Case Study: Realizing the Value of Nurse Practitioners in Long-Term Care

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Abstract

Presently only about 9% of seniors over the age of 75 live in residential care facilities but the anticipated exponential growth of the senior population will put increasing pressure on the need for supportive, continuing care services in the years ahead (CIHI 2017a). They are on average 86 years of age with a diagnosis of dementia (67%) and some cognitive and/or functional impairment (98%) (CIHI 2017b). These compromised seniors are also more likely to use hospital services than others, and in many jurisdictions occupy acute care beds for extended periods because ongoing management of their complex conditions is often not possible within long-term care (LTC) homes. In addition, unnecessary and futile care at the end of life often leads to suffering for individuals and their families (Dobbins 2016), which might otherwise be avoided with the presence of institutionally based providers such as nurse practitioners (NPs).

Christian and Barker (2009) identified NPs as a valuable resource to prevent unnecessary hospitalizations which often lead to complications and devastating results for seniors. Although evidence of the positive impact of NPs working in LTC facilities dates back to the 1970s, very few organizations have created and obtained funding support for these positions in LTC settings.

This case study illustrates the impact of the NP role in a New Brunswick LTC facility; demonstrating the value of a model that includes an NP collaborating with physicians, nurses and allied health professionals. As shown in this case, the presence of an NP clearly impacted a reduction in emergency room visits and hospitalizations, events that more often than not accelerate further physical, mental and functional decline particularly among the frail elderly. Christian and Barker (2009) described the significant consequences of hospitalization for the elderly patient including irreversible decline in function, delirium and exposure to iatrogenic disease.

Having an NP available within LTC affords the residents ongoing monitoring that allows for preemptive and proactive care. NPs providing oversight to the collaborative management of the care of LTC residents has the potential to not only realize cost-avoidance for the healthcare system but also enhance the quality of care for residents and their families.

Introduction

Canada's senior population is growing rapidly, such that in 2011 the first of the "baby boomers" turned 65 years of age and, by 2036, seniors will make up about 25% of the population (CIHI 2011). Parallel to this "seniors wave," frequently described as a pending tsunami by the media, are the challenges of healthcare cost containment and escalating issues of access to services and providers. Since the late 1970s, nurse practitioners (NPs) have been shown to impact cost savings related to a decreased use of hospital services, decreased prescribing and improved quality of care (Caprio 2006). Chavez et al. (2017) revealed improved cost-effectiveness in service utilization 70% of the time when NPs were in place in long-term care (LTC). The impact of improved quality of care is extensive and includes: satisfaction of residents, families, physicians, nursing home staff, and improved medical care due to increased frequency and timeliness of visits, improved performance on quality indicators (e.g., pressure wounds and ambulatory-sensitive transfers to hospital) and improved end-of-life care.

Although almost 40 years of literature has described the positive impact of NPs working in LTC, in 2017 the Canadian Nurses Association described NPs as "an untapped resource," with only 3.1% of the country's NPs working in nursing homes (CNA 2017). NPs have a strategic part to play in the effective management of seniors' health in LTC facilities and can at the same time help to alleviate high utilization and occupancy pressures in the acute care sector. However, the role of the NP in LTC is anything but simplistic. According to the Canadian Institute for Health Information (2011), almost 25% of Canadian seniors reported having three or more chronic conditions or "multimorbidity." Residents admitted to LTC typically have "multimorbidity" or complex co-morbid disease, accompanied by equally complex medication lists. Gruneir (2013) described the residents of LTC as having a "high burden" of medical conditions affecting both cognitive and physical function. In addition, these residents were identified as high-cost health system users. The healthcare of such patients requires in-depth, attentive and continuous inquiry and observation.

In response to the ongoing challenges of managing such medically complex residents, the chief executive officer (CEO) of a 190-bed residential care facility in New Brunswick strategically created a position for a full-time NP. In conjunction with physician and nursing colleagues, this model of collaborative practice was envisioned by the CEO as a means of enhancing resident care by improving the continuity of care and decreasing hospitalizations and emergency room (ER) visits.

The presence of a full-time NP has allowed for improved and integrated access to medical management. The NP offers comprehensive chronic disease

management, palliative care and timely intervention for acute episodic illness with improved outcomes. In addition, the NP provides residents and their families with opportunities for ongoing dialogue, education and continuous relationship building. Frail residents receive the benefits of affordable, 24-hour, quality care in the nursing home, provided by staff and caregivers who truly know them.

The continuity of care is fluent with ongoing in the "home" daily clinical monitoring by the NP, scheduled physician visits and effective medical collaboration. The NP–physician partnership is reciprocal. There is monitoring of residents with physician consultation and follow-up as requested by the NP, as well as NP follow-up of physician interventions (including hospital care), creating a natural ongoing flow in continuity. The NP on site can close gaps that can fragment care not only in the nursing home but also when hospital care is required. The presence of an NP has also resulted in improved health outcomes. For example, a significant decrease in the incidence and severity of skin wounds has been realized. Additionally, unplanned hospital transfers have decreased from almost daily to an average of three per month and, because of comprehensive disease management, there is a decrease in unnecessary futile care and improved quality of life right to the end of life.

The following, not unusual, case study depicts the journey of one resident and the essential role played by the NP in managing her care.

Exemplifying the Essential Role of an NP in Residential Care: Ada's Story

At the age of 93, Ada (not her real name) was initially admitted to residential care. She had been living independently in a seniors' high rise with informal care and support from her family until a fall. She arrived at the facility after spending six months in hospital recovering from rib and pelvic fractures. Ada's diagnostic picture was one of severe frailty with complex co-morbid disease. In addition to her fall and fracture history, she had a history of insulin-dependent type 2 diabetes, renal failure, congestive heart failure, atrial fibrillation, chronic anemia, gastroesophageal reflux disease, osteoporosis, osteoarthritis and mild dementia.

When she arrived at the nursing home, she was on seven oral medications in addition to daily insulin and also had multiple medication allergies. Ada's care needs and frailty were average, her basic physical needs were fairly typical, including ongoing monitoring for safety and daily support for activities of daily living (e.g., bathing, dressing, toileting and ambulation). Her medical needs were in the more moderate-to-severe range, requiring vigilance in the monitoring and management of her congestive heart failure, diabetes, recurrent pneumonia and urinary tract infections.

One year after Ada's admission, she sustained a shoulder fracture while on an outing with her family. She was treated in the ER and transferred back to the nursing home ("her home") the same day. Her prognosis rapidly progressed to guarded as she was being treated for severe shoulder pain and soon after developed pneumonia. Weekly and sometimes daily discussions with family and occasional outpatient orthopedic consultations, enabled Ada to continue to receive care in the comfort of "her home." Over the course of several months, she recovered, achieving close to her original level of function.

Ada continued to "live" and enjoy a wonderful quality of life in the nursing home, including an active social life of structured daily activities with family and friends. Frequent NP visits offered reassurance and support and for her sanctioned a trust, giving her peace of mind. Her intermittent bouts of hyperglycemia, congestive heart failure, pneumonia and urinary tract infections were managed in the comfort of her home with all of her specific medical needs (e.g., allergies, complex co-morbid disease, renal function, medications) taken into consideration. Despite her complex health and severe frailty, Ada's medical needs could be effectively managed in the nursing home largely because of the ongoing surveillance and continuity of care provided by an NP and collaborating physician. Throughout multiple episodes of acute, sometimes severe, illnesses, her family was always engaged with the medical team. Sometimes discussions anticipated possible end-of-life care but each time Ada recovered, albeit with increasing weakness and frailty. Over four and a half years, Ada required only one hospital admission for congestive heart failure. Intimate knowledge of Ada's baseline cardiac and respiratory status and ongoing monitoring afforded proactive "tweaking" of medications and treatments, not only for her heart failure but also for her other chronic diseases and conditions. Such clinical continuity on a day-to-day basis is not only efficient but also ultimately essential to the preemptive management of the complex conditions of residents such as Ada.

Four years and three months after Ada's admission, it was evident that her renal failure and heart failure had run its course, with fewer treatment options and increased ineffectiveness of medications. An emotional meeting with the family and medical team occurred to discuss Ada's guarded prognosis and end-of life-care. The family and Ada were content to continue to manage her care in the nursing home and progressing to active palliation when the time came. Ada lived another four months after that last meeting in "her home," with wonderful care from the staff family she had come to know over the previous four and a half years. She died peacefully at the age of 98 years in the place she had come to know as "home," with wonderful 24-hour care from staff who knew her and loved her, with excellent comprehensive palliative care and her family by her side.

Despite Ada's extreme frailty, the medical team of a full-time NP and collaborating physician and the provision of excellent nursing care enabled Ada's care to be effectively managed in "her home." While the specific cost savings associated with the NP management of Ada's care are difficult to quantify, without it she would have undoubtedly faced multiple hospitalizations and ER visits because of her clinical complexity and would have probably died sooner, probably in hospital. The quality of life associated with the NP's attentive management of the complex, frail elderly resident in familiar surroundings is somewhat immeasurable, but without question is better than the alternative.

Conclusion

In the province of New Brunswick, hospital and LTC services are separately funded by the Department of Health and the Department of Social Development, respectively. However, the salary support for the NP position in this LTC facility has been provided for over a decade by the Department of Health; this is largely due to the reduction in demand for acute care services directly related to the clinical care delivered by the NP.

Overall, the presence of a full-time NP interacting with other healthcare providers, proactively managing and averting residents' acute exacerbations of chronic illness has likely netted significant cost savings to the health system. But more importantly, it has also resulted in happier and more satisfied residents and families, individuals who are able to remain in the comfort of familiar surroundings and providers.

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