

Policy and Practice Note / Note de polique et practique

Improving Primary Health Care for Residents Living in Assisted Living: Evidence for Practice and Policy

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RÉSUMÉ

Le nombre important et croissant de Canadiens âgés a amené un sentiment d'urgence pour faciliter l'accès des personnes âgées aux services de santé et de soins de longue durée. De nombreux systèmes de santé provinciaux ont engagé une série de réformes pour aider les personnes âgées à demeurer autonomes et en bonne santé. Bien que plusieurs changements aient eu lieu au Canada pour optimiser les soins de santé de première ligne, l'accès des personnes âgées à ces soins varie d'une province et d'un territoire à un autre. Les provinces ont la possibilité de bénéficier des expériences réussies réalisées dans les autres juridictions canadiennes. Les résidents des établissements avec services d'assistance à l'autonome constituent un groupe idéal pour orienter les réformes des soins de santé de première ligne étant donné le rôle important qu'ils jouent dans le continuum des soins et les besoins complexes de ces résidents. Le fait de permettre aux praticiens d'exercer leur profession à la mesure de leur compétence et d'assumer une plus grande responsabilité au sein du système de soins de santé est une stratégie adoptée avec succès dans certaines juridictions. Le présent document rend compte des réformes qui ont été réalisées pour élargir le champ d'exercice des infirmières praticiennes et des ambulanciers dans certaines provinces, et qui auraient le potentiel d'améliorer l'accès aux soins de santé de première ligne pour les personnes vivant en résidences avec services dans l'ensemble du pays, y compris dans des provinces plus petites comme le Nouveau-Brunswick.

ABSTRACT

The fact that there is a large and growing number of older Canadians has generated a sense of urgency in improving seniors' access to health and long-term care services. Many provincial health care systems have engaged in a range of reforms to help older adults remain healthy and independent. Although many transformational changes have taken place across Canada to improve primary care, variations exist across provinces and territories in terms of older adults' access to primary health care. Opportunities exist for provinces to learn from successful reforms implemented in other Canadian jurisdictions. Residents of assisted living (AL) facilities are an ideal group to whom to target primary health care reforms, given the important role these facilities play in the care continuum and the complex needs of their residents. Allowing practitioners to practice to their full scope and assume greater responsibility within the health care system is a strategy adopted in some jurisdictions with success. This article reports on reforms that have been made to expand the scopes of practice of nurse practitioners and paramedics in some provinces, but also have the potential to improve access to primary health care for those living in AL across the entire country, including those living in smaller provinces such as New Brunswick.

Manuscript received: / manuscrit reçu : 20/04/2018 Manuscript accepted: / manuscrit accepté : 23/05/2020

Mots-clés: vieillissement, assistance à l'autonomie, infirmier praticien, soins de santé de première ligne

Keywords: aging, assisted living, nurse practitioner, primary health care

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Primary health care (PHC) is the foundation of the Canadian health care system; it provides critical access to the health care system, promotes health, prevents and manages diseases, and is key to improving health and promoting well-being across the lifespan. Lack of access to PHC makes it difficult for people to maintain health, and ultimately places undue pressure on hospitals and the medical system (Canadian Nurses Association, 2015). The need for older adults to have access to PHC is particularly important given the finite number of resources available to respond to the growing number of older adults and the increasing rates of health challenges that accompany aging (New Brunswick Health Council, 2016).

Provincial and national governments have pledged their commitments to strengthening PHC and ensuring that older adults can access health care when and where they need it (Province of New Brunswick, 2012). Central to this commitment is a need to maximize existing resources by assisting people in the management of chronic illnesses and decreasing reliance on hospitals and long-term care (LTC) resources. Over the past decade PHC initiatives have emerged across Canada, which include, among others, team-based models of care and policy reforms allowing health care professionals to practice to their full scope of practice (Peckham, Ho, & Marchildon, 2018; Suter, Misfeldt, & Mallinson, 2015). Although a great deal has been done across the country to strengthen PHC, the nature and degree of these reforms vary across provinces and territories and there are opportunities for some jurisdictions to adopt or modify reforms already proven successful in Canada. This article reports on PHC reforms that have taken place in Canada, with a focus on those that can directly impact residents of assisted living (AL) facilities. The role AL facilities currently have in the care continuum, the health needs of those who reside in them, and issues surrounding the availability of care and access to PHC in AL is discussed. Drawing on the successes of PHC reforms across Canada, opportunities to improve the organization and efficiency of health care in AL facilities is explored. Although this discussion is applicable to all Canadian provinces and territories, the focus of these discussions will be on New Brunswick (NB) AL facilities.

Primary Care in Canada

Similar to the rest of Canada, NB is in the midst of responding to a demographic shift as the number of

people 65 years of age and older is expected to grow exponentially over the next 20 years (Canadian Institute of Health Information, 2017c). According to the Canadian Medical Association (2015), response to the growing number of seniors must be a priority for provincial governments. Policy analysts argue that health spending alone is insufficient to address the challenges of an aging population. What is needed is a comprehensive response involving integrated systems of care, improved access to services, and enriched delivery models that leverage existing resources (Canadian Health Services Research Foundation, 2011; Institute for Research on Public Policy, 2015). Such a response promises to improve the health care system's efficiency and delay or avert the need for expensive nursing home care while simultaneously addressing seniors' needs (Canadian Medical Association, 2015).

Much of what can be done to maintain the health of older adults falls outside of the health care system; the needs of older are best met with a combination of health and social care (Canadian Medical Association, 2016). Optimal care and support for older adults consists of a continuum of services including PHC, chronic disease management, and LTC with the aim of supporting patients to remain at home and out of hospitals and LTC facilities as appropriate for as long as possible (Canadian Medical Association, 2016).

Despite the importance of integration of health and social services to meet the needs of older adults, the Canada Health Act only ensures coverage for medical necessary services that are provided in a hospital or by a physician. Coverage for services beyond physician and hospital services, such as those that take place in the community, is left to the discretion of individual provinces. Although provincial health care systems have evolved over the past two decades in an attempt to better integrate health and social services and enhance overall access and quality of care, considerable variations exist across Canada in terms of how resources are allocated, organized, and financed (Marchildon & Hutchison, 2016). While there are numerous examples of primary care models that focus on health system coordination, linking health and social systems, and enhancing community capacity to care for complex populations (Marchildon & Hutchison, 2016; Valentijn, Schepman, Opheij, & Bruijnzeels, 2013) individual provinces are at different points in their development of these models. Sutherland and Busse (2016) note that less populous provinces tend to have fewer comprehensive health programs than large provinces such as Ontario, Alberta, and British Columbia. For example, whereas some provinces have made considerable investments in PHC during the past decade, including changes in physician remuneration, the creation of team-based primary care clinics, and expanding the scope of practice for nurse practitioners (NPs) (Marchildon & Hutchison, 2016), reforms in smaller provinces such as NB have been less transformational (Sutherland & Busse, 2016).

A recent provincial comparison of primary care innovations across Canada rated NB low in three of six categories of innovation and undetermined in two others (Peckham et al., 2018). This finding is consistent with provincial data that reports that only 32.8 per cent of NB citizens have access to a primary health team (New Brunswick Health Council, 2017). Per-person public and private health expenditures in NB is also above the national average (Canadian Institute of Health Information, 2017a) and not surprisingly, NB's Health Council's 2017-2018 recommendations to the provincial minister of health highlighted the need to strengthening PHC across the province. It is believed that a strengthened PHC system will help older adults in NB obtain the care and services they require and live as independently as possible (Province of New Brunswick, 2017b).

LTC

Ideally, as people age they will be able to remain at home with some or no supports. However, for many seniors, facility-based support will be necessary. According to the Canada Health Act, facility-based LTC is an extended health care service and it is not covered under the national publicly funded health care system. Individual provinces are responsible for LTC, which results in variations in the services being offered and the terminology used to describe LTC across the country (Canadian Institute of Health Information, 2017b). NB is the only Canadian province where LTC does not fall under the Department of Health (Dearing et al., 2017). In NB, LTC is the responsibility of the Department of Social Development and encompasses in-home support services and residential care facilities including nursing homes and special care homes (Province of New Brunswick, 2017a). NB's special care homes offer supportive housing and supervision in home-like settings for those who do not require continuous access to regulated health care providers (New Brunswick Department of Social Development, 2017a). Other Canadian provinces offer a comparable LTC option called either supportive housing or AL (Canadian Institute of Health Information, 2017b).

Given the parallels between NB's special care homes and supportive housing and AL (Maxwell et al., 2015; Stock, Amuah, Lapane, Hogan, & Maxwell, 2017), we use AL to represent supportive housing and supervision offered in home-like settings.

AL as an LTC Option

Demand for AL is increasing across Canada in response to the lower public cost of this care option, individual preference for the home-like environments they offer, and increased incidence of dementia (Maxwell et al., 2015; Penning, Cloutier, Nuernberger, MacDonald, & Taylor, 2016; Stock et al., 2017). Unlike nursing homes, AL facilities generally do not provide primary health services, do not have mandated staffing regulations that determine staffing composition or skill mix, and do not require the presence of regulated health care providers such as registered nurses, licensed practical nurses, or physicians (New Brunswick Department of Social Development, 2017b). To be eligible to work in a NB AL facility, a person must have certification in first aid and cardiopulmonary resuscitation, be 16 years of age or older, and have completed a training program for one of the following jobs: home support worker, special care home worker, health care aide, human services worker, or nursing assistant. These requirements can be waived for 1 year to allow individuals to attain these qualifications, whereas casual or relief staff are only required to have a minimum of a grade 12 education (New Brunswick Department of Social Development, 2013). Although a comprehensive review of staffing requirements in AL facilities across Canada is not available, lower staffing requirements and an absence of regulated care providers appears to be consistent across Canada (Maxwell et al., 2015; McGrail et al., 2013).

Residents of AL facilities

Although facility-based LTC that takes place outside a nursing home is the preferred LTC option for many individuals and families (Anderson, 2015), concerns exist regarding their ability to respond to residents' health needs. This concern relates to disabilities, advanced age, and co-morbidities that are common amongst those relying on AL in Canada (Hogan et al., 2014; Maxwell et al., 2015). In fact, McGrail et al. (2013) report nearly 80 per cent of individuals entering AL facilities in British Columbia have a diagnosis considered to be major, including almost 70 per cent with multiple chronic health conditions, 50 per cent with hypertension, 45 per cent with non-specific signs and symptoms consistent with a geriatric syndrome, 29 per cent with cardiovascular disease, and 31 per cent with anxiety. In the year prior to their admission, these same individuals had a visit with their family physician a

mean of 20 times, 66 per cent saw a medical specialist, and almost 50 per cent had a hospital admission with a mean of 31.5 days in acute care (McGrail et al., 2013). These findings are consistent with a province-wide epidemiological study conducted in Alberta where residents of AL facilities were reported to have a mean of 4.6 diseases (range 0-14), 8.3 prescribed medications (range 0-23), and 54 per cent identified as being clinically complex and medically unstable (Strain, Maxwell, Wanless, & Gilbart, 2011). In addition, 12 per cent of these residents spent at least one night in an acute care hospital and 16 per cent had at least one emergency room visit during the 90 days prior to data collection; this compares to 5 per cent and 6 per cent of nursing home residents respectively. Further, a 1-year follow-up study by Strain et al. showed that 16 per cent of residents who were living in AL moved into a nursing home while another 13% died. More recently Stock et al. (2017) reported higher rates of inappropriate antipsychotic drug use among residents of AL compared with those residing nursing homes. These findings all suggest that residents of AL are medically complex and require a full range of medical services.

ALs role in the care continuum

Given that AL facilities operate at a cost of almost one third of that of nursing homes (Province of New Brunswick, 2016, p. 30), and are often preferred over nursing homes (Anderson, 2015), leveraging this important LTC option offers a logical and sustainable strategy to supporting the growing number of Canadian seniors. In maximizing their contributions, AL facilities could provide an enhanced level of care that is comprehensive and patient-centred, and that aligns with the principles of PHC. This could include care that focuses on health promotion, chronic disease, and injury prevention and management (Canadian Institute of Health Information, 2014; Nurses Association of New Brunswick, 2014). Although provinces such as Ontario and Quebec that offer team-based models of care in the community may be able to offer residents of AL facilities an enhanced level of care, this is not necessarily the case in provinces slow to "move beyond the status quo in primary care" (Peckham et al., 2018, p. 2).

In NB, and perhaps other jurisdictions where PHC models are limited to community health centres or more resource-intensive LTC facilities, AL facilities have limited capacity to offer PHC services. Although staff working in AL are capable of providing day-to-day support for residents, when residents experience any changes in their health status, and/or seek preventive or monitoring of health conditions, they may be required to leave AL to obtain care if the necessary supports are unavailable (Costello, Bartley, Joven,

Takahashi, & Tung, 2017). Worse, health issues may be dismissed or undetected, leading to worsening of residents' needs, and ultimately leading to a need for expensive and intensive acute care resources (McAiney et al., 2008; Sangster-Gormley et al., 2013). Moreover, limited PHC resources available in AL can impede the ability of staff to offer meaningful health promotion and disease-prevention activities, despite the benefits these activities can offer.

In provinces such as NB with limited community primary care teams, residents of AL may be expected to maintain a primary care provider in the community. In other words, residents can be expected to leave one system of care (LTC) and enter another (community care) in order to access primary care, with families playing a critical role in facilitating this process. Not only can transportation itself be problematic, but approximately 5 per cent of residents of AL do not have a primary care provider, and 73 per cent of New Brunswick citizens report being unable to access a primary care provider on the same or next day (New Brunswick Health Council, 2016). In cases of limited availability of community PHC models, transformation is needed to ensure that primary care is accessible, integrated, and coordinated, and that residents are able to obtain care when and where they need it.

Improving accessibility of health care

Despite residents' complex needs, there is limited capacity within many AL facilities across Canada to respond to these needs. Canadian researchers Maxwell et al. (2015) report that AL residents are significantly more likely to be transferred to hospital than are residents of nursing homes (21.6% compared with 42.7%). Similarly, Hogan et al. (2014) report that nearly 40 per cent of AL residents experience at least one hospital admission annually; a rate three times higher than the hospitalization rate for nursing home residents. There may be many reasons for the higher rates of hospitalization among AL residents, including the absence of regulated health care providers and limited ability to proactively manage health, respond to medical needs, or initiate interventions in a timely manner. Given the limited capacity in AL facilities to manage and respond to residents' health needs, Kane and March (2007) argue that AL options for residents' medical care resemble those of any other older adult living in the community, including a heavy reliance on hospitals.

Provincial Variations in PHC

Reliance on community resources for health care is only problematic when these resources are not available or accessible, or are inadequate. Wide variations in provincial and territorial approaches to primary care were uncovered in a recent review of health care reforms across Canada (Peckham et al., 2018). Using six criteria known to be necessary components of an effective and efficient primary care system (i.e., interprofessional primary care teams, tight rostering, access to primary care 24/7, information and communication technologies, flexible physician remuneration models, and structural alignment and accountability of health system) the review highlighted pockets of innovative primary care reforms across the country. For example, the review notes that Alberta offers financial incentives to primary care models that offer after-hour coverage, while other provinces limit after-hours health coverage to emergency services or to specific groups of health professionals. Ontario has a number of co-existing primary care models such as community health centres, primary care networks, and family health networks, while other provinces have only community health centres or a combination of primary care practices and interprofessional care teams (Peckham et al., 2018). Although the review suggests that primary care reform is taking place in all provinces and territories, the nature and scope of these reforms vary, likely because of different priorities, population needs, availability of resources, and financial circumstances.

The desire to enhance PHC has prompted an interest in optimizing resources and ensuring that health personnel are practicing to their full scope (Canadian Institute of Health Information, 2016). Although it is undeniable that clinicians and policy makers continually strive to enhance services and improve efficiencies, smaller provinces and agencies with fewer resources may be less aggressive in piloting new initiatives (Sutherland & Busse, 2016). Provincial legislation can determine how practitioners contribute to PHC when it outlines the conditions in which health care providers can perform their roles. Unfortunately, innovations in how practitioners practice and contribute to primary care models in some provinces have not been widely adopted across the country. For example, despite convincing evidence that NP-led clinics increase access to care and improve patient outcomes (Hansen et al., 2017; Heale, Wenghofer, James, & Garceau, 2018; Marchildon & Hutchison, 2016), the deployment of NPs across Canada varies. Equally diverse are how paramedics are utilized, and other primary care reforms that range from physician remuneration models that provide incentives performance-based funding to structural realignments that facilitate connectivity between different providers and organizations (Peckham et al., 2018). As noted by Peckham et al. (2018), NB has made progress in a number of the categories; however, more can be done, particularly in the area of the area of PHC for older adults.

Given the evidence pointing to the medical complexity of residents living in AL facilities, the province would do well to embrace primary care innovations proven successful in other Canadian provinces and to transform care in AL facilities. Although there are many examples of policy reforms that have enhanced PHC across Canada, some of these are associated with considerable financial investments, such as information and communication technologies, whereas others are highly complex and political, such as physician remuneration. Leveraging existing resources, such as supporting practitioners to practice to their full scope of practice, may be more readily adoptable to a small province. NPs and paramedics have both contributed to enhanced primary care services in Canada when permitted to practice to their full scope (Canadian Institute of Health Information, 2016).

NPs

NPs have and continue to play an important role in PHC reform across Canada, as evidenced by the types and number of models of care where they practice. Ontario and British Columbia both have NP-led clinics where PHC services are provided by NPs who work collaboratively within interprofessional teams that may include a physician. The required level of collaboration that NPs are required to have with physicians is determined by legislation and regulatory bodies, and varies greatly across provinces and territories. Whereas NPs in Ontario and British Columbia are able to work independently, a collaborative practice agreement with a physician is a requirement for NPs to practice in Quebec, Nova Scotia, NB, Prince Edward Island, and Newfoundland and Labrador (Canadian Nurses Association, 2016).

NPs can also play an important role in elevating the role that AL facilities play in the LTC continuum. NPs can provide PHC services on site, rather than expecting residents to leave the AL to obtain care. NPs can help unregulated support staff care for a resident population that is increasingly complex. This can include educating staff to prevent, anticipate, and respond to changing resident needs (Donald et al., 2013; Sangster-Gormley et al., 2013) or supporting residents and their families in meeting personal goals. There are opportunities for NPs to reduce overall costs, not only because they are a less expensive resource than physicians, but they can provide preventive care in the AL and increase staffs' capacity to care for complex residents on site. The model of care in use in the NP-led clinics in Ontario and British Columbia could be adopted across the country with adaptions to accommodate regional needs.

Not only do NPs' contributions in other provinces provide a strong case for expanding their role across the entire country, they also provide a unique opportunity to learn from others and identify what works best and what is sustainable, and under what conditions. For example, in Ontario, many patients whom NPs encountered in newly established clinics had inconsistent access to PHC for years (Heale et al., 2018). As a result, it is not uncommon for patients to have undiagnosed conditions and then become overwhelmed with new treatment plans (Heale et al., 2018). In the case of AL, it is possible that unregulated workers will become overwhelmed with changes in the nature and complexity of resident health needs. Similarly, an in-home NP service in Calgary Alberta reported significant start-up costs with a newly developed program with little effect on hospital diversions. NPs were also dissatisfied working in a home care model (Clare, 2019). These experiences provide important lessons for provinces such as NB that wish to engage in reforms that involve the use of NPs. Reforms should be tailored to the unique needs of target groups, performance indicators should be realistic and refined over time, and collateral consequences should be anticipated.

Paramedics

Community paramedicine is an evolving model of care in which paramedics collaborate with other health care entities to address gaps in the health care system (Bowles, van Beek, & Anderson, 2017). There is evidence that community paramedicine can enhance primary care and health promotion in the community and decrease reliance on emergency and acute care services (Bigham, Kennedy, Drennan, & Morrison, 2013). The literature identifies two categories of community paramedicine programs. The first is a preventive model of care in which paramedics work collaboratively with physicians and other care providers in areas such as routine primary care, health promotion, chronic disease management, administration of influenza vaccinations, and post-discharge care (Agarwal et al., 2019; Guo, Corabian, Yan, & Tjosvold, 2017; Martin-Misener, Downe-Wamboldt, Cain, & Girouard, 2009). The second is a more reactive model in which paramedics provide health services under the direction of a physician or an NP for unscheduled or emergency issues. The aim of reactive models is often to avert the need for hospital or medical services (Marshall, Clarke, Peddle, & Jensen, 2015). Paramedics working within preventive and reactive models have been found to provide care equivalent to or better than that of traditional models (Bigham, Kennedy, & Morrison, 2010).

The expanding role of paramedics represents an opportunity to improve health care in the community, including in AL. This is especially true when they practice within a preventive model of care and the need for future health care is reduced or averted. Agarwal et al. (2019) recently reported on the effectiveness of a community-based paramedicine clinic in decreasing risk

factors for chronic disease and improving health-related quality of life in five communities in Ontario. Marshall et al. (2015) reported on a care by design program in which paramedics work in LTC facilities to provide immediate care for residents requiring medical service, and if necessary, transport to hospital. In the LTC setting, paramedics are reported to increase clinical efficiency, enhance care coordination, and minimize stress for residents, as paramedics are immediately available to deliver some acute care on site and avert hospital transfers. Similar results were reported from other Canadian programs that utilized paramedics in community settings (Agarwal et al., 2018; Brydges, Denton, & Agarwal, 2016; O'Meara, Ruest, & Martin, 2015).

Given the evidence, it would be prudent to identify how to further capitalize on paramedic competencies and their successful utilization in some jurisdictions. Provinces such as NB that have yet to expand the role of paramedics should turn to provinces such as Nova Scotia or Ontario to determine how such programs could be implemented. It is important to examine both strengths and weaknesses in the adoption of paramedics into PHC reforms. One fundamental challenge in utilizing paramedics is balancing the emergent and primary care needs of a community. Other challenges revolve around the absence of education and training standards for community paramedics (Leyenaar et al., 2019). The adoption of paramedic community model of care requires significant recruitment, training, and professional development of paramedics (Leyenaar et al., 2019). It is perhaps because of challenges such as these that community paramedics have not been universally used across Canada. Careful consideration of how to mitigate these challenges should be considered prior to expanding the role of paramedics in ALs.

Integration of Health and Social Services

Although individual provinces have implemented reforms aimed at health and social integration to varying degrees, the fact remains that Canada does not have an integrated model of health and social care. A fundamental premise behind integrated care is that services are organized around the needs of patients rather than around systems of care. Integrating health and social care has been a priority in the National Health System (NHS) for nearly a century. The efforts of the NHS can guide other jurisdictions aiming to integrate health and social care. A key lesson from the NHS's efforts is that structural integration of health and social services does not necessarily lead to service integration, and that service integration can occur without structural integration (Ham & Oldham, 2009). In the case of NB where long-term care does not fall under the same governmental department as health, this suggests that the organization of health care in an LTC setting such as

AL can successfully take place. In other provinces, traditional organizational structures should not be viewed as an impediment to service integration. A successful approach reported in the NHS is the use of shared care protocols between acute care and LTC, including early identification and support for residents at risk for hospitalization, mutually agreed upon approaches to care, ongoing education and training delivered to both health and social personnel together, and the identification of a single "key link worker" (Goodman et al., 2017, p.50) to coordinate services between health and social sectors (Goodman et al., 2017; Kirst et al., 2017).

The systematic collection and analysis of clinical data is key to a fully integrated system. The availability of comprehensive data on the population will help ensure that reforms reflect the needs of the population and facilitate integration of care processes across settings and providers (Heckman et al., 2019). The collection and analysis of comprehensive data to monitor ongoing progress of health reforms will allow for comparisons with other provinces on key indicators. The involvement of key stakeholders, including representatives from government, LTC, nursing, and paramedic regulatory bodies and other health professionals (i.e., physicians, social workers) to engage in a data driven discussion about regional needs, and determination of roles and additional resources to optimize existing resources is also a necessary ingredient of success. Although this article focused on the utilization of NPs and paramedics in ALs, it likely that other providers such as occupational therapists, physical therapists, and social workers will also play an important role in primary care reforms. Standardized clinical information systems across practice environments can support resource allocation and the coordination of multiple health care providers.

The integration of health services across the care continuum has also been implemented in varying degrees across the country. Integral to these activities it the notion of value-based health care that seeks to enhance clinical outcomes and efficiencies across an entire episode of care or population group (Zelmer, 2018). Although it is clear that there is no single path to improving primary care or integrating services across the care continuum, there are a number of leading practices that could be adopted in jurisdictions that have limited resources. In the case of AL in NB, the adoption of NPs and community paramedics should be explored as a means to achieve value-based primary health in long-term care.

Conclusion

A review of PHC initiatives in Canada over the past two decades has uncovered a number of innovations in the organization, funding, and delivery of health services. Many of these initiatives have a direct and meaningful impact on the growing number of older adults and include strategies that integrate care across the continuum, improve access to primary care and services, and fully utilize select health care professionals. Although evidence demonstrates that these approaches strengthen the health care system, there is interprovincial variability in the degree to which individual provinces have adopted PHC initiatives. Smaller less resourced provinces in particular have had more limited reforms, but there are opportunities for these small provinces to adopt initiatives introduced in other provinces. Learning from the successes of other provinces is one way to strengthen PHC in less-resourced provinces, while allowing for adaptions to be made to reflect local circumstances and needs. There are opportunities for provinces with strong PHC strategies to expand existing models of care to include AL facilities, while provinces with less-developed PHC strategies would do well to adopt programs proven successful in other provinces to AL facilities. A highly successful and documented PHC strategy is to allow NPs and paramedics to practice to their full scope Given the complexity of residents living in AL and their reliance on medical services, providing residents with access to NPs and paramedics can help to build on the momentum of Canadian PHC reforms.

References

- Agarwal, G., Angeles, R., Pirrie, M., McLeod, B., Marzanek, F., Parascandalo, J., et al. (2018). Evaluation of a community paramedicine health promotion and lifestyle risk assessment program for older adults who live in social housing: A cluster randomized trial. CMAJ, 190(21), E638–E647.
- Agarwal, G., Angeles, R., Pirrie, M., McLeod, B., Marzanek, F., Parascandalo, J., et al. (2019). Reducing 9-1-1 emergency medical service calls by implementing a community paramedicine program for vulnerable older adults in public housing in Canada: A multi-site cluster randomized controlled trial. *Prehospital Emergency Care*, 23(5), 1–16.
- Anderson, J. (2015). Assisted living preferred care option for seniors who can't live alone. Seniors Living Blog. Retrieved 1 July 2020 from https://www.aplaceformom.com/caregiver-resources/articles/assisted-living-preferred-care
- Bigham, B., Kennedy, S., Drennan, I., & Morrison, L. (2013). Expanding paramedic scope of practice in the community: A systematic review of the literature. *Prehospital Emergency Care*, 17(3), 361–372.
- Bigham, B., Kennedy, S., & Morrison, L. (2010). *Expanding* paramedic scope of practice in the community. Rescu, Keenan Research Centre, Li Ka Shing Knowledge Institute,

- St Michael's Hospital University of Toronto. Retrieved 23 May 2020 from https://communityparamedic.ca/site/media/download_gallery/Community%20Paramedicine %20Report%202010.pdf
- Bowles, R. R., van Beek, C., & Anderson, G. S. (2017). Four dimensions of paramedic practice in Canada: Defining and describing the profession. *Australasian Journal of Paramedicine*, 14(3), 1–12.
- Brydges, M., Denton, M., & Agarwal, G. (2016). The CHAP-EMS health promotion program: A qualitative study on participants' views of the role of paramedics. *BMC Health Services Research*, 16(1), 435.
- Canadian Health Services Research Foundation. (2011). Better with age: Health system planning for the aging population.

 Retrieved 30 April 2020 from http://www.cfhi-fcass.ca/
 Libraries/Aging_roundtable_reports/0604-AGING_
 RNDTBLE-SNTHSS_FinalWEB.sflb.ashx.
- Canadian Institute of Health Information. (2014). *Primary health care*. Retrieved 30 April 2020 from https://www.cihi.ca/en/primary-health-care
- Canadian Institute of Health Information. (2016). *Improving health system efficiency in Canada: Perspectives of decision-makers*. Retrieved 28 April 2020 from https://secure.cihi.ca/free_products/improving_health_system_efficiency_en.pdf.
- Canadian Institute of Health Information. (2017a). *National health expenditure trends*. Retrieved 30 April 2020 from https://www.cihi.ca/en/national-health-expenditure-trends.
- Canadian Institute of Health Information. (2017b). *Residential care*. Retrieved 28 April 2020 from https://www.cihi.ca/en/residential-care.
- Canadian Institute of Health Information (2017c). Seniors in transition: Exploring pathways across the care continuum.

 Retrieved 28 April 2020 from https://www.cihi.ca/en/seniors-in-transition-exploring-pathways-across-the-care-continuum
- Canadian Medical Association. (2015). A policy framework to guide a national seniors' strategy for Canada. Retrieved 30 April 2020 from https://cma.ca/sites/default/files/pdf/News/policy-framework-to-guide-seniors_en.pdf
- Canadian Medical Association. (2016). *The state of seniors health care in Canada*. Retrieved 28 April 2020 from https://cma.ca/sites/default/files/2018-11/the-state-of-seniors-health-care-in-canada-september-2016.pdf.
- Canadian Nurses Association. (2015). *Primary health care: Position statement*. Retrieved 29 April 2020 from http://www.cna-aiic.ca/~/media/cna/page-content/pdf-en/primary-health-care-position-statement.pdf?la=en.
- Canadian Nurses Association. (2016). *The Canadian nurse practitioner initiative: A 10-year retrospective*. Retrieved 1 May 2020 from https://www.cna-aiic.ca/-/media/cna/page-content/pdf-en/canadian-nurse-practitioner-

- initiative-a-10-year-retrospective.pdf?la=en&hash= 406D8F34F947CFD94DA04AE0CF56A739514D01B7.
- Clare, D. (2019). Bringing health care home: A pilot project to improve access to primary health care using mobile nurse practitioner services. *Athens Journal of Health and Medical Services*, 6(1), 19–34. doi:doi.org/10.30958/ajhms.6-1-2.
- Costello, M., Bartley, M., Joven, M., Takahashi, Y., & Tung, E. (2017). A comparison of emergency medical service utilization in assisted living and long-term care facilities. *Annals of Longterm Care*, 25(5), 27–31. doi:10. 25270/altc.2017.10.00002.
- Dearing, J. W., Beacom, A. M., Chamberlain, S. A., Meng, J., Berta, W. B., Keefe, J. M., *et al.* (2017). Pathways for best practice diffusion: The structure of informal relationships in Canada's long-term care sector. *Implementation Science*, 12(1), 11. doi:10.1186/s13012-017-0542-7.
- Donald, F., Martin-Misener, R., Carter, N., Donald, E., Kaasalainen, S., Wickson-Griffiths, A., et al. (2013). A systematic review of the effectiveness of advanced practice nurses in long-term care. *Journal of Advanced Nursing*, 69(10), 2148–2161.
- Goodman, C., Davies, S., Gordon, A., Dening, T., Gage, H., Meyer, J., et al. (2017). Optimal NHS service delivery to care homes: A realist evaluation of the features and mechanisms that support effective working for the continuing care of older people in residential settings. Retrieved 28 April 2020 from https://espace.mmu.ac.uk/622462/1/3011409.pdf.
- Guo, B., Corabian, P., Yan, C., & Tjosvold, L. (2017). Community paramedicine: Program characteristics and evaluation. Edmonton, AB: Institute of Health Economics.
- Ham, C., & Oldham, J. (2009). Integrating health and social care in England: Lessons from early adopters and implications for policy. *Journal of Integrated Care*, 17(6), 3–9.
- Hansen, K. T., McDonald, C., O'Hara, S., Post, L., Silcox, S., & Gutmanis, I. A. (2017). A formative evaluation of a nurse practitioner-led interprofessional geriatric outpatient clinic. *Journal of Interprofessional Care*, 31(4), 546–549.
- Heale, R., Wenghofer, E., James, S., & Garceau, M.-L. (2018). Quality of care for patients with diabetes and mulitmorbidity registered at nurse practitioner-led clinics. *Canadian Journal of Nursing Research*, 50(1), 20–27.
- Heckman, G., Crutchlow, L., Boscart, V., Hillier, L., Franco, B., Lee, L., et al. (2019). Quality assurance as a foundational element for an integrated system of dementia care. *International Journal of Health Care Quality Assurance*, 32 (6), 978–990. doi:/10.1108/IJHCQA-07-2018-0187.
- Hogan, D., Amuah, J., Strain, L., Wodchis, W., Soo, A., Eliasziw, M., *et al.* (2014). High rates of hospital admission among older residents in assisted living facilities: Opportunities for intervention and impact on acute care. *Open Medicine*, 8(1), e33.

- Institute for Research on Public Policy. (2015). *Designing a national seniors' strategy for Canada: IRPP task force on aging.* Retrieved 29 April 2020 from https://irpp.org/wpcontent/uploads/2015/10/report-2015-10-07.pdf
- Kane, R., & Mach Jr., J. (2007). Improving health care for assisted living residents. *The Gerontologist*, 47(1 Suppl), 100–109.
- Kirst, M., Im, J., Burns, T., Baker, G. R., Goldhar, J., O'Campo, P., et al. (2017). What works in implementation of integrated care programs for older adults with complex needs? A realist review. *International Journal for Quality in Health Care*, 29(5), 612–624.
- Leyenaar, M., McLeod, B., Penhearow, S., Strum, R., Brydges, M., Mercier, E., *et al.* (2019). What do community paramedics assess? An environmental scan and content analysis of patient assessment in community paramedicine. *Canadian Journal of Emergency Medicine*, 21(6), 766–775. doi:10.1017/cem.2019.379.
- Marchildon, G., & Hutchison, B. (2016). Primary care in Ontario, Canada: New proposals after 15 years of reform. *Health Policy*, 120(7), 732–738. doi:10.1016/j. healthpol.2016.04.010.
- Marshall, E., Clarke, B., Peddle, S., & Jensen, J. (2015). Care by design: New model of coordinated on-site primary and acute care in long-term care facilities. *Canadian Family Physician*, 61(3), e129–e134.
- Martin-Misener, R., Downe-Wamboldt, B., Cain, E., & Girouard, M. (2009). Cost effectiveness and outcomes of a nurse practitioner–paramedic–family physician model of care: The Long and Brier Islands study. *Primary Health Care Research & Development*, 10(1), 14–25.
- Maxwell, C., Amuah, J., Hogan, D., Cepoiu-Martin, M., Gruneir, A., Patten, S., et al. (2015). Elevated hospitalization risk of assisted living residents with dementia in Alberta, Canada. Journal of the American Medical Directors Association, 16(7), 568–577.
- McAiney, C., Haughton, D., Jennings, J., Farr, D., Hillier, L., & Morden, P. (2008). A unique practice model for nurse practitioners in long-term care homes. *Journal of Advanced Nursing*, 62(5), 562–571.
- McGrail, K., Lilly, M., McGregor, M., Broemeling, A. M., Salomons, K., Peterson, S., et al. (2013). Health care services use in assisted living: A time series analysis. Canadian Journal on Aging/La Revue canadienne du vieillissement, 32(2), 173–183.
- New Brunswick Department of Social Development. (2013). Standards and procedures for adult residential facilities. Retrieved 28 April 2020 from http://www2.gnb.ca/content/dam/gnb/Departments/sd-ds/pdf/Standards/AdultResidential-e.pdf.
- New Brunswick Department of Social Development. (2017a). Special care homes. Retrieved 29 April 2020 from http://www2.gnb.ca/content/gnb/en/departments/social_development/special_care_homes/special_care_homes.html.

- New Brunswick Department of Social Development. (2017b). Standards manual: Nursing home services. Retrieved 28 April 2020 from https://www2.gnb.ca/content/dam/gnb/Departments/sd-ds/pdf/Standards/NursingHomesStandardsManual.pdf.
- New Brunswick Health Council. (2016). Chronic conditions and health serve quality: Are we meeting the need? Retrieved 28 April 2020 from https://nbhc.ca/sites/default/files/publications-attachments/chronic%20conditions% 20and%20health%20service%20quality%20-%20are% 20we%20meeting%20the%20need.pdf.
- New Brunswick Health Council. (2017). *Being patient—Accessibility, primary health and emergency rooms*. Retrieved 29 April 2020 from https://nbhc.ca/sites/default/files/publications-attachments/being-patient-en.pdf.
- Nurses Association of New Brunswick. (2014). *Primary health care: Position statement*. Retrieved 29 April 2020 from https://www.cna-aiic.ca/~/media/cna/page-content/pdf-en/primary-health-care-position-statement.pdf.
- O'Meara, P., Ruest, M., & Martin, A. (2015). Integrating a community paramedicine program with local health, aged care and social services: An observational ethnographic study. *Australasian Journal of Paramedicine*, 12(5), 1–7.
- Peckham, A., Ho, J., & Marchildon, G. (2018). *Policy innovations in primary care across Canada: A rapid review prepared for the Canadian Foundation for Healthcare Improvement*. Retrieved from http://ihpme.utoronto.ca/wp-content/uploads/2018/04/NAO-Rapid-Review-1_EN.pdf.
- Penning, M., Cloutier, D., Nuernberger, K., MacDonald, S., & Taylor, D. M. (2016). Long-term care trajectories in Canadian context: Patterns and predictors of publicly funded care. *The Journals of Gerontology: Series B*, 73(6), 1077–1087.
- Province of New Brunswick. (2012). A primary health care framework for New Brunswick. Retrieved from https://www.gnb.ca/0053/phc/pdf/2012/8752_EN%20Web.pdf.
- Province of New Brunswick. (2016). Report-health: Chapter 2. Nursing homes. Retrieved from http://www.agnbvgnb.ca/content/dam/agnb-vgnb/pdf/Reports-Rapports/2016V1/Chap2e.pdf.
- Province of New Brunswick. (2017a). Long-term care services for seniors. Retrieved from http://www2.gnb.ca/content/gnb/en/services/services_renderer.10115.Long-Term_Care_Services_for_Seniors.html.
- Province of New Brunswick. (2017b). We are all in this together: An aging strategy for New Brunswick. Retrieved 28 April 2020 from https://www2.gnb.ca/content/dam/gnb/Departments/sd-ds/pdf/Seniors/AnAgingStrategyForNB.pdf.
- Sangster-Gormley, E., Carter, N., Donald, F., Misener, R., Ploeg, J., Kaasalainen, S., et al. (2013). A value-added benefit of nurse practitioners in long-term care settings: Increased nursing staff's ability to care for residents. Nursing Leadership (Toronto, Ont.), 26(3), 24–37.

- Stock, K., Amuah, J., Lapane, K. L., Hogan, D., & Maxwell, C. (2017). Prevalence of, and resident and facility characteristics associated with antipsychotic use in assisted living vs. long-term care facilities: A cross-sectional analysis from Alberta, Canada. *Drugs & Aging*, 34(1), 39–53.
- Strain, C., Maxwell, D., Wanless, D., & Gilbart, E. (2011). Designated assisted living (DAL) and long-term care (LTC) in Alberta: Selected highlights from the Alberta continuing care epidemiological studies (ACCESS). Retrieved 1 May 2020 from https://era.library.ualberta.ca/items/86c45141-a2bd-49fc-a694-87c8ce185e4e/view/781b5e54-d2b0-4a17-82c7-c7e828da4e34/ACCES-20Final-20Report.pdf.
- Suter, E., Misfeldt, R., Mallinson, S., Wilhelm, A., Boakye, O., Marchildon, G., et al. (2014). *Comparative review of the policy*

- landscape of team-based primary health care service delivery in western Canada. Edmonton: Alberta Health Services.
- Sutherland, J., & Busse, R. (2016). Canada: Focus on a country's health system with provincial diversity. *Health Policy (Amsterdam, Netherlands)*, 120(7), 729.
- Valentijn, P., Schepman, S., Opheij, W., & Bruijnzeels, M. (2013). Understanding integrated care: A comprehensive conceptual framework based on the integrative functions of primary care. *International Journal of Integrated Care*, 13, 1–12.
- Zelmer, J. (2018). *Identifying the most promising opportunities for value-based health care*. Retrieved 28 April 2020 from https://www.cfhi-fcass.ca/sf-docs/default-source/documents/health-system-transformation/vbhc-design-day-outcomes-summary-e.pdf.