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## Integrating Nurse Practitioners Into Long-term Care: A Call for Action

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### A B S T R A C T

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The coronavirus disease 2019 pandemic exposed the devastating effects of inadequate primary care in long-term care (LTC) settings, both nationally and internationally. Deaths in LTC were compounded by the global shortage of physicians and limitations in existing funding models for these facilities. Nurse practitioners (NPs) can provide similar services as general practice physicians in LTC while meeting residents' needs in a more timely, cost-effective manner. It is critical that NPs be integrated into LTC, particularly in the wake of the coronavirus disease 2019 pandemic. This article provides relevant literature and evidence to substantiate the effectiveness of integrating NPs into the Canadian LTC and highlights the urgent need for improved funding models and policy reform.

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The coronavirus disease 2019 (COVID-19) pandemic placed a burden on health care systems worldwide. Many health care systems continue to be inundated with patients who have contracted COVID-19. In addition, the pandemic has been perpetuated and complicated by mutations of the COVID-19 virus. Although no age group is immune to COVID-19, senior citizens were the most vulnerable worldwide.<sup>1</sup> Between March 1, 2020, and February 15, 2021, deaths that occurred in long-term care (LTC) facilities accounted for more than two thirds of Canada's overall COVID-19 deaths.<sup>2</sup> At the onset of the pandemic, the number of deaths in LTC facilities soared both nationally and internationally, especially in Germany, France, Ireland, and Italy.<sup>3,4</sup> Residents of LTC facilities were at particularly high risk due to congregate settings, exposure to asymptomatic staff, visitors, and multiple comorbidities.<sup>5</sup> The absence of on-site primary care providers (PCPs) further complicated the management of residents' chronic conditions and COVID-19.<sup>6</sup>

Planning for the pandemic was largely overlooked in LTC, even though these facilities provide care to older individuals with complex comorbidities who are at high risk during a pandemic.<sup>1,7</sup> In addition to multiple chronic conditions, most residents in LTC have dementia, which further complicates their care.<sup>7,8</sup> Moreover, residents with dementia and mental health issues require a wide array of skilled staff to provide quality care when they experience functional decline.<sup>7</sup>

Before the COVID-19 pandemic, Alzheimer disease was a leading cause of death in older adults in Canada.<sup>9</sup> In addition, the international literature shows a rapidly increasing population of adults aged 60 years and older who will require LTC.<sup>10</sup> As a result, the health care system in North America is plagued with a long-standing predicament whereby the workforce is

insufficient to meet the demands of the exponentially growing elderly population.<sup>8,11</sup>

This conundrum was significantly exacerbated during the pandemic. This article explores the role of nurse practitioners (NPs) in LTC to ameliorate the shortage of PCPs in these settings.

### Background

Canada's response to the pandemic focused primarily on acute health care, at the expense of vulnerable LTC residents.<sup>12</sup> In comparison to other developed nations, Canada has had the highest rates of death from COVID-19 in LTC.<sup>7,13</sup> Revera, a Canadian company that manages many LTC facilities and retirement homes across Canada, the United States, and the United Kingdom, hired a consultant to conduct a root cause analysis of the causes of deaths in LTC during the COVID-19 pandemic and provide recommendations for future improvements.<sup>12</sup> One of the issues identified by the consultant's review was the paucity of physicians within LTC, which complicated the management of COVID-19–related impacts.<sup>12</sup>

Although there were a multiplicity of factors that contributed to deaths in LTC during the COVID-19 pandemic, the integration of NPs into LTC could significantly benefit the quality and depth of care provided within these facilities and lessen the negative impacts of future pandemics. The ravaging of the elderly population during the COVID-19 pandemic revealed how necessary it is for LTC to have on-site, immediate access to primary care and acute care services for this vulnerable population. The transfer of residents from LTC facilities to hospitals was not a priority during the first wave of COVID-19 because acute care beds were reserved for patients from the community.<sup>12</sup> An overall lack of hospital beds

resulted in decreased access to essential health care services for the LTC population.<sup>12</sup> Undoubtedly, the integration of NPs into LTC could have addressed this issue during the pandemic. In addition, NPs working in LTC could improve residents' access to care, decrease rates of hospitalizations, improve overall health care outcomes, and address psychosocial needs with the goal of improving residents' quality of life.<sup>14</sup>

Staffing within LTC facilities is generally inadequate to meet residents' needs.<sup>7</sup> To improve health outcomes in LTC, these facilities require more educated personnel, such as physiotherapists, occupational therapists, and social workers. Resident ratios for health care aides and nursing staff are high in LTC, resulting in an unsafe environment for both staff and residents.<sup>15</sup> The nurse-to-resident ratios in LTC are 1:25 during the day and evening shifts and 1:67 overnight.<sup>6</sup> Estabrooks et al.<sup>7</sup> discussed the challenges associated with having care provided by underpaid, unregulated direct and indirect workers who have minimal formal education and cannot make decisions to improve resident care.

The care provided in LTC during the second wave of the COVID-19 pandemic was significantly and negatively impacted by inadequate physician/NP support, as well as overall staffing shortages and subpar infection control measures.<sup>12</sup> Attempts to provide virtual care were unsuccessful because there were insufficient staff to provide immediate care to this vulnerable population; staffing shortages were further compounded by sick leaves related to COVID-19 infections.<sup>12,15</sup> In addition, residents' debilitating chronic conditions often prevented them from participating in virtual care.<sup>12</sup> Comparably, staffing shortages and subpar infection control protocols were major contributors to an outbreak at a LTC facility in Manitoba, Canada.<sup>6</sup>

As a result of staffing shortages, 1 NP was redeployed to another LTC facility that suffered an outbreak that resulted in the deaths of approximately 3 dozen residents.<sup>16</sup> The media reported that this redeployment interrupted the continuity of residents' care at the facilities where the NP was normally employed.<sup>17</sup> A British research study reported that residents and their family members appreciate the constant communication and continuity of care provided by NPs.<sup>18</sup> The resident and family-centered care provided by NPs gives families a sense of security knowing their loved ones will receive optimal care in the event of medical complications.<sup>18</sup> In addition, NPs play a critical role in enhancing nursing skills by educating nursing staff about proper assessment and advocacy skills.<sup>19</sup> NPs also facilitate family education and emotional support for residents' families and encourage family members to participate in advanced care planning and care conferences.<sup>20</sup> There are ongoing challenges in LTC facilities regarding the lack of communication between management and residents' families at residents' end of life.<sup>8</sup> These challenges were exacerbated by increasing death rates during the COVID-19 pandemic. A common theme across Canada was the inability of leadership in LTC facilities to provide timely information to families pertaining to the health of residents.<sup>6,12</sup>

Staffing concerns in LTC facilities in the prepandemic period were neutralized to some extent by family members who assisted with activities of daily living.<sup>12</sup> Residents became more vulnerable when visitors' restrictions were implemented as part of the pandemic response. These restrictions presented an unprecedented challenge because preexisting staff shortages were compounded by staff illness. As a result, many residents did not receive basic care, and dehydration and malnutrition became part of the health crisis.<sup>6,7,12</sup>

The psychological impacts of the COVID-19 pandemic on LTC health care professionals, residents, family members, and the public cannot be understated. Many frustrated families voiced their concerns by contacting the media.<sup>12</sup> Some families assumed the care of their loved ones, even if they had to forfeit their careers to

accommodate this new role.<sup>12</sup> Grim visual images in Europe, the United States, and Canada of deaths in LTC facilities during the second wave of the COVID-19 pandemic remain etched in people's minds worldwide.<sup>7</sup> Families and staff were forced to deal with abrupt losses while continuing to provide care to family members and residents. As a result, it was of paramount importance that staff and families received adequate psychological and spiritual support throughout the pandemic.<sup>15</sup>

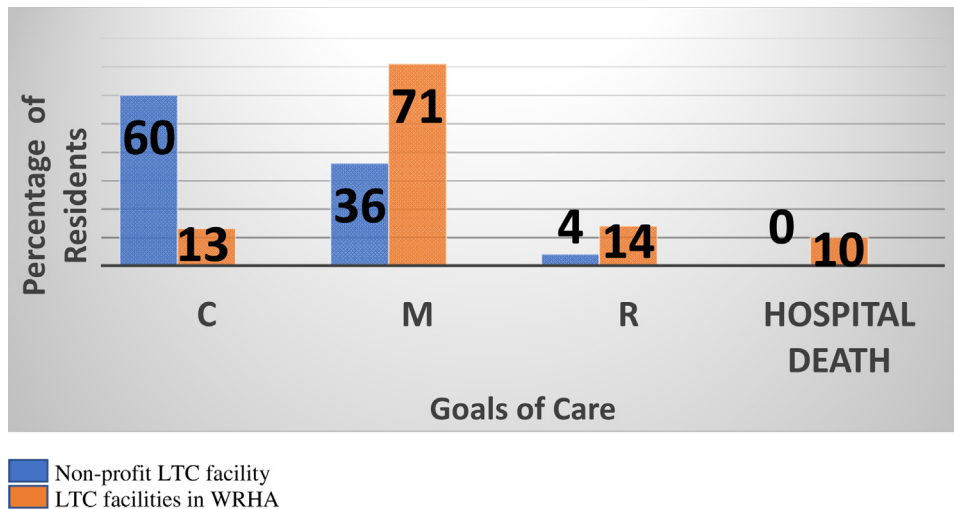
## NP Role and Implications for LTC

NPs are educated to manage chronic and acute conditions in a variety of health care settings.<sup>14</sup> NPs in Canada must have at least 2 years of clinical practice as a registered nurse, a master's degree in NP studies, and a certificate to practice in the NP membership class to function as generalists.<sup>21</sup> In Canada, NP scope of practice varies by province; only Prince Edward Island and Manitoba afford NPs with broad privileges similar to general practitioners.<sup>22</sup> Some Canadian provinces only provide funding for NPs when their support is deemed necessary by physicians.<sup>23</sup> In these jurisdictions, NPs are hindered from practicing to their full scope. If physicians are allowed to dictate NP job availability, this effectively invalidates the NPs' autonomous role in the health care system. Moreover, the integration of NPs into the health care system is onerous because of ongoing role confusion whereby "NP scope of practice and roles are at the intersection of medicine and nursing."<sup>24</sup> During the pandemic, the redeployment of NPs to work as registered nurses in hospitals magnified the role confusion that already haunts the NP profession and hinders policy reform for NP integration.<sup>24</sup>

To guide role expansion, NPs in Manitoba use the Strong Model of Advanced Practice, which includes the following domains: "direct comprehensive care, support of systems, education, research, publication, and professional leadership."<sup>25</sup> The NPs' ethos is focused on illness prevention and the provision of holistic care to all age groups. As a result, NPs have an obligation to influence policy change, engage in research, and participate in the dissemination of information in their respective communities for the purpose of improving clients' quality of life.<sup>25</sup> NPs need to challenge the status quo in which physicians are still considered the sole providers of primary care and become crucial disruptive innovators within the health care system.<sup>24</sup> In addition, NPs have the capacity to bridge gaps within the system and ensure that all patients in LTC have equitable access to prompt management of acute/chronic disease and end-of-life care.<sup>24</sup>

The COVID-19 pandemic exposed deficiencies in LTC that can be resolved through the expertise and evidence-based practice provided by NPs. A study conducted at a 116-bed LTC in Western Canada revealed significant cost savings after an NP was integrated as the sole PCP for the facility.<sup>19</sup> Long-term improvements in health outcomes within the LTC facility demonstrated that the NP served as a catalyst for change and provided much needed innovation in the delivery of care. Additionally, NPs focus on the proactive treatment of potential or actual health concerns among LTC residents; for example, NPs can educate staff on the management of common ailments that may lead to a rapid decline in residents' functional status.<sup>26,27</sup> The results of the Missouri Initiative can be used to advocate for the incorporation of NPs into LTC.<sup>27</sup> This initiative showed that NPs can work proactively within a multidisciplinary community to identify acute conditions early and prevent residents from requiring tertiary care.<sup>27</sup>

NPs work in autonomous roles in collaborative settings, including community clinics, LTC facilities, hospitals, and NP-led clinics.<sup>22</sup> NPs can enhance health outcomes when sufficient funding is available to integrate them into LTC where and when they are able to practice to their full scope. Unfortunately, most LTC settings



**Figure.** Advanced care planning and hospital deaths: a comparison of a nonprofit LTC facility with other LTC facilities in the Winnipeg Regional Health Authority (April–June 2018). C = comfort care; M = medical care; R = resuscitation.

in Canada lack the funding to hire a multidisciplinary team that includes NPs, social workers, a speech-language therapist, a spiritual care provider, and a physical and occupational therapist, which would influence both the quality of care and quality of life.<sup>7</sup> These professionals are essential because their collaboration will foster creative cost-effective strategies to improve quality of care and quality of life in LTC.

Because of ongoing physician shortages, few Canadian physicians provide health care services in LTC.<sup>9,26</sup> For example, a 175-bed LTC facility in Manitoba has 2 on-call physicians who visit the facility weekly, resulting in limited access to prompt and timely care for the remainder of the week. Research indicates that NPs can provide similar services as general practice physicians in LTC.<sup>19</sup> Notably, NPs spend more time with residents than physicians and are better able to meet residents' needs in a timely and cost-effective manner.<sup>14,28</sup> Furthermore, NPs perform comprehensive assessments and also play a critical role in increasing resident and family engagement, educating staff, and addressing advanced care planning.<sup>14,28</sup> Despite the evidence that NPs play a critical role in improving LTC, only 3 NPs are employed across 6 of the 125 LTC facilities in Manitoba.<sup>14,19,20,29</sup> In Ontario, NPs were introduced into LTC in 2000,<sup>8</sup> whereas in Manitoba the first NP was hired into LTC in 2007.<sup>19</sup> Internationally, there is a paucity of research regarding the role of NPs in LTC despite evidence that suggests their efficacy in this setting.

The life expectancy for most Canadian residents in LTC is 18 to 25 months depending on the severity of their comorbidities.<sup>20</sup> These numbers are comparable with the United Kingdom and the United States; as a result, end-of-life care is central to the NP role in LTC.<sup>20</sup> A crucial role of the NP is to improve the quality of end-of-life care by reducing terminal hospital transfers and providing optimal end-of-life care in a place that is familiar to the resident and their family.<sup>8</sup> NPs frequently facilitate residents and family members to navigate the process of end-of-life care (ie, what to expect and how to cope).<sup>8</sup> Although it is crucial to ensure access to primary and acute health care services in LTC, it is also critical to recognize that "death is the final outcome for most admissions in LTC."<sup>20</sup> The availability of end-of-life care to LTC residents during the COVID-19 pandemic is currently unknown.<sup>7</sup>

The ultimate goal of end-of-life care is to reduce residents' suffering, provide psychosocial support to family members, and facilitate a "good death."<sup>7,20</sup> When older adults transition to LTC,

the facility becomes their final home. Residents generally prefer to spend their last days in a familiar environment, rather than being transferred to a hospital.<sup>20</sup> Through advanced care planning, NPs can facilitate a peaceful, dignified death.<sup>20</sup> Despite this, research indicates that 40% of LTC residents are hospitalized within 30 days of dying.<sup>14</sup> In the Winnipeg Regional Health Authority, there was a dramatic difference in the quality and breadth of end-of-life care provided within LTC facilities where NPs were the sole PCPs compared with other LTC facilities. The third author additionally recorded a graph (Figure) that shows lower rates of hospital deaths and higher instances of advanced care planning in the NP-led facilities within the Winnipeg Regional Health Authority.

Since the launch of Manitoba's Aging in Place initiative in 2006, NPs and other allied health professionals working in LTC settings have called for policy changes to support "dying in place."<sup>20</sup> The concept of "dying in place" allows for the prioritization of comfort care in LTC, rather than focusing on curative, potentially futile procedures in acute care settings.<sup>20</sup> Furthermore, place of death is used as a measure of the quality of end-of-life care.<sup>20</sup> "Dying in place" promotes a "good death" while also allowing LTC facilities to uphold their commitment of providing quality care to residents at end of life and using health care system resources efficiently and effectively.<sup>20</sup>

NPs can reduce overall health care costs dramatically by decreasing emergency room and other inappropriate transfers from LTC facilities.<sup>14,19</sup> Quality of care and quality of life are dependent on the management of transfers to and from hospitals.<sup>14</sup> In addition to preventing unnecessary hospital admissions, NPs can improve the quality of care in LTC by providing primary care services and acute care services, deprescribing medications and reducing suffering at end of life, honoring residents' and families' end-of-life wishes/values, and facilitating optimal comfort as well as a "good death."<sup>14,19,20,29</sup>

Death and dying are difficult to navigate for most health care professionals and are best understood through experiential knowledge, which has been correlated with death competence among health care professionals.<sup>30</sup> Formal education programs primarily focus on saving life at all costs, rather than honoring the natural progression of disease toward end of life.<sup>15</sup> Furthermore, the health care system prioritizes lifesaving interventions and curative medicine, which leads to the unintentional medicalization of death and dying. The COVID-19 pandemic exposed the fact that comfort and end-of-life care are neglected within the continuum of

care.<sup>15</sup> The continued increase in the number of older adults in LTC with dementia means that more families are tasked with making difficult end-of-life decisions.<sup>8</sup>

The COVID-19 pandemic exposed and highlighted inequities in LTC; the impacts of these inequities on public trust and respect are still not well understood. In 1 Western Canadian city, 44% of COVID-related deaths and outbreaks occurred in for-profit LTC facilities.<sup>31</sup> It has been argued that there was no correlation between COVID-19 outbreaks and whether a LTC facility was for-profit or nonprofit.<sup>5</sup> For-profit LTC facilities had a higher number of outdated buildings in which congregate living increased the spread of COVID-19 (ie, a higher number of beds per room).<sup>5</sup> Anecdotally, LTC facilities that had an NP as the PCP experienced fewer outbreaks of COVID-19; it remains unclear if these effects were directly correlated to the presence and support provided by the NP. Research to understand this issue is critical.

## Discussion

According to the Strong Model of Advanced Practice, the central role of NPs is to form relationships at different levels within their practice and in the organization, community, and health care system in which they are employed.<sup>25</sup> These relationships facilitate change through policy, research, education, and practice.<sup>28</sup> Although there is evidence to support the effectiveness and contributions of NPs in the Canadian health system, there are still inconsistencies in how NPs are used both nationally and internationally.<sup>22</sup>

The ongoing physician shortages fueled the introduction of NP-led clinics<sup>32</sup>; NPs lobbied to fill the gaps and provide comprehensive care to individuals who did not have a regular PCP.<sup>33</sup> The NP-led clinic model is an example of how NP leadership can advocate to address barriers to health care and effectively influence health policy changes. NP-led clinics pioneered the role of NPs in governance and drove the opening of additional NP-led clinics.<sup>33</sup>

The amalgamation of NPs into LTC remains a challenge both nationally and internationally due to the lack of funding for NP jobs.<sup>26</sup> This is further compounded by a lack of support from physicians who often perceive NPs as potentially impacting their own remuneration.<sup>32,34</sup> Some of the NP care models used globally include various NP-physician collaborative models and the consultative model in which NPs practice within their scope and consult physicians for cases that are beyond their scope of practice.<sup>26</sup> Even though Canadian provinces have integrated NPs into the health care system, NPs are still underutilized in this country, and the sustainability of the NP role remains at risk.<sup>32,35</sup>

There is limited research related to the economic benefits of NPs in LTC. Considering that the elderly population is growing exponentially, it is important to examine the financial implications. A research study involving 6 LTC facilities in Quebec analyzed the cost benefits of having NPs manage the most common complications from comorbidities in older adults, including falls, pressure ulcers, polypharmacy, use of restraints, and short-term acute care hospitalizations.<sup>26,36</sup> The authors presented compelling evidence and urged that more research is needed to examine the long-term cost benefits of introducing NPs into the LTC interdisciplinary team.<sup>36</sup> Based on their cost-benefit analysis, the authors concluded “The median cost of 341 cases of falls, 32 cases of pressure ulcers, and 53 cases of short-term transfers in the six long-term facilities would range between CAD \$4,516,337.80 and CAD \$5,281,824.40.”<sup>36</sup> Their study revealed significant cost savings when an NP was a member of the interdisciplinary team<sup>36</sup> (Table).

Although the Quebec study illustrated positive financial implications, it also showed that residents’ quality of life was improved as a result of NP involvement.<sup>26,36</sup> The continued presence of NPs in

**Table**

Cost Savings at Quebec Long-Term Care Facilities After Nurse Practitioner Management

Nurse Practitioner–Sensitive Events	Cost Savings
Reduction of pressure ulcers	Can \$61,823.8–\$107,926.4
Reduction of falls	Can \$1,831,420.5–\$2,904,143.7
Reduction of short-term transfers	Can \$20,257.2–\$46,239.0
Reduction in the nursing time needed to administer medications	Can \$29,032.0–\$196,094.3
Total cost savings	Can \$1,942,533.6–\$3,254,403.4

Modified with permission.<sup>36</sup>

LTC promotes ongoing observation, optimal management of chronic conditions, reduced polypharmacy, and fewer risk factors for falls.<sup>36</sup> Similarly, Klaasen et al<sup>19</sup> conducted a study in LTC that revealed cost savings with the integration of an on-site NP who was present 5 days a week at a nonprofit LTC facility in Western Canada. There were cost savings related to the use of medications, rates of polypharmacy, use of antipsychotic medications to manage behavioral and psychological symptoms of dementia, and transfers to the emergency department.<sup>19</sup> In addition, the third author participated in an analysis of the evaluation of the integration of an NP at a non-profit LTC facility in 2007 that demonstrated a cost savings of nearly Can \$2,000,000 over 10 years, simply by reducing the average hospital transfers and length of hospital stays. These 2 investigations revealed that the integration of NPs in LTC drastically improved the management of falls, restraint, polypharmacy, pressure ulcers, and acute care hospitalizations while demonstrating significant overall costs reductions.<sup>26,36</sup> Despite the limitations of these investigations, the outcomes related to residents’ quality of life and safety outcomes are indisputable.

Although it may be beneficial to clearly evaluate the cost-effectiveness of NPs as part of the primary care team in LTC, the process is not precise. Most NPs provide holistic care to residents as part of a collaborative system involving other health care professionals. Therefore, benefits that may arise from the integration of NPs into practice cannot be solely attributed to the NP.<sup>29</sup> Because it is difficult to properly gauge the cost benefits of NPs in LTC, most articles examine emergency department transfers as a way to appraise costs to the health care system.<sup>29</sup> Further research to empirically examine the cost-effectiveness of NPs in LTC is required.

## Recommendations for NP Practice

NPs can make contributions and effect changes within the health system by lobbying government representatives to support policies that integrate NPs into LTC. The Canadian Federation of Nurses Unions advocates for better funding models that fully support the NP role, as well as funding models that promote NPs in LTC.<sup>37</sup> In addition, research findings demonstrate that NPs can be clinical leaders in various sectors of the health care system.<sup>14,24,26,27,32</sup> The COVID-19 pandemic highlighted how NPs can bridge the gaps in LTC to allow equitable and prompt access to acute/chronic disease management and end-of-life care.<sup>12</sup>

## Conclusion

The world is at a pivotal point, and the health of older adults must be prioritized to avoid future catastrophes. The calamity of the COVID-19 pandemic presents an opportunity for stakeholders to act swiftly and address deficiencies within LTC facilities, specifically in terms of primary care services. In a quest to create a better and more efficient health care system that aims to enhance quality of life and improve safety outcomes among older adults, government agencies and health

care organizations need to institute a combination of physician and NP-led services. NPs can be used to improve access to and address the long-standing conundrum of primary care shortages in LTC.

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