrugge, M, Plouvier, AOA, Teunisse, S, Bakker, C, ... and Gerritsen, DL.** 2021. Challenging behavior of nursing home residents during COVID-19 measures in the Netherlands. *Aging & Mental Health*, 25(7): 1314–1319. DOI: <https://doi.org/10.1080/13607863.2020.1857695>
- Levac, D, Colquhoun, H and O'Brien, KK.** 2010. Scoping studies: Advancing the methodology. *Implementation Science*, 5(1): 69. DOI: <https://doi.org/10.1186/1748-5908-5-69>
- Linehan, T, Bottery, S, Kaye, A, Millar, L, Sinclair, D and Watson, J.** 2014. 2030 vision: The best and worst futures for older people in the UK. Available at [http://www.ilcuk.org.uk/index.php/publications/publication\\_details/2030\\_vision\\_the\\_best\\_and\\_worst\\_futures\\_for\\_older\\_people\\_in\\_the\\_uk](http://www.ilcuk.org.uk/index.php/publications/publication_details/2030_vision_the_best_and_worst_futures_for_older_people_in_the_uk).
- Liotta, G, Marazzi, M, Orlando, S and Palombi, L.** 2020. Is social connectedness a risk factor for the spreading of COVID-19 among older adults? The Italian paradox. *PLoS ONE*, 15(5): e0233329. DOI: <https://doi.org/10.1371/journal.pone.0233329>
- Lipsitz, LA, Lujan, AM, Dufour, A, Abrahams, G, Magliozzi, H, Herndon, L and Dar, M.** 2020. Stemming the tide of COVID-19 infections in Massachusetts nursing homes. *J Am Geriatr Soc*, 68(11): 2447–2453. DOI: <https://doi.org/10.1111/jgs.16832>
- Litins'ka, Y and Karpenko, O.** 2020. Does self-isolation violate the right to liberty? An analysis of the European Court of Human Rights' practice in light of the Ukrainian experience. *European Journal of Health Law*, 27(4): 368–385. DOI: <https://doi.org/10.1163/15718093-BJA10024>
- Macchia, A, Ferrante, D, Angeleri, P, Biscayart, C, Mariani, J, Esteban, S, ... and de Quirós, FGB.** 2021. Evaluation of a COVID-19 vaccine campaign and SARS-CoV-2 infection and mortality among adults aged 60 years and older in a middle-income country. *JAMA Netw Open*, 4(10): e2130800. DOI: <https://doi.org/10.1001/jamanetworkopen.2021.30800>
- MacLeod, S, Tkatch, R, Kraemer, S, Fellows, A, McGinn, M, Schaeffer, J and Yeh, CS.** 2021. COVID-19 era social isolation among older adults. *Geriatrics (Basel, Switzerland)*, 6(2): 52. DOI: <https://doi.org/10.3390/geriatrics6020052>
- Ministère de la Santé et des Services Sociaux.** 2012. Cadre de référence ministériel d'évaluation de la performance du système public de santé et de services sociaux à des fins de gestion. Available at [https://www.msss.gouv.qc.ca/professionnels/documents/mesure-et-analyse-de-laperformance/Cadre\\_de\\_reference\\_ministeriel\\_devaluation\\_de\\_la\\_performance.pdf](https://www.msss.gouv.qc.ca/professionnels/documents/mesure-et-analyse-de-laperformance/Cadre_de_reference_ministeriel_devaluation_de_la_performance.pdf). Accessed 25 December 2021.
- Ministère de la Santé et des Services Sociaux.** 2017. La prévention et le contrôle des infections nosocomiales: cadre de référence à l'intention des établissements de santé et de services sociaux du Québec. Available at <https://publications.msss.gouv.qc.ca/msss/fichiers/2017/17-209-02W.pdf>. Accessed 25 December 2021.
- Mo, S and Shi, J.** 2020. The psychological consequences of the COVID-19 on residents and staff in nursing homes. *Work, Aging and Retirement*, 6(4): 254–259. DOI: <https://doi.org/10.1093/workar/waaa021>
- Mobasseri, K, Azami-Aghdash, S, Khanijahani, A and Khodayari-Zarnaq, R.** 2020. The main issues and challenges older adults face in the SARS-CoV-2 pandemic: A scoping review of literature. *Iranian Journal of Public Health*, 49(12): 2295–2307. DOI: <https://doi.org/10.18502/ijph.v49i12.4810>
- Moraes, ENd, Viana, LdG, Resende, LMH, Vasconcellos, L S, Moura, AS, Menezes, A, ... and Rabelo, R.** 2020. COVID-19 in long-term care facilities for the elderly: laboratory screening and disease dissemination prevention strategies. *COVID-19 nas instituicoes de longa*



*permanencia para idosos: estrategias de rastreamento laboratorial e prevencao da propagacao da doenca.*, 25(9): 3445–3458. DOI: <https://doi.org/10.1590/1413-81232020259.20382020>

**National Academics of Sciences Engineering and Medicine.** 2020. Social isolation and loneliness in older adults: Opportunities for the health care system. Washington, DC: The National Academic Press.

**National Seniors Council.** 2014. Report on the social isolation of seniors 2013–2014.

**National Seniors Council (NSC).** 2017. Who's at risk and what can be done about it? A review of the literature on the social isolation of different groups of seniors.

**Office, E, Rodenstein, M, Merchant, T, Pendergrast, T and Lindquist, L.** 2020. Reducing social isolation of seniors during COVID-19 through medical student telephone contact. *J Am Med Dir Assoc*, 21(7): 948–950. DOI: <https://doi.org/10.1016/j.jamda.2020.06.003>

**Office of the Premier.** 2020. Ontario accelerating the development of long-term care homes: new approach will lead to more modern and upgraded facilities with air conditioning. Available at <https://news.ontario.ca/en/release/57613/ontario-accelerating-the-development-of-long-term-care-homes>.

**Ontario Association of Residents' Councils.** 2020. Courageously living through COVID-19 together: Residents and families. OARC. Available at <https://www.ontarc.com/>.

**Organisation mondiale de la santé.** 2020. Considérations liées à la santé mentale et au soutien psychosocial pendant la pandémie de COVID-19.

**Ouzzani, M, Hammady, H, Fedorowicz, Z and Elmagarmid, A.** 2016. Rayyan – A web and mobile app for systematic reviews. *Systematic Reviews*, 5: 210. DOI: <https://doi.org/10.1186/s13643-016-0384-4>

**Rico-Urbe, LA, Caballero, FF, Martin-Maria, N, Cabello, M, Ayuso-Mateos, JL and Miret, M.** 2018. Association of loneliness with all-cause mortality: A meta-analysis. *PLoS ONE*, 13(1). DOI: <https://doi.org/10.1371/journal.pone.0190033>

**Sacco, G, Lléonart, S, Simon, R, Noublanche, F and Annweiler, C.** 2020. Communication technology preferences of hospitalized and institutionalized frail older adults during COVID-19 confinement: Cross-sectional survey study. *JMIR Mhealth Uhealth*, 8(9): e21845. DOI: <https://doi.org/10.2196/21845>

**Saskatchewan Health Authority.** 2019. Saskatchewan health authority long-term care quality assessment. *CEO tours, 2019. Regina.*

**Shankar, A, McMunn, A, Banks, J and Steptoe, A.** 2011. Loneliness, social isolation, and behavioral and biological health indicators in older adults. *Health Psychol*, 30(4): 377–385. DOI: <https://doi.org/10.1037/a0022826>

**Sinha, S.** 2020. The post-pandemic future: We will stop warehousing older people in care homes. Available at <https://torontolife.com/city/>

[the-post-pandemic-future-we-will-stop-warehousing-older-people-in-care-homes/](https://doi.org/10.1017/S0144686X00003457).

**Siu, HY-H, Kristof, L, Elston, D, Hafid, A and Mather, F.** 2020. A cross-sectional survey assessing the preparedness of the long-term care sector to respond to the COVID-19 pandemic in Ontario, Canada. *BMC Geriatrics*, 20(1): 421. DOI: <https://doi.org/10.1186/s12877-020-01828-w>

**Skowronski, DM, Astell, C, Brunham, RC, Low, DE, Petric, M, Roper, RL, ... and Babiuk, L.** 2005. Severe acute respiratory syndrome (SARS): A year in review. *Annu Rev Med*, 56: 357–381. DOI: <https://doi.org/10.1146/annurev.med.56.091103.134135>

**Song, R, Kim, HS, Yoo, SJ, Lee, K, Park, JH, Jang, JH, ... and Kim, JN.** 2020. COVID-19 in nursing facilities: Experience in Republic of Korea. *Osong Public Health Res Perspect*, 11(4): 164–169. DOI: <https://doi.org/10.24171/j.phrp.2020.11.4.04>

**Stall, NM, Jones, A, Brown, KA, Rochon, PA and Costa, AP.** 2020. For-profit long-term care homes and the risk of COVID-19 outbreaks and resident deaths. *Canadian Medical Association Journal*, 192(33): E946–E955. DOI: <https://doi.org/10.1503/cmaj.201197>

**Statistics Canada.** 2017. Data tables, 2016 Census: Age (in single years) and average age and sex for the population – Canada, Provinces and Territories, Census Metropolitan Areas, and Census Agglomerations *Catalogue 98-400-X2016001*, Released May 3, 2017.

**Statistics Canada (SC).** 2017. Data tables, 2016 Census: Dwelling type, age and sex for the population in occupied dwellings – Canada, Provinces and Territories, Census Metropolitan Areas, and Census Agglomerations *Catalogue 98-400-X2016021*, Released May 3, 2017.

**Turcotte, M and Sawaya, C.** 2015. Senior care: Differences by type of housing *Catalogue No. 75-006-X, Statistics Canada: Ottawa.*

**United Nations.** 2020. Policy brief: The impact of COVID-19 on older persons. Available at <https://unsdg.un.org/sites/default/files/2020-05/Policy-Brief-The-Impact-of-COVID-19-on-Older-Persons.pdf>.

**Van der Roest, HG, Prins, M, van der Velden, C, Steinmetz, S, Stolte, E, van Tilburg, TG and de Vries, DH.** 2020. The impact of COVID-19 measures on well-being of older long-term care facility residents in the Netherlands. *J Am Med Dir Assoc*, 21(11): 1569–1570. DOI: <https://doi.org/10.1016/j.jamda.2020.09.007>

**Wammes, JD, Kolk, Msc, D, van den, B, Md, JH, MacNeil, V, ... PhD, M.** 2020. Evaluating perspectives of relatives of nursing home residents on the nursing home visiting restrictions during the COVID-19 crisis: A Dutch cross-sectional survey study. *Journal of the American Medical Directors Association*, 21(12): 1746–1750. DOI: <https://doi.org/10.1016/j.jamda.2020.09.031>

**Wenger, GC, Daviesj, R, Shahtahmasebi, S and Scott, A.** 1996. Social isolation and loneliness in old age: Review and model refinement. *Ageing and Society*, 16: 333–358. DOI: <https://doi.org/10.1017/S0144686X00003457>

**Windle, K, Francis, J and Coomber, C.** 2011. Preventing loneliness and social isolation: Interventions and outcomes. *Social Care Institute for Excellence Research Briefing*, 39.

**Wu, Z and McGoogan, JM.** 2020. Characteristics of and important lessons from the coronavirus disease 2019

(COVID-19) outbreak in China: Summary of a report of 72,314 cases from the Chinese Center for Disease Control and Prevention. *JAMA – Journal of the American Medical Association*, 323(13): 1239–1242. DOI: <https://doi.org/10.1001/jama.2020.2648>

---

#### TO CITE THIS ARTICLE:

Beogo, I, Bationo, NJ-C, Collin, S, Tapp, D, Ramdé, J, Gagnon, M-P, Tchouaket, EN and Sia, D. 2022. Promising Best Practices Implemented in Long-Term Care Facilities During the COVID-19 Pandemic to Address Social Isolation and Loneliness: A Scoping Review. *Journal of Long-Term Care*, (2022), pp. 298–311. DOI: <https://doi.org/10.31389/jltc.138>

**Submitted:** 09 February 2022    **Accepted:** 14 October 2022    **Published:** 29 December 2022

#### COPYRIGHT:

© 2022 The Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported International License (CC BY-NC-ND 3.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. See <http://creativecommons.org/licenses/by-nc-nd/3.0/>.

*Journal of Long-Term Care* is a peer-reviewed open access journal published by LSE Press.