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## Discussion

# COVID-19 pandemic in long-term care: An international perspective for policy considerations



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## ABSTRACT

This paper identifies key factors rooted in the systemic failings of the long-term care sector amongst four high income countries during the COVID-19 pandemic. The goal is to offer practice and policy solutions to prevent future tragedies. Based on data from Australia, Canada, Spain and the United States, the findings support evidence-based recommendations at macro, meso and micro levels of practice and policy intervention. Key macro recommendations include improving funding, transparency, accountability and health system integration; and promoting not-for-profit and government-run long-term care facilities. The meso recommendation involves moving from warehouses to “green houses.” The micro recommendations emphasize mandating recommended staffing levels and skill mix; providing infection prevention and control training; establishing well-being and mental health supports for residents and staff; building evidence-based practice cultures; ensuring ongoing education for staff and nursing students; and fully integrating care partners, such as families or friends, into the healthcare team. Enacting these recommendations will improve residents' safety and quality of life, families' peace of mind, and staff retention and work satisfaction.

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## What is known?

- Residents in long-term care facilities were disproportionately affected by the COVID-19 pandemic.
- Quality of life and care provision in long-term care are not new concerns.

## What is new?

- Strengthening long-term care requires macro-, meso- and micro-level interventions.
  - Macro-level recommendations center on improving funding, transparency, accountability and health system integration, as well as promoting not-for-profit and government-run long-term care facilities.
  - The meso-level recommendation focuses on moving long-term care facilities from warehouses to “green houses.”
  - Micro level recommendations include mandating staffing levels and skill mix; providing infection prevention and control training; establishing well-being and mental health supports for resident and staff; building evidence-based practice cultures; ensuring ongoing education for staff and nursing students; and fully integrating care partners into the health-care team.

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## 1. Introduction

Experts, scientists and government officials first learned of SARS-CoV-2/COVID-19 in late 2019 and early 2020. As the virus spread worldwide, morbidity and mortality rose exponentially, with one population as the frontrunner: residents of long-term care facilities (LTCF). By March 11, 2020, the World Health Organization (WHO) reported over 118,000 cases across 114 countries, declared a pandemic worldwide and called an emergency response [1]. Many countries followed with regional emergency measures, such as stay-at-home orders, shutdowns of travel and businesses, and visitor restrictions in healthcare facilities.

The health system was ill prepared to tackle this infectious virus, and the impact on LTCF was particularly harsh. In the Organization for Economic Co-operation and Development (OECD) countries, LTCFs provide care to 25 million residents, and by May 2021, LTCF resident deaths accounted for 40% of the total COVID-19 deaths [2,3].

Historically, there is little precedent for such a difficult scenario in LTCF. Epidemic deaths starting in the early 1900s resulted from communicable infectious diseases, such as tuberculosis and pneumonia in older adults, and typhoid, gastrointestinal infections and smallpox across age groups [4,5]. The 1918 influenza pandemic sickened 500 million persons, causing 50 million deaths mostly among 15–40-year-olds [6]. Close contact propelled contagion in congested urban living quarters without sanitation. Improvements in sanitation and vaccinations lowered the death rates, and deaths shifted to non-communicable diseases. Onward from the mid-1950s, close contact for spread of contagion occurred in structured congregate living, as “rest homes” evolved to nursing homes, i.e., LTCF [7].

News from Europe in early 2020 painted a grim picture in long-term care (LTC). Reports showed an average mortality of 50%, particularly in France and Ireland [8,9]. By June 2020, 19,550 LTCF residents in Spain had died—68% of confirmed COVID-19 [10]. This grim reality soon arrived in North America. In Canada, by June 2020, 5,324 LTCF residents died of COVID-19, accounting for 81% of reported deaths in the country [11]. In the U.S., between February and April 2020, the total cases and deaths in LTCF were 53% of all cases and 83% of all deaths [8,12]. In Australia, when COVID-19 arrived on March 3, 2020, best practices were applied immediately and by May, the government announced easing of restrictions [13]. But as the virus moved across the country, by January 2021, 75% of all COVID-19 deaths were among LTCF residents [14]. Data from the four countries (Appendix A) show the COVID-related deaths in LTCF as a percentage of the total COVID-19 related deaths [15–18].

Emergency public health measures in each region have operated intermittently and for varied durations between 2020 and 2022. This is one major factor confounding analyses of LTCF case and mortality data. Other factors include inconsistency in operational definitions of reportable variables; inaccurate counts; and delays in reporting data [19–23]. As a result, researchers and epidemiologists continued to revise numbers and seek patterns of case and mortality from national, state and local reports [2,8,15,19,24,25].

A compounding factor in illness and death was a less conspicuous social determinant of health: *ageism*. A review conducted before COVID-19 analyzed over 400 scientific studies, finding that ageism led to significantly worse health outcomes in 95.5% of the studies [26]. The detrimental impacts are pervasive—across a variety of geographies, demographics and health domains, as well as across structural and individual levels [26]. Older people are undervalued and this was evident during the pandemic with the lack of preparation for such a crisis in LTCF [27,28].

## 2. Factors affecting LTC during the COVID-19 pandemic

### 2.1. Macro factors

Key macro factors affecting LTC include national policy, financial support and LTCF ownership type.

Beginning in mid-2020, experts focused on gaps in LTC that were exacerbated by COVID-19 and required urgent attention [2,3,8,14,17,18,27–55]. The four countries studied in this paper demonstrated a failure to value and invest in a safe and effective LTC system through adequate national policies and funding [54].

#### 2.1.1. Policy and finances

In the four countries studied, social services, including health, compete with other budgetary priorities, such as infrastructure. The LTC sector has long been under-resourced [3,9,29,56], despite “on-the-books” plans for high-quality LTCF. In effect, high-quality care depends on the country and relevant national legislation requiring prescribed levels of services [2,7,46,50,56–58].

In Australia, the government created the Aged Care Quality and Safety Commission in 2019 to assess and monitor government-funded aged care services benchmarked with the Aged Care Quality Standards [59]. Aged care and LTCF are government funded. Funding is provided via Medicare, a national insurance scheme enabling free or subsidized health care. Recently, previous funding models were retired following criticism related to inequitable funding, i.e., the Resident Classification Instrument (2001) and the Aged Care Funding Instrument (2008). In October 2022, the Australian Government introduced the new Australian National Aged Care Classification (AN-ACC) funding model, which provides equitable funding to government-funded residential aged care homes [60]. It ensures each aged care home can meet the costs of caring for people in residential aged care [60].

In Canada, the Standards Council of Canada and the Canadian Standards Association Group issued two new national standards for LTC in 2023 [61]. LTC is a shared responsibility among federal, provincial and territorial governments. The federal government contributes to health services by providing a percentage of national tax revenues to the provinces and territories, through the Canada Health Transfer payments. Provinces and territories distribute budgetary allocations to health sectors and services, including LTCF [17]. In addition to public funding, LTC is highly influenced by the private sector. The COVID-19 pandemic highlighted long-standing and systemic challenges in Canada’s LTCF. Recognizing Canadians’ concern, the federal government’s 2020 Fall Economic Statement committed \$1 billion through the Safe Long-term Care Fund to support provinces and territories in protecting those living and working in LTCF, and improving infection prevention and control measures [62].

In the U.S., the initiatives supporting nursing home care began in 1986 with an Institute of Medicine Report and the 1987 Nursing Home Reform Act [63]. Federal legislation provides Medicare (insurance for adults over age 65) as a payment system for healthcare and skilled care stays in LTCF. Another payment system, Medicaid, is a joint finance partnership to meet a federal mandate for each state to allocate federal and state funds to provide care to LTCF residents. Medicaid is the largest source of funding for LTC, including nursing care center and personal care services. LTCF residents also have private insurance [46,56].

In Spain, the LTC system is funded by central- and regional-level taxes as well as individual copayments [64]. The system is managed by the regional governments, and its funding and regulation are decentralized. It is regulated by the Personal Autonomy and Dependent Care Law (39/2006), or the Dependency Law, which universalized access to LTC services and expanded public funding

[64]. Co-payment arrangements vary by region and include either cash subsidies or a number of hours of home care support, based on criteria-based needs assessment established per region [64].

The Spanish Ministry of Health took the lead during the COVID-19 pandemic at both the national and regional levels. Local governments provided guidance, specifically regarding logistical support and in rural areas. An assessment of the organization and governance of the pandemic response in LTCF showed that better preparedness would have reduced the reaction time and the harm [65]. Insufficient recognition, lack of visibility and inadequate LTCF policies led to delayed preventative measures compared to other healthcare services [66]. The marginalization of LTC resulted in deficient resources to implement safe and quality measures [66].

### 2.1.2. LTCF ownership and COVID-19 outcomes

Debates and studies have asked whether ownership status of LTCF impacted their performance and outcomes during the pandemic. The disproportionate number of LTCF residents among COVID-19 deaths is agreed upon [67–69]. The layers involved in the spread of the virus are many, complex and intersecting, such as socioeconomic status, ethnicity, crowding and staffing. The factor of LTCF ownership involves three categories: for-profit (corporations, partnerships, and LLCs [limited liability companies]); non-profit (faith-based and private); and government-owned (considered non-profit).

In the state of Victoria, Australia, the highest numbers of infections and deaths occurred in for-profit homes [41]. Publicly owned non-profit facilities experienced no COVID-19 fatalities [36].

A Canadian study revealed that outbreaks happened more often in for-profit than in non-profit settings [52]. Municipal funding allocated to non-profit LTCF was found to facilitate better staffing and capital expenditures [52].

A study from Spain explored 15 variables, including public expenditure, coverage ratio, ownership type and LTCF size in 17 jurisdictions [33,55]. There is positive correlation between the number of COVID-19 related deaths and the number of privately owned LTCF [33,55]. Also, larger LTCF had more deaths attributed to COVID-19. The study concluded that the LTCF model best prepared to address COVID-19 is a non-profit home with fewer than 25 residents [33,55].

Bach-Mortensen and colleagues (2021) reviewed 32 studies from Canada, England, France, Scotland and the U.S. to examine research on variation in outbreaks and infections across for-profit, non-profit and public care homes [31]. There was moderate evidence of a positive association between COVID-19 deaths and for-profit ownership, and no studies found for-profit ownership to be associated with fewer COVID-19 infections [31]. In their conclusion, Bach-Mortensen and colleagues (2021) identified a systematic pattern of exacerbated COVID-19 outcomes among for-profit care homes [31].

Kruse and colleagues (2021) analyzed 18 papers from the U.S., Canada and France, reviewing ownership structure of nursing homes and resident outcomes during COVID-19 [43]. They analyzed LTCF ownership as well as other relevant variables, including 1) organizational factors, such as facility size; 2) process factors impacting infection prevention and control, such as staffing ratios; and 3) contextual factors, such as location and community rates of COVID-19 transmission [43]. A statistically controlled analysis of outcomes did not favor one type of ownership over another [43]. Their recommendations to achieve quality outcomes include improved regulations requiring higher minimum standards for both not-for-profit and for-profit entities [43].

The OECD concluded that their participant countries have different models of funding and regulation for LTCF, and no clear differences in pandemic outcomes were observed across funding

models. It was noted, however, that countries with centralized (e.g., government-owned) regulation and organization of LTC (e.g., in Australia, Austria, Hungary, Slovenia) generally had lower numbers of COVID-19 cases and deaths [24]. Variables such as chain ownership and the size and age of LTCF structures might also have had an impact [31,43,48,52].

## 2.2. Meso factors

The meso factors include the prohibition of visitors to LTCF, geographic location of LTCF, and LTCF building structure.

### 2.2.1. Prohibition of visitors by national or state directives

Prohibiting visitations to LTCF was a universal administrative response and was intended to protect LTCF residents, since the means of virus spread was unknown, and facilities lacked sufficient personal protective equipment (PPE). Sadly, this action had profound negative effects on residents, families and staff. It blocked family members, who are often residents' caregivers; impeded constancy as a source of comfort and orientation; and increased families' anguish during this uncertain, desperate time [46,70]. In its analysis, the Canadian National Institute on Ageing concluded that, by July 2020, "the risks associated with ongoing blanket visitor restrictions outweigh the benefits associated with preventing COVID-19 outbreaks in LTC homes" [47, p. 8].

An Australian Royal Commission on LTC Quality and Safety recommended that "the Australian Government should immediately fund providers that apply for funding to ensure there are adequate staff available to allow continued visits to people living in residential aged care by their families and friends" [29, p. 171]. Similarly, several Canadian organizations demanded family reunification [17,71,72]. In June 2020, in the U.S., Centers for Medicare & Medicaid Services (CMS) recommended modifying visitor restrictions for special circumstances and at the discretion of the facility based on available PPE, ability to screen visitors, staffing levels, and prevalence of COVID-19 in the community [46].

### 2.2.2. Rural versus urban LTCF settings

Rural areas generally suffered from more COVID-19 cases and higher mortality in hospitals [73], but the disparities between rural and urban settings precede the pandemic [74]. At the pandemic's onset, the weekly rural death rate was more than two times higher than the urban rate for months at a time [75]. Over the course of the pandemic, about 37% more rural Americans than urban Americans died from COVID-19, when the deaths are adjusted for population size [75]. By February 2021, the rural cumulative death rate was 16% higher than the urban cumulative rate [75].

While rural isolation offers some protection against COVID-19, it can also contribute to unique vulnerabilities to infection. Nurses from rural LTCF were especially dissatisfied with inadequate provision of PPE and the requirement to treat residents infected with COVID-19 in-place rather than transfer them to hospitals [76]. The lack of imaging facilities and the shortage of laboratory facilities and specialists in rural LTCF further obstructed the safe management of infected patients [77].

### 2.2.3. Older versus newer LTCF

Data shows that LTCF with four persons per room were an early indicator of danger; shared rooms and other organizational hurdles made isolation of cases challenging [78]. Older LTCF design standards contributed to transmission, given their smaller room sizes, fewer single-occupancy rooms, and shared washrooms [52].

In the U.S., 60% of LTCF were built over 50 years ago in a 1950s-mandated funding directive [7]. During the first two waves of the pandemic, most residents in older LTCF were confined to double-

occupancy rooms and unable to physically distance [46,53]. Outdated air-handling systems may have further contributed to airborne transmission [46].

### 2.3. Micro factors

#### 2.3.1. Staffing shortfalls and skill mix deficits

Staffing encompasses more than licensed nurses and certified nurse assistants. In the U.S., it is a workforce of 19 occupation classifications ranging from health care support (41%, i.e., assistants for nurses, therapists, and medical); healthcare practitioners (27%, i.e., physicians, advanced practice registered nurses, registered nurses [RN]/licensed practical nurses [LPN], dietitians, therapists, pharmacists, etc.); food preparation (10%); building and maintenance (5%); to administration and others [56].

The European Care Strategy estimates the number of persons in the European Union in need of LTC is projected to rise from 30.8 million in 2019 to 33.7 million in 2030, and further to 38.1 million in 2050 [79]. An additional 1.6 million LTC workers are required by 2050 simply to keep coverage at current levels, which are already insufficient to meet demands [79].

Staffing is a major predictor of mortality rates in LTCF. The OECD (2021) found that a higher LTC staffing ratio was strongly associated with lower infection and death rates in early 2020 [2]. In their pre-pandemic review, the OECD stated that richer staffing of regulated personnel was needed to maintain residents' safety and prevent costly hospitalizations [3]. For years, experts and professional nurses have called for minimum hours of care per resident [42].

In addition to staffing ratios, skill mix plays a key role in outcomes. The Registered Nurses' Association of Ontario's (RNAO) (2017) robust database of "70 Years of RN effectiveness," comprising more than 626 studies, shows direct links between registered nurses (RN) care and positive patient, organizational and financial outcomes—in all sectors [80]. Such is the case with a higher percentage of RNs with baccalaureate or higher education within various settings, which is associated with lower patient rates of nosocomial and institution-acquired infections [81].

#### 2.3.2. Understaffing

Chronic understaffing is worsened by racism and systemic discrimination, which devalues staff, decreases morale and affects retention [82,83]. In the U.S., racial minorities, such as Black and/or Latinx, suffered the greatest COVID-19 casualties. The death rate in high-minority facilities was 46.87 per 1,000 beds compared to 33.69 per 1,000 beds in predominantly white facilities (>95% white residents) [53]. According to the Australian Bureau of Statistics (2022), Aboriginal and Torres Strait Islander people are at higher risk for COVID-related deaths due to low socioeconomic status and higher levels of chronic disease [84]. However, there is no specific data for LTCF.

Understaffing and deficient skill mix are further compounded by structural problems: part-time/casual per diem employment forces many workers to have more than one job in order to survive. During the pandemic, staff worked at several facilities or were assigned across multiple facilities within a chain to fill staffing deficits, thus likely spreading the virus [44]. McGarry and colleagues (2021) found that the more unique staff members (from any occupation category) entering the LTCF, the greater the number of resident COVID-19 cases and deaths [44]. By September 2020, the LTCF with the largest number of unique staff members had cumulative resident case rates 92% higher than the facilities with the fewest unique staff members [44]. Similarly, an Australian Senate inquiry found that "the reason state-run facilities avoided outbreaks is because they have a higher level of staffing, a better-balanced skill mix, less reliance on casuals and better govern[ance] systems" [85]. This

evidence led the Australian government to prohibit multiple jobs among the care-giving staff [86].

#### 2.3.3. Deficiency of practices in infection prevention and control

Deficient infection prevention and control (IPAC) practices contributed to the high death toll in LTCF worldwide. Limitations in screening knowledge, testing availability, and access to consultant health professionals initially hindered accurate diagnoses of symptoms among LTCF residents and staff [8]. During the first and second waves of the pandemic, governments prioritized resources to support hospital—not LTCF—personnel and patients. Consequently, LTCF residents and staff faced limited access to COVID-19 testing, inadequate deployment of PPE and a lack of providers to manage patient treatment during illness or recovery [9]. More than 20% of workers failed to use PPE in LTCF up until the third quarter of 2020 [8]. To counteract this in the U.S., the Agency for Healthcare Research and Quality, in partnership with others, developed an initiative to provide training and ongoing engagement with peers and mentors in more than 9,000 LTCF [87].

The pandemic exposed IPAC shortfalls and underlying LTCF failure to contain the virus. Few funds had been directed to contingency planning measures, such as infection prevention strategies; quality measures and monitoring; funding and reimbursement; and adequate staffing with equitable compensation [46,53,54,58,88].

The pandemic also reinforced the importance of a safe work environment for LTCF staff. A study in Portugal found that providing psycho-social support to staff and improving the safety culture, through compliance with procedures, nonpunitive response to mistakes, and adequate staffing, could have major implications for staff turnover, residents' care quality, as well as preparedness for future public health emergencies [34].

### 2.4. Key factors contributing to the loss of LTCF residents

While many governments characterize LTCF as "broken" and "in crisis" [9,27,40,56,78,89], quality of life and care provision issues in LTCF are not new concerns. Many failings in LTCF span decades of neglect and devaluation of the aged [39,54]. RNAO (2020) examined 35 reports on LTCF issues in Ontario over two decades and recommended more staffing; proper skill mix of regulated and unregulated staff to meet increasing acuity; and a new funding model [90]. Bakerjian and colleagues (2021) demonstrated that national commissions fail to appreciate the serious issues with RN staffing in LTCF [32]. In the U.S., a CMS Commission noted persisting shortfalls of RN staffing levels [32,46,56].

Our findings identify four key factors that led to devastating suffering and loss of LTCF residents:

- (1) Inadequate funding at all levels of governments and lack of health system integration;
- (2) Large congregate living arrangements that compromise quality of life and IPAC;
- (3) Severe staffing shortfalls, skill mix deficits and unmet educational needs; and
- (4) Extreme social isolation of LTCF residents for extended periods.

Collectively, these are indicative of ageist discrimination and its expression in government policies that address care of the aged.

### 3. Recommendations: macro, meso and micro

Health policy frameworks must give prominence to aged care by altering how we view the LTC sector and improving the care of

residents and the conditions for staff. The need to deliver on macro, meso and micro levels of intervention points to the fragility of the LTC sector.

### 3.1. Macro

#### 3.1.1. Improve funding, transparency, accountability and health system integration

The disproportionate impact of COVID-19 on LTCF residents results from policy and political flaws in government funding and health system transformation plans. Embracing the LTC sector as part of whole community care facilitates the shift away from the medical delivery model [27,37,45,56,90,91]. LTCF must be integrated into enhanced community care plans and funding to be actively connected to the full health system.

Most OECD countries provide universal access to health services for hospital and primary care. LTCF funding currently falls within these broad categories:

- (1) Systems funded by direct or indirect user charges;
- (2) Systems funded through social insurance arrangements and/or hypothecated taxes;
- (3) Systems funded by governments through general taxation measures; and
- (4) Systems targeted oversight for funding disbursements, to ensure the meeting of established standards of patient/resident care or specific purposes/targets.

As nurses, we believe in the right of persons to high-quality aged care based on need, not their financial means. Most OECD nations recognize health care as a universal human right that is publicly funded. We recommend against a system based on user fees (charges) that adversely impacts less privileged groups, especially women, Indigenous peoples, and lower socio-economic groups [56,92–96].

Adequate funding is not enough; ensuring that funding is timely and arrives at the point of care is essential. Often LTC funding has been directed not to staffing, facilities or residents, but to subsidies to companies, high dividends to shareholders and real estate gains. There must be oversight on how funding is used and ensuring it is transparent and accountable [56,97–99].

#### 3.1.2. Promote non-profit LTC care delivery

Several studies favor prioritizing non-profit, publicly funded LTCF. Closing existing privately owned, for-profit facilities is not feasible and would cause major service disruptions at this point. We recommend that future expansion and progression of LTCF rely primarily on public ownership.

### 3.2. Meso: Move from warehouses to “green houses”

A recent approach to evidence-based LTCF design shows promise in maximizing the health and well-being of residents and staff. Innovative LTC designs focus on resident-centered care, flexibility and ambience, and they include elements for staff safety and efficient operations [100]. “Green houses” consist of small residential units housing fewer than 20 residents and allowing each a private bathroom. Personal care staff are assigned permanently to a cottage, and professional staff move among several assigned cottages [30,91,101,102]. About 2% of LTCF in the U.S. are green houses; they had less than half the cases of COVID-19, and death rates two to four times lower than in traditional LTCF [102].

### 3.3. Micro

#### 3.3.1. Mandate recommended staffing levels and skill mix

Our findings indicate staffing had the most profound impact on outcomes. The majority of LTCF residents have complex health needs due to overlapping chronic conditions, and 90% have some form of cognitive impairment. These health conditions require the expert nursing care and skill mix of nurse practitioners (NP), RN, registered or licensed practical nurses (RPN/LPN), and personal support workers (PSW), which is affirmed by research and recommendations across countries, including Australia [103,104] and the U.S [56]. We further determined that retaining, recruiting and training staff remains challenging without first addressing the structural issues in the sector; specifically insufficient equity, diversity and inclusion policies; part-time precarious employment without benefits; and heavy workloads resulting in low job satisfaction.

This team supports proposals for mandated minimum staffing levels and skill mix. An Australian report (2016) calls for 4.3 hours of direct clinical (RN/LPN) and support (PSW) care per resident per day to meet assessed resident needs [103]. Slated to begin in October 2023, the Australian Government is mandating a minimum of 215 direct care minutes, including 44 minutes of RN time [105].

Analysis of the U.S. CMS model suggests that at least 3.3 hours of care, including 40 minutes of RN time, are required to provide adequate care [104]. For a good level of care, total time rises to 3.6 hours, including 40 minutes of RN time [104]. An excellent level of care requires staffing levels only slightly lower than those recommended in the Australian study. There is corroboration by 22 gerontology nursing experts that one hour of direct RN care for each resident is necessary to ensure safe care [42]. They further emphasized that RNs must have competencies in geriatric nursing and strong leadership capacity to guide others in providing care to residents [42].

In Canada, RNAO determined a minimum of four worked hours of direct clinical (RN/RPN) and support (PSW) care per resident per day is crucial to maintaining safe care [51,106]. This recommendation was adopted by the Ontario Long-Term Care COVID-19 Commission and the government of Ontario [107]. More details on RNAO’s recommended staffing formulas are available in [Appendix B \[51\]](#).

#### 3.3.2. Ensure infection prevention and control training

Ensuring robust IPAC training will reduce preventable safety failures. RNAO (2020) outlined the following recommendations for the Ontario government: funding, standardizing and enforcing mandatory IPAC roles, and providing IPAC lead RN staff with specialized education and a resource network to build and sustain capacity [108].

#### 3.3.3. Provide well-being and mental health supports

Addressing mental well-being in LTCF is critical for staff and residents. The impact of COVID-19 on healthcare professionals is manifest in compassion fatigue, burnout, depression, anxiety, physical fatigue, insomnia, anger and aggression, and personal and family health concerns. Staff feel unsupported and overwhelmed, with less emotional energy to engage in proactive coping and the ability to give of oneself [58,109–112]. These adverse effects impact care delivery and result in long-lasting trauma for the professional. They should be addressed with organizational changes that improve work environments; training in coping skills to achieve resilience and mindfulness; as well as proper nutrition and exercise [110,111].

### 3.3.4. Lead with evidence-based practice cultures

Organizations with proactive evidence-based leadership better sustain their staff during their stressors. For example, RNAO's Best Practice Spotlight Organization® program [113], which added value to 1,500 health and academic organizations in 20 countries during the pandemic, provides a roadmap for nurses to maintain person-centered and evidence-based care.

In the U.S., the Magnet Recognition Model® and the Pathways to Excellence® are certifications designated by the American Nurses Credentialing Center to institutions where nurses are empowered to take the lead on patient care, create healthy work environments, provide the highest standards of care and be drivers of institutional healthcare innovation [114].

### 3.3.5. Provide ongoing education for staff and nursing students

In addition to PPE, providing multiple-mode staff education is vital to ensuring timely delivery of best practices in identifying cases of COVID-19 and preventing disease spread [87,88,115].

### 3.3.6. Fully integrate care partners as members of the healthcare team

Integrating residents' care partners into the healthcare team helps prevent the devastation during a pandemic's first year. Given that families and friends often help with hydration, eating, mobility and toileting during their visits, they provide foundational person- and family-centered care critical to residents' quality of life.

In July 2020, RNAO (2020) urged the Ontario government to direct all LTCF, including those experiencing COVID-19 outbreaks, to adopt a risk-tailored and humane approach to allow safe visits [72]. LTCF could designate up to three Essential Family Care Partners (EFCP) for each resident, ensuring that they were educated on the protocols and infection control [72]. One EFCP could visit at any time in face-to-face interaction with the resident, without undue restrictions on the number or length of visits [72]. EFCP could be required to sign statements accepting responsibility for the risk of infection, and LTCF could revoke an EFCP's status if they did not adhere to COVID-19 protocols [72].

## 4. Conclusions

LTC residents were disproportionately affected by the COVID-19 pandemic. The loss of more than 350,000 residents worldwide resulted from the sector's long-standing systemic conditions, which were revealed and exacerbated by the deadly virus [14]. Nurses must be integral to formulating policy and ensuring the implementation of regulations and standards. Preventing such tragedies requires governments and society to value older persons and invest, innovatively and substantially, in their care. For change to occur, it is vital to address the issues in LTC at the systems level through policy change and at the more immediate level, by addressing the severe staffing shortfalls in most LTCF today.

### Authors' notes

This paper refers to long-term care (LTC) when speaking about "aged care" in Australia, or nursing homes elsewhere. "Long-term care facilities" (LTCF) refers to long-term care homes and nursing homes.

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## CRediT authorship contribution statement

**Doris Grinspun:** Conceptualization, Methodology, Investigation, Formal analysis, Writing – original draft, Writing – review & editing, Supervision. **Jennifer Matthews:** Investigation, Formal analysis, Writing – original draft, Writing – review & editing. **Rob Bonner:** Investigation, Writing – second draft, Writing – review & editing. **Teresa Moreno-Casbas:** Investigation, Writing – second draft, Writing – review & editing. **Josephine Mo:** Project Administration, Data curation, Writing - review & editing.

## Declaration of competing interest

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## Appendices. Supplementary data

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