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SPECIAL ISSUE – OPTIMIZING REGISTERED NURSES IN PRIMARY CARE

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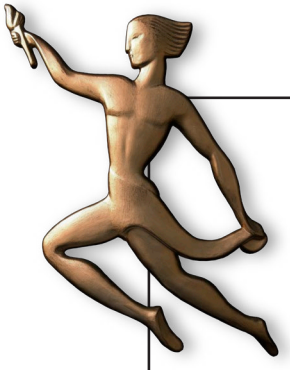

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Registered Nurses in Primary Care: Your Time Is Now

Primary care is described as the front door of the healthcare system (Kiran 2022). Defined more than 30 years ago, primary care is a model of healthcare that includes first-contact care, continuity of care, comprehensiveness and coordination (Starfield 1994). For a patient, it is their entry point to the rest of the healthcare system, and ideally, the place where they go to have most of their healthcare needs met by the same provider over time. Primary care is a component of primary healthcare, which is a broader approach that includes public health as well as policy, action and empowerment strategies involving multiple sectors (WHO n.d.). While Canada has made improvements in primary care delivery, its performance still lags behind that of other countries (Duong and Vogel 2023). One of its shortfalls is accessibility. More than 6.5 million people in Canada do not have access to primary care (Duong and Vogel 2023). This is concerning, and even more so because the population is aging, and many people have one or more chronic illnesses needing ongoing follow-up (Public Health Agency of Canada 2022) and social determinants of health requiring action (Andermann et al. 2016).

This special issue of the *Canadian Journal of Nursing Leadership* (*CJNL*) has a specific focus on the role of registered nurses (RNs) in primary care. While the role of nurse practitioners (NPs) in primary care is well established, and their numbers are growing rapidly (CIHI 2024b), less is known about RNs in primary care. Except in the North, where they have had a longstanding expanded clinical role in primary care for many years RNs were commonly thought of as administrative support to physicians. However, over the past decade, that is changing, particularly with the expansion of team-based primary care (Bodenheimer and Bauer 2016).

Team-based care offers a solution to primary care accessibility challenges, but its impact depends on every provider practising their optimal scope of practice (Canadian Academy of Health Sciences 2012). This poses challenges for RNs in primary care in Canada because their role is still unclear to many other healthcare providers and is underutilized, under-researched and without articulated

theoretical underpinnings. To begin to address this gap, the idea of a special issue of *CJNL* was conceived in conversations with Julia Lukewich, Treena Klassen and Marie-Eve Poitras when I attended a TEAM Primary Care conference in St. John's, Newfoundland and Labrador, in 2023. The concept was to profile current research that demonstrates the vital role that RNs can play in team-based care. It is exciting to see the idea transform into a reality.

The special issue begins with an insightful commentary written by Ivy Bourgeault and Ivy Oandasan who provide an overview of the importance of primary care in the healthcare system and the *Team Primary Care: Training for Transformation* initiative. Their commentary concludes with a sentence that I think will resonate with readers of this special issue – "Primary care – what ought to be the front door to our health system – will benefit from greater and strategic involvement of nursing" (Bourgeault and Oandasan 2025: 12).

Norful et al. (2025) provide the first paper in the special issue. Titled "Theory-Informed Strategies to Guide Policy, Practice, Education and Research About Registered Nurses in Primary Care," this article describes the process and results of a deliberative dialogue involving 68 diverse decision makers at the Team Primary Care Nursing (TPCN) Summit in February 2024. The group's first task was to identify the challenges associated with implementing RNs in primary care. They then identified theoretical models that could guide work to address these challenges. The paper discusses the application of two selected models – Donabedian's (1966) quality of care model and Norful et al.'s (2018) co-management model.

Next, in "Education for Registered Nurses in Primary Care: Current and Future Trends," Lukewich et al. (2025a) discuss education for RNs in primary care, a field that until recently has been neglected in nursing programs. The authors describe the rather bleak state of pre- and post-licensure education for RNs to practise in primary care and the development of an asynchronous bilingual competency-based education program that transformed the education terrain along with a community of practice and an evaluation.

Following this is the paper from Poitras et al. (2025) who write about the implementation of a "train-the-trainer" (p. 42) intervention led by an RN, social worker and patient partner. Their article titled "Key Elements for Implementing a Train-the-Trainer Intervention for Registered Nurses and Social Workers in Primary Care" discusses the development and implementation of this interprofessional, patient-engaged train-the-trainer intervention and its qualitative developmental evaluation.

Spencer et al.'s (2025) paper, "Primary Care Team Funding, Compensation and Practice Models Across Canadian Jurisdictions: An Environmental Scan" is next. It uncovers what is known about team-based practice models and how they are funded, including provider compensation. Importantly, it sheds light on how RNs are compensated in primary care team-based models of care. Understanding funding models and their influences on provider behaviours, including collaboration and work allocation, is an important consideration when evaluating team functioning and outcomes.

In the next paper, Lukewich et al. (2025b) report on their study of nursing leadership in primary care in the context of the COVID-19 response. Their qualitative case study involving a total of 76 RNs, NPs and licensed/registered practical nurses from regions in four provinces probes the relationship between nursing leadership and healthcare system preparedness, identifying the value of nursing leadership during a public health emergency and how nurses' expertise can be better used in primary care settings – important messages to inform system readiness for the next public health crisis.

Prescribing is a new responsibility added to the scope of practice for some RNs in some provinces. MacQuarrie et al.'s (2025) commentary discusses the planning and implementation of RN prescribing in Nova Scotia, and the importance of leadership to make significant change. Their commentary describes the processes and frameworks used to inform the components of the prescribing approach and the importance of partnerships for planning, implementing and evaluating the scope of practice changes.

Scope of practice is the focus of Morin et al.'s (2025) paper in which they report on a scoping review conducted to identify, describe and map self-reported questionnaires for evaluation of RNs' scopes of practice in primary care. Their search yielded 12 articles adding to the knowledge about primary care RNs' scope of practice and about the toolbox of questionnaires available for research and other activities to strengthen RN practice to meet the needs of patients.

In the next commentary, patient partners, Leamon and Poirier (2025) draw on their lived experience and expertise to present a vision for a future in which patients and RNs work together in partnership to drive change in primary care. They discuss the importance of trust between RNs and patients and how it can grow over time because of the longitudinal nature of patient–provider relationships in primary care. Fundamental to the development of trust is respect that patients "are the true experts in their care journey" (Leamon and Poirier 2025: 126).

Next Braithwaite et al. (2025) write about the critical importance of nursing leadership in primary care. They embrace the philosophy of "every nurse a leader" (p. 134) and the affirmation that leadership is a core competency for all RNs in primary care. Their paper identifies challenges and opportunities for leadership to advance the role and impact of RNs in primary care.

The special issue closes with a commentary from the past president of the Canadian Nurses Association, Sylvain Brousseau, who reminds us of the important social mission of RNs in primary care. Beginning with the title, "Empowering Primary Care Nurses – Unlocking Access, Enhancing Quality and Addressing Social Determinants of Health," past President Brousseau leaves readers with a powerful reminder that RNs are essential to strong primary care systems that improve accessibility, equity and quality. Brousseau (2025: 143) leaves us all with a call to action: "The time to act is now. Enough talk, it is time for real and concrete action."

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References

Andermann, A; CLEAR Collaboration. 2016. Taking Action on the Social Determinants of Health in Clinical Practice: A Framework for Health Professionals. *CMAJ* 188(17–18): E474–83. doi:10.1503/cmaj.160177.

Bodenheimer, T. and L. Bauer. 2016. Rethinking the Primary Care Workforce – An Expanded Role for Nurses. *New England Journal of Medicine* 375(11): 1015–17. doi:10.1056/NEJMp1606869.

Bourgeault, I. and I. Oandasan. 2025. Commentary: Optimizing Nursing Roles in Team-Based Primary Care is Imperative. *Canadian Journal of Nursing Leadership* 37(SP): 11–13. doi:10.12927/cjnl.2025.27556.

Braithwaite, S., C. Gilmer, J. Lukewich and S. Myles. 2025. Registered Nurse Leadership in Primary Care: Embracing "Every Nurse a Leader." *Canadian Journal of Nursing Leadership* 37(SP): 133–41. doi:10.12927/cjnl.2025.27547.

Brousseau, S. 2025. Commentary: Empowering Primary Care Nurses – Unlocking Access, Enhancing Quality and Addressing Social Determinants of Health. *Canadian Journal of Nursing Leadership* 37(SP): 142–44. doi:10.12927/cjnl.2025.27546.

Canadian Academy of Health Sciences (CAHS). 2012. Optimizing Scopes of Practice: New Models of Care for a New Health Care System. Retrieved February 20, 2025. <https://cahs-acss.ca/optimizing-scopes-of-practice-new-models-of-care-for-a-new-health-care-system/>.

Canadian Institute for Health Information (CIHI). 2024, July 25. Nurse Practitioners. Retrieved February 20, 2025. <https://www.cihi.ca/en/nurse-practitioners>.

Donabedian, A. 1966. Evaluating the Quality of Medical Care. *The Milbank Memorial Fund Quarterly* 44(3): 166–206. doi:10.2307/3348969.

Duong, D. and L. Vogel. 2023. National Survey Highlights Worsening PRIMARY Care Access. *CMAJ* 195(16): E592–93. doi:10.1503/cmaj.1096049.

Kiran, T. 2022. Keeping the Front Door Open: Ensuring Access to Primary Care for All in Canada. *CMAJ* 194(48): E1655–56. doi:10.1503/cmaj.221563.

Leamon, T. and M.-D. Poirier. 2025. The Future of Registered Nurses in Primary Care: The Patients' Perspectives. *Canadian Journal of Nursing Leadership* 37(SP): 125–32. doi:10.12927/cjnl.2025.27548.

Lukewich, J., S. Myles, D. Ryan, S. Braithwaite, M.-E. Poitras, D. Curnew et al. 2025a. Education for Registered Nurses in Primary Care: Current and Future Trends. *Canadian Journal of Nursing Leadership* 37(SP): 27–40. doi:10.12927/cjnl.2025.27554.

Lukewich, J., D. Ryan, M. Mathews, L. Hedden, E.G. Marshall, C. Vaughan et al. 2025b. Nurses Leading the Way: A Qualitative Study of Nursing Leadership, Innovation and Opportunity in Primary Care During a Public Health Crisis. *Canadian Journal of Nursing Leadership* 37(SP): 77–95. doi:10.12927/cjnl.2025.27551.

MacQuarrie, C., N. Cashen and S. Welcher. 2025. Implementation of Registered Nurse Prescribers in Nova Scotia. *Canadian Journal of Nursing Leadership* 37(SP): 96–103. doi:10.12927/cjnl.2025.27550.

Morin, A., C. Gagnon, M.-J. Émond, M.-E. Perron, M. McGraw, P.-H. Roux-Levy et al. 2025. Measuring Registered Nurses' Scope of Practice in Primary Care: A Scoping Review of Available Self-Reported Questionnaires. *Canadian Journal of Nursing Leadership* 37(SP): 104–24. doi:10.12927/cjnl.2025.27549.

Norful, A.A., K. de Jacq, R. Carlino and L. Poghosyan. 2018. Nurse Practitioner–Physician Comanagement: A Theoretical Model to Alleviate Primary Care Strain. *The Annals of Family Medicine* 16(3): 250–56. doi:10.1370/afm.2230.

Norful, A.A., J.A. Nikpour, S. Myles and J. Lukewich. 2025. Theory-Informed Strategies to Guide Policy, Practice, Education and Research About Registered Nurses in Primary Care. *Canadian Journal of Nursing Leadership* 37(SP): 14–26. doi:10.12927/cjnl.2025.27555.

Poitras, M.-E., Y. Couturier, A. Morin, M.-D. Poirier, V.T. Vaillancourt, M.-É. Pépin et al. 2025. Key Elements for Implementing a Train-the-Trainer Intervention for Registered Nurses and Social Workers in Primary Care. *Canadian Journal of Nursing Leadership* 37(SP): 41–58. doi:10.12927/cjnl.2025.27553.

Public Health Agency of Canada. 2022. Aging and Chronic Diseases: A Profile of Canadian Seniors. Government of Canada. Retrieved February 20, 2025. <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/aging-chronic-diseases-profile-canadian-seniors-report.html>.

Spencer, S., L. Hedden, J. Lukewich, M. Mathews, M.-E. Poitras, C. Beaulieu et al. 2025. Primary Care Team Funding, Compensation and Practice Models Across Canadian Jurisdictions: An Environmental Scan. *Canadian Journal of Nursing Leadership* 37(SP): 59–76. doi:10.12927/cjnl.2025.27552.

Starfield, B. 1994. Is Primary Care Essential? *The Lancet* 344(8930): 1129–33. doi:10.1016/s0140-6736(94)90634-3.

World Health Organization (WHO). n.d. Primary Care. Retrieved February 20, 2025. <https://www.who.int/teams/integrated-health-services/clinical-services-and-systems/primary-care>.

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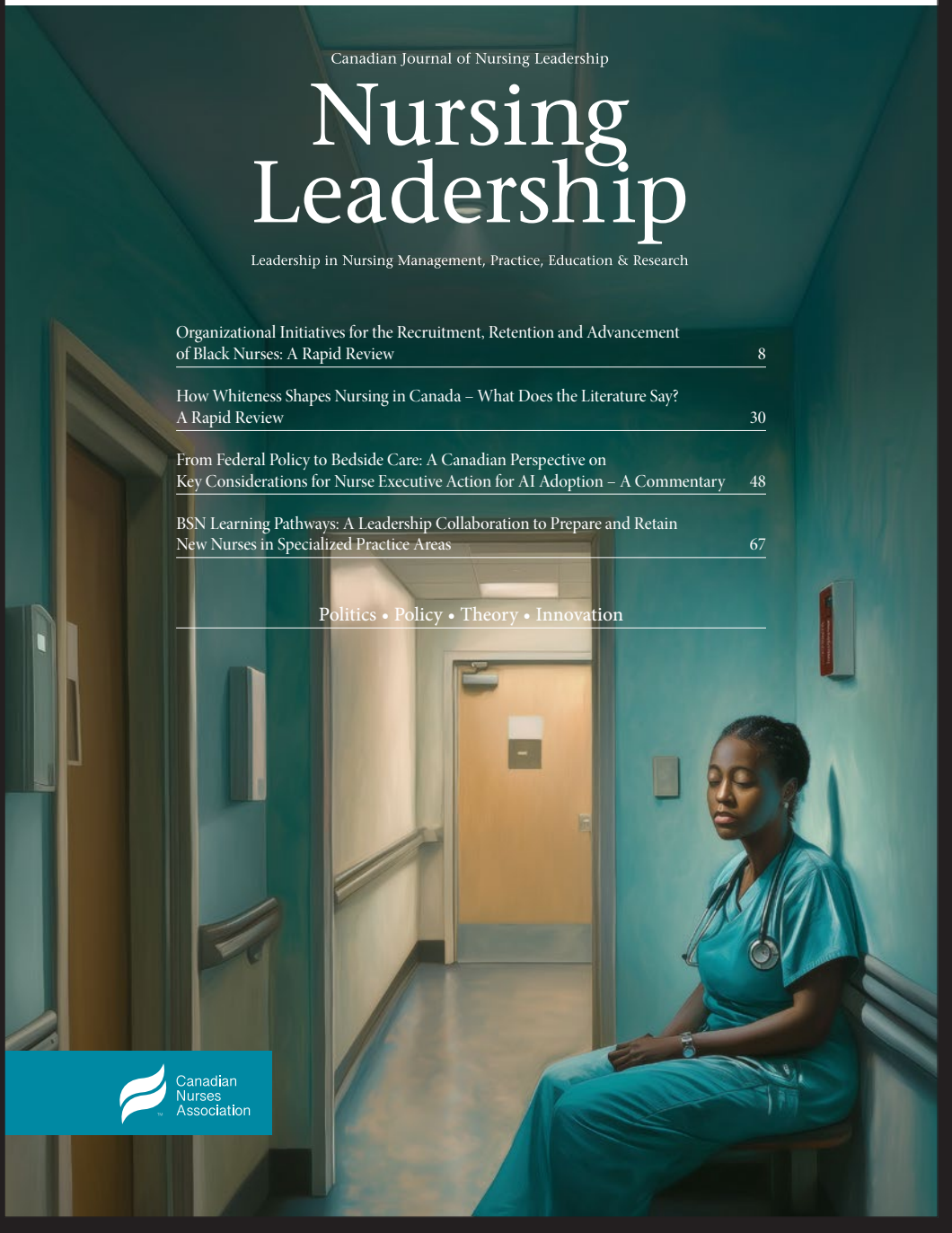

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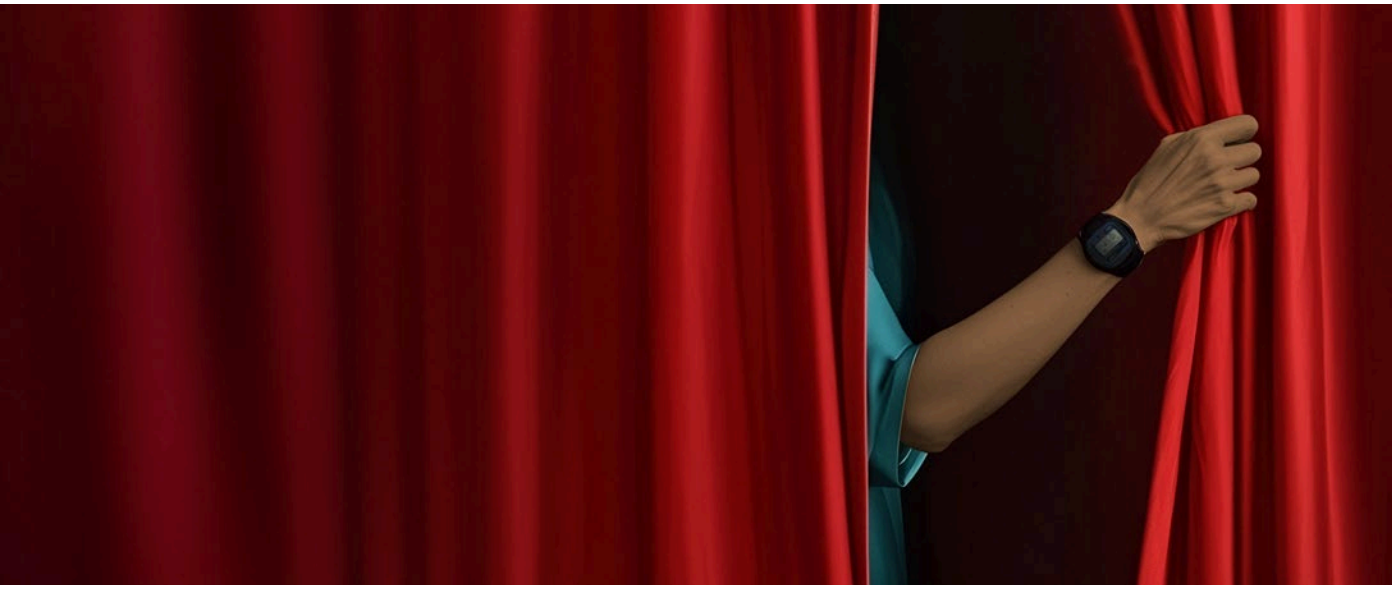

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Team Primary Care and Team Primary Care Nurse was established by funding received from Employment and Social Development Canada through a grant to the Foundation for Advancing Family Medicine, co-led by the College of Family Physicians of Canada and the Canadian Health Workforce Network.

Commentary: Optimizing Nursing Roles in Team-Based Primary Care Is Imperative

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Introduction

The optimization of the roles and skills that all healthcare professionals play is imperative, not the least of which is in the foundational primary care sector.

Data abound about how so many different healthcare professionals are constrained in their ability to apply in the provision of care the skills for which they have trained so diligently to master – and for which they and the Canadian public have supported financially through the funding of training institutions. We need to see a way around the manner that we train yet constrain health professionals, particularly during a workforce crisis.

When it studied the state of the optimization of health professional scopes of practice over 10 years ago, the Canadian Academy of Health Sciences (CAHS 2014) boldly stated that:

> One of the key problems in the way health care is delivered in Canada today is that health professional scopes of practice and associated models of care tend to be organized on the basis of tradition and politics rather than in relation to the evidence of how best to meet contemporary population health needs (p. 19).

Confronting these structural barriers, particularly around funding and regulatory reform, was where it focused its key recommended actions.

The recent reinterpretation of the *Canada Health Act* (1985) by the federal minister of health (Health Canada 2025) is consistent with these calls. This in turn creates a timely and synergistic opportunity for nurses' and other health providers' integration into primary care. The key to optimizing their role in primary care is in defining in turn what are medically necessary primary care services that should be accessible to all Canadians; who has the training and regulated scope to provide these services; and as Spencer et al. (2025) describe herein, how do we ensure that funding, compensation and practice models support a complement of healthcare professionals who can collaboratively deliver these services.

Indeed, the goal ought not to simply be the optimization of health professional scopes of practice within professional practice silos – it should quite explicitly be the optimization to work in teams in team-based models of primary care.

This was one of the key principles of the *Team Primary Care: Training for Transformation* initiative that we co-led (Team Primary Care 2024). We specifically brought together over 20 primary care practitioner-focused training teams to develop curricula and programs to better learn about, from and with all of those who can contribute to higher quality team-based care across Canada's primary care systems. We started first by sharing what each provider group is trained and regulated to do as foundational knowledge for working better together.

Similar to the over 20 other partners, the registered nursing team co-led by Marie-Eve Poitras, Julia Lukewich, Treena Klassen and others developed some of the project's most innovative team-based primary care-focused training for nurses, showcased here in this special issue and in an earlier special issue of Team Primary Care (Poitras et al. 2024).

With nursing being the largest group of healthcare professionals, initiatives to integrate and optimize the role for registered nurses in team-based primary care have the greatest potential to significantly enhance the provision of primary care across Canada.

Primary care – what ought to be the front door to our health system – will benefit from greater and strategic involvement of nursing.

References

Canadian Academy of Health Sciences (CAHS). 2014. Optimizing Scopes of Practice: New Models of Care for a New Health Care System. Retrieved January 22, 2025. <https://cahs-acss.ca/optimizing-scopes-of-practice-new-models-of-care-for-a-new-health-care-system/>.

Canada Health Act (R.S.C., 1985, c. C-6). Government of Canada. Retrieved January 22, 2025. <https://laws-lois.justice.gc.ca/eng/acts/c-6/>.

Health Canada. 2025, January 10. Statement From the Minister of Health on the *Canada Health Act*. Retrieved January 22, 2025. <https://www.canada.ca/en/health-canada/news/2025/01/statement-from-the-minister-of-health-on-the-canada-health-act.html>.

Poitras, M.-E, J. Lukewich, T. Klassen, M. Guérin, D. Ryan, A.-S. Langlois et al. 2024. Co-Development of a National, Bilingual, Post-Licensure Accredited Educational Program for Registered Nurses in Primary Care: A Knowledge-to-Action Exemplar. *Healthcare Management Forum* 37(1_suppl): 43S–48S. doi:10.1177/08404704241259929.

Spencer, S., L. Hedden, J. Lukewich, M. Mathews, M.-E. Poitras, C. Beaulieu et al. 2025. Primary Care Team Funding, Compensation and Practice Models Across Canadian Jurisdictions: An Environmental Scan. *Canadian Journal of Nursing Leadership* 37(SP): 59–76. doi:10.12927/cjnl.2025.27552.

Team Primary Care. 2024. *Training for Transformation. 2022–2024 Project Overview.* Retrieved January 22, 2025. <https://static1.squarespace.com/static/63dab34cdcf44c74c49865d0/t/66841d9df8b1cd7297e5786c/1719934371740/TPC+Project+Overview+-+English.pdf>.

Theory-Informed Strategies to Guide Policy, Practice, Education and Research About Registered Nurses in Primary Care

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Abstract
Many primary care leaders remain unclear about how to embed registered nurses (RNs) into primary care practices. This paper identifies theoretical groundwork and measurement strategies to expand primary care RN roles. We facilitated deliberative dialogue, including breakout sessions, with a target audience of 68 participants from primary care research, policy and clinical organizations. Discussion was recorded and analyzed until themes emerged. Results illuminated challenges with inconsistent titles, lack of competencies and difficulties measuring RN contributions. Theoretical frameworks (e.g., Donabedian's model and the co-management model) and effective measurement strategies may best inform practice, policy and research to enhance RN roles in primary care.

Introduction

Primary care is the foundation of Canadian healthcare and the entry point to care for most individuals (Kiran 2022). Primary care is responsible for meeting the everyday health and social needs of populations across the lifespan. A high-quality

primary care system delivers services in a manner that is accessible, coordinated with other care providers and facilities and patient-centred. Yet primary care remains inaccessible for nearly five million Canadians. In 2021, nearly 20% of Toronto's family physicians alone reported considering closing their practice in the next five years (Kiran et al. 2022; Statistics Canada 2020). This shortage is most prominent in rural and low-income communities, thereby widening racial and socio-economic disparities in access to care and patient outcomes (Mangin et al. 2022).

One proposed solution to improving accessibility is expanding the use of inter-professional primary care teams, which has the potential to improve quality, comprehensiveness, coordination and effectiveness of care as well as patient and provider satisfaction (Schottenfeld et al. 2016). In Canada specifically, researchers have found improved mortality and decreased re-admissions and emergency department visits with team-based primary care as opposed to traditional physician-led clinics (Riverin et al. 2017). Some practices are increasingly applying team-based primary care, which may include family physicians, nurse practitioners, social workers, pharmacists and, increasingly, registered nurses (RNs) (Bauer and Bodenheimer 2017). On the contrary, other practice models may include the use of a sole physician and medical assistant. Yet RNs offer a multitude of primary care services, such as coordinating care, chronic disease prevention and management and health education (Norful et al. 2017). Emerging evidence from Canada, and abroad, indicates that adding RNs to primary care teams offers benefits for patients, providers and health systems, including greater patient satisfaction, reduced physician workload and improved outcomes related to disease management, routine preventative care and self-management interventions (e.g., smoking cessation support) (Lukewich et al. 2022a, 2022b). Yet, there have been challenges with expanding the role of RNs in primary care, thereby inhibiting models for achieving RN engagement, RN-led care and training opportunities. Organizations, such as the Josiah Macy Jr. Foundation in the US, have called for primary care leaders to extend the scope of discussion about how to best advocate for and allocate resources needed to expand roles of RNs across primary care settings (Bodenheimer and Mason 2017).

Despite the potential for improved outcomes, many primary care practices leaders (e.g., managers/directors) and health policy makers remain unclear about how to best embed RNs into primary care. Historically, primary care RNs' roles have been limited to patient triage, intake and scheduling and office-based functions such as preparing exam rooms (Norful et al. 2017). One US-based study of 30 high-performing primary care practices found that primary care practice exemplars expand RN roles into higher-level duties, such as care coordination and direct

patient care (Flinter et al. 2017). While these emerging practices have yielded early evidence about improved outcomes, undertaking expansion of RN roles requires substantial time and resource investments to appropriately redirect workflows and engage team members.

To aid decision makers in embedding and optimizing primary care RN workforce across Canada, we convened the Team Primary Care Nursing (TPCN) Summit in February 2024 in St. John's, Newfoundland and Labrador. The purpose of the TPCN Summit was to: (1) identify frameworks and recommendations for a primary care target audience to effectively integrate RNs into team-based care and (2) identify opportunities for practices to measure RNs' contributions to care. More specifically, we held a plenary session led by one international moderator to facilitate the exchange of theory-based practices and evidence-based approaches related to optimizing the RN role within team-based primary care. A second moderator with expertise in Canadian primary care nursing policy evoked discussion on local and national efforts and implications. This present paper describes the deliberative dialogue across this key plenary session and the subsequent breakout sessions (as described in the following sections) intended to inform best practices in Canada surrounding theory-informed integration of RNs in primary care.

Methodology

The approach to participant engagement at the TPCN Summit was consistent with deliberative democracy principles (Fearon 1998). The key activities within the session were structured as deliberative dialogues, which is a strategy for knowledge translation and research uptake that considers contextually specific considerations stemming from diverse participant input (Boyko et al. 2012). Deliberative dialogue offers the potential to enhance the knowledge and insights of participants about an issue and generate recommendations informed by evidence and driven by participants (Mulvale et al. 2014; O'Brien et al. 2020). There are several distinguishing features: participants represent multiple participant groups; research evidence is included in dialogue to provide foundational information to guide discussion; participant tacit knowledge and experience is incorporated into dialogue; and facilitation (Lavis et al. 2014). While not necessarily intended to achieve consensus, this technique in structured meetings has been employed in health services research to collect information from experts (Jones and Hunter 1995). Knowledge dissemination and implementation of findings generated from such discussions is an optimum outcome of consensus activities (Jones and Hunter 1995; Plamondon et al. 2015).

Participants were selected using purposive maximum variation sampling to secure a widely representative participant mix (Boyko et al. 2012). Participants included 68 primary care decision makers from various groups who contribute to primary

care across Canada and internationally (i.e., patient partners; health policy makers; health administrators [e.g., primary care team managers/directors]; nursing educators; researchers with expertise in nursing, health workforce, service delivery [e.g., funding models], primary care education/training and chronic disease management; primary care providers [e.g., RNs, nurse practitioners, physicians]; nursing students; and representatives from nursing organizations [e.g., Canadian Nurses Association, Canadian Family Practice Nurses Association]). The TPCN Summit assembled this primary care target audience in person, fostering collaboration and dialogue, including a plenary session followed by smaller breakout sessions and a concluding/cumulative panel. The results below were derived from one of the plenary sessions that focused on the application of theory and measurement, specifically intended to prompt deliberative dialogue of strategies that inform policy and practice change among the primary care nursing workforce. The plenary session lasted one hour and included an overview of potential theoretical models and measurement tools that may be useful in policy making. The session was facilitated by two moderators (JL and AN), where one expert in primary care delivery models presented theoretical and measurement content, and the other, with expertise in primary care nursing policy in Canada, evoked key discussion among the attendees. Next, the group was subdivided into breakout groups (each with 8–10 participants) and a session leader (i.e., previously identified group representative) to discuss the application of theoretical and measurement approaches needed to expand the role of RNs in primary care. The breakout groups used white-board sessions to apply a substruction process to determine dimensions of primary care team models, identify potential scales to measure relevant data and discuss existing challenges with embedding RNs in primary care. Dialogue and visual photography of any figures created on the white boards were documented. Next, the whole group of 68 participants re-convened and each breakout group leader presented their individual groups' dialogue and recommendations as part of a panel. Detailed documentation of the plenary lecture, breakout sessions and panel was done by a research assistant. All notes from sessions were merged into a single document and the study team coded the discussion, grouping codes into categories, and through iterative discussion, determined emergent themes (Plamondon et al. 2015). Further details about the proceedings and approaches to collect and analyze the data stemming from deliberative dialogues are published elsewhere (Lukewich et al. 2024).

Results

Theme #1: Known Challenges to Embedding RNs Into Primary Care Teams

The initial dialogue surrounded key factors that often inhibit nurses from being effectively embedded into primary care teams. First, inconsistencies in professional titles that denote roles and settings of RNs often vary across organizations and geographical jurisdictions. For example, the title "practice nurse" in one area

identifies a nurse working in primary care while terms such as "general nurse," "community nurse" or "general practice nurse" may be used. The title most used across Canada is "primary care nurse" or "family practice nurse." The promotion of standardized titles and/or an explicit reference to regulatory designation (i.e., "registered nurse in primary care") may support a better identification of a nurse's training, skillset and setting in which they practice.

Next, the group identified that many practices lack established competencies. The scarcity of standardized skillsets and roles for nurses working in primary care yields missed opportunities for nurses to practice to the full extent of their education and training. While there have been efforts to establish national-based competency evaluations/check lists, variability across organizations remains. There is a subsequent impact on the evaluation of nursing practice. If no established competencies are fitted to nursing practice policies, it is difficult to assess and monitor a nurse's effectiveness in primary care. It also creates confusion about which roles a nurse contributes to care delivery, prompting underutilization or assignment of non–clinical-based responsibilities.

Furthermore, it was noted consistently that valid and reliable metrics to understand RN contributions to primary care delivery and outcomes are lacking. While an initial approach to measurement may not include billable services, efforts at practice and leadership levels may be made to evaluate the seven pillars of quality: efficacy (ability of care to improve health), effectiveness (degree to which health improvements are attained), efficiency (providing the greatest health improvement at the lowest cost), optimality (cost–benefit balance), acceptability (patient comfort and subsequent impact on patient outcomes and cost), legitimacy (social impact of care) and equity (fair distribution of care) (Donabedian 1990). Harnessing evidence about RNs' contributions to each of these pillars may illuminate the impactful contributions of primary care nursing roles.

Another identified challenge was a lack of training opportunities within primary care, particularly referring to clinical training experiences. Securing knowledgeable and willing preceptors is difficult as many regions do not currently have nurses within primary care practices, thus inhibiting opportunities for hands-on, real-world training. While several practices do offer clinical rotations with non-nursing providers, the importance of nurses training nurses is critical to adequate preparation for a primary care role. Finally, the lack of funding mechanisms that reimburse practices for nursing-specific tasks (e.g., vaccinations, patient education) creates a myriad of inefficiency, missed revenue and limited identification of clinical contributions that nurses make. Finally, the measurement of nurse-led visits and procedures appears critical to better understand fiscal contributions of RNs in primary care.

Theme #2: Leveraging Established Theory to Implement Change in Practice, Policy and Research

Donabedian's quality of care model

The first theory presented to inform efforts for change in primary care nursing practice, policy and research was Donabedian's (1966) quality of care model. This linear model consists of three dimensions, indicating (1) structure, which informs (2) function/process, which in turn impacts (3) outcomes. Per group dialogue, structure factors are imperative to embed nurses into primary care and consist of ample resources (physical and personnel) for the nursing management of patients. This structure includes adequate office space to support the flow of patient care delivery, including private rooms and administrative space for documentation or team meetings. It also includes practice infrastructure such as team and patient communication and documentation aids (e.g., telephones, e-mail access, secure messaging, electronic medical records). In addition, interprofessional clinical staff are needed to ensure that nursing responsibilities do not shift toward non-clinical roles. Answering phones, cleaning exam rooms and administrative organizational tasks (e.g., filing paperwork) were identified as common mismanagement and underutilization of nurses in primary care. Finally, established policies that delineate nursing competencies and roles are critical to ensure that subsequent processes are completed appropriately.

The interplay of structure and processes (second dimension) influences patient, clinician and organizational outcomes. It is critical to measure and understand the processes that nurses perform to promote efficiency and effectiveness. Such processes range from workflow, team and patient interactions, clinical procedures and co-managing patients with other clinicians to direct clinical care. Communication and documentation, including in person or written exchange of information, emerged as important processes across RN roles. It was noted that nurses need full access to patient care documentation to make informed decisions about patient care delivery.

Outcomes (third dimension) encompassed a wide array of potential outcome variables that should be evaluated to support further integration of RNs in primary care. Diagnosis-specific control of patient's clinical status, quality-of-care metrics, patient volume, revenue, workforce retention and nursing-specific outcomes such as well-being, burnout, stress and job satisfaction were discussed with subsequent influence on team efficiency and effectiveness. Collectively, the above-mentioned exemplars within each of the dimensions of Donabedian's model were noted as highly important variables that should be considered by clinicians, policy makers and organizational leaders when embedding RNs into primary care.

Co-management model

The second model explored within the dialogue was Norful et al.'s (2018a) co-management model. The model posits that despite the presence of team infrastructure, clinical resources and day-to-day processes, not all clinicians, leaders and organizations work cohesively when co-managing patients. The model focuses on a more granular examination of the interpersonal interaction within clinician dyads (e.g., physician and nurses) needed to effectively co-manage patient care within the overarching clinical team. The three dimensions of the model indicate what needs to be present for effective co-management: (1) effective communication; (2) mutual respect and trust; and (3) shared philosophy of care. The identification of suboptimal factors within any of the three dimensions will help clinicians, policy makers and leaders identify targets for practice or policy change needed to improve clinician relations. The first dimension, effective communication, was identified as effective and timely dialogue between RNs and other clinical team members, including access to patient and practice documentation. It was noted that since nurses are not currently billable providers, they are not always privy to practice-level quality or fiscal outcomes. In addition, since an RN is not typically a prescribing provider, they do not necessarily know all clinical-related information received or exchanged across providers.

The second dimension incorporates not only an interpersonal mutual respect and trust but also a co-managing provider's understanding of the RN's scope of practice, skillset strengths/weaknesses and professional experience. By recognizing and leveraging RNs' strengths and subsequently trusting their decisions during patient care may prompt improved clinical outcomes, efficiency and effectiveness of clinical team processes. It is important to have RN practice policies that clearly delineate RN skillset capacity. The third dimension is a shared philosophy of care and surrounds a clinical alignment of patient, care delivery and team goals. In summary, dimensions within this conceptual model were identified as essential for RNs' interactions within primary care teams.

Discussion

This paper describes the themes surrounding a deliberative dialogue about challenges and strategies to increase efforts for embedding RNs in primary care teams. Several challenges emerged, including the lack of standardization of titles, competencies, evaluation metrics to highlight nursing contributions and training opportunities to increase primary care workforce capacity. Theoretical models may help inform a structured approach to policy making by understanding key dimensions of high-quality care and interprofessional relations. Finally, measurement tools that validly and reliably measure the contributions of RNs in primary care are needed.

To help overcome our finding about the challenges with the standardization of titles, a recent publication identified the protected titles (i.e., regulatory title), job titles and education/training requirements for RNs to work in primary care across international jurisdictions (Barrett et al. 2021; Lukewich et al. 2021). In Canada specifically, RNs are regulated at the provincial/territorial level with the protected title of "registered nurse" (Almost 2021). Globally, it is recommended that consistent nomenclature within a region or at a national level may help generate common understanding and optimal integration of RN roles within primary care teams. Knowing terminology used internationally may also help countries learn and adapt initiatives designed for comparable RN roles in primary care within their respective jurisdictions. In addition to formative training in Canada, a post-licensure education program for RNs in primary care was launched (CFPNA 2024). This program was designed to unite RN roles in primary care across the country, which is often performed in isolation within a specific clinic/office setting. The program offers opportunities to learn about Canadian competencies for RNs in primary care, the Patient's Medical Home model, scope of practice and role optimization and patient engagement in primary care, and apply the concepts to case scenarios that may be encountered in everyday practice. Importantly, the program includes a virtual network of nurse academics, clinical experts and mentors who can be leveraged to share knowledge related to RN primary care practice across clinics, regions and provinces. Despite these recent initiatives, there is still much more to be done to support preparation, integration and advancement of this role within primary care in Canada and internationally.

In this paper, two theoretical approaches were discussed to inform policy and practice change along with areas for future research for nurses in primary care. The first, Donabedian's (1966) quality of care model, has been a long-standing guide for policy makers and health services researchers to approach decisions in healthcare needed to optimize outcomes. Newer models such as the co-management model (Norful et al. 2018a) illuminate granular factors that should be considered when establishing workforce compositions. While these two models precipitated meaningful discussion and recommendations, it is important to note that other theories exist and may be applied to efforts with embedding RNs into primary care. The Nursing Role Effectiveness Model, built upon a Donabedian framework, provides insight into nursing-sensitive structure, processes and outcomes (Doran 2003, 2011; Irvine et al. 1998). However, to avoid the limitation of often variable RN distribution in existing primary care practices, future research is needed to explore and measure a wide array of factors surrounding Donabedian's dimensions needed to embrace interdisciplinary and interprofessional influence on team compositions. Comparative effectiveness research that builds evidence about patient and workforce outcomes stemming from varying team and interdisciplinary primary care models is recommended. More

specifically, existing models such as the nursing care organization framework (Dubois et al. 2012) may offer opportunities for leaders and researchers to explore team compositions, skillsets, work environments and innovative approaches to primary care delivery given available organizational allocation of resources. Overall, policy and practice change may benefit from theoretical foundations that inform the interplay of multi-faceted factors influencing the success of RNs embedded into primary care.

Another pertinent finding from our deliberative dialogue surrounded the importance of measurement of nursing data. Historically, nursing roles are folded into practice-level budgets, prompting an inability to evaluate fiscal contributions, conduct comparative effectiveness analysis or illuminate contributions of RNs to patient and organizational outcomes (Welton and Sermeus 2010). The adoption of data processes that isolate nursing roles and the application of valid and reliable measures may help optimize decision making for nursing leaders and organizations.

Implications for Nursing Leadership

There are several implications for nursing leadership within this paper to inform practice, policy and research. Despite an increased amount of literature supporting the expansion of nurses in primary care, nursing leaders may struggle with the best approach to plan, implement and evaluate the addition of RNs into primary care. First, as stated earlier, theoretical frameworks offer a structured approach to evaluating key factors needed to be established prior to successfully embedding an RN into primary care. The models may be focused on a broad infrastructure perspective or at a more granular team or process level. Second, to improve the measurement and evaluation of nursing outcomes, the adoption of academic–clinical practice partnerships can promote collaboration between clinical nursing leaders and academic researchers, who often have the existing capacity to analyze data and measure the impact of interventions. Such existing partnerships have been shown to enhance the capacity of clinical organizations to conduct nursing research and subsequently support the evaluation of policy and practice outcomes (Rivera and Shelley 2024). A third recommendation is to explore evidence about existing primary care practices that have demonstrated success with RNs in primary care teams. Researchers have generated evidence about RN workflow, roles and responsibilities in primary care (Norful et al. 2018a, 2018b). Other literature has evaluated existing primary care exemplars to understand strategies for optimizing RN roles. Such practices exhibit common workflows that include (1) patient care visits that are co-managed with providers; (2) nursing-specific roles to contribute to complex care management; (3) nurses running specialized care services, including programs that provide disease-specific support to patients; and (4) using standing protocols to enhance independent RN-led care (e.g., vaccinations) (Wagner et al. 2017). RNs in other settings (e.g., hospitals and

long-term care) have established many of these workflow processes. The adoption of such efforts in primary care may expand the acceptance and effectiveness of RNs embedded into primary care settings with the goal of improving practice efficiency and patient and workforce outcomes. More research and deliberative dialogue investigating optimal ways to achieve such changes as RN roles and patient care delivery models are needed, especially in the context of dynamic operational and cultural attributes.

There are limitations to this paper. First, deliberative dialogue is limited to perspectives and experiences shared by attendees at the TPCN Summit. While our planners made a substantial effort to purposively recruit a generalizable representation of primary care target audience from different groups (e.g., academics, researchers, clinicians, practice leaders, policy makers, etc.) and a wide geographic distribution, other potential participants who did not attend may have different perspectives. Furthermore, deliberative dialogue, methodologically, is limited by a lack of definitive data analysis methods to analyze outcomes related to content explored. In addition, we acknowledge that varying payment systems may have great potential to support an increased role of RNs. However, in this present dialogue, the variability of funding models across international jurisdictions was beyond the scope of this paper. Efforts to illuminate cost and payment systems were performed separately and will be published elsewhere (Spencer et al. 2025). Future research should include comparative effectiveness and qualitative research (e.g., grounded theory or ethnography) needed to rigorously analyze data, possibly triangulated with practice-level quality-of-care data. Finally, the results, discussion and implications of this present paper are presented in the context of nursing leaders. Future work should be centred around the implications for primary care leadership and policy makers outside of nursing who can collectively reshape policy and practice.

Conclusion

Established theoretical frameworks to inform practice and workflow initiatives when embedding RNs into primary care may be useful for nursing leaders to isolate effective structure, processes and outcomes. Challenges such as nursing nomenclature, inadequate training opportunities and lack of standardized competencies and metrics to evaluate primary care nursing contributions exist. Future research should include comparative effectiveness studies that compare practice and workforce outcomes when RNs are embedded in primary care.

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References

Almost, J. 2021, February. *Regulated Nursing in Canada: The Landscape in 2021*. Canadian Nurses Association. Retrieved February 19, 2025. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/Regulated-Nursing-in-Canada_e_Copy.pdf>.

Barrett, C., M. Mathews, M.-E. Poitras, A.A. Norful, R. Martin-Misener, J. Tranmer et al. 2021. Job Titles and Education Requirements of Registered Nurses in Primary Care: An International Document Analysis. *International Journal of Nursing Studies Advances* 3: 100044. doi:10.1016/j.ijnsa.2021.100044.

Bauer, L. and T. Bodenheimer. 2017. Expanded Roles of Registered Nurses in Primary Care Delivery of the Future. *Nursing Outlook* 65(5): 624–32. doi:10.1016/j.outlook.2017.03.011.

Bodenheimer, T. and D. Mason. 2017, March. *Registered Nurses: Partners in Transforming Primary Care: Proceedings of a Conference on Preparing Registered Nurses for Enhanced Roles in Primary Care*. Retrieved February 19, 2025. <https://macyfoundation.org/assets/reports/publications/macy_monograph_nurses_2016_webpdf.pdf>.

Boyko J.A., J.N. Lavis, J. Abelson, M. Dobbins and N. Carter. 2012. Deliberative Dialogues as a Mechanism for Knowledge Translation and Exchange in Health Systems Decision-Making. *Social Science Medicine* 75(11). 1938–45. doi:10.1016/j.socscimed.2012.06.016.

Canadian Family Practice Nurses Association (CFPNA). 2024. *Introduction of the TPCN Project*. Retrieved June 1, 2024. <https://www.cfpna.ca/copy-of-tpcn-project>.

Donabedian, A. 1966. Evaluating the Quality of Medical Care. *The Milbank Memorial Fund Quarterly* 44(3): 166–206. doi:10.2307/3348969.

Donabedian, A. 1990. The Seven Pillars of Quality. *Archives of Pathology and Laboratory Medicine* 114(11): 1115–18.

Doran, D.M. 2003. *Nursing Sensitive-Outcomes. State of the Science.* Jones and Bartlett Publishers, Inc.

Doran, D.M. 2011. *Nursing Outcomes. The State of the Science (2nd ed.)*. Jones and Bartlett Publishers, Inc.

Dubois, C.-A., D. D'Amour, E. Tchouaket, M. Rivard, S. Clarke and R. Blais. 2012. A Taxonomy of Nursing Care Organization Models in Hospitals. *BMC Health Services Research* 12: 286–301. doi:10.1186/1472-6963-12-286.

Fearon, J.D. 1998. *Deliberation as Discussion*. In: J. Elster, ed., *Deliberative Democracy* (pp. 44–68). Cambridge University Press.

Flinter, M., C. Hsu, D. Cromp, M.D. Ladden and E.H. Wagner. 2017. Registered Nurses in Primary Care: Emerging New Roles and Contributions to Team-Based Care in High-Performing Practices. *The Journal of Ambulatory Care Management* 40(4): 287–96. doi:10.1097/JAC.0000000000000193.

Irvine, D., S. Sidani and L.M. Hall. 1998. Linking Outcomes to Nurses' Roles in Health Care. *Nursing Economic* 16(2): 58–64, 87.

Jones J. and D. Hunter. 1995. Consensus Methods for Medical and Health Services Research. *BMJ* 311(7001): 376–80. doi:10.1136/bmj.311.7001.376.

Kiran T. 2022. Keeping the Front Door Open: Ensuring Access to Primary Care for All in Canada. *CMAJ* 194(48): E1655–56. doi:10.1503/cmaj.221563.

Kiran, T., R. Wang, C. Handford, N. Laraya, A. Eissa, P. Pariser et al. 2022. Family Physician Practice Patterns During COVID-19 and Future Intentions: Cross-Sectional Survey in Ontario, Canada. *Canadian Family Physician* 68(11): 836–46. doi:10.46747/cfp.6811836.

Lavis, J.N., J.A. Boyko and F.-P. Gauvin. 2014. Evaluating Deliberative Dialogues Focussed on Healthy Public Policy. *BMC Public Health* 14: 1287. doi:10.1186/1471-2458-14-1287.

Lukewich, J., M.-E. Poitras and M. Mathews. 2021. Unseen, Unheard, Undervalued: Advancing Research on Registered Nurses in Primary Care. *Practice Nursing* 34(4): 158–62. doi:10.12968/pnur.2021.32.4.158.

Lukewich, J., S. Asghari, E.G. Marshall, M. Mathews, M. Swab, J. Tranmer et al. 2022a. Effectiveness of Registered Nurses on System Outcomes in Primary Care: A Systematic Review. *BMC Health Services Research* 22(1): 440. doi:10.1186/s12913-022-07662-7.

Lukewich, J., R. Martin-Misener, A.A. Norful, M.-E. Poitras, D. Bryant-Lukosius, S. Asghari et al. 2022b. Effectiveness of Registered Nurses on Patient Outcomes in Primary Care: A Systematic Review. *BMC Health Services Research* 22(1): 740. doi:10.1186/s12913-022-07866-x.

Lukewich, J., M.-E. Poitras and T. Klassen. 2024, February. *Team Primary Care Nurse Summit: Proceedings of a Summit to Develop a National Plan for Leveraging the Registered Nurse Role in Primary Care*. Retrieved February 19, 2025. <https://collections.banq.qc.ca/document/JSCJ-fSAE2nYzjXbbHrr6Q>.

Mangin, D., K. Premji, I. Bayoumi, N. Ivers, A. Eissa, S. Newbery et al. 2022. Brief on Primary Care Part 2: Factors Affecting Primary Care Capacity in Ontario for Pandemic Response and Recovery. *Science Briefs of the Ontario COVID-19 Science Advisory Table* 3(68): 1–24. doi:10.47326/ocsat.2022.03.68.1.0.

Mulvale, G., H. Chodos, M. Bartram, M.P. MacKinnon and M. Abud. 2014. Engaging Civil Society Through Deliberative Dialogue to Create the First Mental Health Strategy for Canada: Changing Directions, Changing Lives. *Social Science Medicine* 123: 262–68. doi:10.1016/j.socscimed.2014.07.029.

Norful, A., G. Martsolf, K. de Jacq and L. Poghosyan. 2017. Utilization of Registered Nurses in Primary Care Teams: A Systematic Review. *International Journal of Nursing Studies* 74: 15–23. doi:1016/j.ijnurstu.2017.05.013.

Norful, A.A., K. de Jacq, R. Carlino and L. Poghosyan. 2018a. Nurse Practitioner–Physician Comanagement: A Theoretical Model to Alleviate Primary Care Strain. *The Annals of Family Medicine* 16(3): 250–56. doi:10.1370/afm.2230.

Norful, A.A., J.C. Dillon, S. Ye and L. Poghosyan. 2018b. The Perspectives of Nurse Practitioners and Physicians on Increasing the Number of Registered Nurses in Primary Care. *Nursing Economic$* 36(4): 182–88.

O'Brien, N., S. Law, K. Proulx-Boucher, B. Ménard, L. Skerritt, I. Boucoiran et al. 2020. Codesigning Care Improvements for Women Living With HIV: A Patient-Oriented Deliberative Dialogue Workshop in Montréal, Quebec. *CMAJ Open* 8(2): E264–72. doi:10.9778/cmajo.20190158.

Plamondon., K.M., J.L. Bottorff and D.C. Cole. 2015. Analyzing Data Generated Through Deliberative Dialogue: Bringing Knowledge Translation Into Qualitative Analysis. *Qualitative Health Research* 25(11): 1529–39. doi:10.1177/1049732315581603.

Rivera, R.R. and A.N. Shelley. 2024. Building a Foundation for Excellence: Advancing Evidence-Based Practice and Nursing Research in a Multi-Campus Healthcare Setting. *Nurse Leader* 22(4): 365–73. doi:10.1016/j.mnl.2024.04.010.

Riverin, B.D., P. Li, A.I. Naimi and E. Strumpf. 2017. Team-Based Versus Traditional Primary Care Models and Short-Term Outcomes After Hospital Discharge. *CMAJ* 189(16): E585–93. doi:10.1503/cmaj.160427.

Schottenfeld, L., D. Petersen, D. Peikes, R. Ricciardi, H. Burak, R. McNellis et al. 2016. Creating patient-centered team-based primary care. Retrieved February 20, 2025. <https://www.ahrq.gov/sites/default/files/wysiwyg/ncepcr/tools/PCMH/creating-patient-centered-team-based-primary-care-white-paper.pdf>.

Spencer, S., L. Hedden, J. Lukewich, M. Mathews, M.-E. Poitras, C. Beaulieu et al. 2025 Primary Care Team Funding, Compensation and Practice Models Across Canadian Jurisdictions: An Environmental Scan. *Canadian Journal of Nursing Leadership* 37(SP): 59–76. doi:10.12927/cjnl.2025.27552.

Statistics Canada. 2020, October 22. Primary Health Care Providers, 2019. Retrieved February 1, 2024. <https://www150.statcan.gc.ca/n1/pub/82-625-x/2020001/article/00004-eng.htm>.

Wagner, E.H., M. Flinter, C. Hsu, D. Cromp, B.T. Austin, R. Etz et al. 2017. Effective Team-Based Primary Care: Observations From Innovative Practices. *BMC Family Practice* 18: 13. doi:10.1186/s12875-017-0590-8.

Welton, J.M. and W. Sermeus. 2010. Use of Data by Nursing to Make Nursing Visible: Business and Efficiency of Health Care System and Clinical Outcomes. In C. Weaver, C. Delaney, P. Weber and R. Carr, eds., *Nursing and Informatics for the 21st Century: An International Look at Practice, Education and EHR Trends (2nd ed.)* Healthcare Information and Management Systems Society Publishing.

Education for Registered Nurses in Primary Care: Current and Future Trends

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Abstract
Registered nurses (RNs) require specific preparation to fulfill the unique roles of working in primary care in Canada; however, RN education lacks primary care-specific content. This paper reviews RN education related to primary care in Canada by outlining opportunities and challenges. Gaps in primary care-specific education within undergraduate programs and at the post-licensure level highlight the need for integrating primary care, including interprofessional collaboration, into curricula throughout the education and training pipeline. Establishing partnerships across education, practice and policy spheres is critical to adapting RN education to meet the needs of Canada's primary care workforce.

Introduction

Education intentionally designed for the primary care context is fundamental to ensuring that the registered nurse (RN) workforce can meet the unique roles and responsibilities of working in primary care settings across Canada. RNs in primary care (also known as primary care nurses and family practice nurses; Barrett et al. 2021) have post-secondary education and work both autonomously and in collaboration with other providers to coordinate care and deliver direct healthcare services to patients, families and communities (CNA 2015). In primary care, RNs provide a broad range of health services across the lifespan, including triage; prenatal, well-baby and well-women care; routine immunizations; mental health and substance use support; treatment of acute illness; sexual healthcare; chronic disease prevention and management; health education and self-management support; coordination and implementation of targeted primary care programs; and patient navigation (CFPNA n.d.; CNA 2011; Norful et al. 2017; Oandasan et al. 2010). In Canada, RNs are adopting an increasingly collaborative role alongside family physicians and other healthcare providers in primary care. Research demonstrates that team-based care models involving nurses improve access to and continuity of care (Ansell et al. 2017; Laurant et al. 2005; Lukewich et al. 2018; Norful et al. 2017) and lead to better patient outcomes (Griffiths et al. 2010; Lukewich et al. 2022; Martin et al. 2010).

Worldwide, most nursing education programs at the baccalaureate level have not prioritized the integration of primary care-specific content into their curriculum and remain heavily focused on preparing students to work in acute care (Calma et al. 2019; Curnew et al. 2023; Wojnar and Whelan 2017). There are also notable gaps in post-licensure continuing education opportunities for the primary care nursing workforce (Lukewich et al. 2024). The lack of standardized educational requirements and opportunities for RNs in primary care has contributed to their slowed integration and optimal utilization within primary care teams.

Across Canada and internationally, nursing literature and primary care system partners (e.g., policy makers, managers, healthcare providers) acknowledge that RNs are playing an increasing role in primary care and that there is a need to establish standardized training and education for this career path (Bauer and Bodenheimer 2017; CNA 2015; Lukewich et al. 2024; Stewart et al. 2024). Indeed, primary care nursing is progressively considered to be a unique discipline requiring its own skills and training requirements (Poitras et al. 2018). A World Health Organization report acknowledging the contribution of nurses to the global health workforce outlined a need to develop standardized education and training to prepare nurses for their roles in primary care among other healthcare settings (WHO 2021). Moreover, the International Council of Nurses highlight the necessity for comprehensive interprofessional education and training focused on

primary care to ensure that the nursing workforce can meet and adapt to evolving healthcare needs and challenges, such as concurrent public health and primary care crises (ICN 2021; Stewart et al., 2024).

Therefore, the purpose of this paper is to provide an overview of the current status of the educational preparation and educational opportunities for RNs in primary care. We summarize the education requirements for RNs to practise in primary care, present opportunities for primary care education at the undergraduate and post-licensure levels and discuss challenges confronting the preparation of RNs for primary care. We conclude with recommendations for nursing educators, health leaders and researchers to support and promote the future of education for RNs in primary care across Canada. We will draw upon recent literature published in this area, as well as the expertise and knowledge of nursing educators, researchers and leaders who work closely in the area of improving primary care through the integration and optimization of RNs in team-based care across the country.

Education for RNs in Primary Care in Canada

To practise in primary care in Canada, RNs do not currently require any specialized education or training beyond that which is required for general entry-to-RN practice (Barrett et al. 2021). Licensure is required for RNs to practise in Canada and is the responsibility of provincial/territorial regulators. The Canadian Council of Registered Nurse Regulators (CCRNR) comprises 12 provincial/territorial bodies (Northwest Territories and Nunavut share the same regulatory body) that collaborate toward consistent regulatory standards, practices and competencies. Each provincial/territorial regulator has unique criteria for licensure; however, minimally, these include graduating from an approved nursing education program, passing a licensing exam and applying to the regulator for licensure (Miller 2020). The National Council Licensure Examination – Registered Nurse (NCLEX-RN) (National Council of State Boards of Nursing n.d.) is the licensing examination in all Canadian jurisdictions, except for the province of Quebec, where nurses are required to pass the Ordre des infirmières et infirmiers du Québec (OIIQ) professional examination (OIIQ n.d.). Since 2000, RN preparation in Canada generally consists of a baccalaureate degree in nursing from a program that has been approved by the provincial/territorial regulator. Quebec is currently the only jurisdiction that offers a diploma option for entry-to-RN practice (i.e., collège d'enseignement général et professionnel [CEGEP]) (Baker 2019; CNA 2015). Although a diploma option exists, it is important to note that Quebec RNs require a baccalaureate degree to practise in primary care. The Canadian Association of Schools of Nursing (CASN) is responsible for setting accreditation standards and granting accreditation to baccalaureate nursing programs in Canada (CASN n.d.). In 2022, there were 12,439 graduates from all Canadian entry-to-practice nursing programs (CASN 2023).

Guiding Frameworks for Educating RNs in Primary Care

Canada does not have nationwide standards or a curriculum framework defining education or preparation requirements for the RN workforce in primary care.

CASN's National Nursing Education Framework

CASN's National Nursing Education Framework (2022) outlines learning outcomes specified for each degree level, including baccalaureate entry-to-practice. It is intended to be used as a guide for developing and revising curricula and to demonstrate the broad scope of nursing education. The framework does not currently include learning outcomes specific to primary care, limiting its ability to serve as a guide for advancing primary care education (CASN 2022). Recently, the CASN Nurse Educator Interest Group developed a community health-focused guide to accompany the CASN National Nursing Education Framework. This companion guide contains explicit directions for primary care education, such as integrating knowledge of family practice and outpost nursing settings into undergraduate nursing curricula, and examining the activities of the CFPNA (CASN Community Health Nursing Interest Group 2024).

Canadian competencies for RNs in primary care

In 2019, the Canadian competencies for RNs in primary care were published by the CFPNA, a professional association dedicated to supporting and advancing the role of nurses working in primary care settings across Canada (CFPNA 2019; Lukewich et al. 2020). This framework consists of 47 unique competency statements organized across six domains, namely, professionalism; clinical practice; communication; collaboration and partnership; quality assurance, evaluation and research; and leadership. These competencies are unique to primary care practice and define the essential knowledge and skills required for RNs to effectively practise in this sector. The competencies provide some direction to guide primary care nursing education and practice across the country.

Undergraduate Education

Across Canada, undergraduate nursing programs and curricula vary, but all programs must prepare graduates to meet provincial/territorial entry-level competencies (ELCs), which are based on CCRNR Entry-Level Competencies for the Practice of Registered Nurses (CCRNR 2019). The framework organizes 101 competencies into nine RN roles: clinician, professional, communicator, collaborator, coordinator, leader, advocate, educator and scholar. ELCs are broad and represent the expected competencies of a beginning generalist RN (CCRNR 2019). Provincial/territorial regulators set minimum standards for how ELCs must be taught, applied and evaluated, leading to curricular variation across the country regarding teaching-learning requirements.

The roles identified within the CCRNR (2019) competency framework and many of the ELCs overlap with the Canadian competencies for RNs in primary care, but primary care is not explicitly distinguished within the framework. To assess the extent to which Canadian undergraduate baccalaureate nursing programs have integrated the Canadian competencies for RNs in primary care into their curricula, a national cross-sectional survey of undergraduate baccalaureate nursing programs ($n = 74$) was conducted (Lukewich et al. 2023). Program coordinators and professors/instructors from CASN-accredited nursing programs were asked to rate their level of agreement regarding the integration of each competency into their program. Findings revealed that the competencies are inconsistently integrated into nursing curricula across the country, and there is a need to further investigate the nature of primary care learning opportunities (e.g., in theory courses, simulated experiences and clinical placements) and understand the barriers/facilitators to integrating primary care within Canadian nursing programs to strengthen education for this growing workforce. Although these influencing factors have not yet been examined in Canada, internationally, several barriers to the development of the primary care nursing workforce have been identified, including a lack of continuous professional development opportunities (Endalamaw et al. 2024; Halcomb et al. 2018; Stephen et al. 2018). The international literature has identified a lack of faculty expertise (Morton et al. 2019; Wojnar and Whelan 2017) and available qualified preceptors (Mennenga et al. 2021; Morton et al. 2019; Sykes and Urquhart 2021) in primary care as barriers to integrating primary care education. A recent scoping review found that the qualifications/expertise of nursing faculty to deliver primary care education is unclear (Curnew et al. 2023). Furthermore, successful undergraduate primary care nursing education often involves providing professional development support to enhance the capacity of primary care nurses to act as clinical preceptors. In particular, government/health authority-funded initiatives that involved collaborative leadership from academic and practice sectors played a key role in adequately resourcing primary care education and facilitating formal training for RNs in primary care to offer quality clinical experiences for students (Curnew et al. 2023).

The majority of clinical practice experience within Canadian undergraduate nursing programs occurs within acute care settings, such as medical-surgical units (Smith et al. 2013), with limited primary care content or exposure to primary care environments. Educators across Canada have begun to advocate for a shift away from the prioritization of acute care education to include primary care components such as clinical placements in primary care settings, in light of changing population health needs and the expansion of team-based primary care (CASN 2024; CFPC et al. 2022; Curnew et al. 2022; Sanders et al. 2024). Furthermore, several schools of nursing in other countries (e.g., US, UK) have

integrated specialized primary care education pathways into undergraduate nursing programs in response to healthcare system strategies to address population needs and/or strengthen the primary care workforce. Although the same drivers exist across Canada, there is limited Canadian evidence available, and no such Canadian pathway programs were evaluated within the identified literature (Curnew et al. 2023).

Post-Licensure Education

RNs acquire, maintain and continually enhance their knowledge and skills in their chosen areas of practice in several ways, including but not limited to post-licensure continuing education programs, specialty certification (e.g., the CNA Certification Program) and mentorship programs (CNA 2015). Presently, there are few widely available post-licensure education programs within Canada to support practice and continuing competence development for RNs in primary care (Barrett et al. 2021; Lukewich et al. 2024). Certifications in specialty areas of nursing are offered through the Canadian Nurses Association (CNA) (a national body that represents and promotes the role of nurses within all regulatory designations) but are not mandatory for licensure or employment. The Community Health Nursing Certification includes elements of primary care in its blueprint (CNA 2021); however, primary care is currently not recognized as a specialty practice by the CNA. Therefore, there is no specific certification offered for primary care nursing (CNA 2020).

A recently published environmental scan (Lukewich et al. 2024) identified post-licensure education programs available to RNs in primary care across Canada and explored their alignment with the Canadian competencies for RNs in primary care (CFPNA 2019; Lukewich et al. 2020) and the College of Family Physicians of Canada Patient's Medical Home (PMH) model (CFPC 2019). Ten unique programs were identified that offered high-level primary care content tailored to specific practice areas or environments, with varying levels of alignment with the Canadian competencies and PMH model pillars; however, no programs were specifically informed by the Canadian competencies for RNs in primary care (CFPNA 2019). These findings underscore the need for a post-licensure education program that aligns with established primary care frameworks to inform clinical practice, define the scope of practice and potential roles, and highlight nurses' contributions to primary care.

Team primary care nurse

To address the lack of primary care-specific knowledge in Canadian nursing education, a bilingual Canadian team of researchers, RNs, patient partners, nursing educators, mentorship experts, policy makers, nurse students and primary care administrators created the Team Primary Care Nurse (TPCN) initiative.

The team conducted a multiphase project to develop and implement a national post-licensure educational program for RNs in primary care based on the Canadian competencies (CFPNA 2019; Lukewich et al. 2020; Poitras et al. 2024) and CFPC's PMH model (CFPC 2019). Using the Knowledge-to-Action framework (Graham et al. 2006), the team used a co-creation approach to identify overarching themes and develop the andragogical content for each module within the educational program. This process led to the development of a bilingual asynchronous education program for RNs in primary care across Canada, delivered through a digital learning environment (launched in March 2024) (CFPNA 2023; Poitras et al. 2024). The program acknowledges the importance of preparing RNs for practice in primary care and comprises six modules centred around the current state of primary care nursing in Canada, the PMH model, the nursing scope of practice and roles in primary care, the Canadian competencies, patient engagement and critical thinking contextualized within a case study. The team has also built a community of practice comprising a network of facilitators and subject matter experts as a support structure to accompany the educational program. To assess the implementation process and educational intervention's effects on RNs in primary care, the team co-designed a developmental evaluation, supported by the RE-AIM [reach, effectiveness, adoption, implementation, and maintenance] (Glasgow and Estabrooks 2018), Eco-Normalization (Hamza and Regehr 2021) and the New World Kirkpatrick Models (Kirkpatrick and Kirkpatrick 2015). The protocol of this initiative is submitted and under review (Poitras et al. 2024). Evaluation is ongoing and will be published in future reports.

Given the collaborative team environment in primary care, a Canadian interprofessional initiative called *Team Primary Care – Training for Transformation* was implemented in 2022 (Team Primary Care 2023) to enhance the capacity of primary care professionals. It established a network of primary care providers (e.g., family physicians, RNs, dieticians, pharmacists, midwives) from across the country who made strides toward better preparing primary care providers to work together in collaborative primary care teams.

International Comparisons

Outside of Canada, several countries have established initiatives driven from governmental levels to enhance primary care nursing education within entry-to-practice programs (Curnew et al. 2023). For example, the Brazilian National Programme for the Reorientation of Professional Health Education (*Pró-Saúde*) is a cooperative effort between the health and education sectors to promote curricular changes that emphasize community-based primary care (de Andrade et al. 2014; Morais et al. 2010). This program aims to better prepare nurses at the undergraduate level to respond to population health needs, through didactic and clinical experiences in primary care settings. Furthermore, Health Education England

(a division of the UK's National Health Service) has developed a General Practice Nursing Workforce Development Plan that aims to increase the number and quality of nursing student clinical placements within primary care settings, guided by a developed framework of education and regulatory practices (HEE 2017). Note, in the UK, RNs in primary care are commonly referred to as general practice nurses (Barrett et al. 2021). This initiative is driven by a recognized need to expand and develop the primary care nursing workforce and involves oversight by Health Education England into the clinical environments where students engage in clinical experiences.

The Australian Government Department of Health and Aged Care instituted an initiative around strengthening the role of the nursing workforce in collaboration with the Australian Primary Health Care Nurses Association and the Australian Government Department of Education, Skills and Employment. This initiative includes a Transition to Practice Program and Chronic Disease Management and Ageing Workshops to support the transition of new and experienced nurses into primary healthcare, and to provide chronic disease management and healthy aging education and training for nurses working in primary healthcare, respectively (Department of Health and Aged Care 2023). Similarly, other post-licensure educational initiatives exist for RNs internationally, with the goal of enhancing skills and competencies to facilitate RN practice in primary care. For example, the General Practice Nurse Program in the UK offers a comprehensive pathway for RNs to transition into primary care roles within general practice, with some universities offering specialized postgraduate certificate programs (GPNEN 2024). The Primary Health Care Specialty Nursing Program in New Zealand focuses on training RNs to work effectively in primary care settings, with a focus on the provision of well-child care, through the delivery of a postgraduate certificate (Whitireia and WelTec 2024).

Discussion

Implications and Recommendations for Nursing Leaders

Nursing education needs to keep pace with the growing primary care workforce within primary care teams, including the expansion of team-based primary care. Building the capacity of the RN workforce is imperative as the demand for comprehensive, team-based primary care rises, driven by factors such as an aging population, rising rates of chronic illness, a growing emphasis on preventative health measures and a shortage of primary care providers (CIHI 2022; Flood et al. 2023; Stewart et al. 2024). New roles and practice settings for RNs are continually being introduced to address Canadians' health needs and improve health service delivery. Many challenges related to the integration and optimization of RNs in primary care stem from limited attention and access to education and preparation explicitly focused on this growing workforce.

At an undergraduate level, primary care should be intentionally integrated into CASN's National Nursing Education Framework and considered within entry-to-practice competencies. Purposeful engagement among nursing programs (including program leaders, faculty, students, clinical partners and government ministries) will facilitate opportunities to strengthen primary care exposure within nursing programs, including clinical experiences, and build capacity for undergraduate nursing students to work in primary care (Belita et al. 2020; Bell et al. 2023). Canadian educators acknowledge the importance of undergraduate nursing education in driving primary care advancement; however, fulsome realization of the vision will require commitment and innovation with respect to pedagogical approaches (Duncan and Pepin 2025).

In addition to the importance of expanded undergraduate nursing education, it is also necessary to further develop training at the post-licensure level. In Canada, post-licensure educational opportunities such as certification and continuing education programs specific to primary care are lacking (Lukewich et al. 2024). Furthermore, leaders of primary care organizations should support nurses in pursuing additional credentialing or certification by allocating dedicated time for professional development, raising awareness of available opportunities or offering funding. Moreover, mentorship programs and formal leadership training initiatives have been shown to enhance nurses' readiness for primary care practice by increasing their autonomy, self-confidence, problem-solving abilities and professional communication skills while also improving collaboration within healthcare teams (Gularte-Rinaldo et al. 2023). Mentorship programs at the transition-to-practice level have been shown to play a role in helping newly placed RNs adapt, gain competence and increase the skill sets required to practise in primary care and experience an easier transition to the workplace after graduation (Aggar et al. 2017; Lavoie-Tremblay et al. 2020). Likewise, programs aimed at enhancing leadership competencies, such as decision making and interprofessional collaboration, are essential for preparing nurses to lead within primary care (Heinen et al. 2019). Future efforts should prioritize mentorship and leadership training at both practice and policy levels and build upon conceptual knowledge gained during undergraduate education (Curnew et al. 2023). Promoting lifelong learning through strategic investments in diverse educational pathways is essential for strengthening and optimizing the contributions of the RN workforce within primary care.

The nature of high-quality primary care is collaborative, where "two or more professions learn with, from and about each other to improve collaboration and the quality of care" (CAIPE 2002). Therefore, all providers who work in primary care (e.g., medicine, nursing, social work, pharmacy) should receive education and training in interprofessional collaboration (Stewart et al. 2024). The training

should include elements focused on understanding scopes of practice and roles/activities so that all team members can gain clarity into their roles/activities and how they may complement and/or overlap with others in primary care teams. This may contribute to improved healthcare professional satisfaction, expand the range of services provided in a primary care clinic and positively impact the provision of recommended testing, screening and preventative care (Wranik et al. 2019).

Conclusion

Opportunities for RNs in primary care are expanding as Canadian healthcare systems continue to integrate collaborative primary care teams, underpinning the need for primary care nursing workforce preparation to keep pace with healthcare system evolution. Preparing RNs to practise in primary care involves a commitment to their development across the career lifespan, including pre- and post-licensure stages. Partnership across education, practice and policy spheres, from local to national levels is needed to promote and sustain the preparation of RNs in primary care.

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References

Aggar, C., J. Bloomfield, T.H. Thomas and C.J. Gordon. 2017. Australia's First Transition to Professional Practice in Primary Care Program for Graduate Registered Nurses: A Pilot Study. *BMC* Nursing 16(1). doi:10.1186/s12912-017-0207-5.

Ansell, D., J.A.G. Crispo, B. Simard and L.M. Bjerre. 2017. Interventions to Reduce Wait Times for Primary Care Appointments: A Systematic Review. *BMC Health Services Research* 17(295). doi:10.1186/s12913-017-2219-y.

Baker, C. 2019. Promoting Quality in Nursing Education in Canada Through a Canadian Examination for Baccalaureate Nurses. *Nursing Leadership* 32(4): 81–91. doi:10.12927/cjnl.2020.26098.

Barrett, C., M. Mathews, M.-E. Poitras, A.A. Norful, R. Martin-Misener, J. Tranmer et al. 2021. Job Titles and Education Requirements of Registered Nurses in Primary Care: An International Document Analysis. *International Journal of Nursing Studies Advances* 3: 100044. doi:10.1016/j.ijnsa.2021.100044.

Bauer, L. and T. Bodenheimer. 2017. Expanded Roles of Registered Nurses in Primary Care Delivery of the Future. *Nursing Outlook* 65(5): 624–32. doi:10.1016/j.outlook.2017.03.011.

Belita, E., N. Carter and D. Bryant-Lukosius. 2020. Stakeholder Engagement in Nursing Curriculum Development and Renewal Initiatives: A Review of the Literature. *Quality Advancement in Nursing Education – Avancées en formation infirmière* 6(1): 2. doi:10.17483/2368-6669.1200.

Bell, T., J. Blazek, K. Elsea and T. Morris. 2023. Increasing Exposure to Primary Care Nursing Through Curriculum Revision and an Innovative Nursing Minor. *Nurse Educator* 48(1): 49–53. doi:10.1097/NNE.0000000000001267.

Calma, K.R.B., E. Halcomb and M. Stephens. 2019. The Impact of Curriculum on Nursing Students' Attitudes, Perceptions and Preparedness to Work in Primary Health Care: An Integrative Review. *Nurse Education in Practice* 39: 1–10. doi:10.1016/j.nepr.2019.07.006.

Canadian Association of Schools of Nursing (CASN). n.d. Accredited Canadian Nursing Education Programs. Retrieved June 25, 2024. <https://www.casn.ca/accreditation/accredited-canadian-nursing-education-programs/>.

Canadian Association of Schools of Nursing (CASN). 2022, November. *National Nursing Education Framework*. Retrieved June 25, 2024. <https://www.casn.ca/wp-content/uploads/2022/12/National-Nursing-Education-Framework_2023_EN_FINAL.pdf>.

Canadian Association of Schools of Nursing (CASN). 2023, November. *Registered Nurses Education in Canada Statistics 2021–2022*. Retrieved June 25, 2024. <https://www.casn.ca/wp-content/uploads/2023/11/2021-2022-RNECS-Report-EN-Final.pdf>.

CASN Community Health Nursing Interest Group. 2024. Community Health Nursing Guidelines: Companion Guide to CASN National Nursing Education Framework. Canadian Association of Schools of Nursing. Retrieved February 24, 2025. <https://www.casn.ca/competency-guidelines/national-nursing-education-framework/>.

Canadian Council of Registered Nurse Regulators (CCRNR). 2019. *Entry-Level Competencies (ELCs) for the Practice of Registered Nurses, 2018*. Retrieved June 25, 2024. <https://www.ccrnr.ca/assets/ccrnr-rn-entry-level-competencies---2019.pdf>.

Canadian Family Practice Nurses Association (CFPNA). n.d. CFPNA – About. Retrieved June 25, 2024. <https://www.cfpna.ca/>.

Canadian Family Practice Nurses Association (CFPNA). 2019. National Competencies for Registered Nurses in Primary Care. Retrieved June 25, 2024. <https://www.cfpna.ca/national-core-competencies>.

Canadian Family Practice Nurses Association (CFPNA). 2023. Introduction of the TPCN Project. Retrieved June 25, 2024. <https://www.cfpna.ca/copy-of-tpcn-project>.

Canadian Institute for Health Information (CIHI). 2022. Health Workforce in Canada: In Focus (Including Nurses and Physicians). Retrieved September 12, 2024. <https://www.cihi.ca/en/health-workforce-in-canada-in-focus-including-nurses-and-physicians>.

Canadian Nurses Association (CNA). 2011. Primary Care Toolkit. Retrieved June 25, 2024. <https://www.cna-aiic.ca/en/nursing/nursing-tools-and-resources/primary-care-toolkit>.

Canadian Nurses Association (CNA). 2015. *Framework for the Practice of Registered Nurses in Canada*. Retrieved June 25, 2024. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/Framework_for_the_Pracice_of_Registered_Nurses_in_Canada__1_.pdf>.

Canadian Nurses Association (CNA). 2020. CNA Certification Program. Retrieved June 25, 2024. <https://cna-aiic.ca/en/certification>.

Canadian Nurses Association (CNA). 2021, July. *Community Health Nursing Certification: Exam Blueprint and Specialty Competencies*. Retrieved June 25, 2024. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/CH_Blueprint_2020_Revised_July_2021_Copy.pdf>.

Centre for Advancement of Interprofessional Education (CAIPE). 2002. CAIPE's Definition of Interprofessional Education. In "CAIPE Strategy 2022-2027." Retrieved June 25, 2024. <http://www.caipe.org.uk/>.

Curnew, D., A. Deeb, S. Isaacs, R. Puddester and C. Vaughan. 2022. Hindsight Is 2020: A Graduate Student Perspective. *Nursing Leadership* 35(3): 32–47. doi:10.12927/cjnl.2022.27004.

Curnew, D., J. Lukewich, M. Mathews, M.-E. Poitras and K. Romme. 2023. Integration of Primary Care Education Into Undergraduate Nursing Programs: A Scoping Review Protocol. *JBI Evidence Synthesis* 21(7): 1493–1500. doi:10.11124/JBIES-22-00312.

de Andrade, S.R., A.E. Boeha, D. de Mattia, C.G.E. Bohes and M.F. dos Santos Daussy. 2014. Cooperation and the Relationship Between Education and Healthcare Institutions: The Nursing *Pró-Saúde* Project. *Texto e Contexto Enfermagem* 23: 160–66. doi:10.1590/S0104-07072014000100019.

Department of Health and Aged Care. 2023. Strengthening the Role of the Nursing Workforce. Retrieved June 25, 2024. <https://www.health.gov.au/our-work/strengthening-the-role-of-the-nursing-workforce>.

Duncan, S.M. and J.I. Pepin. 2025. Opportunities for Nursing Education Advancement in Primary Health Care | Des ouvertures pour la formation en sciences infirmières en soins de santé primaires. *QANE - AFI* (11)1: Article 1. doi:10.17483/2368-6669.1556.

Endalamaw, A., R.B. Khatri, D. Erku, A. Zewdie, E. Wolka, F. Nigatu et al. 2024. Barriers and Strategies for Primary Health Care Workforce Development: Synthesis of Evidence. *BMC Primary Care* 25(1): 99. doi:10.1186/s12875-024-02336-1.

Flood, C.M., B. Thomas and E. McGibbon. 2023. Canada's Primary Care Crisis: Federal Government Response. *Healthcare Management Forum* 36(5): 327–32. doi:10.1177/08404704231183863.

General Practice Nurse Education Network (GPNEN). 2024. General Practice Nurse Programmes Available in the United Kingdom. Retrieved June 25, 2024. <https://gpnen.org.uk/early-career/general-practice-nurse-programmes-available-in-the-united-kingdom/>.

Glasgow, R.E. and P.E. Estabrooks. 2018. Pragmatic Applications of RE-AIM for Health Care Initiatives in Community and Clinical Settings. *Preventing Chronic Disease* 15: e02. doi:10.5888/pcd15.170271.

Graham, I.D., J. Logan, M.B. Harrison, S.E. Straus, J. Tetroe, W. Caswell et al. 2006. Lost in Knowledge Translation: Time for a Map? *The Journal of Continuing Education in the Health Professions* 26(1): 13–24. doi:10.1002/chp.47.

Griffiths, P., T. Murrells, J. Maben, S. Jones and M. Ashworth. 2010. Nurse Staffing and Quality of Care in UK General Practice: Cross-Sectional Study Using Routinely Collected Data. *British Journal of General Practice* 60(570): e36–48. doi:10.3399/bjgp10x482086.

Gularte-Rinaldo, J., R. Baumgardner, T. Tilton and V. Brailoff. 2023. Mentorship ReSPeCT Study: A Nurse Mentorship Program's Impact on Transition to Practice and Decision to Remain in Nursing for Newly Graduated Nurses. *Nurse Leader* 21(2): 262–67. doi:10.1016/j.mnl.2022.07.003.

Halcomb, E., E. Smyth and S. McInnes. 2018. Job Satisfaction and Career Intentions of Registered Nurses in Primary Health Care: An Integrative Review. *BMC Family Practice* 19(1): 136. doi:10.1186/s12875-018-0819-1.

Hamza, D.M. and G. Regehr. 2021. Eco-Normalization: Evaluating the Longevity of an Innovation in Context. *Academic Medicine* 96(11s): S48–53. doi:10.1097/ACM.0000000000004318.

Health Education England (HEE). 2017. *The General Practice Nursing Workforce Development Plan.* Retrieved June 28, 2024. <https://www.hee.nhs.uk/sites/default/files/documents/The%20general%20practice%20nursing%20workforce%20development%20plan.pdf>.

Heinen, M., C. van Oostveen, J. Peters, H. Vermeulen and A. Huis. 2019. An Integrative Review of Leadership Competencies and Attributes in Advanced Nursing Practice. *Journal of Advanced Nursing* 75(11): 2378–92. doi:10.1111/jan.14092.

International Council of Nurses (ICN). 2021. *Policy Brief. Nursing Education and the Emerging Nursing Workforce in COVID-19 Pandemic.* Retrieved June 25, 2024. <https://www.icn.ch/sites/default/files/2023-06/ICN%20Policy%20Brief_Nursing%20Education.pdf>.

Kirkpatrick, J. and W.K. Kirkpatrick. 2015. *An Introduction to the New World Kirkpatrick Model.* Retrieved June 25, 2024. <https://www.cpedv.org/sites/main/files/file-attachments/introduction_to_the_kirkpatrick_new_world_model_-eval_002.pdf>.

Laurant, M., D. Reeves, R. Hermens, J. Baspenning, R. Grol and B. Sibbald. 2005. Substitution of Doctors by Nurses in Primary Care. *Cochrane Database of Systematic Reviews* 18(2): CD001271. doi:10.1002/14651858.cd001271.pub2.

Lavoie-Tremblay, M., L. Sanzone, T. Aubé, C. Bigras, G. Cyr and G. Primeau. 2020. A University/Healthcare Institution Mentorship Programme: Improving Transition to Practice for Students. *Journal of Nursing Management* 28(3): 586–94. doi:10.1111/jonm.12960.

Lukewich, J., D.S. Edge, E. VanDenKerkhof, T. Williamson and J. Tranmer. 2018. Team Composition and Chronic Disease Management Within Primary Healthcare Practices in Eastern Ontario: An Application of the Measuring Organizational Attributes of Primary Health Care Survey. *Primary Health Care Research and Development* 19(6): 622–28. doi:10.1017/s1463423618000257.

Lukewich, J., M. Allard, L. Ashley, K. Aurbrey-Bassler, D. Bryant-Lukosius, T. Klassen et al. 2020. National Competencies for Registered Nurses in Primary Care: A Delphi Study. *Western Journal of Nursing Research* 42(12): 1078–87. doi:10.1177/0193945920935590.

Lukewich, J., R. Martin-Misener, A.A. Norful, M.-E. Poitras, D. Bryant-Lukosius, S. Asghari et al. 2022. Effectiveness of Registered Nurses on Patient Outcomes in Primary Care: A Systematic Review. *BMC Health Services Research* 22(1): 740. doi:10.1186/s12913-022-07866-x.

Lukewich, J., M. Mathews, M.-E. Poitras, J. Tranmer, R. Martin-Misener, D. Bryant-Lukosius et al. 2023. Primary Care Nursing Competencies in Canadian Undergraduate Nursing Programs: A National Survey. *Nursing Education in Practice* 71: 103738. doi:10.1016/j.nepr.2023.103738.

Lukewich, J., M.-E. Poitras, C. Vaughan, D. Ryan, M. Guérin, D. Bulman et al. 2024. Canadian Post-Licensure Education for Primary Care Nurses Addressing the Patient's Medical Home Model and Canadian Competencies for RNs in Primary Care: An Environmental Scan. *Quality Advancement in Nursing Education* 10(2): 8. doi:10.17483/2368-6669.1429.

Martin, J.S., W. Ummenhofer, T. Manser and R. Spirig. 2010. Interprofessional Collaboration Among Nurses and Physicians: Making a Difference in Patient Outcome. *Swiss Medical Weekly* 140(1718): 1–12. doi:10.4414/smw.2010.12648.

Mennenga, H.A., R.J. Brown, T.L. Horsley, A.A. Abuatiq and C. Plemmons. 2021. Collaborating With Rural Practice Partners to Provide a Primary Care Experience for Prelicensure Nursing Students. *Nurse Educator* 46(2): E14–17. doi:10.1097/nne.0000000000000876.

Miller, L. 2020. Understanding Regulatory, Legislative, and Credentialing Requirements in Canada. In E. Staples, R. Pilon and R.A. Hannon, eds., *Canadian Perspectives on Advanced Practice Nursing (2nd ed)*. (pp. 87–98). Canadian Scholars.

Morais, F.R.R., I.D.R. Leite, L.L. de Oliveira and R.M. Verás. 2010. Teaching and Nursing Practices Reorientation: Pro-Health Implantation in Mossoró, Brazil. *Revista Gaucha de Enfermagem* 31(3): 442–49. doi:10.1590/s1983-14472010000300006.

Morton, J.L., F.M. Weierbach, R. Sutter, K. Livsey, E. Goehner, J. Liesveld et al. 2019. New Education Models for Preparing Pre-Licensure Students for Community-Based Practice. *Journal of Professional Nursing* 35(6): 491–98. doi:10.1016/j.profnurs.2019.05.004.

National Council of State Boards of Nursing. n.d. About the NCLEX: A Behind-the-Scenes Look at the Exam. Retrieved June 25, 2024. <https://www.nclex.com/About.page>.

Norful, A., G. Martsolf, K. de Jacq and L. Poghosyan. 2017. Utilization of Registered Nurses in Primary Care Teams: A Systematic Review. *International Journal of Nursing Studies* 74: 15–23. doi:10.1016/j.ijnurstu.2017.05.013.

Oandasan, I.F., M. Hammond, L.G. Conn, S. Callahan, A. Gallinaro and A. Moaveni. 2010. Family Practice Registered Nurses: The Time Has Come. *Canadian Family Physician* 56: e375–82.

Ordre des infirmières et infirmiers du Québec (OIIQ). n.d. Becoming a Nurse in Quebec: Professional Examination. Retrieved June 25, 2024. <https://www.oiiq.org/en/acceder-profession/parcours-etudiant/examen-professionnel/convocation-et-inscription>.

Poitras, M.-E., M.-C. Chouinard, F. Gallagher and M. Fortin. 2018. Nursing Activities for Patients with Chronic Disease in Primary Care Settings: A Practice Analysis. *Nursing Research* 67: 35–42. doi:10.1097/NNR.0000000000000253.

Poitras, M.-E., J. Lukewich, T. Klassen, M. Guérin, S. Braithwaite, R. Devey-Burry et al. 2024. Implementation and Evaluation of a Canadian Post-Licensure Educational Program for Registered Nurses in Primary Care: A Developmental Evaluation Protocol. *BMC Nurs.* [under review]

Sanders, T., J. Avanthay Strus, B. Chyzzy, A. Chircop, G. Currie, F. Fillion et al. 2024. Understanding the Current State of Community Health Nursing Education in Canada: An Exploration of the Erosion and Devaluation of Community Health Theoretical and Practice Education in Canadian Nursing Programs. Q*ANE – AFI* 10(3): Article 2. doi:10.17483/2368-6669.1447.

Smith, P.M., M.M. Spadoni and V.M. Proper. 2013. National Survey of Clinical Placement Settings Across Canada for Nursing and Other Healthcare Professions – Who's Using What? *Nurse Education Today* 33(11): 1329–36. doi:10.1016/j.nedt.2013.02.011.

Stephen, C., S. McInnes and E. Halcomb. 2018. The Feasibility and Acceptability of Nurse-Led Chronic Disease Management Interventions in Primary Care: An Integrative Review. *Journal of Advanced Nursing* 74(2): 279–88. doi:10.1111/jan.13450.

Stewart, D., M. Schober and H. Catton. 2024. *Nursing and Primary Health Care: Towards the Realization of Universal Health Coverage. A Discussion Paper*. International Council of Nurses. Retrieved September 23, 2024. <https://www.icn.ch/sites/default/files/2024-09/ICN_PHC-Report-2024_EN_FINAL.pdf>.

Team Primary Care. 2023. About Team Primary Care. Retrieved June 25, 2024. <https://www.teamprimarycare.ca/about>.

The College of Family Physicians of Canada (CFPC). 2019, March 18. A New Vision for Canada: Family Practice – The Patient's Medical Home. Retrieved June 25, 2024. <https://www.cfpc.ca/en/resources/patient-s-medical-home/a-new-vision-for-canada-family-practice-the-patien>.

The College of Family Physicians of Canada (CFPC), Canadian Nurses Association (CNA), Canadian Medical Association (CMA). 2022, April 14. *Health Human Resource Policy Recommendations: Summary.* Retrieved September 19, 2024. <https://policybase.cma.ca/viewer?file=%2Fmedia%2FBriefPDF%2FBR2022-11.pdf#page=1>.

Whitireia and WelTec. 2024. Postgraduate Certificate in Primary Health Care Specialty Nursing. Retrieved June 25, 2024. <https://www.whitireiaweltec.ac.nz/study-programmes/postgraduate/health-and-social/postgraduate-certificate-in-primary-health-care-specialty-nursing>.

Wojnar, D.M. and E.M. Whelan. 2017. Preparing Nursing Students for Enhanced Roles in Primary Care: The Current State of Prelicensure and RN-to-BSN Education. *Nursing Outlook* 65(2): 222–32. doi:10.1016/j.outlook.2016.10.006.

World Health Organization (WHO). 2021. *Global Strategic Directions for Strengthening Nursing and Midwifery 2016–2020*. Retrieved June 25, 2024. <https://iris.who.int/bitstream/handle/10665/275453/9789241510455-eng.pdf?sequence=>.

Wranik, W.D., S. Price, S.M. Haydt, J. Edwards, K. Hatfield, J. Weir et al. 2019. Implications of interprofessional primary care team characteristics for health services and patient health outcomes: A systematic review with narrative synthesis. *Health policy (Amsterdam, Netherlands)* 123(6): 550–63. doi:10.1016/j.healthpol.2019.03.015.

Key Elements for Implementing a Train-the-Trainer Intervention for Registered Nurses and Social Workers in Primary Care

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Abstract
Registered nurses (RNs) and social workers (SWs) in Canada must integrate evidence-based practice in primary care. Continuing education interventions are needed and are valuable for achieving this. Primary care is a complex environment that must be considered to effectively implement a training intervention. Our team developed and implemented a train-the-trainer (TTT) intervention, including patient partners as trainers, to promote evidence-based practice for RNs and SWs working in primary care. Our developmental analysis highlighted key components, including the importance of leaders' support and contextual adaptation, demonstrating that while this TTT intervention holds significant potential, its effectiveness depends on organizational commitment and sufficient support from leaders.

Introduction

Primary care forms the basis of the interprofessional health services provided to the Canadian population (CFPC 2019; Statistics Canada 2020). Professionals working in primary care come from various disciplines and offer care to a wide range of individuals within the population (CFPC 2019). In some Canadian provinces, interdisciplinary primary care clinics (PCCs) are predominant in the primary care landscape (Gouvernement de l'Ontario n.d.; Gouvernement du Québec n.d.). These clinics, often led by family physicians, include registered nurses (RNs) and other professionals such as social workers (SWs) (CFPC 2019). Although most of these PCCs are staffed by family physicians and other professionals, they have strong medical leadership and are often hierarchical (McInnes et al. 2015) and managed on a matrix basis (i.e., several authorities and individuals manage the structure and organization of PCCs and services) (Akman et al. 2022; Hutchison et al. 2011; Poitras and Couturier 2022; Pomey et al. 2009). Changes and decisions, therefore, must be submitted to and approved by various authorities/individuals before they can be implemented (Poitras and Couturier 2022).

RNs and SWs working in those PCCs must provide evidence-based practice anchored in equitable, accessible, interprofessional and patient-centred care (CFPC 2019; Statistics Canada 2020). RNs in primary care serve as generalists, offering a broad range of services, including, but not limited to, health education, health promotion, chronic disease prevention and management, therapeutic interventions (e.g., wound care, immunizations), medication management, pediatric and women's health, referral management, care coordination and system navigation (Lukewich et al. 2018). SWs in primary care support patients and families with mental health and well-being, ensure that they have the resources they need to heal and help them navigate the healthcare system (Ashcroft et al. 2018, 2024; Tadic et al. 2020).

While some primary care professional practices are acquired through the curricula, essential skills required by primary care RNs and SWs must be acquired through continuing education activities (Barrett et al. 2021; Couturier and Pépin 2024; Lukewich et al. 2023). This is because the current academic curricula leading to the graduation of RNs and SWs do not contain sufficient training specifically related to primary care (Ashcroft et al. 2018; Lukewich et al. 2018). While some clinical skills can be learned – such as managing follow-up care for individuals with chronic illnesses and evaluating social functioning – there is a lack of academic curricula specifically designed to foster the development of professional leadership, define scopes of practice or promote interprofessional collaboration in primary care (Ashcroft et al. 2018; Lukewich et al. 2018). According to several authors, continuing education is necessary to compensate for the lack of integration of primary care in current curricula (Lukewich et al. 2018, 2024; Poitras et al. 2018). It is highly recommended to support knowledge development and the implementation of innovations. Continuing education innovation in primary care refers to developing and implementing new approaches, strategies and methods to enhance healthcare professionals' educational experiences and outcomes in the primary care setting (Serdyukov 2017). However, implementing innovation in primary care, such as continuing education intervention, faces several challenges that hinder its successful implementation and adoption. This is due to the complexity of the primary care environment (Ohr et al. 2021). Stakeholders wishing to implement innovations in this environment must combine and consider, but not be limited to, medical and professional governance, interprofessional teams, different clinics in the same geographically delocalized area and continuing clinical needs (British Columbia Ministry of Health, Primary Care Division 2024; Government of Northwest Territories n.d.; Ministère de la Santé et des Services Sociaux and Direction des communications 2019; Ohr et al. 2021; Poitras et al. 2019; Poitras and Couturier 2022; Primary Care Nurses of Ontario n d.).

Poitras et al. (2022) developed a train-the-trainer (TTT) intervention (Formation de formateurs en première ligne, hereafter F2PL) to support the implementation of the team-based care approach for RNs and SWs working in PCCs. In Quebec, this team-based care approach is being promoted by distributing two practice guides, one intended for RNs and the other for SWs, conceived and distributed by the Quebec Ministry of Health and Social Services (Ministère de la Santé et des Services Sociaux and Direction des communications 2019; Poitras et al. 2019). These guides have three sections: (1) information regarding the operation of PCCs; (2) the expected role of RNs or SWs in PCCs; and (3) interprofessional collaboration in PCCs. F2PL was developed in partnership with researchers, decision makers, content experts and patient partners (hereafter knowledge users). The protocol was previously published (Poitras et al. 2022).

A TTT approach is an organized activity provided by a trainer aiming to improve the trainees' learning and behaviour in a healthcare context (Kirkpatrick and Kirkpatrick 2019). In the healthcare system, trainers play a vital role in educating other healthcare professionals (Byrne et al. 2010; Moon et al. 2008; Ramberg and Wasserman 2004; Shrestha et al. 2006). Poitras et al. (2022) introduced a unique TTT intervention, using triads of trainers comprising RNs, SWs and patient partners to support the content of RNs' and SWs' integrating practice guides (Poitras et al. 2022). This intervention showed some effects presented in previous works (Morin et al. 2023; Poitras et al. 2024b). Briefly, in the F2PL study, trainers received training in the content of the guides and in the skills needed to become trainers themselves, enabling them to train primary care RNs and SWs. These trainers then trained RNs and SWs from the participating sites. Specific training content is available in Table 1.

Table 1. F2PL's training content

Module	Title	Overview
Module 1	Introduction	Host and introduction of participants and trainers. Presentation of the context that led to the deployment of the clinical practice guidelines in Quebec and the training objectives.
Module 2	Primary care and the role of PCCs in care service trajectories	Introducing primary care and PCCs and their contribution.
Module 3	Scope of practice of the RN and SW in PCCs	Supporting the development of knowledge of the practice field of nurses and PCCs' SWs.
Module 4	The patient experience	Introducing the partnership approach with patients and their families and making the most of patients' experiential knowledge.
Module 5	Interprofessional collaboration in PCCs	Support in acquiring strategies to help healthcare professionals develop collaborative practice, explaining the benefits and added value.

F2PL = Formation de formateurs en première ligne; PCC = primary care clinic; RN = registered nurse; SW = social worker.

Few authors have taken an interest in innovative continuing education interventions in primary care (Brimmer et al. 2008; Chambers et al. 2013; Foster et al. 2016; Fraser et al. 2017; McCreaddie 2002; Ohr et al. 2021). Large-scale continuing education innovation implementation in primary care, such as TTT, remains poorly documented; the literature tends to focus on innovation implementation in PCCs one at a time, overlooking the complexities of the primary care environment. In this paper, we describe the key elements that support the implementation of a TTT for RNs and SWs in primary care and to identify the strategies required for successful deployment.

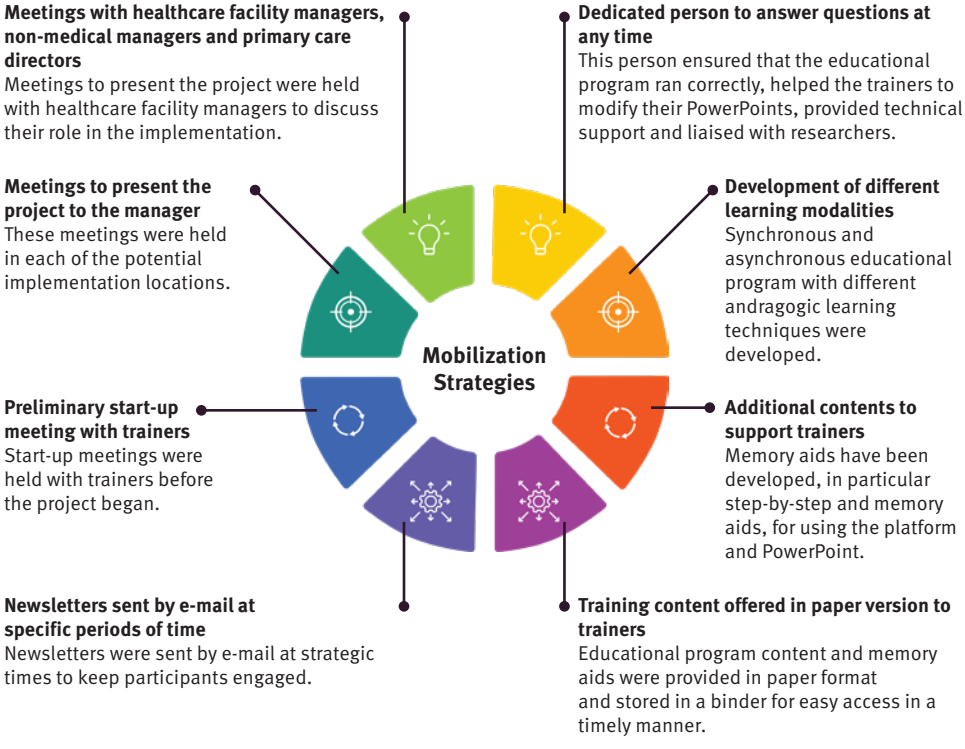
Methodology

We conducted a qualitative developmental evaluation (Patton et al. 2015) from 2019 to 2023. We used the Knowledge-to-Action (KTA) Framework (Graham et al. 2018) and mobilization strategies to support the TTT intervention implementation process (Figure 1). Figure 2 shows the structure of our project and evaluation. The developmental evaluation and KTA approach enabled us to fully understand the implementation of the intervention and to continuously inform the process of intervention development and implementation (Patton et al. 2015). We reported data using the COnsolidated criteria for REporting Qualitative research (COREQ) checklist (Tong et al. 2007).

Practices' Enrollment and Study Participants

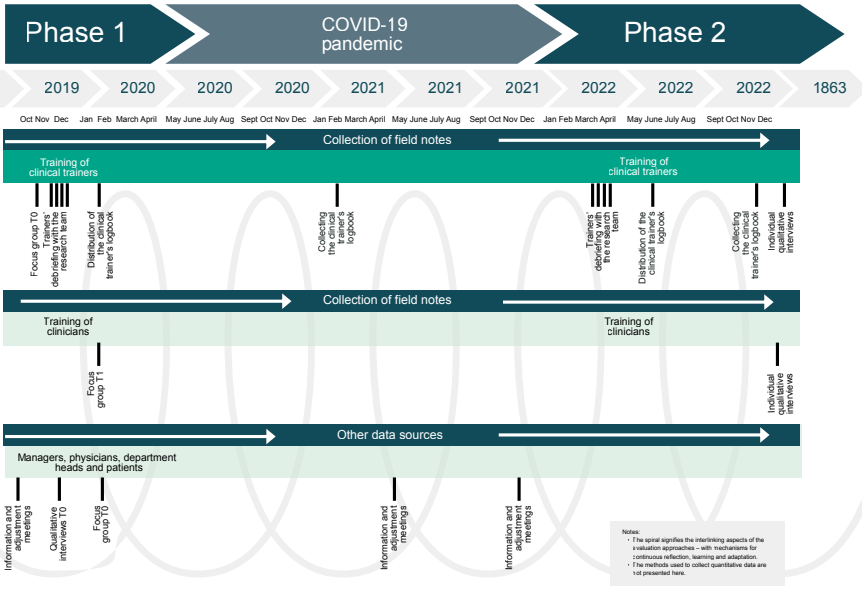
As described in the articles by Poitras et al. (2022, 2024b), during phase 1, PCCs from three administrative regions were targeted based on their area characteristics, including mega-urban, semi-urban and rural classifications, to obtain a representative view of the realities in different settings across the province of Quebec, Canada. Two PCCs from each administrative region were enrolled. Governance representatives from the participating administrative regions identified RNs, SWs

Figure 1. Mobilization strategies to support TTT intervention



TTT = train-the-trainer.

Figure 2. Project structure and evaluation



and patient partners to become trainers. For phase 1, 15 trainers were recruited (9 clinical trainers and 6 patient trainers). These trainers provided the educational program to 33 trainees. In phase 2, we proceeded similarly, deploying in an administrative region that included urban, semi-urban and semi-rural environments. We enrolled 12 PCCs. Through each area's governance representatives, we recruited one SW and two RNs for a clinical trainer position. Three patient trainers were recruited on a voluntary basis from other related research projects. These trainers provided the educational program to 50 trainees. Finally, we recruited six head family physicians, 10 managers and four continuous quality improvement officers to take part in qualitative interviews in support of our implementation evaluation process.

Data Collection

In phase 1 at T0 (before the implementation), 29 structured interviews and nine focus groups were conducted with family physicians, trainees (RNs, SWs), patients, trainers (clinical trainers and patient trainers), managers and continuous quality improvement officers. At T1 (one month post-implementation), one semi-structured interview and two focus groups were conducted with trainees. In phase 2, two months post-implementation, 13 structured interviews were conducted with trainees and patient trainers and six logbooks from clinical trainers and patient trainers were collected. During phases 1 and 2, we collected field notes throughout the research process (four years). All data collection methods are summarized in Table 2.

Table 2. Qualitative data collection description

Qualitative data collection methods documenting the development of F2PL	
Qualitative semi-structured interviews	44 interviews were conducted during the various phases with physicians, managers, department heads, patients, RNs, SWs, patient trainers and continuous quality improvement agents.
Focus groups	14 focus groups were held with patients, clinical trainers, RNs and SWs.
Researcher's field notes	472 lines of notes were consigned by 4 members of the research team in an Excel document.
Trainer's logbook	19 logbooks containing trainers' reflections on the implementation process were collected.
Trainers' debriefing with the research team	8 debriefing meetings between the research team and the trainers supported the documentation of the implementation.
Information and adjustment meetings with managers, decision makers and physicians	5 meetings enabled us to prepare for implementation, identify barriers and facilitators to successful implementation and establish effective deployment strategies to address shortcomings.

F2PL = Formation de formateurs en première ligne; RN = registered nurse; SW = social worker.

Data Analysis

Qualitative data were iteratively analyzed using three concurrent flows (Miles et al. 2020). The data were condensed and grouped by themes to provide learnings that could support implementing the TTT intervention. The analysis focused on finding meaning in the multiple sources of data to describe the key elements that support the implementation of a TTT for RNs and SWs in primary care and to identify the strategies required for successful deployment.

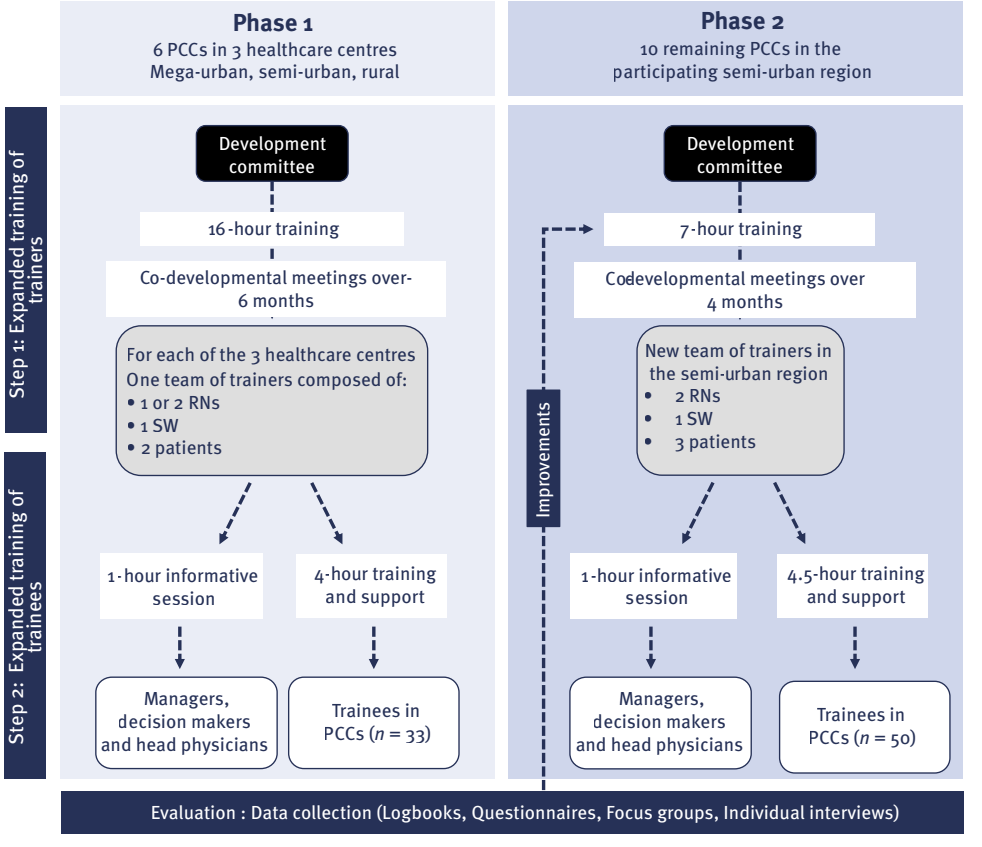
Ethical Considerations

The ethics committees of the participating establishments have approved the project (CIUSSS Saguenay-Lac-Saint-Jean under the reference 2019–037). Informed consent was obtained from each participant. All participants signed an electronic informed consent form to participate in the study before the data collection. Research data have been anonymized and stored securely according to guidelines and regulations (Declaration of Helsinki).

Results

The TTT intervention was deployed in two phases. At its conclusion, F2PL resulted in the training of a total of 12 SWs and 71 RNs. The impact of the TTT is available in the articles by Poitras et al. (2024b) and Morin et al. (2023). The developmental evaluation used throughout the research process enabled us to adapt phase 2 according to what we learned in phase 1. Figure 3 shows the TTT improvement between phase 1 and phase 2. The qualitative analysis of the 562 data sources collected throughout the project (Table 2) allowed our team to present the following results.

Figure 3. TTT improvement between phases 1 and 2



PCC = primary care clinic; RN = registered nurse; SW = social worker; TTT = train-the-trainer.

Theme #1: Managers and Decision Makers Failed to Realize Concrete Action to Support Innovation Implementation

Implementing a TTT innovation requires support from managers and decision makers. They must be engaged and take concrete action. This mobilization was supposed to be reflected in official communications from managers to RNs and SWs in each PCC. It was also to be reflected in a concrete commitment to freeing trainers from a predetermined number of hours/months to carry out their role as trainers. This also meant that RNs and SWs in the target PCCs would be authorized to free up their time to complete the training. Our field data showed that although the medical and administrative managers/directors of PCCs were formally in favour of implementing the innovation, few concrete actions were taken to legitimize it and encourage potential RNs and SWs to engage in training as trainees. It was documented in the first meeting field notes, with each manager's/director's verbal support to the project, but after the meeting, managers/directors failed to realize concrete action. To compensate for the lack of support from

managers/directors, we deployed extra strategies to assist trainers in engaging RNs and SWs in training. As a result, the team conducted additional meetings with the medical and administrative managers/directors of the targeted PCCs to emphasize the value of training contextualized to their PCC. Several discussions took place to establish strategies for promoting the training intervention through both formal communication channels (e.g., clinical notices and professional e-mails) and informal ones (e.g., weekly practice team meetings).

Finally, it has been documented during meetings with non-medical managers that they frequently felt uncomfortable promoting training or participation in research implementation training without the prior agreement of the PCC's medical manager.

> During the meeting with the administrative manager of the clinics, it was documented that he saw added value in the training of nurses and social workers. However, he cannot give his full agreement to the participation of the professionals without the agreement of the medical manager of each clinic. (Field note of the research team in Region X in phase 1)

> We haven't started training yet, as we're still looking for suitable premises to accommodate everyone. In addition, we have not yet obtained the medical manager's agreement to release the nurses for the duration of the training. (Note made during a call with Region X trainers in phase 1)

Theme #2: The Complexity of Primary Care Context Requires the Adaptation of Training Modalities to Encourage Engagement and Learning

When the TTT intervention was created, it was decided by the project team in phase 1 that face-to-face training would be preferable to create dynamic exchanges and partnerships between clinical trainers, patient trainers and the RNs/SWs to be trained. It has been observed that delivering face-to-face training in a PCC can be arduous for both trainers and trainees. As an example, an appropriate room or required equipment, such as a computer and screen to present the PowerPoint, was often lacking.

> The trainers found it difficult to organize the training in clinic X. No premises could accommodate all the nurses and the social workers. Moreover, the only room that could accommodate them had no computer, and access to technology was impossible. The trainers were, therefore, able to deliver the training but could not use the multimedia content provided to support the exchanges and training. (Field note of the research team in phase 1)

It was also observed that PCCs operate differently in terms of working methods, infrastructure and staff release for continuing education. In phase 2, it was essential to re-evaluate the face-to-face training and provide training using various methods. This allowed trainers to adapt training delivery to each PCC.

> I appreciated that we had live training in teams, where we could talk with our colleagues, the trainer, etc. I thought it was more interesting than training courses that are videos and PowerPoint, and then we try not to daydream while it is going on, so I thought it was interesting to have something interactive. I appreciated having [live] training in teams, where we could exchange [information] with our colleagues, with the trainer and all. (RN trained in phase 2)

Our team documented in the logbook that offering a single training modality (e.g., four-hour training for all) could hinder trainees' commitment to training and project start-up. As a result, the four-hour face-to-face training course was modified to a four-hour distance learning course combining synchronous, asynchronous, active and passive learning modes. The changes between phases 1 and 2 had notably engaged the trainees. They liked that the training was available in various formats, allowing them to complete it between two encounters or during times that did not disrupt their clinical work. These different modes gave the trainers the agility they needed to modulate the training according to each PCC's environment.

> We went over the basics and so on, but I think what helped the most was seeing the patient's side of things. That's what really impressed me the most about the training, to see their perceptions too, to go and find out what their needs are, and then to see whether we've met their real needs when they come along. (RN trained in phase 2)

Theme #3: Training Interventions Must Provide Actionable Steps Tailored to Clinical Contexts and an Operational Framework for Trainers

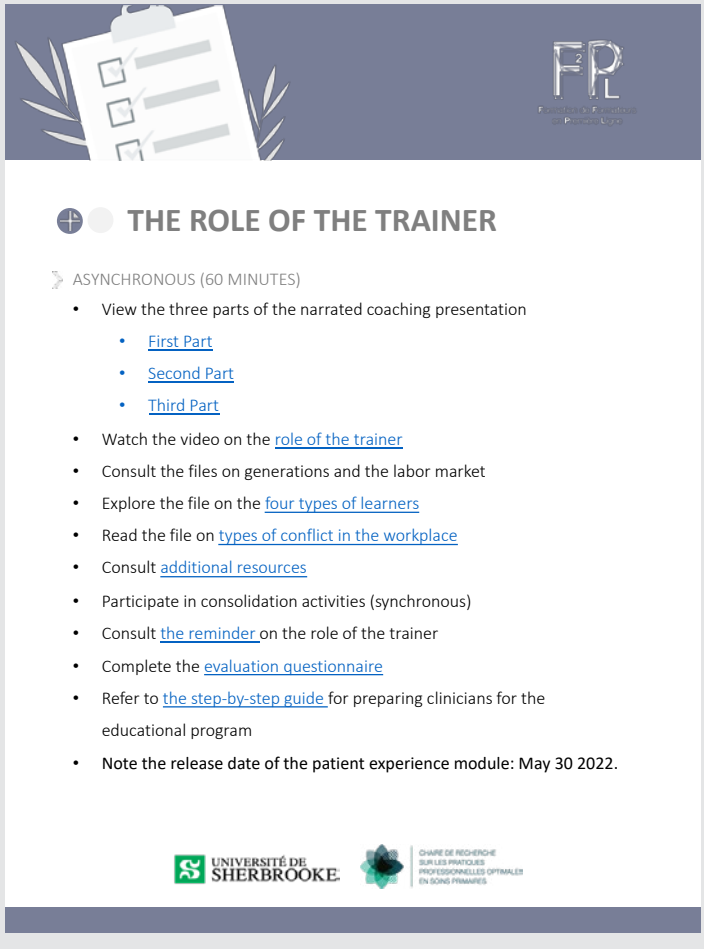
During phase 1, we gave the three teams of trainers the freedom to determine when, where and how they would carry out their training and coaching. It was observed that this freedom to contextualize the training to their PCCs and jurisdiction was a source of hesitation and delay on the part of the trainers. It was noted that the phase 1 trainers encountered difficulty launching the training and establishing common ground. They could not figure out the best ways to collaborate as trainers or establish the training sequence for the two practices for which they were supposed to provide training.

> In phase 1, the team of trainers from Region X held four preparatory meetings to determine the training sequence and the approach to be taken with the doctors in charge of the targeted clinics in order to enhance the added value of the training. The team's principal researcher attended the fourth meeting to support them in planning the activities to be carried out. (Field note of the research team in phase 1)

For phase 2, the research team provided trainers with a clear operational framework described in a step-by-step guide (Figure 4). This guide made it easier for trainers to feel confident in their actions.

> The step-by-step is helpful. I know exactly what to do and when to do it. (Patient trainer in phase 2; notes from the recording of the trainers' meeting)

Figure 4. Step-by-step: The role of the trainer



The research team also circulated an operational framework for the deployment of training with trainers at monthly meetings. These meetings allowed trainers to ask questions about the structure and the operationalization of training.

> F2PL launch meeting with two clinical trainers, extremely interested in the training platform, say they were happy to be "taken by the hand" when talking about the platform. (Field notes of the research team in phase 2)

Theme #4: The Matrix Structure in Primary Care Hinders the Swift Implementation of Actions to Support Innovation, Such as a TTT Intervention

The PCCs included are subject to matrix management, which typically involves creating matrix organizational structures where employees are part of cross-functional, interdependent teams based on their expertise or area of specialty. In this study, this management reduces the power of impact that a manager can have on the PCC. While RNs were under the responsibility of an administrative manager (often an RN manager of several PCCs in the same jurisdiction), SWs were under the responsibility of a different manager. In addition, these two managers co-managed SWs or RNs in partnership with the PCC's medical director. So, to achieve the training, on average, three to five meetings were held per PCC to explain the training and the research (data from research team field notes). This led to delays in implementation, as we held additional meetings. Finally, it was observed that this matrix management undermines the team cohesion required to prioritize an innovation such as a TTT intervention. This is because the needs perceived by RN managers, SW managers and medical managers may differ from one another.

> Environment X, which is an academic primary care clinic, is positive about the arrival of the project and eager to start training. They find the training content relevant and useful for their social workers and nurses. On the other hand, nurse managers and social workers in practice Y, a private primary care clinic, are in favour of the project's arrival but doubt that it will be considered relevant by the medical manager and medical team in place. (Field notes of the research team in phase 2)

Discussion

This paper aims to describe the learning that supports the implementation of a TTT for RNs and SWs in primary care and identify the strategies required for successful deployment. The main results led us to the following propositions.

Without strong leadership from primary care managers and decision makers, a continuing education program dedicated to RNs and SWs across a wide territory cannot be achieved. In the present study, which was conducted in different

regions and in two phases, we observed that one of the essential elements for the deployment of the TTT was the mobilization of managers and decision makers. They had to believe in the project and support the research team with concrete actions to mobilize primary care teams and authorize the implementation of the said training in certain PCCs or even across entire territories. Indeed, although a training program and the resulting training intervention can be co-constructed with representatives of various knowledge users, including managers and decision makers, it is essential for a leader from each organization to support the connection between the different stakeholders or primary care settings and to inspire and motivate the employees in their sector (van Diggele et al. 2020). This is particularly true in primary care, where each setting must be approached to consent to the intervention and where each context must be considered as a distinct unit but forming a whole. Therefore, these managers and decision makers must take on the role of leaders, setting direction, influencing others and managing change (Parry and Bryman 2006). They must become messengers who carry the intervention just as the research team does by sharing the values promoted by the training or initiative. This type of leadership, which some authors describe as transformational, can support change and innovation within an organization and among the individuals who work there (Alshahrani et al. 2023).

Our results lead us to believe that *it seems essential for primary care managers and decision makers to work together to support the deployment of innovation in primary care*. Decision makers and managers must be leaders and work together to counter the complexity of the primary care structure, which suggests more of a siloed/matrix management by the professional sector rather than an integrated and interdisciplinary management of primary care (Peiris et al. 2024). This management is not unique to the primary care sector and is more important in hierarchical sectors (Pedersen et al. 2024). This is also observable in our own study, where non-physician managers did not feel justified in authorizing the training without the family physician's director's agreement. There has been a lack of consensus and consultation among leaders in the same sectors on how to support the training. The lack of cohesion and cooperation between the different levels of management of PCCs inside each jurisdiction makes it harder to implement innovations such as TTT.

Finally, the TTT intervention is a helpful structure that can overcome the complexity of the primary care structure. However, trainers need guidance on the training sequence; the approaches to be used; and the key players to be considered, approached and included in the initiative. In the present study, the TTT intervention enabled the deployment of the educational intervention in three regions in phase 1 and then in all the PCCs of a single region in phase 2. Training so many people from different professions on various training content would not have been

possible without this approach. Furthermore, training trainers in three different regions in phase 1 allowed the creation of trainer teams skilled in understanding the primary care contexts in which they had to operate. This understanding was proved necessary for the development of the trainers' roles. However, these trainers must be not only trained but also supported in their training efforts. Our work has described that they need to be supported after their own training so that the knowledge acquired during their training can be operationalized into skills. In the context of this study, this support proved crucial for strengthening the trainers' capacities. The continuous support provided by our team and the monthly trainer meetings not only ensured the effective application of the skills acquired by the trainers but also contributed to long-term professional development and the overall success of the training objectives (Medina et al. 2015). Previous work by our team (Poitras et al. 2021), as well as that of Nexø et al. (2024) and Pearce et al. (2012), also highlighted the effectiveness of trainer's training on trainees. However, the subject of trainers has hardly been studied. Moreover, the project discussed in this paper is the first, to our knowledge, to specifically highlight the importance of not only training the trainer but also providing longitudinal support to trainers once the basic training is offered. This is an essential element to be considered by leaders wishing to replicate a TTT intervention in primary care to develop competent trainers and ensure the longevity (and sustainability) of knowledge and innovation in clinical settings.

Conclusion

Our TTT intervention for RNs and SWs is one of the first of its kind in Canada, and our findings will enable us to better develop similar training programs in the same context. As PCCs are distinct entities with unique characteristics (Ohr et al. 2021), the strategies developed by our team may not be transferable to all contexts but could be used by nursing leaders to support continuing education programs in primary care. The integration and analysis of four years of data provided a comprehensive understanding of the phenomenon, boosting the study's credibility (Cronin et al. 2008; Miles et al. 2014). The lessons learned (i.e., contextualizing the format and the content to primary care complex environment, involving the leadership of managers and decision makers in each province to support implementation and developing a support structure for trainees) have been used to support the creation of the first national educational program for primary care RNs as part of the Team Primary Care initiative (https://www.teamprimarycare.ca/) (Poitras et al. 2024a).

Implications for Nursing Leadership

Our study provides field data to understand how TTT interventions can be deployed and the strategies required for successful deployment. This knowledge is essential to leaders who want to deploy such interventions in primary care. By

reading this paper, a leader will gain an understanding of the structure of a TTT intervention and the necessary elements for supporting or potentially hindering its progress. It emerges from our four-year data analysis that the leader's support must be concrete and that he or she must put forward strategies to mobilize change and the key players in his or her environment. Without this, even if a project is well-structured and offered for implementation in each environment by a research team, there is little chance that it will be deployed effectively and achieve the desired effects. The leader has to become a vector of change and a key person in the success of major innovation in primary care in collaboration with the research team members.

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References

Akman, M., D. Ayhan Başer, B. Usanma Koban, T. Marti, P. Decat, Y. Lefeuvre et al. 2022. Organization of Primary Care. *Primary Health Care Research Development* 23: e49. doi:10.1017/s1463423622000275.

Alshahrani, I., O. Al-Jayyousi, F. Aldhmour and T. Alderaan. 2023. Towards Understanding the Influence of Innovative Work Behavior on Healthcare Organizations' Performance: The Mediating Role of Transformational Leaders. *Arab Gulf Journal of Scientific Research* 42(1): 198–216. doi:10.1108/AGJSR-09-2022-0167.

Ashcroft, R., C. McMillan, W. Ambrose-Miller, R. McKee and J.B. Brown. 2018. The Emerging Role of Social Work in Primary Health Care: A Survey of Social Workers in Ontario Family Health Teams. *Health and Social Work* 43(2): 109–17. doi:10.1093/hsw/hly003.

Ashcroft, R., K. Adamson, S. Guy, F. Phelps, P. Sheffield, G. Webber et al. 2024, September. *Social Work and Primary Care: A Vision for the Path Forward.* Canadian Association of Social Workers. Retrieved February 18, 2025. <https://www.casw-acts.ca/files/attachements/4023_CASW_SocialWorkAndPrimaryCare_Report_EN-Final.pdf>.

Barrett, C., M. Mathews, M.-E. Poitras, A.A. Norful, R. Martin-Misener, J. Tranmer et al. 2021. Job Titles and Education Requirements of Registered Nurses in Primary Care : An International Document Analysis. *International Journal of Nursing Studies Advances* 3: 100044. doi:10.1016/j.ijnsa.2021.100044.

Brimmer, D.J., K.K. McCleary, T.A. Lupton, K.M. Faryna, K. Hynes and W.C. Reeves. 2008. A Train-the-Trainer Education and Promotion Program: Chronic Fatigue Syndrome – A Diagnostic and Management Challenge. *BMC Medical Education* 8(1): 49. doi:10.1186/1472-6920-8-49.

British Columbia Ministry of Health, Primary Care Division. 2024. February. *Nurse in Practice Program Application Guide*. Retrieved February 18, 2025. <https://www2.gov.bc.ca/assets/gov/health/practitioner-pro/nurse-in-practice-program/nurse-in-practice-application-guide.pdf>.

Byrne, M.K., A. Willis, F.P. Deane, B. Hawkins and R. Quinn. 2010. Training Inpatient Mental Health Staff How to Enhance Patient Engagement With Medications: Medication Alliance Training and Dissemination Outcomes in a Large US Mental Health Hospital. *Journal of Evaluation in Clinical Practice* 16(1): 114–20. doi:10.1111/j.1365-2753.2009.01126.x.

Chambers, M., S. Gillard, K. Turner and R. Borschmann. 2013. Evaluation of an Educational Practice Development Programme for Staff Working in Mental Health Inpatient Environments. *Journal of Psychiatric and Mental Health Nursing* 20(4): 362–73. doi:10.1111/j.1365-2850.2012.01964.x.

The College of Family Physicians of Canada (CFPC). 2019. *A New Vision for Canada. Family Practice – The Patient's Medical Home 2019*. Retrieved February 18, 2025. <https://patientsmedicalhome.ca/files/uploads/PMH_VISION2019_ENG_WEB_2.pdf>.

Couturier, Y. and M-É. Pépin. 2024. L'arrivée des travailleuses sociales dans les cliniques médicales du Québec. In S. Ponnou and R. Wittorski, eds., *Le travail de la relation* (pp. 233–49). Champ Social.

Cronin, A., V.D. Alexander, J. Fielding, J. Moran-Ellis and H. Thomas. 2008. The Analytic Integration of Qualitative Data Sources. In P. Alasuutari, L. Bickman and J. Brannen, eds., *The SAGE Handbook of Social Research Methods* (pp. 572–84). SAGE Publications Ltd.

Foster, F., R. Piggott, L. Teece and R. Beech. 2016. Patients With COPD Tell Their Stories About Living With the Long-Term Condition: An Innovative and Powerful Way to Impact Primary Health Care Professionals' Attitudes and Behaviour? *Education for Primary Care* 27(4): 314–19. doi:10.1080/14739879.2016.1181699.

Fraser, C., A. Grundy, O. Meade, P. Callaghan and K. Lovell. 2017. EQUIP Training the Trainers: An Evaluation of a Training Programme for Service Users and Carers Involved in Training Mental Health Professionals in User-Involved Care Planning. *Journal of Psychiatric and Mental Health Nursing* 24(6): 367–76. doi:10.1111/jpm.12361.

Gouvernement de l'Ontario, M. de la S. et des S. de L. durée. n.d. *Équipe Santé familiale – Programmes du ministère – Professionnels de la santé – MSSLD*. Retrieved February 2, 2022. <https://www.health.gov.on.ca/fr/pro/programs/fht/default.aspx>.

Gouvernement du Québec. n.d. *Groupe de médecine de famille (GMF), groupe de médecine de famille universitaire (GMF-U) et super-clinique (GMF-A et GMF-R)*. Retrieved March 21, 2022. <https://www.quebec.ca/sante/systeme-et-services-de-sante/organisation-des-services/gmf-gmf-u-et-super-clinique/>.

Government of Northwest Territories. n.d. *Clinical Practice Guidelines Chapters* [Information]. Government of the Northwest Territories. Retrieved March 21, 2024. <https://www.hss.gov.nt.ca/professionals/en/services/nwt-clinical-practice-guidelines-primary-community-care-nursing/clinical-practice>.

Graham, I.D., A. Kothari and C. McCutcheon. 2018. Moving Knowledge Into Action for More Effective Practice, Programmes and Policy: Protocol for a Research Programme on Integrated Knowledge Translation. *Implementation Science* 13(1): 22. doi:10.1186/s13012-017-0700-y.

Hutchison, B., J.-F. Levesque, E. Strumpf and N. Coyle. 2011. Primary Health Care in Canada: Systems in Motion. *The Milbank Quarterly* 89(2): 256–88. doi:10.1111/j.1468-0009.2011.00628.x.

Kirkpatrick, J. and W.K. Kirkpatrick. 2019. *An Introduction to the New World Kirkpatrick Model.* Kirkpatrick Partners. Retrieved March 31, 2025. <https://www.kirkpatrickpartners.com/wp-content/uploads/2021/11/Introduction-to-The-New-World-Kirkpatrick%C2%AE-Model.pdf>.

Lukewich, J., M. Mathews, M.-E. Poitras, J. Tranmer, R. Martin-Misener, D. Bryant-Lukosius et al. 2023. Primary Care Nursing Competencies in Canadian Undergraduate Nursing Programs: A National Cross-Sectional Survey. *Nurse Education in Practice* 71: 103738. doi:10.1016/j.nepr.2023.103738.

Lukewich, J., M.-E. Poitras, C. Vaughan, D. Ryan, M. Guérin, D. Bulman et al. 2024. Canadian Post-Licensure Education for Primary Care Nurses Addressing the Patient's Medical Home Model and Canadian Competencies for Registered Nurses in Primary Care: An Environmental Scan. *Quality Advancement in Nursing Education* 10(2): 8. doi:10.17483/2368-6669.1429.

Lukewich, J., S. Taylor, M.-E. Poitras and R. Martin-Misener. 2018. Advancing Family Practice Nursing in Canada: An Environmental Scan of International Literature and National Efforts Towards Competency Development. *Canadian Journal of Nursing Leadership* 31(2): 66–78. doi:10.12927/cjnl.2018.25602.

McCreaddie, M. 2002. Involving Patients in Teaching About Blood-Borne Viruses. *Nursing Standard* 16(44): 33–36. doi:10.7748/ns2002.07.16.44.33.c3230.

McInnes, S., K. Peters, A. Bonney and E. Halcomb. 2015. An Integrative Review of Facilitators and Barriers Influencing Collaboration and Teamwork Between General Practitioners and Nurses Working in General Practice. *Journal of Advanced Nursing* 71(9): 1973–85. doi:10.1111/jan.12647.

Medina, L., E. Acosta-Pérez, C. Velez, G. Martínez, M. Rivera, L. Sardiñas et al. 2015. Training and Capacity Building Evaluation: Maximizing Resources and Results With Success Case Method. *Evaluation and Program Planning* 52: 126–32. doi:10.1016/j.evalprogplan.2015.03.008.

Miles, M.B., A.M. Huberman and J. Saldaña. 2014. *Qualitative Data Analysis: A Methods Sourcebook (3rd ed.)*. SAGE Publications, Inc.

Miles, M., A.M. Huberman and J. Saldana. 2020. *Qualitative Data Analysis: A Methods Sourcebook (4th ed.)*. SAGE Publications, Inc.

Ministère de la Santé et des Services Sociaux and Direction des communications. 2019. *Guide pratique à l'intention des travailleurs sociaux issus d'un établissement du réseau de la santé et des services sociaux et qui travaillent dans un groupe de médecine de famille ou un groupe de médecine de famille universitaire : Dans une perspective de collaboration interprofessionnelle*. Gouvernement du Québec. Retrieved February 18, 2025. <https://publications.msss.gouv.qc.ca/msss/fichiers/2019/19-924-12W.pdf>.

Moon, R.Y., T. Calabrese and L. Aird. 2008. Reducing the Risk of Sudden Infant Death Syndrome in Child Care and Changing Provider Practices: Lessons Learned From a Demonstration Project. *Pediatrics* 122(4): 788–98. doi:10.1542/peds.2007-3010.

Morin, A., Y. Couturier, M.-D. Poirier, V.T. Vaillancourt, S. Massé, A.D. Tardif et al. 2023. The Impact of Patients as Trainers on Registered Nurses' Patient Engagement in Primary Care Clinics: A Qualitative Study. *BMC Primary Care* 24(1): 265. doi:10.1186/s12875-023-02210-6.

Nexø, M.A., N.R. Kingod, S.H. Eshøj, E.M. Kjærulff, O. Nørgaard and T.H. Andersen. 2024. The Impact of Train-the-Trainer Programs on the Continued Professional Development of Nurses: A Systematic Review. *BMC Medical Education* 24(1): 30. doi:10.1186/s12909-023-04998-4.

Ohr, S.O., D. Maguire, N. Lord, C. Talluri and A. Solman. 2021. A Unique Model for Developing Continuing Education Resources for Health Professionals in Geographically Dispersed Health Organizations. *Journal of Continuing Education in the Health Professions* 41(3): 221–25. doi:10.1097/CEH.0000000000000320.

Parry, K.W. and A. Bryman. 2006. Leadership in Organizations. In S.R. Clegg, C. Hardy, T.B. Lawrence and W.R. Nord, eds., *The Sage Handbook of Organization Studies (2nd ed.)* (pp. 446–68). SAGE Publications Ltd.

Patton, M.Q., K. McKegg and N. Wehipeihana. 2015. *Developmental Evaluation Exemplars: Principles in Practice*. Guilford Publications.

Pearce, J., M.K. Mann, C. Jones, S. van Buschbach, M. Olff and J. Bisson. 2012. The Most Effective Way of Delivering a Train-the-Trainers Program: A Systematic Review. *Journal of Continuing Education in the Health Professions* 32(3): 215–26. doi:10.1002/chp.21148.

Pedersen, E.R.G., F. Sudzina and F. Rosati. 2024. A Multi-Dimensional Study of Organisational Boundaries and Silos in the Healthcare Sector. *Health Services Management Research* 37(4): 200–08. doi:10.1177/09514848231218617.

Peiris, D., A.-M. Feyer, J. Barnard, L. Billot, T. Bouckley, A. Campain et al. 2024. Overcoming Silos in Health Care Systems Through Meso-Level Organisations – A Case Study of Health Reforms in New South Wales, Australia. *The Lancet Regional Health – Western Pacific* 44: 101013. doi:10.1016/j.lanwpc.2024.101013.

Poitras, M.E. A. Bergeron, L. Paré, C. Jodar, F. Ferguson, L. Marois et al. 2019. *Guide pratique à l'intention des infirmières cliniciennes qui travaillent dans un groupe de médecine de famille ou un groupe de médecine de famille universitaire : Dans une perspective de collaboration interprofessionnelle*. BAnQ numérique. Retrieved February 21, 2025. <http://collections.banq.qc.ca/ark:/52327/4000312>.

Poitras, M.-E., E. Bélanger, V.T. Vaillancourt, S. Kienlin, M. Körner, I. Godbout et al. 2021. Interventions to Improve Trainers' Learning and Behaviors for Educating Health Care Professionals Using Train-the-Trainer Method: A Systematic Review and Meta-Analysis. *The Journal of Continuing Education in the Health Professions* 41(3): 202–09. doi:10.1097/CEH.0000000000000375.

Poitras, M.-E., J. Lukewich, T. Klassen, M. Guérin, D. Ryan, A.-S. Langlois et al. 2024a. Co-Development of a National, Bilingual, Post-Licensure Accredited Educational Program for Registered Nurses in Primary Care: A Knowledge-to-Action Exemplar. *Healthcare Management Forum* 37(1_suppl): 43S–48S. doi:10.1177/08404704241259929.

Poitras, M.-E., Y. Couturier, E. Doucet, V.T. Vaillancourt, G. Gauthier, M.-D. Poirier et al. 2024b. Enhanced Train-the-Trainer Program for Registered Nurses and Social Workers to Apply the Founding Principles of Primary Care in Their Practice: A Pre-Post Study. *BMC Primary Care* 25(1): 322. doi:10.1186/s12875-024-02574-3.

Poitras, M.-E., M.-C. Chouinard, F. Gallagher and M. Fortin. 2018. Nursing Activities for Patients With Chronic Disease in Primary Care Settings: A Practice Analysis. *Nursing Research* 67(1): 3542. doi:10.1097/NNR.0000000000000253.

Poitras, M.-E., Y. Couturier, E. Doucet, V.T. Vaillancourt, M.-D. Poirier, G. Gauthier et al. 2022. Co-Design, Implementation, and Evaluation of an Expanded Train-the-Trainer Strategy to Support the Sustainability of Evidence-Based Practice Guides for Registered Nurses and Social Workers in Primary Care Clinics: A Developmental Evaluation Protocol. *BMC Primary Care* 23(1): 84. doi:10.1186/s12875-022-01684-0.

Poitras, M.-E. and Y. Couturier. 2022. Barrières à L'innovation et l'innovation et inerties structurelles à l'implantation d'une culture apprenante en groupe de médecine de famille. *Le point en santé et services sociaux* 13(3): 12–16.

Pomey, M.-P., E. Martin and P.-G. Forest. 2009. Quebec's Family Medicine Groups: Innovation and Compromise in the Reform of Front-Line Care. *Canadian Political Science Review* 3(4): 31–46. doi:10.24124/c677/2009193.

Primary Care Nurses of Ontario. n.d. Web Resources. Retrieved May 21, 2024. <https://www.pcno.ca/pro-dev/web-resources>.

Ramberg, I.-L. and D. Wasserman. 2004. Benefits of Implementing an Academic Training of Trainers Program to Promote Knowledge and Clarity in Work With Psychiatric Suicidal Patients. *Archives of Suicide Research* 8(4): 331–43. doi:10.1080/13811110490476707.

Serdyukov, P. 2017. Innovation in Education: What Works, What Doesn't, and What to Do About It? *Journal of Research in Innovative Teaching and Learning* 10(1): 4–33. doi:10.1108/JRIT-10-2016-0007.

Shrestha, N., K.C. Samir, R. Baltussen, K.K. Kafle, D. Bishai and L. Niessen. 2006. Practical Approach to Lung Health in Nepal: Better Prescribing and Reduction of Cost. *Tropical Medicine and International Health* 11(5): 765–72. doi:10.1111/j.1365-3156.2006.01599.x.

Statistics Canada. 2020, October 22. *Primary Health Care Providers, 2019*. Retrieved February 18, 2025. <https://www150.statcan.gc.ca/n1/pub/82-625-x/2020001/article/00004-eng.htm>.

Tadic, V., R. Ashcroft, J.B. Brown and S. Dahrouge. 2020. The Role of Social Workers in Interprofessional Primary Healthcare Teams. *Healthcare Policy* 16(1): 27–42. doi:10.12927/hcpol.2020.26292.

Tong, A., P. Sainsbury and J. Craig. 2007. Consolidated Criteria for Reporting Qualitative Research (COREQ): A 32-Item Checklist for Interviews and Focus Groups. *International Journal for Quality in Health Care* 19(6): 349–57. doi:10.1093/intqhc/mzm042.

van Diggele, C., A. Burgess, C. Roberts and C. Mellis. 2020. Leadership in Healthcare Education. *BMC Medical Education* 20(2): 456. doi:10.1186/s12909-020-02288-x.

Primary Care Team Funding, Compensation and Practice Models Across Canadian Jurisdictions: An Environmental Scan

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Abstract

Introduction: Successive waves of primary care reforms have focused on expanding team-based care across Canada, frequently through the addition of registered nurses (RNs). Reforms have varied, however, in teams' funding, compensation and organization.
Methods: In this environmental scan, we sought to identify and describe existing primary care compensation and practice models across Canada.
Results: Through structured and snowball searching, we identified and extracted data from 189 sources, yielding 44 compensation models and 55 practice models.
Discussion: While information on RNs' compensation was lacking, physician remuneration and practice model descriptions indicate substantial variation in funding, compensation and practice models where integration of RNs is occurring. This reflects ongoing primary care reforms that build upon heterogenous plans and existing systems.
Conclusion: Amidst ongoing calls to expand team-based primary care, the lack of clarity around existing funding, compensation and practice models challenges our ability to evaluate the aspects of team-based care that contribute to their overall functioning and effectiveness.

Introduction

Over the past 20 years, Canadian provinces and territories have implemented successive waves of primary care reforms. Between 2000 and 2006, the federal government created the Primary Health Care Transition Fund, allocating $800 million to support provinces and territories in meeting the healthcare needs of Canada's aging population and addressing growing rates of chronic disease via primary care reform (Health Canada 2007). The primary care reforms that followed varied in each jurisdiction but have generally focused on key areas such as quality improvement, collaborative practice and organizational restructuring (Breton et al. 2011; Carter et al. 2016). More recent federal funding initiatives have focused specifically on team-based care, such as a $45.3 million grant in 2023 for a training initiative to enhance the capacity of primary care teams (Team Primary Care 2023).

The focus on the transition to and expansion of team-based care recognizes that appropriate primary care delivery requires a diversity of healthcare professionals working together with intention (Green and Johnson 2015; Health Canada 2007; Health Council of Canada 2009). Likewise, evidence supports that team-based care enables comprehensive care by increasing continuity and coordination and is an appropriate means of addressing the healthcare needs of the Canadian population (Contandriopoulos et al. 2018; Lowe and O'Hara 2000; Wranik et al. 2017). Accordingly, in 2004, as part of a 10-year plan to strengthen healthcare, provincial and territorial governments committed to providing half of Canadians with primary care teams by 2011 (Health Council of Canada 2009). Despite this commitment and substantial investments, physician-only models of care rather than interprofessional teams – defined as two or more professions working collaboratively toward common objectives (Green and Johnson 2015) – remain the dominant model of primary care delivery across Canada (Aggarwal and Williams 2019; CMA 2019; Hutchison et al. 2001). Where primary care teams have been instituted, family physicians (FPs) frequently remain the key figure(s) around which clinic teams (1) are funded and (2) operate, with major reforms being negotiated and implemented through master payment or physician services agreements between provincial and territorial governments and medical associations (McKay et al. 2022).

Between federal funding initiatives and provincial and territorial commitments to team-based care, primary care reforms have not consistently defined what a team looks like, how it works, or what it should do, resulting in the proliferation of various team-based care structures across Canada (Hutchison et al. 2011; Strumpf et al. 2012). Despite the variation, one element of primary care teams has been relatively constant – registered nurses (RNs) form the core of interprofessional primary care teams across many jurisdictions in Canada (Ardal et al. 2007; CNA 2013). The enactment of RNs' roles and scope in the context of primary care, however, can vary depending on the practice model in which they work, the funding model of the team and the compensation models of the FPs with whom they work, all of which can impact the functioning and performance of team-based care (Basu and Mandelzys 2008; Montesanti et al. 2022; Wranik et al. 2017).

In the present work, we distinguish between funding, compensation and practice models (Figure 1). "Funding models" are the mechanism(s) by which primary care organizations are financed while "compensation models" are the arrangements that determine how individual healthcare providers are remunerated for their work. The terms "compensation" and "funding model" are often used interchangeably in the primary care literature to describe the mechanisms used to generate revenue; compensation, however, refers more specifically to the physicians' income after overhead costs (including, in applicable models, the remuneration

of RNs, medical office assistants and other staff). The incorporation of practices or corporate ownership of practice chains may further blur the lines between individual physician compensation and funding model. In addition, we define "practice models" as the different types of organizations (e.g., clinics) that deliver primary care and their organizational attributes, including administrative structures; how they are governed, staffed and resourced (financially and physically); and how their delivery of care is organized.

Figure 1. Funding, compensation and practice model definitions

Funding model	Compensation model	Practice model
The mechanisms by which primary care organizations are financed	The arrangements that determine how individual healthcare providers are remunerated for their work	The different types of organizations that deliver primary care and their organizational attributes
e.g., global budget	e.g., provider time	e.g., health authority clinic

While existing academic and grey literature have described select primary care funding, compensation and practice models in certain jurisdictions, a comprehensive listing and description of these is not currently available for all provinces and territories. To build on existing theories and evidence regarding the impact of different funding, compensation and practice models on the function and performance of primary care teams, we sought to identify which models best support primary care teams in Canada, specifically focusing on those that integrate RNs. As an initial step within a larger research project with a purpose of examining the impact of compensation and practice models on team function and performance (Mathews et al. 2022), the objective of this environmental scan is to identify and describe existing primary care team models (that include RNs) in place across Canadian jurisdictions. Identifying and synthesizing this information will set the foundation for subsequent analyses of the impact of these models on the integration and optimization of the roles of RNs within team-based primary care.

Methodology

Study Design

We conducted an environmental scan (Graham et al. 2008) to describe current primary care compensation and practice models across Canadian health jurisdictions, specifically focusing on FPs and RNs. In the absence of a standardized method for conducting and reporting environmental scans (Charlton et al. 2021), we have relied on approaches used across various projects by members of our study team (Bodner et al. 2022; Lukewich et al. 2018, 2024) that we adapted for this project. We sought out publicly available policies, web pages, reimbursement data and peer-reviewed and grey literature through systematic searches and confirmed results through consultation with regional subject area experts.

Search Strategy

We conducted a series of searches in English and French using a combined approach of string term, targeted website and snowball searches between March and September 2022. String term searches were constructed using combinations of broad terms for primary care funding, compensation and practice models and individual provinces and territories. We provide a full list of our search terms and the search string configurations in Appendix 1 (available online at longwoods.com/content/27552). These string term searches were run through Google, Google Scholar and PubMed databases until results were exhausted (i.e., ongoing searches produced no new sources containing relevant information). We also conducted manual searches of targeted websites for provincial and territorial governments, ministries of health and nursing and physician organizations (e.g., unions and colleges/regulators) during the same period (Appendix 2, available online at longwoods.com/content/27552). From these string term and targeted searches, we also followed links and references in previously identified web pages and documents to locate additional sources. We saved sources using the Zotero reference management software (Corporation for Digital Scholarship).

Screening

Prior to extraction, the research team reviewed the saved sources to eliminate duplicates and screen for relevance. We included sources that mentioned or described compensation models for primary care physicians and RNs and practice models where primary care teams can operate – provided RNs are eligible to practise as a member of the team. We also included compensation and practice models for specialized primary care clinics targeting specific populations and those for clinics that require primary care-relevant postgraduate training (e.g., certification in family practice, diabetes educator). We excluded sources that described models that have been phased out or are no longer in use, for clinics or programs where the focus is not primary care and for clinics specifically designed for nurses with graduate-level nursing education (beyond that of an RN), unless RNs can be integrated into those practices as well. We did not limit our search or inclusion of sources based on publication dates, though we did make efforts to identify the most up-to-date sources for every model.

Extraction

The final set of sources ($N = 136$) were then extracted for each compensation and practice model they identified or described. Using Google Forms, researchers entered the following information to the extent it was available in a source: the name of the compensation/practice model, jurisdiction and year it was introduced; the scope of availability of a model (i.e., whether the model is available province- or territory-wide, only in specific health or geographic regions or is specific to eligible clinics) and the number of providers or clinics implementing

a certain model; the nature of clinic funding and the basis of funding level (e.g., volume, population, hours or a combination of these); and the basis and the source of compensation for FPs and RNs (e.g., activity, patients, time or a combination of these). We also extracted information about any team supports that were included with a compensation or practice model (e.g., financial, human or practice resources) and any eligibility conditions. Sources could be extracted multiple times depending on the number of compensation or practice models they described.

Consolidation and Validation

Once all sources were extracted, one researcher organized and consolidated all extracted data first by province and territory and then by compensation or practice model. A spreadsheet with the consolidated jurisdictional extractions was then shared with the relevant regional study team members and local subject area experts outside the research team to both verify the extracted information and fill in missing data points. Two researchers then worked model by model to further identify and fill in the missing information by conducting targeted web searches for previously identified funding, compensation and practice models between June and October 2023. During regional validation and targeted data searches, we identified and drew data from 53 additional sources. We then used content analysis (Graneheim and Lundman 2004; Vaismoradi et al. 2013) to consolidate and describe the extracted information from all sources ($N = 189$) into comparable categories across models and jurisdictions.

Positionality

Our interdisciplinary study team is comprised of both academic and practising RNs, nurse practitioners and FPs, policy makers and researchers. The members of our team have expertise in primary care, nursing practice, health workforce policy and the Canadian health system.

Results

Search Results

Our original searches resulted in 264 individual extractions describing funding, compensation or practice models. These extractions, and our subsequent regional validation, identified 99 models across the 13 provinces and territories. Despite repeated efforts to fully describe each model, we were unable to obtain complete data for all models and jurisdictions. Notably, details on RN compensation in different primary care practice models are lacking. Our complete table of consolidated extraction results is included in Appendix 3 (available online at longwoods.com/content/27552). Below, we describe core details about current primary care compensation and practice models across Canadian jurisdictions, distinguishing between compensation models for FPs and RNs and the practice models in which

they work. While compensation of FPs is highly varied (based on their activity, patient population, time or some combination of these) within and across jurisdictions, RN compensation is predominately time based. The primary care practice models that incorporate RNs also vary, from traditional FP-owned and operated practices to health authority-run interdisciplinary care teams.

Compensation Models

FP compensation

The FP compensation models we identified in our search are listed by jurisdiction and the basis of compensation in Table 1. Provider activity-based models (e.g., fee-for-service) compensate FPs for each service rendered. In patient population-based models (e.g., capitation or population-based funding), FPs receive a set fee for each patient on their roster, which may be adjusted to account for patient complexity according to age, sex, morbidity or other factors. Provider time-based models (e.g., alternative payment plans, sessional or salaried arrangements) are contract-based payments to FPs that compensate providers for their time worked. Blended models arrange a combination of different models, often using one form as the base (e.g., capitation with fee-for-service for non-rostered patients) (CMA Joule n.d.). While these compensation models are often framed from the perspective of individual physician remuneration, they can also represent clinic funding – though this relationship is infrequently delineated or described in the sources we reviewed.

All provinces and territories, except Nunavut, have a compensation model based on provider activity (i.e., fee-for-service billings) for FPs. Fee-for-service payments accounted for between 39.2% (Nova Scotia) and 90.7% (Alberta) of payments to FPs in 2021–2022, with an average of 64.7% across the 11 jurisdictions for which the Canadian Institute for Health Information (CIHI) reports data (i.e., excluding Nunavut and Northwest Territories) (CIHI 2023).

Fewer than half ($N = 6$) of the jurisdictions in Canada have a compensation model based on the primary care physicians' patient population (CIHI 2006; FMNB n.d.; GPSC 2017; Health and Wellness 2022) or a blend of patient population and physician activity (Abrar and Friesen 2019; Alberta Health n.d.; McKay et al. 2022) or time (HealthForceOntario 2019). Though the basis of compensation is similar in these patient population-based models, they vary by name and structure across jurisdictions (e.g., for which patient complexities FPs are provided additional compensation).

Conversely, all provinces and territories have at least one compensation model for FPs that is based on their time worked. These time-based models vary by name and their application as well as the method of provider payment (e.g., hourly or

sessional versus salaried payments). These compensation models are frequently associated with health system-operated clinics (as opposed to private, physician-owned and operated ones), with contracts governed by health authorities for providers working in specific practice models (AGNB 2012; Doctors Manitoba 2024; HCS n.d.; Health Canada 2009, 2022; HealthForceOntario 2019; Katz et al. 2016; Nova Scotia Health Authority n.d.; Peckham et al. 2018a, 2018b). Time-based compensation schemes are not commonly available to FPs working in independently owned and operated primary care practices. In 2021–2022, these alternative payments to FPs ranged from a low of 9.3% in Alberta to a high of 60.8% in Nova Scotia, with a national average of 35.3% across all jurisdictions (excluding Nunavut and Northwest Territories) (CIHI 2023).

Some compensation models (e.g., fee-for-service) are broadly available within provinces and territories, while others are unique to specific regions, populations or clinics. For example, value-based compensation is a capitation-based model restricted to compatible Primary Care Network clinics in Fort St. John, British Columbia, that use a specific electronic medical record (EMR) system (i.e., Medical Office Information System or MOIS) (Abrar and Friesen 2019; BC Ministry of Health 2019).

Table 1. FP compensation models by jurisdiction and basis of compensation

Basis of compensation*	Jurisdictions												
	AB	BC	MB	NB	NL	NT	NS	NU	ON	PE	QC	SK	YK
Provider activity	•	•	•	•	•	•	•		•	•	•	•	•
Patient population		•		•			•				•		
Provider time	•	•	•	•	•	•	•	•	•	•	•	•	•
Blended: activity + population	•	•							•				
Blended: activity + time											•		
Blended: population + time									•				

* Provider activity–based models compensate FPs for each service rendered; in patient population-based models, FPs receive a set fee for each patient on their roster, which may be adjusted to account for patient complexity according to age, sex, morbidity or other factors; provider time–based models are contract-based payments to FPs that compensate providers for their time worked; blended models arrange a combination of different models, often using one form as the base (CMA Joule n.d.).
AB = Alberta; BC = British Columbia; FP = family physician: MB = Manitoba; NB = New Brunswick; NL = Newfoundland and Labrador; NS = Nova Scotia; NT = Northwest Territories; NU = Nunavut; ON = Ontario; PE = Prince Edward Island; QC = Quebec; SK = Saskatchewan; YK = Yukon.
Note: We have excluded an additional blended arrangement (activity + population + time) from this table since our data indicate no jurisdictions currently have such a compensation model available.

RN compensation

There is limited information on how RNs working in primary care settings are compensated across jurisdictions. Where information is available, however, this indicates that RNs in primary care are almost exclusively paid by salary, with activity-based compensation only available in one practice model (i.e., Family Medicine New Brunswick). The most detail about RN compensation comes via collectively bargained contracts between nursing and/or public sector unions and the provincial or territorial governments that serve as their employers (Health Employers Association and Association of Unions 2019). While these contracts are not specific to primary care settings, they set wage scales for RN compensation for those nurses working in government or health authority-operated primary care settings (e.g., health authority-operated Community Health Centres and Urgent and Primary Care Centres in British Columbia [Longhurst and Cohen 2019; Ministry of Health 2019]). Conversely, independently (physician and/or nurse practitioner) owned (e.g., fee-for-service practices [Magee et al. 2011]) and community-governed (e.g., community health centres [BCACHC n.d.; GHC n.d.] primary care settings have greater flexibility when they employ RNs to work as a member of their team with respect to the RNs' role enactment and compensation models. Given the independent (i.e., nonhealth system operated) nature of these primary care settings, the compensation models of staff are largely inaccessible given that clinics are not obligated to make public their private finances or internal operations.

Practice Models

The practice models we identified through our jurisdiction-specific searches are listed in Table 2 (and further detailed in Appendix 3, available online at longwoods.com/content/27552). In this table, we list the practice model name at the top of each cell, with the RN compensation model at the bottom left and the RN employer at the bottom right of each practice model cell. Here, the lack of information describing how RNs are paid and by whom in different primary care practice models is evident. Where we were able to identify this information, however, we see the prevalence of salaried arrangements across jurisdictions, practice models and clinic funding. While not always the case, where practice models are funded by the provider's activity, the clinic itself tends to be the RN's employer (Alberta Medical Association 2013; GPSC 2017; Katz et al. 2010; Magee et al. 2011; Ministry of Health and Long-Term Care 2023; NBMS and FMNB 2019). Conversely, where a practice model is funded by a global budget or block funding, it is more common that a (regional) health authority or a similar entity external to the clinic in which they work employs the RN directly (Breton et al. 2011; Hutchison and Glazier 2013; Longhurst and Cohen 2019; Ministry of Health 2019; OAGC 2017; Peckham et al. 2018a).

While several FP and RN compensation models are used across a variety of different practice models, practice models are limited in the compensation models with which they can remunerate members of their primary care team. Often, this is related to requirements or specifications for when certain practice models can be implemented. These requirements can also determine how RNs are integrated into primary care settings and how compensation models interact between different providers in that practice model. Just as with the compensation models mentioned earlier, though many are broadly available across their associated province or territory, several practice models are limited in their scope of availability to specific regions, clinics or providers. For example, Family Care Clinics in Alberta are intended for communities with populations over 2,500 and have a defined team composition of at least one FP, one nurse practitioner, two additional service providers and a business manager (Alberta Health 2013).

The practice models we identified do not always explicitly describe RNs as a required member of a team; rather, we included any primary care practice model where RNs could potentially be employed. This means that there is variation in the availability and extent of mechanisms for facilitating team-based approaches to care across practice models (see "Team supports" column in Appendix 3, available online at longwoods.com/content/27552). Where present, supports range from change management resources to facilitate integrating new members and professions into primary care clinics (Dinh 2012; Peckham et al. 2018a) to funding for: EMR infrastructure or EMR access to coordinate care across providers (Hutchison and Glazier 2013; Katz et al. 2010; Reichert and Associates 2020); making physical modifications to clinics (e.g., expanding or creating new exam rooms and/or office space) to accommodate additional team members (GPSC 2019); and hiring interprofessional healthcare providers and clinic support staff directly (Katz et al. 2016; Leslie et al. 2020; WRHA n.d.). In some models, funding is specifically allocated for a given resource (e.g., subsidies for the purchase and implementation of an approved EMR for Family Health Networks and Family Health Organizations in Ontario [Hutchison and Glazier 2013]). In other models, these supports fall under a broad umbrella of "overhead" and may be covered through clinics' annual business plans (e.g., Family Care Clinics in Alberta [Alberta Health 2013]) or a global budget (e.g., Community Health Centres in Ontario [Hutchison and Glazier 2013]).

Discussion

We conducted structured and snowball searches to identify and describe current primary care compensation and practice models in Canadian provinces and territories, specifically focusing on FPs and RNs. This is the first phase of a project to evaluate the impact of funding models on the integration and optimization of RNs' roles in primary care teams (Mathews et al. 2022). By identifying primary

care compensation and practice models across Canadian provinces and territories, health leaders and decision makers will be better able to discern those where RNs can be integrated, how FPs and RNs are compensated in those practices and how those team-based care settings are funded.

Despite our repeated searches (both broad and targeted), the availability and detail of information describing funding, compensation and practice models differed greatly by model and the province or territory. As a result, it is not possible to fully capture all the nuances of different primary care funding, compensation or practice models using publicly available sources. In part, this reflects a lack of detailed and clearly articulated descriptions of primary care models. It also reflects the constantly evolving primary care landscape across and within health jurisdictions, where incremental, layered reforms and policy legacies have created myriad funding and organizational features (Hutchison et al. 2001; Rudoler et al. 2019). That is, when new compensation or practice models are introduced, these rarely replace the models that preceded them; rather, existing models continue to operate alongside new models. This is exemplified by the handful ($N = 9$) of population-based funded clinics (Primary Healthcare Organizations) in British Columbia, the remnants of a 14-clinic pilot project that was introduced in 1999 (Abrar and Friesen 2019; British Columbia Medical Association 2005), or the persistence of independent fee-for-service clinics across Ontario despite that province's shift to a variety of team-based practice models. This suggests that, once a compensation or practice model is introduced, governments may be challenged in the future to revoke that mechanism of remuneration or structure of care delivery.

This also highlights the difficulty associated with implementing reforms in a sector dominated by independent businesses (Hedden and McGrail 2023; Nielsen and Sweetman 2018), where physicians and their professional associations remain influential in shaping primary care policy (McKay et al. 2022; Rudoler et al. 2019), not to mention the complexity of evaluating the impact of these models on patient and system outcomes. The traditional delivery of primary care through independent, physician-owned and operated small businesses in Canada and the implementation of reforms through negotiated agreements with physician associations may also explain why there is not more publicly available information describing RNs' compensation. However, the absence of these details also reflects the ongoing perception of nurses as ancillary to the provision of primary care. This corresponds with a lack of information detailing RNs' roles – both defined and enacted – in primary care practice (Lukewich et al. 2021).

Our search results also indicate substantial variation in types of primary care compensation and practice models between jurisdictions, even if they share the same name (e.g., Primary Care Networks in British Columbia and Alberta). The

only truly consistent model in name and structure across all jurisdictions is independent (physician-owned) group/solo practices funded by fee-for-service, which continues to be the dominant compensation model across Canada (CIHI 2022). These practices, however, are also the least likely to support RN integration in clinical practice since such practices and any RN positions they fill are funded by physician fee-for-service billings (through contributions to clinic overhead) and, where they do use RNs, are least likely to support RNs working to their full scope (Akeroyd et al. 2009; Mathews et al. 2022; Pearce et al. 2011; Pullon et al. 2009).

The provinces and territories that have made the biggest shifts toward team-based care share similar traits for compensation and practice models. These models, however, have inconsistent names and many implementation nuances that challenge comparison within and across jurisdictions. This may reflect the existing heterogeneity of provincial and territorial primary care structures as well as variation in population demographics, health needs and accessibility of health services. Given that healthcare is mainly a provincial and territorial responsibility in Canada, the variation in both terminology and approaches to primary care compensation and practice models are likely to persist.

Limitations

As noted earlier, despite our multiple search strategies and attempts to fill in missing information, there remain substantial gaps in information describing the compensation and practice models we identified. Given the focus of our search on RNs, the paucity of information on how these members of primary care teams are remunerated is a significant limitation in our scan. Our explicit focus on models that include RNs in primary care may also have resulted in the exclusion of models where other nurse professions (i.e., nurse practitioners or registered or licensed practical nurses) are members of a primary care team. Our focus on RNs means that there may be models that do not expressly mention RNs but nonetheless have important lessons about the connection between funding, compensation and practice models, and outcomes of team-based care are excluded. Furthermore, by focusing on models in each of Canada's provinces and territories, our searches did not capture models operating under federal jurisdiction. The results of our scan are also limited by the dates during which our searches were conducted (i.e., March to September 2022). Since then, new primary care compensation models have been introduced in British Columbia, Nova Scotia and Manitoba (Government of British Columbia 2022; Province of Manitoba 2023; Province of Nova Scotia 2023). Though we have not captured or detailed these models here, they are unlikely to alter our findings; like fee-for-service, these models are not likely to have formal mechanisms to support the integration of RNs in primary care practices.

Conclusion

Team-based primary care continues to be implemented and expanded across Canadian jurisdictions through iterative policy reforms. These reforms build upon an existing diverse primary care landscape of funding, compensation and practice models. In most cases, the practice model determines how the clinic is funded and healthcare providers are paid – whether by provider activity, patient population, provider time or a combination of these elements. Practices funded by provider time may be publicly operated or include public employees embedded in independent (physician-owned and operated) clinics. The source of compensation and employment of primary care RNs may have implications for their scope of practice and the availability of team-based care supports in the setting in which they deliver care. Though we were not able to identify complete information for all models identified during our environmental scan, this study provides ways to meaningfully group and begin to compare team-based primary care practices across Canada. The absence of complete data highlights the limited information on the structural components of team-based care and the need for more detailed descriptions of these models to support their implementation. Amid ongoing calls to expand team-based primary care in Canada, this limited understanding of how existing models operate and how they impact the function and performance of teams challenges policy makers' ability to evaluate and replicate effective structures, to the potential detriment of both provider experiences and patient care.

Implications for Nursing Leadership

Given the prevalence of RNs in primary care across Canada, the absence of details as to their compensation and the structures in which they work poses challenges for understanding RNs' roles in team-based primary care and the factors that shape these. This is compounded by the variation of primary care practice models within and across Canadian provinces and territories that reflect primary care reforms that prioritize team-based care but have not consistently defined the structure of a team, how it should be organized or the roles of its members (Hutchison et al. 2011; Strumpf et al. 2012). This inconsistency – both in how primary care teams are implemented and of information describing primary care teams – presents an opportunity for nursing leadership to advocate for a more deliberate approach to integrating nonphysician providers, such as RNs, in ongoing primary care reforms. With their ongoing challenges their primary care access and changes to FP compensation, nurse leaders have a responsibility not only to continue advocating for the role of RNs in primary care but also to define what that role is, how it fits within existing and future practice models and how that role may be impacted by the compensation models of other providers in those models.

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References

Abrar, S. and J. Friesen. 2019. Physician Compensation 101: Physician Compensation in BC. Divisions of Family Practice. Retrieved May 8, 2024. <https://divisionsbc.ca/surrey-north-delta/news-events/upcoming-events/physician-compensation-101>.

Aggarwal, M. and A.P. Williams. 2019. Tinkering at the Margins: Evaluating the Pace and Direction of Primary Care Reform in Ontario, Canada. *BMC Family Practice* 20(1): 128. doi:10.1186/s12875-019-1014-8.

Akeroyd, J., I. Oandasan, A. Alsaffar, C. Whitehead and L. Lingard. 2009. Perceptions of the Role of the Registered Nurse in an Urban Interprofessional Academic Family Practice Setting. *Nursing Leadership* 22(2): 73–84. doi:10.12927/cjnl.2009.20800.

Alberta Health. n.d. Blended Capitation Clinical Alternative Relationship Plan (ARP) Model. *Government of Alberta*. Retrieved May 8, 2024. <https://www.alberta.ca/blended-capitation-clinical-alternative-relationship-plan-model>.

Alberta Health. 2013. June 4. *Family Care Clinic Reference Manual (Wave 2)*. Government of Alberta. Retrieved February 13, 2024. <https://open.alberta.ca/dataset/53b0bc55-dd33-4f6a-8032-962c4d7f0ac2/resource/e27d4dbc-9e3d-4263-8261-c660b56fa5f6/download/6859089-2013-family-care-clinic-reference-manual-2013-06-04.pdf>.

Alberta Medical Association. 2013. December. *PCN Evolution: Vision and Framework*. Retrieved January 25, 2024. <https://www.albertadoctors.org/Leaders-Primary%20Care/PCN_report_FINAL_acfp_web.pdf>.

Ardal, S., C. Abrahams, D. Olsen, H. Lalani and A. Kamal. 2007. Health Human Resource Toolkit. *Health Force Ontario*. Retrieved June 6, 2023. <https://www.hhr-rhs.ca/en/?option=com_mtree&task=att_download&link_id=6095&cf_id=68>.

Auditor General of New Brunswick (AGNB). 2012. *Department of Health – Medicare – Payments to Doctors* (Chapter 2; Report of the Auditor General). Government of New Brunswick. Retrieved May 8, 2024. <https://www.agnb-vgnb.ca/content/dam/agnb-vgnb/pdf/Reports-Rapports/2012V2/Chap2e.pdf>.

Basu, K. and D. Mandelzys. 2008. The Modes of Physician Remuneration and Their Effect on Direct Patient Contact. *Cahiers de sociologie et de démographie médicales* 48(4): 41–59.

BC Association of Community Health Centres (BCACHC). n.d. About CHCs. Retrieved May 9, 2024. <https://bcachc.org/about-chcs/>.

BC Ministry of Health. 2019. *Primary Care Networks: GP and NP Contracts and Compensation*. Government of British Columbia. Retrieved February 13, 2024. <https://divisionsbc.ca/sites/default/files/49980/PCN_QA_PCNs-GP_and_NP_contracts_July_30.pdf>.

Bodner, A., S. Spencer, M.R. Lavergne and L. Hedden. 2022. Exploring Privatization in Canadian Primary Care: An Environmental Scan of Primary Care Clinics Accepting Private Payment. *Healthcare Policy* 17(3): 65–80. doi:10.12927/hcpol.2022.26727.

Breton, M., J.-F. Lévesque, R. Pineault and W. Hogg. 2011. Primary Care Reform: Can Quebec's Family Medicine Group Model Benefit From the Experience of Ontario's Family Health Teams? *Healthcare Policy = Politiques De Sante* 7(2): e122–35. doi:10.12927/hcpol.2011.22618.

British Columbia Medical Association. 2005, October. *Working Together: Enhancing Multidisciplinary Primary Care in BC*. Doctors of BC. Retrieved February 13, 2024. <https://www.doctorsofbc.ca/sites/default/files/mdc_report.pdf>.

Canadian Institute for Health Information (CIHI). 2006. *The Status of Alternative Payment Programs for Physicians in Canada, 2003–2004 and Preliminary Information for 2004–2005 (Alternative Payments and the National Physician Database [NPDB])*. Retrieved February 13, 2024. <https://publications.gc.ca/collections/Collection/H115-13-2004E.pdf>.

Canadian Institute for Health Information (CIHI). 2022, November 17. An Overview of Physician Payments and Cost per Service. Retrieved July 15, 2024. <https://www.cihi.ca/en/health-workforce-in-canada-in-focus-including-nurses-and-physicians/an-overview-of-physician>.

Canadian Institute for Health Information (CIHI). 2023. National Physician Database – Payments Data, 2021–2022. Retrieved March 6, 2024. <https://www.cihi.ca/en/national-physician-database-metadata>.

Canadian Medical Association (CMA). 2019. December. *Family Medicine Profile*. Retrieved March 6, 2024. <https://www.cma.ca/sites/default/files/2019-01/family-e.pdf>.

Canadian Nurses Association (CNA). 2013. Registered Nurses: Stepping Up to Transform Healthcare.

Carter, R., B. Riverin, J.-F. Levesque, G. Gariepy and A. Quesnel-Vallée. 2016. The Impact of Primary Care Reform on Health System Performance in Canada: A Systematic Review. *BMC Health Services Research* 16(1): 324. doi:10.1186/s12913-016-1571-7.

Charlton, P., T. Kean, R.H. Liu, D.A. Nagel, R. Azar, S. Doucet et al. 2021. Use of Environmental Scans in Health Services Delivery Research: A Scoping Review. *BMJ Open* 11(11): e050284. doi:10.1136/bmjopen-2021-050284.

CMA Joule. n.d. *Practice Management Curriculum*. Canadian Medical Association. Retrieved March 6, 2024. <https://joulecma.ca/sites/default/files/pdf/pmc/Remuneration%20Models%20Table_EN.pdf>.

Contandriopoulos, D., M. Perroux, A. Cockenpot, A. Duhoux and E. Jean. 2018. Analytical Typology of Multiprofessional Primary Care Models. *BMC Family Practice* 19(1): 44. doi:10.1186/s12875-018-0731-8.

Dinh, T. 2012, October 31. Improving Primary Health Care Through Collaboration: Briefing 1—Current Knowledge About Interprofessional Teams in Canada. The Conference Board of Canada. Retrieved February 13, 2024. <https://www.conferenceboard.ca/product/improving-primary-health-care-through-collaboration-briefing-1-current-knowledge-about-interprofessional-teams-in-canada/>.

Doctors Manitoba. 2024, October 8. Remuneration: Alternate-Funded MDs: Can You Ever Bill Fee-For-Service? Doctors Manitoba. Retrieved February 20, 2025. <https://doctorsmanitoba.ca/managing-your-practice/remuneration/alternate-funding/alternate-funded-mds>.

Family Medicine New Brunswick (FMNB). n.d. For Physicians. Family Medicine New Brunswick. Retrieved May 9, 2024. <https://www.fmnb.ca/for-physicians/>.

General Practices Services Committee (GPSC). 2019. *Primary Care Network Planning and Implementation Guide (No. 1.0)*. British Columbia Ministry of Health. Retrieved May 14, 2024. <https://www.pcnbc.ca/media/pcn/PCN_Planning_and_Implementation_Guide_v3.7.docx.pdf>.

General Practices Services Committee (GPSC). 2017. Implementation of the Integrated System of Primary and Community Care: Team-Based Care Through Primary Care Networks. Guidance to Collaborative Services Committees.

Government of British Columbia. 2022, October 31. B.C. Health-Care System Strengthened by New Payment Model for Doctors. *BC Government News.* Retrieved July 15, 2024. <https://news.gov.bc.ca/releases/2022HLTH0212-001619>.

Graham, P., T. Evitts and R. Thomas-MacLean. 2008. Environmental Scans: How Useful Are They for Primary Care Research? *Canadian Family Physician* 54(7): 1022–23.

Graneheim, U.H. and B. Lundman. 2004. Qualitative Content Analysis in Nursing Research: Concepts, Procedures and Measures to Achieve Trustworthiness. *Nurse Education Today* 24(2): 105–12. doi:10.1016/j.nedt.2003.10.001.

Green, B.N. and C.D. Johnson. 2015. Interprofessional Collaboration in Research, Education, and Clinical Practice: Working Together for a Better Future. *Journal of Chiropractic Education* 29(1): 1–10. doi10.7899/JCE-14-36.

Group Health Centre (GHC). n.d. Home. Retrieved May 9, 2024. <https://ghc.on.ca/>.

Health and Community Services (HCS). n.d. *Collaborative Team-Based Care Clinics*. Government of Newfoundland and Labrador. Retrieved May 8, 2024. <https://www.gov.nl.ca/hcs/files/Primary-HealthCare-Collaborative-Team-Based-Care-Clinics.pdf>.

Health and Wellness. 2022. June 9. New Family Doctor Funding Model Pilot Project. *Government of Nova Scotia*. Retrieved May 9, 2024. <https://news.novascotia.ca/en/2022/06/09/new-family-doctor-funding-model-pilot-project#>.

Health Canada. 2007. Primary Health Care Transition Fund. *Government of Canada*. Retrieved February 13, 2024. <https://www.canada.ca/en/health-canada/services/primary-health-care/primary-health-care-transition-fund.html>.

Health Canada. 2009. June 24. *Canada Health Act – Annual Report 2008–2009*. Government of Canada. Retrieved February 13, 2024. <https://www.canada.ca/content/dam/hc-sc/migration/hc-sc/hcs-sss/alt_formats/pdf/pubs/cha-ics/2209-cha-ics-ar-ra/chaar-ralcs-09-eng.pdf>.

Health Canada. 2022. *Canada Health Act Annual Report 2020–2021*. Government of Canada. Retrieved May 9, 2024. <https://www.canada.ca/content/dam/hc-sc/documents/services/publications/health-system-services/canada-health-act-annual-report-2020-2021/canada-health-act-annual-report-2020-2021-eng.pdf>.

Health Council of Canada. 2009. April 30. Teams in Action: Primary Health Care Teams for Canadians. Canadian Electronic Library. Retrieved June 6, 2023. <https://www.deslibris.ca/ID/218087>.

Health Employers Association and Association of Unions. 2019. *2019–2022 Health Services & Support Facilities Subsector Collective Agreement*. Retrieved February 13, 2024. <https://www.bcnu.org/Contracts-Bargaining/Documents/FBA_Collective_Agreement_2019_2022.pdf>.

HealthForceOntario. 2019, July. *Family Medicine Compensation and Practice Models in Ontario*. HealthForceOntario Marketing and Recruitment Agency. Retrieved February 13, 2024. <http://www.healthforceontario.ca/UserFiles/file/PracticeOntario/FM%20Compensation%20Practice%20Models%20EN.pdf>.

Hedden, L. and K. McGrail. 2023. The Best Defence Is a Good Offence: Ensuring Equitable Access to Primary Care in Canada. *Healthcare Management Forum* 36(5): 293–98. doi:10.1177/08404704231182260.

Hutchison, B., J. Abelson and J. Lavis. 2001. Primary Care in Canada: So Much Innovation, So Little Change. *Health Affairs* 20(3): 116–31. doi:10.1377/hlthaff.20.3.116.

Hutchison, B. and R. Glazier. 2013. Ontario's Primary Care Reforms Have Transformed the Local Care Landscape, But a Plan Is Needed for Ongoing Improvement. *Health Affairs (Project Hope)* 32(4): 695–703. doi:10.1377/hlthaff.2012.1087.

Hutchison, B., J.-F. Levesque, E. Strumpf and N. Coyle. 2011. Primary Health Care in Canada: Systems in Motion. *The Milbank Quarterly* 89(2): 256–88. doi:10.1111/j.1468-0009.2011.00628.x.

Katz, A., B. Bogdanovic and R.-A. Soodeen. 2010. *Physician Integrated Network Baseline Evaluation: Linking Electronic Medical Records and Administration Data*. Manitoba Centre for Health Policy. Retrieved February 13, 2024. <http://mchp-appserv.cpe.umanitoba.ca/reference/PIN_full_report.pdf>.

Katz, A., J. Valdivia, D. Chateau, C. Taylor, R. Walld, S. McCulloch et al. 2016. A Comparison of Models of Primary Care Delivery in Winnipeg. Manitoba Centre for Health Policy. Retrieved February 13, 2024. <http://mchp-appserv.cpe.umanitoba.ca/deliverablesList.html>.

Leslie, M., A. Khayatzadeh-Mahani, J. Birdsell, P.G. Forest, R. Henderson, R.P. Gray et al. 2020. An Implementation History of Primary Health Care Transformation: Alberta's Primary Care Networks and the People, Time and Culture of Change. *BMC Family Practice* 21: 258. doi:10.1186/s12875-020-01330-7.

Longhurst, A. and M. Cohen. 2019. *The Importance of Community Health Centres in BC's Primary Care Reforms*. Canadian Centre for Policy Alternatives – BC Office. Retrieved February 13, 2024. <https://policyalternatives.ca/sites/default/files/uploads/publications/BC%20Office/2019/03/ccpa-bc_march2019_chcs-in-bc.pdf>.

Lowe, F. and S. O'Hara. 2000. Multi-Disciplinary Team Working in Practice: Managing the Transition. *Journal of Interprofessional Care* 14(3): 269–79. doi:10.1080/jic.14.3.269.279.

Lukewich, J., S. Taylor, M.-E. Poitras and R. Martin-Misener. 2018. Advancing Family Practice Nursing in Canada: An Environmental Scan of International Literature and National Efforts Towards Competency Development. *Nursing Leadership* 31(2): 66–78. doi:10.12927/cjnl.2018.25602.

Lukewich, J., M.-E. Poitras and M. Mathews. 2021. Unseen, Unheard, Undervalued: Advancing Research on Registered Nurses in Primary Care. *Practice Nursing* 32(4): 158–62. doi:10.12968/pnur.2021.32.4.158.

Lukewich, J., M.-E. Poitras, C. Vaughan, D. Ryan, M. Guérin, D. Bulman et al. 2024. Canadian Post-Licensure Education for Primary Care Nurses Addressing the Patient's Medical Home Model and Canadian Competencies for Registered Nurses in Primary Care: An Environmental Scan. *Quality Advancement in Nursing Education - Avancées en formation infirmière* 10(2): 8. doi:10.17483/2368-6669.1429.

Magee, T., C. Hodder-Malloy and D. Mason. 2011, September. Family Practice Nursing on the Rise in Nova Scotia. *Doctors NS Newsletter*. Retrieved February 13, 2024. <https://www.cfpna.ca/_files/ugd/28eddb_f0e18ec523ef4d5f9b651941dcde8d26.pdf>.

Mathews, M., S. Spencer, L. Hedden, J. Lukewich, M.-E. Poitras, E.G. Marshall et al. 2022. The Impact of Funding Models on the Integration of Registered Nurses in Primary Health Care Teams: Protocol for a Multi-Phase Mixed-Methods Study in Canada. *BMC Primary Care* 23: 290. doi:10.1186/s12875-022-01900-x.

McKay, M., M.R. Lavergne, A.P. Lea, M. Le, A. Grudniewicz, D. Blackie et al. 2022. Government Policies Targeting Primary Care Physician Practice From 1998–2018 in Three Canadian Provinces: A Jurisdictional Scan. *Health Policy* 126(6): 565–75. doi:10.1016/j.healthpol.2022.03.006.

Ministry of Health. 2019. *Supportive Policy Directive: Urgent and Primary Care Centres*. Government of British Columbia. Retrieved May 9, 2024. <https://divisionsbc.ca/sites/default/files/inline-files/PCN_UPCC_Revised_Policy_October2019_V5.pdf>.

Ministry of Health and Long-Term Care. 2023, August 18. Primary Care Payment Models in Ontario. *Government of Ontario*. Retrieved February 13, 2024. <https://www.ontario.ca/page/primary-care-payment-models-ontario>.

Montesanti, S., C. Pritchard, L. Green, S. Berg, S. Mallinson and J. Birdsell. 2022. Implementing Primary Health Care Teams and Integrated Care in Alberta, Canada. *Health Reform Observer – Observatoire des réformes de santé* 10(1): Article 2. doi:10.13162/hro-ors.v10i1.4680.

New Brunswick Medical Society (NBMS) and Family Medicine New Brunswick (FMNB). 2019, November. *A Guide to Family Medicine New Brunswick*. Retrieved February 13, 2024. <https://www.nbms.nb.ca/wp-content/uploads/2020/07/Guide-to-FMNB-Eng_Nov2019.pdf>.

Nielsen, L. and A. Sweetman. 2018. Measuring Physicians' Incomes With a Focus on Canadian-Controlled Private Corporations. *HealthcarePapers* 17(4): 77–86. doi:10.12927/hcpap.2018.25572.

Nova Scotia Health Authority. n.d. Collaborative Family Practice Teams. Retrieved December 3, 2024. <https://web.archive.org/web/20241203055850/https://cfpt.nshealth.ca/>.

Office of the Auditor General of Canada (OAGC). 2017, March 7. *Health Care Services – Nunavut*. Retrieved February 13, 2024. <https://www.oag-bvg.gc.ca/internet/english/nun_201703_e_41998.html>.

Pearce, C., C. Phillips, S. Hall, B. Sibbald, J. Porritt, R. Yates et al. 2011. Following the Funding Trail: Financing, Nurses and Teamwork in Australian General Practice. *BMC Health Services Research* 11: 38. doi:10.1186/1472-6963-11-38.

Peckham, A., J. Ho and G. Marchildon. 2018a. *Policy Innovations in Primary Care Across Canada: A Rapid Review Prepared for the Canadian Foundation for Healthcare Improvement (Rapid Review No. 1)*. North American Observatory on Health Systems and Policies. Retrieved February 13, 2024. <https://naohealthobservatory.ca/wp-content/uploads/2019/08/NAO_RR1.pdf>.

Peckham, A., S. Kreindler, J. Church, S. Chatwood and G. Marchildon. 2018b. *Primary Care Reforms in Ontario, Manitoba, Alberta, and the Northwest Territories: A Rapid Review Prepared for the Canadian Foundation for Healthcare Improvement (Rapid Review No. 2)*. North American Observatory on Health Systems and Policies. Retrieved February 13, 2024. <https://naohealthobservatory.ca/wp-content/uploads/2018/09/NAO-Rapid-Review-2-_EN.pdf>.

Province of Manitoba. 2023, July 20. Manitoba Government and Doctors Manitoba Reach Landmark Tentative Agreement. *Government of Manitoba*. Retrieved July 15, 2024. <https://news.gov.mb.ca/news/index.html?item=60055>.

Province of Nova Scotia. 2023, July 20. Province, Doctors Nova Scotia Reach New Four-Year Agreements [News release]. Retrieved July 15, 2024. <https://novascotia.ca/news/release/?id=20230720003>.

Pullon, S., E. McKinlay and K. Dew. 2009. Primary Health Care in New Zealand: The Impact of Organisational Factors on Teamwork. *British Journal of General Practice: The Journal of the Royal College of General Practitioners* 59(560): 191–97. doi:10.3399/bjgp09X395003.

Reichert and Associates. 2020. *Central Okanagan Division of Family Practice Integrating Nurses Into Practice: Transition Stage (Case Study)*. General Practices Services Committee. Retrieved July 15, 2024. <https://www.jcc-resourcecatalogue.ca/media/divresources/CODFP_NiPCP_Case_Study_FinalReport.pdf>.

Rudoler, D., A. Peckham, A. Grudniewicz and G. Marchildon. 2019. Coordinating Primary Care Services: A Case of Policy Layering. *Health Policy* 123(2): 215–221. doi:10.1016/j.healthpol.2018.12.002.

Strumpf, E., J.-F. Levesque, N. Coyle, B. Hutchison, M. Barnes and R.J. Wedel. 2012. Innovative and Diverse Strategies Toward Primary Health Care Reform: Lessons Learned From the Canadian Experience. *Journal of the American Board of Family Medicine* 25(Suppl 1): S27–33. doi:10.3122/jabfm.2012.02.110215.

Team Primary Care. 2023, June 8. Federal Funding to Transform Primary Care Training in Canada. Retrieved July 15, 2024. <https://www.teamprimarycare.ca/insights/federal-funding-to-transform-primary-care-training-in-canada>.

Vaismoradi, M., H. Turunen and T. Bondas. 2013. Content Analysis and Thematic Analysis: Implications for Conducting a Qualitative Descriptive Study. *Nursing & Health Sciences* 15(3): 398–405. doi:10.1111/nhs.12048.

Winnipeg Regional Health Authority (WRHA). n.d. Walk-In Connected Care. Retrieved May 9, 2024. <https://wrha.mb.ca/locations-services/walk-in-connected-care/>.

Wranik, W.D., S.M. Haydt, A. Katz, A.R. Levy, M. Korchagina, J.M. Edwards et al. 2017. Funding and Remuneration of Interdisciplinary Primary Care Teams in Canada: A Conceptual Framework and Application. *BMC Health Services Research* 17(1): 351. doi:10.1186/s12913-017-2290-4.

Nurses Leading the Way: A Qualitative Study of Nursing Leadership, Innovation and Opportunity in Primary Care During a Public Health Crisis

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Abstract

Introduction: Nurses in primary care play critical roles during public health crises; however, nursing leadership was underutilized during the COVID-19 response. This study explores nurses' leadership roles during the pandemic and their perspectives on the value of nursing leadership in primary care.
Methodology: We conducted qualitative interviews with 76 nurses across four Canadian regions. Participants described their roles and the barriers and facilitators encountered during the COVID-19 pandemic. We used thematic analysis and examined themes relevant to leadership.
Results: Three themes emerged: actualizing leadership, leveraging leadership experience and the value of nursing leadership. Nurses demonstrated leadership competencies, including educating teams and developing care delivery strategies. Participants emphasized the importance of involving nursing leadership in decision making and policy development.
Conclusion: Sustaining and leveraging nursing leadership post-pandemic is essential to enhance collaboration and strengthen healthcare systems. Involving nurses in decision making can address system challenges and improve responses to future public health crises.

Introduction

Leadership is an entry-level competency (i.e., a skill required by all nurses to provide safe, competent and ethical care) for all nursing designations. In Canada, primary care is commonly delivered in an office or clinic setting by teams of healthcare providers (Glazier 2023) that include nurse practitioners (NPs), registered nurses (RNs) and/or licensed practical nurses/registered practical nurses (LPNs/RPNs) (CCPNR 2019; CCRNR 2019, 2023). Competencies were developed

to help articulate the unique contribution of NPs and RNs in primary care, including their roles as leaders (CCRNR 2023; CFPNA 2019). Nursing leadership in primary care is enacted at the societal or system level (e.g., advocating for primary care reform and social justice) and at the team level (e.g., sharing knowledge with peers to support evidence-based practice and developing practice policies and/or guidelines) (CFPNA 2019; Mathews et al. 2021a). Nursing leadership may involve formal positions (supervisor, manager) and/or engagement in different roles/skills in everyday practice. All nurses, regardless of regulatory designation, are expected to apply leadership competencies in some capacity to contribute to high-functioning primary care. Primary care nurses are well-positioned to undertake leadership roles such as facilitating care coordination; leading health education, prevention and health promotion programs; advocating for patients and effective resource use; sharing knowledge; problem-solving; developing healthy public policies; and mentoring (Canadian Nurses of Ontario 2023; Guibert-Lacasa and Vázquez-Calatayud 2022; ICN 2024; Lamb et al. 2018; Lukewich et al. 2021; Mathews et al. 2021a).

Existing research on nursing leadership is predominantly focused on the enactment of leadership in hospital-based settings or in managerial roles (Cummings et al. 2021; De Brún et al. 2019; Guibert-Lacasa and Vázquez-Calatayud 2022). Systematic reviews have reported on the critical role that nursing leadership plays in improving patient and health system outcomes (Cummings et al. 2021). Strong nursing leadership is also linked with high levels of job satisfaction, motivation and performance among the nursing workforce (Cummings et al. 2010; Germain and Cummings 2010). In primary care, where the role of the nurse as a leader has often been overlooked and underutilized, nurses have demonstrated critical leadership in care coordination, staff supervision, quality improvement and team-based planning, leading to enhanced quality, greater efficiency and reduced costs (ICN 2024; Smolowitz et al. 2015). Within primary care, the lack of formalized leadership positions or opportunities for nurses to actualize their leadership skills could impact quality of care and team collaboration (Severinsson and Holm 2012). This knowledge gap can be attributed to the reliance on traditional models of care that reinforce physician-led decision making and hierarchies within the healthcare system (Fernandopulle 2021); lack of understanding that leadership is within the nursing scope of practice (CCPNR 2019; CCRNR 2019, 2023; Lukewich et al. 2021); absence of well-defined nursing leadership within primary care (De Brún et al. 2019); and environmental and systemic factors, including clinic type and funding models (Mathews et al. 2021a).

During a public health crisis, such as the COVID-19 pandemic, nursing leadership is vital for shaping the delivery and quality of healthcare services (Wymer et al. 2021). Existing research regarding the ways in which nursing leadership

was leveraged during the COVID-19 pandemic largely focuses on hospital-based settings (Hayes and Cocchi 2022; Salminen-Tuomaala and Seppälä 2022). During the COVID-19 pandemic, within primary care, nurses had to rapidly adapt their roles in response to changing guidelines and public health policies (Mathews et al. 2023a, 2023b). Nurses enacted leadership competencies to support the pandemic response, including providing necessary patient care, enacting infection prevention and control measures, advocating for resources, participating in supply chain management, communicating policies and procedures and educating patients/the public (Aquilia et al. 2020; Fowler and Robbins 2022; Simonovich et al. 2021; Wymer et al. 2021). Despite these critical leadership roles, the prioritization of nursing leadership is not well-incorporated into pandemic response guidelines, particularly with respect to nurses in front-line/clinical positions within primary care (Government of Canada 2018; Rosser et al. 2020). Therefore, the purpose of our study was to explore the leadership roles that nurses enacted in primary care during the pandemic and the perspectives surrounding the value of nursing leadership in primary care.

Methodology

Study Design

This analysis was part of a larger cross-provincial multiple mixed-methods case study (Mathews et al. 2021b) aimed at describing the roles of primary care providers during the different stages of the COVID-19 pandemic (Mathews et al. 2023c) as well as the facilitators and barriers associated with these roles. As part of this study, we conducted in-depth semi-structured qualitative interviews with primary care nurses from four regions in Canada: the Interior, Island and Vancouver Coastal health regions in British Columbia (BC); the Ontario (ON) Health West region; and the provinces of Nova Scotia (NS) and Newfoundland and Labrador (NL).

Study Participants

Nurses were eligible to participate if they were licensed to practise in primary care during the COVID-19 pandemic (March 2020 to January 2023). We excluded nursing students who were undertaking a clinical placement/preceptorship or nurses in exclusively academic, research or administrative roles.

Sampling and Recruitment

We used maximum variation sampling (Creswell 2014) to recruit nurses (i.e., NPs, RNs, LPNs/RPNs) across a wide range of demographic and practice characteristics, which have been shown to impact the enactment of nursing roles in primary care (e.g., community size, funding models) (Mathews et al. 2021a). We targeted nurses who worked in a range of clinic practice types, including general

family practices (i.e., those with a broad patient population) and focused practices (i.e., those that serve specific patient populations or medical conditions), and also accounted for the nature of nurses' roles within these clinics. Nurses' roles within a clinic may differ from that of the broader practice, with some nurses focusing more on specialized areas, such as chronic disease management or outreach work; therefore, clinic and nurses' nature of practice were examined separately. To recruit participants, research assistants e-mailed study invitations to nurses identified from practice lists and search portals of regulatory and professional associations. Recruitment invitations were included in the newsletters, e-mails and social media posts of professional organizations. Clinics employing primary care nurses were identified through website searches and an invitation was sent to the e-mail address listed for the clinic. Where permitted by regional ethics boards, snowball sampling was used, whereby we asked participants to refer us to other eligible colleagues who they believed could be interested. Recruitment continued until we achieved data saturation (Berg 1995; Creswell 2014).

Data Collection

In the larger case study, nurses were asked to describe the actual and potential roles, and barriers/facilitators with respect to performing these roles, that they carried out during the pandemic (Mathews et al. 2023b) (Appendix 1, available online at longwoods.com/content/27551). Slight modifications were made to interview guides to account for regional differences in nursing roles, health system contexts and pandemic epidemiology and response. Interviews were conducted by research team members (CV, GY, LM, LR, SS) through video conference (Zoom Video Communications Inc.) or telephone, depending on participant preference. Interviews were audio recorded, transcribed verbatim, verified for accuracy and de-identified.

Data Analysis

We used a descriptive thematic analysis approach to analyze interview transcripts (Guest et al. 2012) using a robust coding template developed collaboratively by research team members. To develop this template, an experienced member of the research team in each region (LR, DR, SS, DB) independently coded one interview from their region and developed a draft template using an inductive approach to identify recurring ideas and themes. Team members then coded a selected set of transcripts from each province and met to compare themes, refine the meaning of each code and develop a unified template with consistent labels and descriptions. This process continued until all team members were satisfied with the appropriateness and applicability of the unified template. Each regional team then used the unified coding template to code all transcripts from their own regions using NVivo 12 software (QSR International) to facilitate the process.

Any disagreements in coding were resolved through discussion among the team members. We used inductive thematic saturation relating to leadership themes during the analysis stage. For the current paper, we analyzed coded excerpts specific to leadership (i.e., a leadership code that described leadership roles and activities performed by nurses) as well as other codes related to leadership (i.e., those focused on organizational context, roles of staff and clinic team, interactions with management and educating/supporting organizations) and identified themes from the data.

Rigour and Positionality

We used rigorous methods in the study (Berg 1995; Creswell 2014; Guest et al. 2012), such as pre-testing interview questions, documentation of all procedures and decisions, the use of skilled interviewers and validation of meaning through participant interaction during interviews. We looked for negative cases and provided thick descriptions. This project was carried out by an interdisciplinary team of primary care researchers, including primary care providers involved in the pandemic response. Input from a larger team of experts, including nurses, public health officials and policy makers, helped with the development of the interview guide and the verification of interpretations.

Ethics

We obtained ethics approval from the research ethics boards for Simon Fraser University and the University of British Columbia (File: H20-02998), the Health Research Ethics Board of Newfoundland and Labrador (File: 20222815), the Nova Scotia Health Authority Research Ethics Board (File: 1027959) and the Western University Research Ethics Board (File: 120519).

Results

A total of 76 nurses completed interviews across the four study regions between May 2022 and January 2023. Interviews varied in length from 24 to 125 minutes (mean = 58 minutes). Participants consisted of 24 NPs, 37 RNs and 15 LPNs/RPNs (Table 1). The majority of nurses practised in a general family practice (90.8%) and had a broad role focused on the general patient population of the clinic (78.9%). Three overarching themes related to nursing leadership during the COVID-19 pandemic emerged: (1) actualizing leadership; (2) leveraging leadership experience; and (3) the value of nursing leadership.

Actualizing Leadership

The pandemic highlighted nurses' exceptional ability to adapt and lead in times of crisis and offered a window into nurses' leadership qualities and functions that may have gone previously unnoticed. Early in the pandemic when policies were

Table 1. Demographic characteristics of participants (*N* = 76)

Demographic characteristics	Ontario *n* = 27	Nova Scotia *n* = 20	British Columbia *n* = 13	Newfoundland and Labrador *n* = 16	Total *n* = 76
Gender, *n* (%)[a]					
Man or non-binary[b]	1 (3.7)	1 (5.0)	2 (15.4)	0 (0)	4 (5.3)
Woman	26 (96.3)	19 (95.0)	11 (84.6)	16 (100)	72 (94.7)
Nurse type, *n* (%)					
LPN/RPN	9 (33.3)	8 (40.0)	2 (15.4)	5 (31.3)	24 (31.6)
RN	9 (33.3)	11 (55.0)	11 (84.6)	6 (37.5)	37 (48.7)
NP	9 (33.3)	1 (5.0)	0 (0)	5 (31.3)	15 (19.7)
Clinic nature of practice, *n* (%)[c]					
General family practice	22 (81.5)	19 (95.0)	13 (100.0)	15 (93.8)	69 (90.8)
Focused practice	5 (18.5)	1 (5.0)	0 (0)	1 (6.3)	7 (9.2)
Nurse nature of practice, *n* (%)[d]					
General family practice	20 (74.1)	19 (95.0)	11 (84.6)	10 (62.5)	60 (78.9)
Focused practice	7 (25.9)	1 (5.0)	2 (15.4)	6 (37.5)	16 (21.1)
Community size, *n* (%)[e]					
Rural	10 (37.0)	11 (55.0)	1 (7.7)	6 (37.5)	28 (36.8)
Small urban	5 (18.5)	6 (30.0)	3 (23.1)	0 (0)	14 (18.4)
Urban	12 (44.4)	3 (15.0)	9 (69.2)	9 (56.3)	33 (43.4)
Mixed	0 (0)	0 (0)	0 (0)	1 (6.3)	1 (1.3)
Years in practice, mean (SD)	13.6 (10.1)	15.6 (11.3)	17.7 (11.2)	14.0 (9.8)	14.9 (10.3)

a Gender was asked as an open-ended question.
b Non-binary participants were grouped with men due to small cell size.
c Whether the clinic that the nurse works in serves a broad population or focuses on a specialized area, such as a specific patient population or medical condition (e.g., diabetes clinic, low-barrier walk-in clinic).
d Whether the nurse's role involves providing a broad range of services to the general population or focuses on a specialized area, such as a specific patient population or medical condition (e.g., chronic disease management, outreach work).
e Rural < 10,000 population; small urban = 10,000–99,999 population; urban > 100,0000 population (Statistics Canada 2001); mixed = participants reported practising in more than one community that involved rural and urban populations.

LPN/RPN = licensed practical nurse/registered practical nurse; NP = nurse practitioner; RN = registered nurse; SD = standard deviation.

rapidly changing, nurses reported a lack of context-specific guidance and found it difficult to navigate communications. Nurses recounted enacting leadership skills to address gaps and inconsistencies with the communication of pandemic policies, protocols and public health guidelines. One nurse described how they took the lead within their clinic to seek out information and contextualize it to their own practice:

> In some places, it was a challenge because for a while there was no guidance for primary care in the initial phases, it was only acute care. So, we did some adaptations, but we found everything online. (ON17 NP)

Another nurse recalled receiving limited communication and guidance, prompting her to take initiative:

> So, there wasn't a lot of direct updates [for] us; we did a lot of asking: "Can we keep the mask mandate? Can we run COVID clinics? … We think the community is asking for these things, can we do them? We think it would be helpful." (NS07 NP)

Leadership was demonstrated when nurses served as the primary source of knowledge for other staff/providers in their clinic. One RN participant assumed the responsibility of sharing knowledge with the physicians in the clinic, thereby ensuring they stayed up-to-date on COVID-19 guidelines and could focus their time on patient care delivery:

> I was keeping the doctors up-to-date on what was going on. … They're so busy just trying to keep their head afloat … but I could focus on their patients and what was going on with the COVID updates and guidelines and things like that and what was changing. So, I would spread the information around. So, quite often they would come to me and say, "So what's going on today?" or, "What was the last update?" and I would be able to find that. (NS09 RN)

Another participant described sharing public health guidelines with peers: "I would help the other physician disseminate the new information that was coming through in terms of spread, protocols to protecting ourselves, screening" (ON26 NP). Nurses took initiative to provide education to other members of the clinic team. An NP participant stated:

> … when the vaccines were coming out or we were discussing potential vaccines, helping to disseminate that information to people based on my weekly Health Unit updates that I was receiving … [and] assisting with any questions between employees. (ON26 NP)

Similarly, an RN with vaccination experience developed a vaccination training program in an effort to educate other members of the clinic:

> I took it upon myself to ensure that we had a training program to make sure that each of the nurses or whoever was going to be administering the vaccines was aware of it … there [were] different little caveats that [were] very legislatively dictated that I ended up having to make sure I understood it, from an educational component, and then developed the appropriate program … (NL08 RN)

Nurses demonstrated leadership by taking initiative to develop workflow protocols and policies within the clinic. An NP from ON stated: "So, as part of the COVID team, we actually developed a physical clinical flow" (ON17 NP). Another NP described how she led the development of a policy related to screening: "… I started to make some policy myself … a little handout I made on how to do a swab and a little clip from YouTube, to actually show how to do it … to test the right way" (ON22 NP). In addition, nurses developed and disseminated protocols to assist other community organizations. One RN described how, as part of her practice focused on harm reduction and the provision of low-barrier primary care services, she assisted community shelters with the establishment of protocols for implementing infection prevention and control procedures:

> … we helped [the shelters] establish protocols for isolation. … So, it was challenging in the sense to try to … provide reassurance, try to set up plans, try to have a donning and doffing station, and show them how to wear the PPE [personal protective equipment] … (NL19 RN)

Another participant recounted developing workflows related to daily clinic operations that were shared and adopted by other primary care settings:

> It was us who [designed an electronic version of a clinic workflow]; the nurses did that. We didn't have any external support helping us do that. I designed that spreadsheet on my own time to help me and then we ended up making copies of it and sending it to the other districts. (NL01 RN)

Nursing leadership was also demonstrated through outreach activities at a system/population level. Participants reported engaging in outreach with organizations outside of their primary care clinic: "A lot of what we did in those early months was a lot of outreach to different organizations or different parts of [the Regional Health Authority]" (NL07 LPN). Nurses also described advocating for socially marginalized or medically at-risk patient groups who were facing additional barriers and disproportionately impacted by the pandemic, such as unhoused

individuals, those of low socio-economic status, those with pre-existing chronic diseases and the elderly. One LPN described liaising with different community organizations to advocate for patients with limited resources: "We had elderly people come in who, you know, relied on food banks or they didn't have a whole lot of money or they didn't have someone to go to the store for them" (NL07 LPN). Another LPN described advocacy to support safe patient care:

> And there was no real process in place for [patients] at this point. So, we kind of had to reach out to the opioid treatment centre, recovery centre … [and] really do a lot of digging around in how we can get these patients their necessary medication, but also trying to keep everyone safe in the process. (NL07 LPN)

Nurses recognized and understood patient and health system needs and took the lead in filling perceived gaps. In the absence of formalized guidance, nurses were tasked with making their own decisions around how to adapt changes to their practice due to the time-sensitive nature of the unfolding pandemic:

> So, we just start[ed] making the changes [to clinic operations] ourselves. Like we didn't really wait until [management] came down with it, you know what I mean? Because it takes a little longer to get their policies written up … (NS05 NP)

Given the lack of clear direction or actionable guidelines specific to primary care, nurses assumed leadership roles and made decisions around the safest course of action for implementing certain protocols. One RN describes stepping up to help the clinic with issues related to staffing shortages and devising how to keep the clinic operational in the face of staff members contracting COVID-19 or requirements to quarantine after exposure: "… that was a big part of our role as the team leads here, was figuring out what to do [with staff shortages]. … [I]t's just figuring out … what's the safest way to do this and roll this out" (BC12 RN).

Leveraging Leadership Experience

Participants described how existing positions of leadership were leveraged during the pandemic. Many nurses in existing leadership roles prior to the pandemic, and often NPs in a perceived or actual position of leadership, took on specific positions that were pandemic focused and created in response to a critical need. Existing formal leadership roles consisted of designated positions within primary care that nurses had been officially appointed to, where they carried out leadership activities in an official capacity such as "manager" (NL05 RN) or "clinic supervisor" (BC12 RN). For instance, an RN with previous leadership experience was asked to take on additional activities to address a gap that had emerged in clinic leadership:

> So, there … [were] some changes in leadership and I do have a previous background in leadership, so I was asked to fill some roles that weren't normally mine. … My manager asked and I agreed. I just … stepped into the role and I think it made sense just because I did have that … previous experience. (BC10 RN)

In many instances, nurses had pre-existing skills that made them well-positioned to take on key leadership roles. For example, nurses with existing experience in providing vaccinations were often asked to oversee COVID-19 vaccination clinics:

> But definitely when I was helping lead the vaccine programs on a large scale, I was sort of more [involved] in managing, helping to manage I guess, the clinics themselves and I was basically the vaccine go-to person. (NL13 RN)

Another participant described a similar experience: "… I ran the immunization clinics in the evenings almost completely independently with just very minimal support" (NS07 NP).

NPs often found themselves in leadership positions and overseeing clinic operations due to their advanced education and the formal leadership associated with their positions. One NP participant elaborated on how leadership responsibilities would automatically fall on her: "… I'm the only nurse practitioner here and usually if we have something like that happen, like SARS or H1N1 … I usually am the one sort of assessing what we might need here" (NS05 NP). NPs also tended to have greater access to information than other members of the team and frequently acted as leaders by disseminating pertinent knowledge: "So, the nurse practitioner … she spearheaded a lot. … They had their COVID committee … and [the committee] were very good to make sure that we knew what was happening and what was going on" (ON21 RPN). Another NP participant recounted how their access to information led them to assume a leadership role in disseminating public health updates: "… there [are] two NPs in our program. We both are kind of leading it and help with the program but I would be involved in the weekly COVID-19 public health update" (ON26 NP).

The Value of Nursing Leadership

Participants expressed the importance of nurses in leadership roles during the pandemic and the unique contribution of these roles to primary care functioning. However, despite widespread agreement, some participants felt their leadership skills were not fully recognized. In particular, participants expressed that nurses were not granted the opportunity to effectively engage in leadership to the full extent of their capabilities, with their activities often being directed toward other

areas of the pandemic response that did not fully utilize their skills: "My gut says they were asked to do too much in some capacities … and not given opportunity to do enough in other areas, like more leadership-type roles" (BC08 RN). In some cases, a lack of recognition toward the contributions of nursing leadership could hinder a nurse's ability to fully optimize these roles. An RN expressed a desire for a more prominent role in pandemic planning, particularly around the clinic organization and flow, but was hindered by the inability of those in leadership positions to recognize the value of this contribution:

> So, I think even us taking on a bit more of a planning role would be beneficial. … I certainly wouldn't mind doing more of that if the need arose again, but like I said, the [managers in the] clinic didn't see the benefit in letting us go to do that. (NS10 RN)

Participants also voiced concerns about the limited representation of nurses in leadership and emphasized the importance of nurses being more involved in decision making, with one RN noting: "… I saw a lot of scenarios where I thought, oh, if nurses had been involved in this decision, I don't think it would have gone this way. … [W]e could have moved nurses, I think, into more leadership roles" (BC08 RN). Nurses expressed concern that those tasked with creating policies often lacked insight into the distinctive role and perspective of nurses in primary care. A nurse expressed the need for greater inclusion of nursing expertise in policy development: "I think especially the input into how the system is developed. … I think that input into what's feasible and practical would have been a helpful contribution" (NS03 NP). Likewise, an RN participant articulated the need for front-line providers to have their voices heard, as they are well-positioned to speak to the day-to-day clinic operations and unique functions of primary care:

> I think that [decision makers] could have … listened a bit more to the front-line workers and had some of those front-line people involved in some of those meetings. I feel like sometimes with leadership, it's a very, you know, "here's our ideas," but … it's difficult for them to know day-to-day how the operation will … look and the nuance of that. It really does a disservice to the clients [when decision makers are] not really listening to the people who are doing the actual work and not getting input from them. (BC10 RN)

Despite the underutilization of nursing leadership in some instances, the pandemic highlighted the value of developing new leadership roles and opportunities for nurses. In these cases, nurses made valuable contributions to overall primary care functioning and showcased their leadership. For example, an LPN reflected on how she and her colleagues were able to demonstrate their leadership capabilities by overseeing assessment clinics:

> Not to toot my own horn or anything, but me and another LPN that I worked with … we were … running some of the COVID clinics. When our managers weren't there, they were like, "You need to make sure everything is running smoothly today." And, you know, we're capable of doing that … (NL07 LPN)

Similarly, some participants took on new leadership roles to ensure that trainees were receiving appropriate guidance. For example, an NP described accepting a position that involved overseeing newly graduated NPs:

> I knew that innovation was coming because it had to. I knew that we, our systems, were getting overwhelmed, and I knew that there would be a lot of change for NPs. I don't know that I would have been as willing to take [a new leadership position] had the last two years not been as challenging for me, because all I could think was, if this was this challenging for me, how did the new grads feel? And so, I realized I had to take a role in supporting, and in some ways protecting [new graduates] by helping to guide what [transition to practise for new NPs] should look like and what the key … pieces would be to include and change. (NS08 NP)

Some participants expressed that nursing voices within leadership roles appeared to be more valued after their critical contributions were exemplified during the pandemic. One RN noted that the display of effective leadership by nurses during the pandemic led to an increased appreciation for the nursing role in primary care: "I believe that the [primary care nurse] role, we became more of a leader. … I actually think they treat me different[ly] now after COVID. … [They show m]ore respect" (NS09 RN). Another participant described a shift in viewpoints regarding the importance of nurses in leadership:

> And [the pandemic is] also, in a funny way, helping nurse practitioners to have a lot more credibility with the public, with other health providers, with leaders, because they really can and should be stepping into lots and lots of innovation … (NS08 NP)

The pandemic highlighted nursing leadership capabilities that may have been previously unrecognized and underutilized. As one participant expressed:

> … I think my being a nurse was significant because there are other sites that didn't have nurse managers and did not respond in the same [way]; like it was very, definitely challenging [for them]. … So, I think the role of nursing was very much highlighted and I think the flexibility and fluidity of the role of the nurse too, because every day I'd say to the staff, "Okay,

> now we're doing this, now we're doing this." … But I think leadership was huge; our team lead was a nurse and that person was running the show every day and everyone knew it. (BC08 RN)

Discussion

This study describes the leadership roles that nurses demonstrated or adopted during the COVID-19 pandemic and nurses' perspectives on the value and need for nursing leadership in primary care. Prior to this study, there was scant evidence to inform nursing leadership roles during a public health crisis (ICN 2024; Rosser et al. 2020). Our study demonstrated that pre-existing leadership competencies were made visible by nurses across all regulatory designations (NPs, RNs, LPNs/RPNs) and ensured the ongoing provision of patient care in rapidly changing circumstances.

Nurses in our study identified situations where they enacted leadership competencies that were not necessarily embedded in routine primary care practice, including creating and implementing policies and clinic workflows, managing and advocating for resources, educating clinic team members and providing outreach to community organizations. Many of these are identified as leadership roles within the Canadian competencies (CCPNR 2019; CCRNR 2023; Lukewich et al. 2020). Our findings also align with previous research on nursing leadership, as well as leadership in healthcare more broadly, during a pandemic. For example, an international review of evidence found consensus on 10 leadership imperatives to serve as a guiding framework for health leaders during a pandemic (Geerts et al. 2021). Nurses in our study engaged in a number of these essential leadership imperatives, including maximizing team, organizational and system performances; managing the backlog of paused services and considering improvements; providing regular communication and engendering trust; and consulting with public health and fellow leaders to improve care and emergency preparedness (Geerts et al. 2021). These leadership imperatives could be incorporated into future primary care-focused pandemic plans using concrete examples of what we have learned from the experiences of primary care nurses during the COVID-19 pandemic. In another study, Aquilia et al. (2020) studied nursing leadership across different healthcare settings in the US, highlighting nurses' roles in adapting to novel situations and effectively leading pandemic response efforts through informed decision making. It is anticipated that the increased leadership responsibilities acquired during this crisis are unlikely to diminish with the waning of the pandemic (Wymer et al. 2021). These opportunities should be effectively leveraged to sustain and empower nurse leadership engagement, particularly as a means to enhance capacity in team-based primary care.

Evidence suggests that a lack of: clearly defined roles, recognition of leadership functions, opportunities to work at a strategic level and position/authority within organizations are considered barriers to nursing leadership advancement (Hughes 2018). In our study, nurses identified similar factors that hindered their ability to enact leadership, including a lack of clear direction or actionable guidelines, rapidly changing policies, capacity and staffing issues and a lack of recognition and inclusion in policy development and decision-making processes. Participants in our study perceived that health leaders (often non-clinical individuals with minimal understanding of the front-line nursing experience) overseeing pandemic response planning lacked a comprehensive understanding of primary care and the value of nursing within this setting (e.g., the scope of practice, the nature of longitudinal care, etc.). Similar to prior research highlighting the lack of prioritization of primary care and the limited representation of primary care voices in decision making broadly (Mathews et al. 2023d; Roe et al. 2022), this oversight affected the healthcare system's capacity to fully leverage nursing expertise. Consequently, this resulted in negative impacts on patient care, resource allocation and workforce management.

Implications for Nursing Leadership

A report by the World Health Organization (WHO 2020) recommends that healthcare systems take action to strengthen leadership roles within the nursing profession. Similarly, a recent report by the International Council of Nurses (ICN 2024) emphasizes the critical role of nursing leadership in advancing primary care and advocates for the empowerment of nursing leadership through their active participation in policy development. We recommend that, during pandemic planning and future public health crises, governments leverage nursing knowledge and expertise directly. The Canadian Nurses Association requested greater nursing engagement during the pandemic (CNA et al. 2020), prompting the Government of Canada to reinstate the chief nursing officer position in an effort to increase nurses' contributions and to increase their involvement in healthcare decision making (Government of Canada 2022). The prioritization of leadership is fundamental to advancing the nursing profession (Institute of Medicine [US] Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine 2011), and there is a clear and consistent need for decision makers to involve nurses during healthcare crises, specifically concerning resource allocation and workforce management to improve patient care. By leveraging nursing leadership, many health system challenges can be addressed and a more robust and timely pandemic response can be coordinated.

Limitations

Interviews were conducted across four regions in Canada; our findings may not reflect the experiences of all nurses or those in other Canadian regions.

Our interview guide consisted of semi-structured questions related to roles and barriers/facilitators that nurses encountered during the different stages of the pandemic. While participants were not asked specifically about their enactment of leadership roles, these themes arose organically and probes were employed to further explore these concepts. Lastly, interview data, as with all self-reported data, are subject to recall and social desirability bias (Bergen and Labonté 2020; Coughlin 1990); however, this was mitigated through the use of experienced interviewers who provided descriptions of each pandemic period to enhance recall and the use of consistent probes to encourage self-reflection.

Conclusion

Research informing leadership roles and opportunities for nurses in primary care is limited. Challenges arising from the COVID-19 pandemic allowed for increased visibility of these roles and opportunities for nurses to enact new leadership roles in primary care. Findings provide direction for health leaders and decision makers about the importance of directly involving nurses in pandemic planning and decision making during future healthcare crises. Nurses' leadership competencies should be leveraged to improve patient care experiences and address challenges facing health systems, especially in times of crisis. Future research should explore strategies for the intentional and effective integration of nurses into leadership positions in primary care settings, including assessing the impact of this integration on patient outcomes, healthcare delivery and organizational effectiveness.

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References

Aquilia, A., K. Grimley, B. Jacobs, M. Kosturko, J. Mansfield, C. Mathers et al. 2020. Nursing Leadership During COVID-19: Enhancing Patient, Family and Workforce Experience. *Patient Experience Journal* 7(2):136–43. doi:10.35680/2372-0247.1482.

Berg, B.L. 1995. *Qualitative Research Methods for the Social Sciences (2nd ed.).* Allyn and Bacon.

Bergen, N. and R. Labonté. 2020. "Everything Is Perfect, and We Have No Problems": Detecting and Limiting Social Desirability Bias in Qualitative Research. *Qualitative Health Research* 30(5): 783–92. doi:10.1177/1049732319889354.

Canadian Council for Practical Nurse Regulators (CCPNR). 2019. *Entry-Level Competencies for Licensed Practical Nurses*. Retrieved June 6, 2024. <https://ccpnr.ca/wp-content/uploads/2021/03/CCPNR-ELCs_2019E.pdf>.

Canadian Council of Registered Nurse Regulators (CCRNR). 2019. *Entry-Level Competencies (ELCs) for the Practice of Registered Nurses (2018)*. Retrieved June 6, 2024. <https://www.ncsbn.org/public-files/ccrnr-rn-entry-level-competencies---2019.pdf>.

Canadian Council of Registered Nurse Regulators (CCRNR). 2023, December. *National Entry-Level Competencies for Nurse Practitioners*. Retrieved February 23, 2025. <https://static1.squarespace.com/static/671142bd58709c1e559e8c2a/t/672fdb07719a981d7c5480b7/1731189512640/english-national-np-elcs-final-bibliography-updated-june-2024.pdf >.

Canadian Family Practice Nurses Association (CFPNA). 2019. National Competencies for Registered Nurses in Primary Care. Retrieved June 6, 2024. <https://www.cfpna.ca/copy-of-resources-1>.

Canadian Nurses Association (CNA), Nurse Practitioners' Association of Ontario (NPAO) and Registered Practical Nurses Association of Ontario (WeRPN). 2020, July 30. *Independent Long-Term Care COVID-19 Commission*. Retrieved June 6, 2024. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/CNA_NPAO_WeRPN_letter-to-Premier-Ford-and-Min-Fullerton-re-LTC-Commission_2020-07-30_e.pdf>.

College of Nurses of Ontario (CNO). 2023. Leadership in Nursing Practice. Retrieved February 23, 2025. <https://www.cno.org/en/learn-about-standards-guidelines/educational-tools/ask-practice/leadership-nursing-practice/>.

Coughlin, S.S. 1990. Recall Bias in Epidemiologic Studies. *Journal of Clinical Epidemiology* 43(1): 87–91. doi:10.1016/0895-4356(90)90060-3.

Creswell, J.W. 2014. *Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.).* SAGE Publications Ltd.

Cummings, G.G., T. MacGregor, M. Davey, H. Lee, C.A. Wong, E. Lo et al. 2010. Leadership Styles and Outcome Patterns for the Nursing Workforce and Work Environment: A Systematic Review. *International Journal of Nursing Studies* 47(3): 363–85. doi:10.1016/j.ijnurstu.2009.08.006.

Cummings, G.G., S. Lee, K. Tate, T. Penconek, S.P.M. Micaroni, T. Paananen et al. 2021. The Essentials of Nursing Leadership: A Systematic Review of Factors and Educational Interventions Influencing Nursing Leadership. *International Journal of Nursing Studies* 115: 103842. doi:10.1016/j.ijnurstu.2020.103842.

De Brún, A., R. O'Donovan and E. McAuliffe. 2019. Interventions to Develop Collectivistic Leadership in Healthcare Settings: A Systematic Review. *BMC Health Services Research* 19(1): 72. doi:10.1186/s12913-019-3883-x.

Fernandopulle, N. 2021. To What Extent Does Hierarchical Leadership Affect Healthcare Outcomes? *Medical Journal of Islamic Republic of Iran* 35: 117. doi:10.47176/mjiri.35.117.

Fowler, K.R. and L.K. Robbins. 2022. The Impact of COVID-19 on Nurse Leadership Characteristics. *Worldviews on Evidence Based Nursing* 19(4): 306–15. doi:10.1111/wvn.12597.

Geerts, J.M., D. Kinnair, P. Taheri, A. Abraham, J. Ahn, R. Atun et al. 2021. Guidance for Health Care Leaders During the Recovery Stage of the COVID-19 Pandemic: A Consensus Statement. *JAMA Network Open* 4(7): e2120295. doi:1001/jamanetworkopen.2021.20295.

Germain, P.B. and G.G. Cummings. 2010. The Influence of Nursing Leadership on Nurse Performance: A Systematic Literature Review. *Journal of Nursing Management* 18(4): 425–39. doi:10.1111/j.1365-2834.2010.01100.x.

Glazier R.H. 2023. Our Role in Making the Canadian Health Care System One of the World's Best: How Family Medicine and Primary Care Can Transform and Bring the Rest of the System with Us. *Canadian Family Physician* 69(1): 11–16. doi:10.46747/cfp.690111.

Government of Canada. 2018. Canadian Pandemic Influenza Preparedness: Planning Guidance for the Health Sector. Ottawa: Government of Canada. Retrieved June 6, 2024. <https://www.canada.ca/en/public-health/services/flu-influenza/canadian-pandemic-influenza-preparedness-planning-guidance-health-sector.html>.

Government of Canada. 2022, August 23. Government of Canada Announces Chief Nursing Officer for Canada. Health Canada. Retrieved June 6, 2024. <https://www.canada.ca/en/health-canada/news/2022/08/government-of-canada-announces-chief-nursing-officer-for-canada.html>.

Guest, G., K.M. MacQueen and E.E. Namey. 2012. *Applied Thematic Analysis*. SAGE Publications Ltd.

Guibert-Lacasa, C. and M. Vázquez-Calatayud. 2022. Nurses' Clinical Leadership in the Hospital Setting: A Systematic Review. *Journal of Nursing Management* 30(4): 913–25. doi:10.1111/jonm.13570.

Hayes, M.M. and M.N. Cocchi. 2022. Critical Care Leadership During the COVID-19 Pandemic. *Journal of Critical Care* 67: 186–88. doi:10.1016/j.jcrc.2021.09.015.

Hughes, V. 2018. What Are the Barriers to Effective Nurse Leadership? A Review. *Athens Journal of Health* 5(1): 7–20. doi:10.30958/ajh.5-1-1.

Institute of Medicine (US) Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing, at the Institute of Medicine. 2011. *The Future of Nursing: Leading Change, Advancing Health.* National Academies Press.

International Council of Nurses (ICN). 2024. Nursing and Primary Health Care: Towards the Realization of Universal Health Coverage. Retrieved February 23, 2025. <https://www.icn.ch/sites/default/files/2024-09/ICN_PHC-Report-2024_EN_FINAL.pdf>.

Lamb, A., R. Martin-Misener, D. Bryant-Lukosius and M. Latimer. 2018. Describing the Leadership Capabilities of Advanced Practice Nurses Using a Qualitative Descriptive Study. *Nursing Open* 5(3): 400–13. doi:10.1002/nop2.150.

Lukewich, J., M. Allard, L. Ashley, K. Aubrey-Bassler, D. Bryant-Lukosius, T. Klassen et al. 2020. National Competencies for Registered Nurses in Primary Care: A Delphi Study. *Western Journal of Nursing Research* 42(12): 1078–87. doi:10.1177/0193945920935590.

Lukewich, J., M.-E. Poitras and M. Mathews. 2021. Unseen, Unheard, Undervalued: Advancing Research on Registered Nurses in Primary Care. *Practice Nursing* 34(4): 158–62. doi:10.12968/pnur.2021.32.4.158.

Mathews, M., T. Liu, D. Ryan, L. Hedden, J. Lukewich, E.G. Marshall et al. 2023a. Practice- and System-Based Interventions to Reduce the Risk of COVID-19 Transmission in Primary Care Settings: A Qualitative Study. *Healthcare Policy* 19(2): 63–78. doi:10.12927/hcpol.2023.27232.

Mathews, M., L. Meredith, D. Ryan, L. Hedden, J. Lukewich, E.G. Marshall et al. 2023b. An Analysis of Policies Supporting the Roles of Family Physicians in Four Regions in Canada During the COVID-19 Pandemic. *Healthcare Management Forum* 36(5): 333–39. doi:10.1177/08404704231183174.

Mathews, M., L. Meredith, D. Ryan, L. Hedden, J. Lukewich, E.G. Marshall et al. 2023c. The Roles of Family Physicians During a Pandemic. *Healthcare Management Forum* 36(1): 30–5. doi:10.1177/08404704221112311.

Mathews, M., D. Ryan, L. Hedden, J. Lukewich, E.G. Marshall, R. Buote et al. 2023d. Strengthening the Integration of Primary Care in Pandemic Response Plans: A Qualitative Interview Study of Canadian Family Physicians. *British Journal of General Practice* 73(730): e348–55. doi:10.3399/bjgp.2022.0350.

Mathews, M., D. Ryan, R. Buote, S. Parsons and J. Lukewich. 2021a. Family Practice Nursing in Newfoundland and Labrador: Are Reported Roles Reflective of Professional Competencies for Registered Nurses in Primary Care? *SAGE Open Nursing* 7. doi:10.1177/23779608211053496.

Mathews, M., S. Spencer, L. Hedden, E.G. Marshall, J. Lukewich, L. Meredith et al. 2021b. Development of a Primary Care Pandemic Plan Informed by In-Depth Policy Analysis and Qualitative Case Studies With Family Physicians Across Canada During COVID-19: A Qualitative Case Study Protocol. *BMJ Open* 11: e048209. doi:10.1136/bmjopen-2020-048209.

Roe, E., S. Decker, K. Marks, J. Cook, K. Garno, J. Newton et al. 2022. Nurse Experience During the COVID-19 Pandemic: Implications for Nurse Leaders. *Nursing Management* 53(5): 8–17. doi:10.1097/01.NUMA.0000829268.46685.bb.

Rosser, E., L. Westcott, P.A. Ali, J. Bosanquet, E. Castro-Sanchez, J. Dewing et al. 2020. The Need for Visible Nursing Leadership During COVID-19. *Journal of Nursing Scholarship* 52(5): 459–61. doi:10.1111/jnu.12587.

Salminen-Tuomaala, M. and S. Seppälä. 2022. Nurses' Ratings of Compassionate Nursing Leadership During the COVID-19 Pandemic – A Descriptive Cross-Sectional Study. *Journal of Nursing Management* 30(6): 1974–80. doi:10.1111/jonm.13642.

Severinsson, E. and A.L. Holm 2012. Knowledge Gaps in Nursing Leadership – Focusing on Health Systems Organization. *Journal of Nursing Management* 20(6): 709–12. doi:10.1111/j.1365-2834.2012.01472.x.

Simonovich, S.D., R.S. Spurlark, D. Badowski, S. Krawczyk, C. Soco, T.N. Ponder et al. 2021. Examining Effective Communication in Nursing Practice During COVID-19: A Large-Scale Qualitative Study. *International Nursing Review* 68(4): 512–23. doi:10.1111/inr.12690.

Smolowitz, J., E. Speakman, D. Wojnar, E.-M. Whelan, S. Ulrich, C. Hayes et al. 2015. Role of the Registered Nurse in Primary Health Care: Meeting Health Care Needs in the 21st Century. *Nursing Outlook* 63: 130–36. doi:10.1016/j.outlook.2014.08.004.

Statistics Canada. 2001, November. Definitions of Rural. *Rural and Small Town Analysis Bulletin* 3(3). Catalogue no. 21-006-XIE. Retrieved February 23, 2025. <https://www150.statcan.gc.ca/n1/pub/21-006-x/21-006-x2001003-eng.pdf>.

World Health Organization (WHO). 2020, April 6. State of the World's Nursing 2020: Investing in Education, Jobs and Leadership. Retrieved June 6, 2024. <https://www.who.int/publications/i/item/9789240003279>.

Wymer, J.A., C.H. Stucky and M.J. De Jong. 2021. Nursing Land COVID-19: Defining the Shadows and Leading Ahead of the Data. *Nurse Leader* 19(5): 483–88. doi:10.1016/j.mnl.2021.06.004.

Implementation of Registered Nurse Prescribers in Nova Scotia

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Abstract
Registered nurse (RN) prescribing has been successfully implemented globally in various countries, yet it remains a relatively new practice in Canada. RN prescribers have the potential to improve role satisfaction and access to care; however, the implementation of the role is influenced by various change levers that shape its success and integration. This commentary offers perspectives from the Nova Scotia (NS) RN prescribing steering committee and shares the achievement that took place in NS when a learning health system approach was applied. Local experiences were systematically integrated, generating new knowledge with a focus on this new role and the expanded responsibilities of RNs in healthcare teams in NS.

Purpose

Registered nurse (RN) prescribing refers to the ability and authority to prescribe autonomously by RNs who have advanced specialized education in prescribing medications and diagnostics within a defined scope and population of patients and is separate from the prescribing roles of nurse practitioners (NPs) (Ladd and Schober 2018). The role and responsibilities of RNs is constantly evolving to meet the needs of patients, families and communities. Early in 2021, NS Health and

IWK Health, in partnership with Dalhousie University School of Nursing and the Nova Scotia College of Nursing (NSCN), launched a graduate-level certificate program to prepare RNs to practise as an RN prescriber. On January 1, 2022, educated RN prescribers entered the workforce for the first time in the province.

To date, limited information has been disseminated on the implementation. This commentary aims to share perspectives from members of the Nova Scotia (NS) RN Prescribing Steering Committee regarding the implementation of the RN prescribing role. In particular, the iterative journey has been characterized by setting a foundation for change, leveraging data and experiences to inform decisions and maintaining a commitment to rapid learning and improvement – an approach defined as a learning health system.

Introduction

Internationally, RN prescribing dates back to 1994 (Adams et al. 2010; Latter and Courtenay 2004; Maier 2019; Short et al. 2024; Wilkinson 2011), with the overall aim of improving access to healthcare services for patients seeing nurses in primary health. Latter and Courtenay (2004) performed a review a decade after the introduction of the role and found that the model of permitting RNs to prescribe medications was largely positive and was thus explored as a possibility within Canada. The Canadian Nurses Association (CNA) (2015) recommended optimizing the RN role to include prescribing as one way to improve access to care in the spirit of the right provider at the right time and in the right place. Using the success in England as a blueprint, as well as the recommendations and framework created by the CNA, in 2016, a group of provincial nursing leaders began a multi-year exploration. The focus was on optimizing the scope of RNs and ways to improve access to care for NS residents. This group, known as the NS RN Prescribing Steering Committee, was comprised of health system partners, including two large acute and primary healthcare employers, a university school of nursing graduate studies program, the provincial Department of Health and Wellness and the provincial nursing regulatory and licensing body, the NSCN.

This dynamic group demonstrated that changes in nursing are best actualized when system partners work together. The committee began visualizing the necessary components within the NS context to enable RNs to become authorized prescribers within specific populations and for certain conditions, removing the need to wait to access care. In addition, healthcare professionals work within teams, and to work most effectively, these teams must ensure that each role is optimized, complements the roles of others, adapts to meet changing needs and provides safe and quality care. Transitioning RNs to RN prescribers was one approach to achieve this goal.

Setting the Foundation

The foundation for RN prescribing in NS consists of four interconnected elements: *structure*, defines the role and the regulatory framework; *competence*, encompasses the knowledge, skills and judgement needed for safe and ethical practice; *practice*, focuses on professional and collaborative care; and *evaluation*, assesses progress and supports integration into practice environments and teams (Bryant-Lukosius et al. 2016; CNA 2015). Figure 1 illustrates a visual representative of our implementation framework.

In 2018, the committee members conducted an environmental scan and literature review and developed a communication strategy and RN prescribing education model. Legislative and regulatory changes were required to support this competency, with the NSCN responsible for creating regulations and guidelines for RN prescribing and training. While waiting for the legislation process to be finalized, the committee members established the foundation for RN prescribing in NS, focusing on expanding RN scope, responsibilities and competencies to include authorization to prescribe. Legislation changes were proposed in February 2019 and approved in June 2019, and education and regulatory changes were finalized in the fall of 2019.

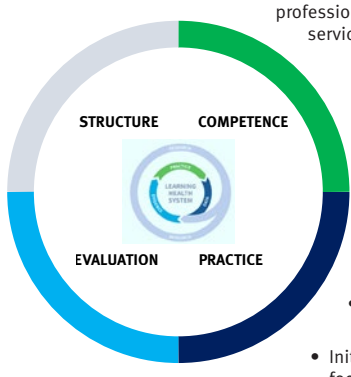
Moody et al. (2020) revealed the importance for RN prescribers to have advanced knowledge of pharmacology above what is necessary at the entry-to-practice level and clinical experience in their intended practice setting. The practicum experience helped the developing RN prescriber to practise the skills of prescribing in the context of the population and the advanced knowledge gained in their education (Moody et al. 2020). The advanced pharmacology and clinical experience created the backbone of the education program. Dalhousie University School of Nursing launched its first graduate-level RN Prescribing Certificate Program in January 2021.

The identification of target populations laid the groundwork for addressing health needs of Nova Scotians. Approved practice settings to be trialled by NS Health and IWK Health included primary, emergency and ambulatory care areas. The PEPPA (Participatory Evidence-informed Patient-centered Process for Advanced Practice Nursing Role Development)-Plus Framework (Bryant-Lukosius et al. 2016) guided prioritizing populations and prepared teams for RN prescriber integration. Comprehensive implementation plans were launched, and the first group of RN prescribers joined the workforce in early 2022.

The committee convened and expedited evaluations and decisions on specific time-sensitive matters. Monthly meetings co-chaired by the two employers continued until the spring of 2024, when the provincial committee transitioned

into more of an advisory and monitoring role following the successful implementation of RN prescribing into various clinical settings around the province. New milestones were created that focused on scale and the intentional spread of the RN prescribing role into the larger healthcare system. The NS RN Prescribing Steering Committee re-enforced a learning health system approach where day-to-day experiences were utilized to create a rapid feedback loop for continuous improvement (Nova Scotia Health Innovation Hub n.d.).

Figure 1. NS approach for implementing RN prescribers



- Provincial Steering Committee struck
- Environmental scan, literature review and interviews conducted
- Adopted Canadian Nurses Association Framework for RN Prescribing
- Legislative changes proposed to government
- Regulatory components approved
- Initial RN Prescriber Guidelines proposed by NSCN
- Ongoing support from the government of NS

- Provincial RN Prescribing education model developed
- Nurse prerequisites and competencies defined
- Curriculum designed and approvals sought at Dalhousie University
- Scope of employment designed with continuing professional development plan proposed to service providers and union partners

- Learning health system approach adopted
- Questioned: Have we met our goals? What are we learning?
- Collaboration between steering committee and each operational unit strengthened
- Tracked progress, actions and outcomes with ongoing refinements
- Comprehensive approach to sharing key findings launched

- Initiated PEPPA PLUS Evaluation plan
- Initial populations identified with focus on access to care
- Site and nurse selection completed
- Implementation plans launched
- RN prescribers implemented in primary care, emergency and ambulatory care settings

NS = Nova Scotia; NSCN = Nova Scotia College of Nursing; RN = registered nurse.

NS Healthcare

During the initial RN prescribing implementation, the population of NS was approximately 992,005 (Nova Scotia Department of Finance 2021). Half of the province's population was living in rural communities. The NS perspective mirrors the Canadian context with respect to the high burden of chronic disease management, advancing citizen age and the complexity and acuity of patients requiring acute care services (CIHI 2021). The percentage of NS's population over the age of 65 is 20.8% (CIHI 2021). Currently, this age cohort uses more than 50% of hospital-based care (CIHI 2021).

Given the identification of NS care needs, it has been asserted that an interprofessional team-based approach to care is required, where all providers work collaboratively and at an optimal scope of practice. The RN prescribing strategy and implementation emerged as a key solution to improve access to care and enhance the experiences of patients and providers during and beyond the COVID-19 pandemic. Despite delays in the initial offering of the education, the COVID-19 pandemic became a catalyst for more rapid adoption of RN prescribing. It also provided an opportunity to expand other roles and scopes of practice in NS, including that of the pharmacist prescriber and varied models of care.

The NS RN Prescribing Steering Committee adopted a learning health system approach, using real-time data and feedback to guide decisions. Their focus remained on increasing the autonomy of nursing scope and increasing access to care through RN prescribing. Achieving RN prescribing and other authorized prescriber role integration into healthcare teams was recognized as a crucial component to improve healthcare access and sustainability in NS.

Drivers in Change

The committee needed to move crucial levers to help create the change possible to implement RN prescribing within NS. Several key drivers in change enabled the overall implementation of the role. They included:

- the Provincial Nursing Network (PNN) chaired by the Department of Health and Wellness, who endorsed and provided funding;
- legislation changed to NS *Nursing Act* (Government of Nova Scotia 2020) and regulatory frameworks being established by the NSCN;
- approval by the University Senate and the NSCN of a three-course certificate program at the graduate level for RNs at Dalhousie University School of Nursing;
- clinical teams and leadership at both Nova Scotia Health and IWK Health that were involved in preparatory discussions to address any team conflict and concerns from other authorized prescribers who felt threatened by this new role's implementation;
- nurses willing to pursue advanced education and adapt to real-time refinements;
- the province's Drug Information System expanded to include RNs authorized to prescribe. Provincial prescribing numbers had to be obtained for new RN prescribers;
- the Government of Nova Scotia developing a Health Action Plan whereby data were collected and shared; and
- impactful partnerships with patients, government, nursing unions, regulatory bodies and academic and health partners as being vital to success.

Discussion

Committee members agreed that RN prescribing was timely; relevant; and in keeping with the mission, values and direction of the two employers and other health service providers. This was further supported by the provincial mandate for role optimization within the health workforce and timelier access to care. The committee members reviewed lessons learned for each phase of the implementation. Furthermore, RN prescribing learners and their employers met regularly to discuss facilitators and challenges related to their involvement in the initiative. The PEPPA PLUS Framework (Bryant-Lukosius et al. 2016), aligned with the principles of a learning health system, guided the evaluation process. Investigating the lessons learned, several key conclusions can be drawn.

RN Prescriber Role Implementation

The implementation of RN prescribing between 2020 and 2024 faced challenges due to the COVID-19 pandemic. The first cohort, initially planned for September 2020, was delayed until January 2021. Nurses struggled to balance increased patient care demands with the rigorous graduate-level program, leading to higher attrition rates. Health service managers and Dalhousie University faculty supported learners by extending deadlines for assignments and clinical placement hours.

The implementation of RN prescribing sparked mixed emotions, including excitement as well as concerns, from other prescribers about safety and role ambiguity. Despite efforts to clarify the limited, collaborative scope of RN prescribers compared with NPs, members of the healthcare team often struggled to fully understand these distinctions. This confusion added stress and became a barrier to role acquisition for RN prescribing learners. Regular communications between the RN prescribing learners, employers, faculty and key partners helped to address fears and answer questions. This communication became an opportunity to highlight the extensive work done in creating safe structures, advanced education and regulations, ensuring a well-planned implementation of RN prescribing.

The direct support from the employers' Interprofessional Practice and Learning (IPPL) teams ensured collaborative practice was fostered and was key to successful change management and role implementation. Implementation support such as mentorship provided a clear understanding of the purpose and parameters associated with this new role. Equally important was the continued support by the RN prescribers' health service managers, who were able to facilitate necessary organizational, structural and process changes. These changes included recognition and acceptance by departments such as laboratory services, diagnostic imaging and information management/information technology of the licensed RN prescriber to be able to prescribe and order diagnostics within the provincial systems.

Operating procedures of these departments can be clinical site, or zone specific, instead of standardized across the province, which delays the effective implementation of the RN prescriber role today.

IPPL teams continue to play a critical role in removing barriers to successful RN prescriber implementation. This includes securing alternative solutions to a lack of clinical preceptors in care areas without NPs or physicians, providing clarity and education on the appropriateness of integration of an RN prescriber versus other roles into an interprofessional team and ongoing support with the RN prescribers' transition to practise. Lastly, IPPL teams are monitoring patient outcomes, prescribing patterns and team dynamics, while advocating and communicating efforts with the NS RN Prescribing Steering Committee. The interaction between the two groups continues to guide implementation through our learning health system approach.

Nursing Workforce Trends

A secondary aim beyond access to care and role satisfaction is the retention of nurses in the current system. Healthcare globally is experiencing human resource challenges, with the World Health Organization (WHO) projecting a shortage of 10 million healthcare workers by 2030 (WHO 2024). Nurses represent the largest portion of the workforce in healthcare, with workforce data in 2020 indicating that Canada employs roughly 448,000 nurses (CIHI 2021). The Royal Society of Canada produced a policy briefing in 2022 called *Investing in Canada's Nursing Workforce* and identified several factors associated with poor recruitment and retention, one being a lack of autonomy in nursing roles (Tomblin-Murphy et al. 2022). In addition, in 2022 the Government of Nova Scotia released its *Action for Health: Strategic Plan.* The plan focuses on advancing six core solutions centred on attracting healthcare professionals and progressing the healthcare system to ensure that Nova Scotians receive the best care possible (Government of Nova Scotia 2022).

Conclusion

Advancing RN practice to include RN prescribers increases access to care and optimizes the role of the nurse, resulting in retention and satisfaction. Optimization has been implemented in NS based on the ingenuity of the nursing leaders in the system. Collaboration, determination and a shared understanding allowed NS to successfully implement RN prescribing. This was based on the iterative process, guided by continuous learning and improvement, and using a learning health system approach, emphasizing the collection and use of real-time data and feedback to inform decisions. As RN prescribing matures in our province, we will continue to evaluate the improved healthcare access for patients and greater satisfaction of nurses to guide us into the future.

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References

Adams, E., A. Cuddy, M. Flynn, R. Lorenz and C. MacGabhann. 2010. Prescribing in Ireland: The National Implementation Framework. *Nurse Prescribing* 8(4): 182–89. doi:10.12968/npre.2010.8.4.47413.

Bryant-Lukosius, D., E. Spichiger, J. Martin, H. Stoll, S.D. Kellerhals, M. Fliedner et al. 2016. Framework for Evaluating the Impact of Advanced Practice Nursing Roles. *Journal of Nursing Scholarship* 48 (2): 201-209. doi:10.1111/jnu.12199.

Canadian Institute for Health Information (CIHI). 2021. Nursing in Canada, 2020 – Data Tables. Retrieved February 13, 2025. <https://www.cihi.ca/sites/default/files/document/nursing-in-canada-2014-2023-data-tables-en.xlsx>.

Canadian Nurses Association (CNA). 2015, April. *Framework for Registered Nurse Prescribing in Canada.* Retrieved February 13, 2025. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/CNA_RN_prescribing_framework_e.pdf>.

Government of Nova Scotia. 2020. *Nursing Act*. Retrieved on December 27, 2024. <https://nslegislature.ca/sites/default/files/legc/statutes/nursing.pdf>.

Government of Nova Scotia. 2022. *Action for Health: A Strategic Plan 2022–2026*. Retrieved September 2024. <https://actionforhealth.novascotia.ca/sites/default/files/2023-09/action-for-health-strategic-plan-for-nova-scotia.pdf>.

Ladd, E. and M. Schober. 2018. Nurse Prescribing From the Global Vantage Point: The Intersection Between Role and Policy. *Policy, Politics and Nursing Practice* 19(1–2): 40–49. doi:10.1177/1527154418797726.

Latter, S. and M. Courtenay. 2004. Effectiveness of Nurse Prescribing: A Review of the Literature. *Journal of Clinical Nursing* 13: 26–32. doi:10.1046/j.1365-2702.2003.00839.x.

Maier, C.B. 2019. Nurse Prescribing of Medicines in 13 European Countries. *Human Resources for Health* 17: 95. doi:10.1186/s12960-019-0429-6.

Moody, E., R. Martin-Misener, J. Carrier, M. MacDonald, K. MacMillan and S. Axe. 2020. The Educational Terrain of Preparing Registered Nurses to Prescribe: An Environmental Scan. *Canadian Journal of Nursing Leadership* 33(2): 54–66. doi:10.12927/cjnl.2020.26237.

Nova Scotia Department of Finance. 2021. Share of Census Population Centres, 2021. Retrieved August 31, 2024. <https://novascotia.ca/finance/statistics/archive_news.asp?id=17529&dg=&df=&dto=0&dti=3#:~:text=In%20Nova%20Scotia%2C%2058.9%25%20of,was%2041.1%25%20in%20Nova%20Scotia.>.

Nova Scotia Health Innovation Hub. n.d. Learning Health System. Retrieved December 27, 2024. <https://innovationhub.nshealth.ca/partnering-nova-scotia-health-innovation-hub/learning-health-system>.

Short, K., C. Andrew, W. Yang and I. Jamieson. 2024. The Impact of Nurse Prescribing on Health Care Delivery for Patients With Diabetes: A Rapid Review. *Journal of Primary Health Care* 16: 78–89. doi:10.1071/HC23121.

Tomblin-Murphy, G., T. Sampalli, L. Bourque Bearskin, N. Cashen, G. Cummings, A.E. Rose et al. 2022, May. *Investing in Canada's Nursing Workforce Post-Pandemic: A Call to Action*. Royal Society of Canada. Retrieved September 20, 2024. <https://rsc-src.ca/sites/default/files/Nursing%20PB_EN_0.pdf>.

Wilkinson, J. 2011. Extending the Prescribing Framework to Nurses: Lessons From the Past. *Collegian* 18: 157–63. doi:10.1016/j.colegn.2011.07.001.

Measuring Registered Nurses' Scope of Practice in Primary Care: A Scoping Review of Available Self-Reported Questionnaires

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Abstract

Many authors have reported significant variability in the scope of practice of registered nurses (RNs) working in primary care clinics. Existing self-reported questionnaires (SRQs) for evaluating nurses' scope of practice in these settings are poorly documented, and the conditions for using SRQs in primary care settings are not well understood. We conducted a scoping review using the Joanna Briggs Institute methodology and Preferred Reporting Items Systematic reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR) guidelines to identify, describe and map current knowledge on SRQs assessing the scope of practice of RNs in primary care. We followed a structured process including search strategy, data extraction and result presentation. This paper presents the results of a scoping review of 12 articles on SRQs assessing nurses' scope of practice in primary care, detailing SRQs, their dimensions, conditions of use and development quality. These results support the need to measure primary care nurses' scope of practice in order to identify the needs and assess the effects of existing and future trainings and organizational structures.

Introduction

Primary healthcare is based on an approach to health that offers comprehensive and integrated health services to the entire population. It is founded on principles of justice, equity and solidarity, which take into account social determinants (WHO n.d.). As a first-contact point of care, primary care must promote accessible, continuous, comprehensive, person-centred and coordinated care to populations (AAFP n.d.; CFPC 2019; Statistics Canada 2020; WHO n.d.). In Canada, primary care clinics adopt the Patient Medical Home (PMH) model to achieve these goals. The PMH model refers to team-based care and focuses on healthcare and services delivered by a group of professionals (i.e., family physicians, primary care registered nurses [PC-RNs], social workers, physiotherapists and pharmacists) working together (CFPC 2019). The PMH must ensure high-quality care and services as it offers, among other things, better accessibility and comprehensive and timely healthcare (CFPC 2019; CMA n.d.). This model relies on 10 pillars

divided into three domains: (1) foundation; (2) function; and (3) ongoing development (CFPC 2019).

Among the different members of the team-based care promoted by the PMH, the PC-RNs are an active part of the primary care team and have competencies specific to their work (CFPNA n.d.; Lukewich et al. 2020). A Canadian competency guide for PC-RNs presents six domains of expertise: (1) professionalism; (2) clinical practice; (3) communication, collaboration and partnership; (4) quality assurance; (5) evaluation and research; and (6) leadership (CFPNA n.d.; Lukewich et al. 2020).

Despite the guidance provided by Canadian guidelines (the PMH model and the Canadian Family Practice Nurses Association [CFPNA] competencies) to support primary care disciplinary and interdisciplinary services organizations (CFPNA n.d.; CFPC 2019), several issues have been reported such as lack of access, lack of family physicians, fragmentation of care, increase in chronic diseases, aging population, care inequities and understaffing of health services (Association médicale canadienne et al. 2022; Gouvernement du Canada 2011, 2021; Queenan et al. 2021). These issues have also been reported globally, indicating that they are not unique to the Canadian context but are prevalent in primary care systems worldwide (Bodenheimer et al. 2009; Endalamaw et al. 2024; Starfield et al. 2005; WHO n.d.). To overcome some of these difficulties, such as the lack of access to a provider, the increase in chronic diseases and the care inequities, PC-RNs could serve as key collaborative contributors with interdisciplinary team members. Indeed, they can take on several nursing activities including assessing physical and mental conditions, preventing disease, promoting health, managing chronic or acute disease, partnering with patients and families when providing care and services and collaborating with other health and services professionals (CFPNA n.d.; Keleher et al. 2009; Lukewich et al. 2014, 2020; Norful et al. 2017; Poitras et al. 2016, 2018a). However, several authors reported variability in the scope of PC-RNs' practice from clinic to clinic and from professional to professional (Halcomb et al. 2016; Lukewich et al. 2014; Norful et al. 2017; Poitras et al. 2018a). Assessing the professional practice of PC-RNs using an SRQ could help identify specific training and infrastructure needs of PC-RNs to support the strengthening of the workforce across Canada. Very little is currently known about SRQs evaluating PC-RNs' scope of practice in Canada and internationally (Braithwaite et al. 2022; Halcomb et al. 2016; Kerdmuang et al. 2014; Landu and Crowley 2023).

Aim

The aim of this study is to identify SRQs assessing registered nurses' (RNs') scope of practice in primary care. Specific objectives are (1) to document the dimensions assessed in SRQs and (2) to assess the quality of the SRQs' development.

Methodology

Study Design

We used a scoping review design to identify and describe SRQs measuring the RNs' scope of practice in primary care. We used this design to map the current knowledge relating to SRQs assessing PC-RNs' scope of practice (Arksey and O'Malley 2005; Peters et al. 2022). We followed the Joanna Briggs Institute (JBI) methodology and the Preferred Reporting Items Systematic reviews and Meta-Analyses extension for Scoping Review (PRISMA-ScR) to report the data (Aromataris et al. 2024; Tricco et al. 2018). We followed these steps: (1) review question; (2) inclusion criteria; (3) search strategy; (4) screening and selection (5) data extraction; and (6) data analysis and presentation of results (Aromataris et al. 2024).

Review Question

What SRQs are available to measure the scope of practice of PC-RNs in primary care clinics internationally?

Inclusion Criteria

Population

This scoping review considered studies that involved PC-RNs, who are licensed professionals with a bachelor's degree or a diploma (in some countries) in nursing (Barrett et al. 2021). They work in collaboration with the family physician and other healthcare professionals as an interprofessional team to increase accessibility and focus on prevention, health promotion and chronic disease management across the lifespan (Halcomb et al. 2016; Lukewich et al. 2020; Norful et al. 2017; Poitras et al. 2016).

Concept

This scoping review considered studies that included SRQ (Rajai et al. 2023). SRQs must include a scoring system based on a psychometric or rash-based system. It allows one to obtain a quantitative assessment of the nurse's scope of practice, which includes the roles, functions and activities authorized by the profession and which the PC-RN has been educated to perform (Almost 2021; Poitras et al. 2016). SRQs must measure specific dimensions of PC-RNs' scope of practice, which can then be generalized to a broader population. Furthermore, SRQs' measurements needed to have a numerical score that can be statistically analyzed to assess relationships between these dimensions and individual characteristics of PC-RNs (Creswell and Creswell 2017).

Context

This scoping review also considered the context of primary care clinics, which are general practice facilities aiming to facilitate access to healthcare by offering

various care services tailored to patients' needs. Within these clinics, a team of family physicians generally works in collaboration with other health professionals to offer person-oriented, coordinated and continuous care in a comprehensive and equitable manner (AAFP n.d.; CFPC 2019; Halcomb et al. 2016; Lukewich et al. 2020).

Types of sources of evidence

The sources of evidence for this scoping review were exclusively searched in scientific databases. Only peer-reviewed scientific articles and review articles addressing topics of interest were included. No additional sources were included, as the development of SRQs is a research-based process.

Search Strategy

We developed the search strategy to search for a maximum number of relevant articles answering the research question. With the help of the academic librarian of Université de Sherbrooke and the research team composed of professors (authors MEPo and CG), we developed a global search strategy that includes several keywords relating to RN, SRQs, practice and primary healthcare. To capture the different keywords and medical subject headings (MeSH) designating primary care used by different countries, we relied on the bibliometric analysis of Duguet et al. (2023) and the keywords listed in the key articles. According to the global search strategy, we first developed individualized exploratory search strategies in MEDLINE, with full text (EBSCO), and CINAHL Plus, with full text, to explore the most relevant keywords and MeSH, enabling us to find key articles relevant to our topic. AM reviewed the number of retrieved articles, their relevance to each keyword, and the inclusion of key articles. Keywords like "frontline," "responsabilit*," "scale," "tool" and "function" were removed for being nonvaluable and noisy. We held meetings with the academic librarian and research team to refine the research strategy. After developing strategies for MEDLINE (EBSCO) and CINAHL Plus, we adjusted keywords for Embase, PubMed and Cochrane databases using a similar process. The search strategies were applied in April 2024 and are shown in Table 1, available online at longwoods.com/content/27549. Studies considered for inclusion included any full-text study published in English or French that developed or used an SRQ to assess the scope of practice of PC-RNs. Studies had to be published between 2000 and 2024. This timeline was chosen as 2000 corresponds to the year in which an increase in the integration of PC-RNs into primary care clinics could be observed worldwide (Halcomb et al. 2016; Lukewich et al. 2022; Norful et al. 2017; Poitras et al. 2018a; Swanson et al. 2020). The studies also had to meet the population, concept and context definitions defined earlier. All the SRQs included were designed to assess the scope of practice of PC-RNs or their equivalent appellation (e.g., general practice nurse, family nurse) (Barrett et al. 2021). SRQs assessing PC-RNs who underwent considerable

advanced focused training were excluded (e.g., nurse practitioner, advanced practice nurse). All SRQs that exclusively assessed PC-RNs' theoretical knowledge about specific diseases were also excluded as they do not provide an evaluation of clinical practice. All survey-type data collection has been removed, as they are not standardized and do not have a scoring system.

Screening and Selection

The research team included AM (student), MEPo (researcher), CG (researcher), MEPe (student), PHRL (post-doctoral fellow), MJE (student) and MM (student). A preliminary meeting with the research team ensured a shared understanding of the selection criteria. The resulting articles after the search strategy were transferred to Covidence (https://www.covidence.org) to proceed with selection. Each member individually reviewed 25 articles using the eligibility criteria. Agreement rates with AM ranged from 80% to 96%. Disagreements were discussed and clarified with the reviewers. AM screened all articles by title and abstract, while the reviewers individually screened about a quarter. Conflicts were resolved by consensus between AM and the reviewers. AM and MJE then read the full texts to select the final articles. Disagreements between AM and MJE were resolved iteratively, with MEPo and CG consulted if needed.

Data Extraction

Data charting process

The articles retained were read and summarized by AM and MJE using the extraction grid. When the included studies came from an SRQ developed by other authors, we searched for the SRQs' development article in the reference list and included it. If the SRQ was developed by other authors and had never been validated with primary care nurses, only the article where the SRQ was adapted in primary care was included, and we did not use the original SRQ development article in the data extraction. Data extraction was carried out simultaneously by AM and MJE independently in two separate documents as recommended by the JBI methodology.

Data items

The extraction grid was developed by AM in partnership with MEPo and CG according to literature, JBI recommendations, PRISMA-ScR recommendations and the two primary care frameworks used in Canada. Data extracted in the scoping review were classified by author, year of publication, country, number of items, questionnaire type (generic or specific), objective of the study, study design, population, completion time, dimensions assessed and conditions of use. The dimensions reported in the extraction grid were developed based on the 10 pillars of the PMH model and the six competencies from the CFPNA framework, resulting in 13 dimensions (CFPNA n.d.; CFPC 2019). When the authors of the SRQs

evaluated new dimensions not present in the grid, we added them inductively to include all the dimensions assessed by the included SRQs.

Critical appraisal of individual sources of evidence

We assessed the development of the SRQs with the consensus-based standards for the selection of health measurement instruments (COSMIN) methodology for assessing the content validity of patient reported outcomes measures (PROMs) to assess the content validity quality of the SRQs development (Terwee et al. 2018). This ensured a thorough evaluation of each SRQ's quality (Terwee et al. 2018). This approach allowed us to systematically appraise the SRQs based on their relevance, comprehensiveness and comprehensibility (Terwee et al. 2018). The COSMIN methodology for assessing the content validity of PROMs was developed, but it can also be applied to a clinician's self-reported measures (Terwee et al. 2018). We used this COSMIN checklist since the tools included were articles on the development of measurement tools. From this perspective, the content validity of tool development is the preferred choice for assessing the quality of the development of the tools (Terwee et al. 2018). AM and MJE used the grid recommended by COSMIN and rated the questions of Boxes 1a and 1b independently. The conflicts were resolved by consensus following a meeting between AM and MJE. The grid including these scores is available in Appendix 1 (available online at longwoods.com/content/27549).

Analysis and Presentation of Results

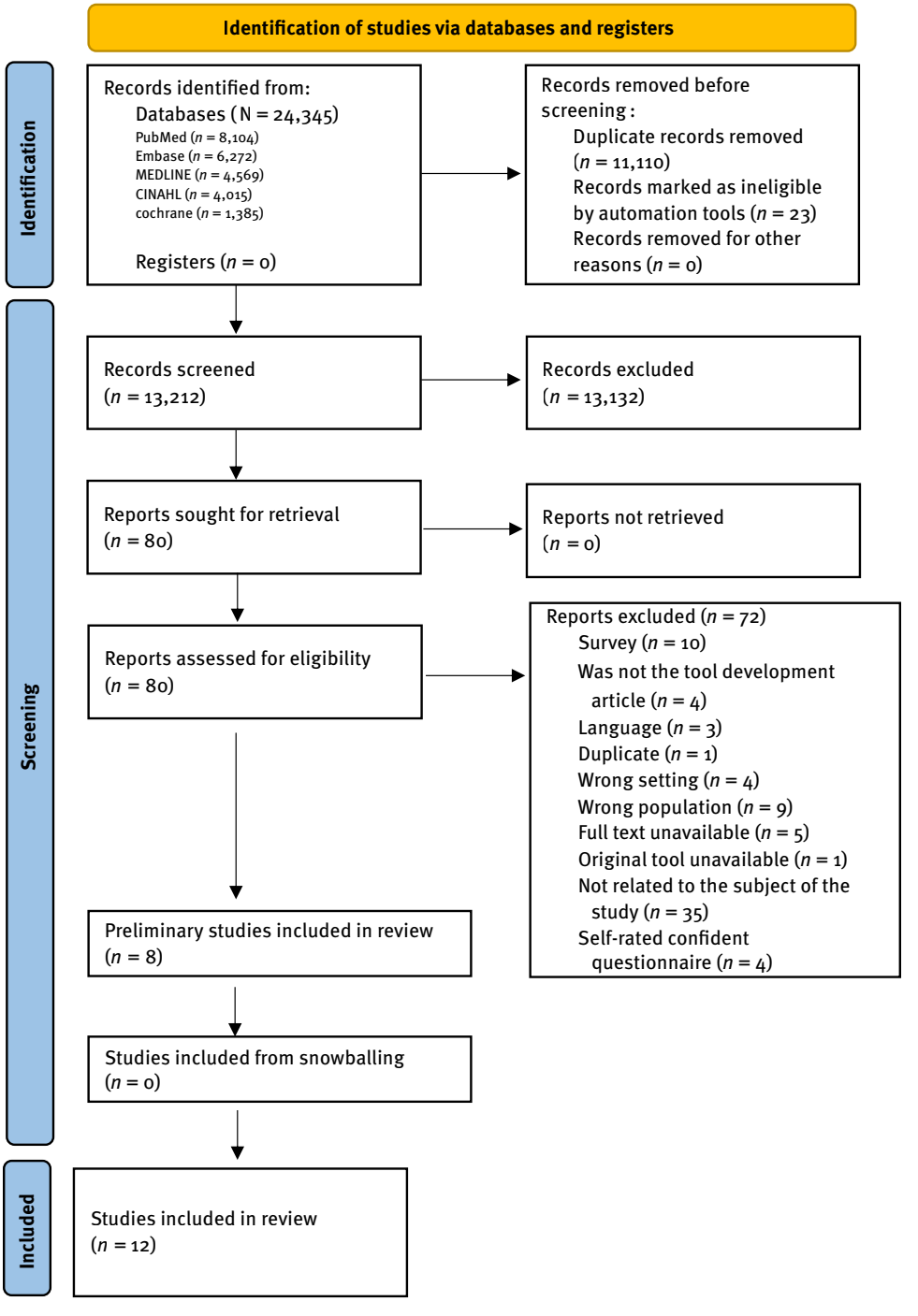
Two meetings were organized between the two reviewers to calibrate the extracted data, as well as to discuss the synthesis and interpretation of the extracted data. Each grid category was reviewed and compared between AM and MJE for each SRQ. As recommended by Peters et al. (2022), we performed a descriptive analysis using both deductive (PMH model and CFPNA framework) and inductive (literature) methods to describe the SRQs and their dimensions and to highlight the conditions of use. As a team, we then discussed the key points for each SRQ. The results were reviewed by AM and MJE for further refinement. MEPo, CG, PHRL, MEPe, MM and MJE participated in the analysis of data and reviewed the studies. MEPo and CG also played a mentoring role throughout the process. They ensured rigour and enriched the analysis through their expertise.

Results

Search Results

We screened 80 full-text articles for the full-text reading stage. After reading the full texts, 12 SRQs were identified: eight SRQ development articles and four articles using an SRQ for which they were not the authors were added through snowballing. We referred to the questionnaire development articles for these four articles to collect and analyze the data. Our search results and the selection

Figure 1. Flow diagram



of studies are presented in a flow diagram (Figure 1). Among these studies, we identified 12 SRQs measuring nursing practice in primary care from 2005 to 2022, with a higher proportion of studies between 2020 and 2022 (42%) and from 10 different countries. Concepts measured by SRQs were evidence-based practice (Gerrish et al. 2007; Ruzafa-Martínez et al. 2020; Upton and Upton 2006), assessment of patients with chronic disease (Carryer et al. 2010), occupational health service competencies (Kerdmuang et al. 2014), self-management support (Duprez et al. 2016), the scope of practice enactment (Braithwaite et al. 2022), intercultural competencies (Harris-Haywood et al. 2014), engagement in primary care (Kosteniuk et al. 2017) and collaboration and end-of-life nursing care (Jaruseviciene et al. 2019; Lemetti et al. 2021). The SRQs included cover a range from 20 to 120 items. Table 2 (available online at longwoods.com/content/ 27549) shows the SRQ's characteristics, and Table 3 (available online at longwoods.com/content/27549) shows the dimensions measured by each SRQ. Following the critical appraisal, the results will be presented in two themes: (1) dimensions measured by SRQs assessing nursing scope of practice in primary care and (2) conditions of use of SRQs measuring PC-RNs' scope of practice.

Critical Appraisal of the Quality of the SRQ Development

Based on Terwee et al. (2018), the critical analysis was reported on the following three topics: (1) PROM design to ensure relevance, (2) cognitive interview study or another pilot test to evaluate the comprehensibility and comprehensiveness of a PROM and (3) total quality of the PROM development study. For each SRQ, we rated each item of the COSMIN tool according to the COSMIN scoring scale: very good, adequate, doubtful, inadequate and not applicable. The complete COSMIN grid for analyzing SRQ development quality is reported in Appendix 1, available online at longwoods.com/content/27549.

PROM Design to Ensure Relevance

The general design requirements are classified as either very good or adequate for all SRQs, as the authors clearly defined the construct being measured, the target population, the context of use and the rationale for the SRQ construct (Braithwaite et al. 2022; Carryer et al. 2010; Duprez et al. 2016; García-Salvador et al. 2021; Gerrish et al. 2007; Harris-Haywood et al. 2014; Kerdmuang et al. 2014; Kosteniuk et al. 2017; Lemetti et al. 2021; Ruzafa-Martínez et al. 2020; Upton and Upton 2006). However, the concept of elicitation, which demonstrates relevance and comprehensiveness, is rated as doubtful or inadequate for all SRQs due to the qualitative approaches being either insufficient or lacking sufficient detail to assess the quality of the elicitation concept.

Cognitive Interview Study or Other Pilot Test to Evaluate Comprehensibility and Comprehensiveness of a PROM

Several authors provide limited details on the processes used to ensure the comprehensibility and comprehensiveness of their SRQs, which resulted in a doubtful rating (Braithwaite et al. 2022; Carryer et al. 2010; Duprez et al. 2016; García-Salvador et al. 2021; Gerrish et al. 2007; Harris-Haywood et al. 2014; Jaruseviciene et al. 2019; Kerdmuang et al. 2014; Kosteniuk et al. 2017; Lemetti et al. 2021; Ruzafa-Martínez et al. 2020). In some cases, the final version of the SRQ was either not tested or only assessed for comprehensibility or comprehensiveness, leading to an inadequate rating (Harris-Haywood et al. 2014; Upton and Upton 2006). In addition, some authors tested content validity using only the content validity index (Braithwaite et al. 2022; Jaruseviciene et al. 2019; Kerdmuang et al. 2014), a method not recommended by COSMIN, which resulted in doubtful or inadequate ratings.

Total Quality of the PROM Development Study

Notably, due to various shortcomings in concept elicitation and insufficient testing for comprehensiveness and comprehensibility, the overall content validity of the SRQs' development cannot be considered of high quality. However, all authors provided a clear description of the concept of interest, target population and context, resulting in a "very good" rating in the general design requirements section. Finally, none of the SRQs received an overall score of "very good" or "adequate," as at least one section of the COSMIN tool was rated as poor quality.

Dimensions Measured by SRQs Assessing Nursing Scope of Practice in Primary Care

Our analyses revealed that the 12 SRQs assessed 20 dimensions of nursing scope practice in primary care. The most commonly evaluated dimension was clinical practice, which included self-management support, evidence-based practice, care coordination and community adaptiveness, covered by 11 SRQs (92%). The only SRQ that does not focus on clinical practice evaluates collaboration between professionals within the workplace (Jaruseviciene et al. 2019). Figure 2 shows the total number of SRQs measuring each dimension. Most SRQs (91.6% or 11 out of 12) are specific, as they measured precise elements of the PC-RNs' scope of practice, such as self-management support, collaboration, cultural competency and engagement (Carryer et al. 2010; Duprez et al. 2016; García-Salvador et al. 2021; Gerrish et al. 2007; Harris-Haywood et al. 2014; Jaruseviciene et al. 2019; Kerdmuang et al. 2014; Kosteniuk et al. 2017; Lemetti et al. 2021; Ruzafa-Martínez et al. 2020; Upton and Upton 2006). Only one generic SRQ was identified, measuring the actual scope of practice, covering 12 of the 20 dimensions extracted from all the SRQs (Braithwaite et al. 2022). This SRQ is currently measuring the largest number of dimensions of nursing scope of practice in primary care.

Figure 2. Overview of the number of SRQs measuring each dimension

Dimension	Number of SRQs
Administration and funding	1
Appropriate infrastructure	5
Connected care	5
Accessible care	2
Community adaptiveness and social accountability	8
Comprehensive team-based care with family physician leadership	1
Continuity of care	5
Patient- and family-partnered care	8
Measurement, continuous quality improvement and research	8
Training, education and continuing professional development	3
Professionalism	6
Leadership	4
Clinical practice	10
Communication	8
Quality assurance, evaluation and research	8
Collaboration and partnership	8
Attitude	3
Ethics	2
Cultural sensibility and equity	1
Knowledge	5

The initial dimensions from the PMH model and the CFPNA competency frameworks are shown in Table 3, available online at longwoods.com/content/27549. Analysis of the dimensions measured by the SRQ has enabled us to identify four other dimensions as emergent dimensions: attitude, ethics, cultural sensibility and equity, and knowledge (presented in Table 3). Attitudes toward evidence-based practice were assessed by the evidence-based practice questionnaire across all items of the SRQs, as it is known that healthcare professionals' attitudes are a significant factor in the adoption of new guidelines and practices (Upton and Upton 2006). They were also evaluated by the occupational health service competency scale, such as attitudes toward occupational health (Kerdmuang et al. 2014). Ethics were evaluated by the occupational health service competency scale, particularly in relation to professional ethics in occupational health service (Kerdmuang et al. 2014), while the investigation into nurses' care understanding of end-of-life questionnaire measured ethical and legal issues in terms of palliative care with patient and family (García-Salvador et al. 2021). The dimension of cultural sensibility and equity was also measured by the modified patient

assessment of chronic illness care (MPACIC) in terms of adaptiveness of chronic illness care according to the person's ethnicity, directing the patient to culturally appropriate services and awareness of cultural or ethnic issues (Carryer et al. 2010). This dimension was also assessed by the Primary Health Care Engagement (PHCE) scale, assessing if the professional's workplace understands equity issues and if it is organized to address health needs related to social determinants (Kosteniuk et al. 2017).

Conditions of Use of SRQs Measuring PC-RNs' Scope of Practice

The authors of the various SRQs have provided conditions for using their SRQ with the PC-RNs. The various conditions of use described are: to identify training needs and a lever for optimizing individual practice, to develop and evaluate educational programs, to assess the quality of services and monitor practice, to implement health policies and to evaluate organizational interventions and management.

Identifying Training Needs and a Lever for Optimizing Individual Practice

Several studies have highlighted that their SRQs identified both individual and collective training needs for PC-RNs, focusing specifically on competencies or clinical practices that require enhancement through training (Duprez et al. 2016; García-Salvador et al. 2021; Harris-Haywood et al. 2014; Kerdmuang et al. 2014; Lemetti et al. 2021; Ruzafa-Martínez et al. 2020; Upton and Upton 2006). These assessments of training needs are valuable for objectively identifying gaps and guiding the development of targeted training programs. In addition, such assessments contribute to the self-evaluation of PC-RNs' scope of practices on an individual level, supporting role optimization (Braithwaite et al. 2022).

Developing and Evaluating Educational Programs

Some authors have shown that SRQs can be valuable tools for designing effective educational programs for both individuals and groups and for assessing progress after the completion of educational programs (García-Salvador et al. 2021; Gerrish et al. 2007; Harris-Haywood et al. 2014; Kerdmuang et al. 2014; Ruzafa-Martínez et al. 2020; Upton and Upton 2006). These findings highlight the role of SRQs not only in creating targeted educational interventions but also in evaluating their effectiveness over time.

Assessing the Quality of Services and Monitoring Practice

Several studies highlight the potential of SRQs to provide a comprehensive view of various aspects of nursing scope of practice. For example, SRQs can define current collaborative practices (Jaruseviciene et al. 2019), chronic illness care management (Carryer et al. 2010) and the enactment scope of practice (Braithwaite et al. 2022).

It can also be useful for evaluating the quality of occupational health services and supporting quality assurance efforts (Kerdmuang et al. 2014). In addition, Lemetti et al. (2021) claim that their SRQs provide an overview of the current collaboration between the PC-RNs and RNs across different sectors, an argument also mentioned by Jaruseviciene et al. (2019), who highlighted how their SRQs facilitate a simple overview of teamwork dynamics.

Implementing Health Policies, Evaluating Organizational Interventions and Management

Some authors suggest that SRQs can be crucial for policy makers and decision makers in making informed decisions, assessing the impact of organizational changes and aiding management (Braithwaite et al. 2022; Gerrish et al. 2007; Kerdmuang et al. 2014; Kosteniuk et al. 2017; Ruzafa-Martínez et al. 2020). For instance, Gerrish et al.'s (2007) SRQ highlights how their SRQ identifies barriers and organizational factors negatively affecting the scope of practice, thus supporting the implementation of policies to address these issues. Braithwaite et al. (2022) added that the Actual Scope of Practice-Primary Care (ASCOP-PC) can be used by managers and decision makers to enhance the scope of practice and optimize the use of human resources. In addition, Kerdmuang et al. (2014) suggest that their SRQ serves as a criterion for evaluating the suitability of candidates for placement and advancement within management.

Discussion

The aim of our study was to identify SRQs that measure PC-RNs' scope of practice. It also aimed to list the dimensions assessed by these SRQs and evaluate the quality of the SRQs' development. Overall, we identified 12 SRQs from 2005 to 2022 that measured a total of 20 dimensions. We also found that the SRQs were used under various conditions, such as identifying training needs and as a lever for optimizing individual practice, developing and evaluating educational programs, assessing the quality of services and monitoring practice, implementing health policies and finally, evaluating organizational interventions and management. Following a critical appraisal using the COSMIN criteria, the analysis of the content validity in the development of the questionnaires revealed scores ranging from doubtful to inadequate. These results led us to the following observations: Current SRQs do not cover or evaluate all the dimensions in the present scope of practice of PC-RNs in Canada, there is a need to upgrade the guiding frameworks that support PC-RNs and the actual SRQs are used in a variety of conditions of use.

The Existing SRQs Do Not Adequately Assess the Current Practices of PC-RNs in Canada

Our study reveals that existing SRQs target only specific aspects of primary care nursing scope of practice, such as self-management, with the exception of Braithwaite et al.'s (2022) SRQ, which aims to measure the scope of practice enactment. However, even Braithwaite et al.'s (2022) SRQ fails to capture all the dimensions identified by the PMH model and the new dimensions emerging from this review, such as ethics and cultural sensibility. Although this SRQ assesses more dimensions than others, it still covers only 12 of the 20 identified, limiting its ability to evaluate the full scope of PC-RN practice. Moreover, an international article by Rycroft-Malone et al. (2004) pointed out that many tools fail to fully encompass the complexity of nurse roles, particularly in terms of ethical considerations and culturally responsive care, both of which are critical to global patient management in diverse populations.

We have also noted significant variability in the number of items across the SRQs, and little information has been reported on the acceptable completion time for PC-RNs. This lack of guidance reflects international concerns, as highlighted by Streiner et al. (2015), who argue that without clear guidelines on completion times and cognitive load, the practical usability of health measurement scales in clinical settings can be compromised. Furthermore, the quality of the SRQ development processes is generally low, suggesting that many may be unsuitable for evaluating PC-RNs' scope of practice in Canada. Our critical analysis highlights the need for greater involvement of primary care nurses throughout the SRQ development process to enhance content validity. This recommendation has been made by authors who developed tools in contexts other than primary care, acknowledging that inadequate participation can sometimes hinder the development of effective tools (Slater et al. 2017; Woo 2024). Finally, we noted a lack of user recommendations and standard operating procedures to support the use and interpretation of SRQs in clinical or organizational settings. This can lead to SRQs being completed incorrectly, results that do not reflect reality or results being misinterpreted, leading to decisions that fail to address clinical or organizational needs (DeVellis and Thorpe 2022; Terwee et al. 2018).

There Is a Need to Upgrade the Frameworks That Support PC-RNs

We note that current practice frameworks need improvement to better understand the phenomenon of practice from several angles according to the resulting dimensions. The two guiding frameworks are not exhaustive enough in terms of nursing scope of practice. The PMH framework, with its focus on family medicine, is designed to apply broadly to all professionals working in primary care clinics – whether they are physicians, PC-RNs, social workers, etc. (CFPC 2019). On the other hand, the CFPNA framework only includes the competencies that nurses

must master, which may not fully capture the complexity of the nursing scope of practice (Rycroft-Malone et al. 2004). We propose the creation of a comprehensive framework for PC-RNs that could significantly enhance the scope of practice evaluation, training and gaining a better understanding of the factors influencing the scope of practice in this field. Moreover, the integration of dimensions such as cultural sensitivity and equity corresponds to the objectives for improving health services as proposed by the quintuple aim integrating the health equity principle (Nundy et al. 2022). Developing a framework that takes the quintuple aim into account could potentially allow for a more effective evaluation of the primary care nursing scope of practice, which must incorporate principles of equity (Nundy et al. 2022; WHO n.d.).

SRQs Are Used in a Variety of Conditions

Our findings indicate that SRQs can be effectively applied at macro, meso and micro levels. At the macro level, some authors suggest that their SRQs can play a role in developing and evaluating health policies and human resources management (Braithwaite et al. 2022; Gerrish et al. 2007; Kerdmuang et al. 2014; Kosteniuk et al. 2017; Ruzafa-Martínez et al. 2020). As mentioned by Braithwaite et al. (2022), we believe that the use of a new generic SRQ would enable decision makers and managers to better support and ensure adequate infrastructures and to have a better overview of the effects of decision making, enabling us to promptly put elements in place to support good practice. Furthermore, SRQs could align with the principles of a learning health system by ensuring that nurses' perspectives and practices are incorporated into health policy development (Menear et al. 2019). Indeed, SRQs could support the continuous feedback loop of the learning health system (Menear et al. 2019); for example, data derived from the nursing scope of practice could inform clinical practices and strategic decision making at a higher level. At the meso level, we found that SRQs can be used to establish a portrait of current teamwork practice or to assess nurses' needs in terms of improving collective practice in a specific setting (Braithwaite et al. 2022; Carryer et al. 2010; Jaruseviciene et al. 2019; Kerdmuang et al. 2014; Kosteniuk et al. 2017; Ruzafa-Martínez et al. 2020). As mentioned by Kerdmuang et al. (2014), evaluating collective nursing practices through SRQs provides a summary of service quality, which supports continuous improvement efforts. SRQs could enable better management of PC-RNs' needs, which in turn could potentially improve their job satisfaction and well-being by addressing positive factors that contribute to their satisfaction, such as working with better-trained staff, having access to professional development opportunities, fostering healthy relationships among workers and, ultimately, recognizing and celebrating successes (Ayamolowo et al. 2013). We believe that creating a new SRQ with comprehensive questions about PC-RNs' scope of practice would help in providing a clearer picture of how nurses work in primary care settings. Finally, at the micro level, we

have observed that the authors report individual use of their SRQ, in particular, for self-assessment of nursing scope of practice as a lever for optimizing practice and skills development (Braithwaite et al. 2022; Kerdmuang et al. 2014). Carryer et al. (2010) suggest that a SRQ can be used to compare self-assessment of nursing practice with the patient's assessment to gain a better understanding of the phenomenon. However, it is essential to recognize that the applicability of SRQs can vary across cultural and organizational contexts. It is necessary to adapt SRQs to local realities by being flexible and adaptable to different health systems (Horton et al. 2007; Squires et al. 2013).

Limitation

The theoretical frameworks used to classify the dimensions originate from Canada, which may differ from the global context. On the other hand, to have an overall view of the dimensions, we left space for new dimensions to emerge that were not found in the two Canadian frameworks (CFPNA n. d.; CFPC 2019). Some of the SRQs included in the scoping review to assess PC-RNs' scope of practice were also implemented for nurses working in hospital settings (Duprez et al. 2016; Gerrish et al. 2007; Lemetti et al. 2021; Ruzafa-Martínez et al. 2020; Upton and Upton 2006). The use of the same SRQ may contribute to a lack of exhaustiveness in evaluating dimensions specific to primary care nursing practice. Although we followed the JBI methodology and did a double-blinded article selection and data extraction, no expert consultation was done to ensure better comprehension of the phenomenon (Aromataris et al. 2024). However, we have included several people (MJE, MEPo, MEPe, MM, PHRL, CG) with different areas of expertise throughout the article selection process, data analysis and article revision, which allows us to explore the phenomenon from different angles.

Implications for Nursing Leadership

Our observations fill a gap in the literature concerning knowledge of existing assessment questionnaires for PC-RNs worldwide. As variability in PC-RNs' scope of practice has been observed in several Canadian provinces as well as in other parts of the world (Cernuda Martínez et al. 2024; de Oliveira Toso et al. 2024; Dufour et al. 2023; Halcomb et al. 2016; Lukewich et al. 2014; Norful et al. 2017), SRQs could support the need for practice evaluation (Bernier et al. 2020; Girard et al. 2017; Lukewich et al. 2014; Poitras et al. 2018b). We have also observed that SRQs have several conditions of use and the potential to be used by decision makers, managers, care teams and nurses to support them in their everyday work. PC-RNs' scope of practice is distinct from RNs' scope of practice in the hospital setting, and the lack of current prelicensure training (Lukewich et al. 2024) reinforces the need to evaluate the current scope of practice to support skill improvement and knowledge development. The study also highlighted the variety of dimensions used to evaluate PC-RNs' scope of practice internationally

and the need to improve frameworks guiding PC-RNs according to new dimensions. A clear theoretical framework would potentially better integrate nurses' vision of practice in primary care and could facilitate managers in better clamping their decision making and interventions. On the other hand, this study's results demonstrate the need to develop an SRQ to evaluate the actual scope of practice in a Canadian context according to Canadian guidelines and literature-based dimensions such as ethics and cultural sensitivity. Developing a new SRQ could also allow for a better valorization of practice by standardizing the nursing role, which could help better distinguish the scope of practice across primary care settings. We believe that the development of a new SRQ, including a wide range of dimensions, could be highly relevant to decision makers, managers, care teams, clinicians and, ultimately, patients.

Conclusion

Our study has provided evidence on existing SRQs and their dimensions to support the evaluation of the nursing scope of practice in primary care clinics. The scoping review has demonstrated a gap in a generic measurement SRQ that measures the scope of practice. Further studies will be necessary to develop a generic SRQ evaluating the practice of Canadian PC-RNs to assess the scope of practice according to Canadian guidelines and the dimensions that have emerged inductively in the literature.

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References

Almost, J. 2021, February. *Regulated Nursing in Canada: The Landscape in 2021*. Canadian Nurses Association. Retrieved February 19, 2025. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/Regulated-Nursing-in-Canada_e_Copy.pdf>.

American Academy of Family Physicians (AAFP). n.d. *Primary Care*. Retrieved May 18, 2024. <https://www.aafp.org/about/policies/all/primary-care.html>.

Arksey, H. and L. O'Malley. 2005. Scoping Studies: Towards a Methodological Framework. *International Journal of Social Research Methodology* 8(1): 19–32. doi:10.1080/1364557032000119616.

Aromataris, E., C. Lockwood, K. Porritt, B. Pilla and Z. Jordan. 2024. *JBI Manual for Evidence Synthesis–2024 Edition*. doi:10.46658/JBIMES-24-01.

Ayamolowo, S.J., O. Irinoye and M. Oladoyin. 2013. Job Satisfaction and Work Environment of Primary Health Care Nurses in Ekiti State, Nigeria: An Exploratory Study. *International Journal of Caring Sciences* 6(3): 531–41.

Barrett, C., M. Mathews, M.-E. Poitras, A.A. Norful, R. Martin-Misener, J. Tranmer et al. 2021. Job Titles and Education Requirements of Registered Nurses in Primary Care : An International Document Analysis. *International Journal of Nursing Studies Advances* 3: 100044. doi:10.1016/j.ijnsa.2021.100044.

Bernier, A., M. Champagne, M. Lacroix and M.-E. Poitras. 2020. The Expected, Enacted and Desired Role of Family Practice Nurses in Family Medicine Groups as Perceived by Nurses and Family Physicians. *Science of Nursing and Health Practices* 3(2): 1–15. doi:10.31770/2561-7516.1072.

Bodenheimer, T., E. Chen and H.D. Bennett. 2009. Confronting the Growing Burden of Chronic Disease: Can the U.S. Health Care Workforce do the Job? *Health Affairs* 28(1): 64–74. doi:10.1377/hlthaff.28.1.64.

Braithwaite, S., J. Tranmer, R. Wilson, J. Almost and D. Tregunno. 2022. Measuring Scope of Practice Enactment Among Primary Care Registered Nurses. *Canadian Journal of Nursing Research* 54(4): 508–17. doi:10.1177/08445621211058328.

Canadian Family Practice Nurses Association (CFPNA). n.d. Family Practice Nursing. Retrieved May 18, 2024. <https://www.cfpna.ca/about>.

Canadian Medical Association (CMA). n.d. Why Canada's Health System Needs (a Lot More) Team-Based Care. Retrieved May 7, 2024. <https://www.cma.ca/our-focus/workforce-planning/why-canadas-health-system-needs-lot-more-team-based-care>.

Carryer, J., C. Budge, C. Hansen, and K. Gibbs. 2010. Modifying the PACIC to Assess Provision of Chronic Illness Care: An Exploratory Study With Primary Health Care Nurses. *Journal of Primary Health Care* 2(2): 118–23. doi:10.1071/HC10118.

Cernuda Martínez, J.A., R. Castro Delgado and P. Arcos González. 2024. Difficulties of Spanish Primary Health Care Nurses to Assist Emergencies: A Cross-Sectional Study. *International Emergency Nursing* 74: 101442. doi:10.1016/j.ienj.2024.101442.

The College of Family Physicians of Canada (CFPC). 2019. The Patient's Medical Home. Retrieved February 19, 2025. <https://www.cfpc.ca/en/policy-innovation/health-policy-goverment-relations/the-patient-s-medical-home>.

Creswell, J.W. and J.D. Creswell. 2017. *Research Design : Qualitative, Quantitative, and Mixed Methods Approaches (5th ed.)*. Sage.

de Oliveira Toso, B.R.G., B.I. Orth, L.B. Vieira, C.R. Dalla Nora, D.S. Geremia, A.V.M. Mendonça and M.F. de Sousa. 2024. Practices Developed by Nurses in Primary Health Care in Southern Brazil. *Revista Gaúcha de Enfermagem* 45: e20230154. doi:10.1590/1983-1447.2024.20230154.en.

DeVellis, R. and C. Thorpe. 2022. *Scale Development: Theory and Applications (5th ed)*. Sage.

Dufour, E., J. Bolduc, J. Leclerc-Loiselle, M. Charette, I. Dufour, D. Roy et al. 2023. Examining Nursing Processes in Primary Care Settings Using the Chronic Care Model: An Umbrella Review. *BMC Primary Care* 24(1): 176. doi:10.1186/s12875-023-02089-3.

Duguet, T., G. Ibanez, M. Schuers, J.-P. Lebeau, K. Roser, C.S. Gomes et al. 2023. General Practice-Related MeSH Terms in Main Journals: A Bibliometric Analysis From 2011 to 2021. *British Journal of General Practice* 74(739): e120–25. doi:10.3399/BJGP.2023.0060.

Duprez, V., S.M. Van Hooft, J. Dwarswaard, A. van Staa, A. Van Hecke and M.M.H. Strating. 2016. The Development and Psychometric Validation of the Self-Efficacy and Performance in Self-Management Support (SEPSS) Instrument. *Journal of Advanced Nursing* 72(6): 1381–95. doi:10.1111/jan.12918.

Endalamaw, A., R.B. Khatri, D. Erku, A. Zewdie, E. Wolka, F. Nigatu et al. 2024. Barriers and Strategies for Primary Health Care Workforce Development: Synthesis of Evidence. *BMC Primary Care* 25(1): 99. doi:10.1186/s12875-024-02336-1.

García-Salvador, I., E. Chisbert-Alapont, A. Antonaya Campos, J. Casaña Mohedo, C. Hurtado Navarro, S. Fernández Peris et al. 2021. Design and Validation of the INCUE Questionnaire: Assessment of Primary Healthcare Nurses' Basic Training Needs in Palliative Care. *International Journal of Environmental Research and Public Health* 18(20): 10995. doi:10.3390/ijerph182010995.

Gerrish, K., P. Ashworth, A. Lacey, J. Bailey, J. Cooke, S. Kendall et al. 2007. Factors Influencing the Development of Evidence-Based Practice: A Research Tool. *Journal of Advanced Nursing* 57(3): 328–38. doi:10.1111/j.1365-2648.2006.04112.x.

Girard, A., C. Hudon, M.-E. Poitras, P. Roberge and M.-C. Chouinard. 2017. Primary Care Nursing Activities With Patients Affected by Physical Chronic Disease and Common Mental Disorders: A Qualitative Descriptive Study. *Journal of Clinical Nursing* 26(9–10): 1385–94. doi:10.1111/jocn.13695.

Gouvernement du Canada. 2011, Mai 27. *Le Système des soins de santé du Canada*. Retrieved February 19, 2025. <https://www.canada.ca/fr/sante-canada/services/systeme-soins-sante/rapports-publications/regime-soins-sante/canada.html>.

Gouvernement du Canada. 2021, Décembre 13. *Comprendre les systèmes: le rapport de 2021 du Conseil consultatif national sur la pauvreté*. Retrieved February 19, 2025. <https://www.canada.ca/fr/emploi-developpement-social/programmes/reduction-pauvrete/conseil-consultatif-national/rapports/annuel-2021.html>.

Halcomb, E., M. Stephens, J. Bryce, E. Foley and C. Ashley. 2016. Nursing Competency Standards in Primary Health Care: An Integrative Review. *Journal of Clinical Nursing* 25(9–10): 1193–1205. doi:10.1111/jocn.13224.

Harris-Haywood, S., T. Goode, Y. Gao, K. Smith, S. Bronheim, S.A. Flocke et al. 2014. Psychometric Evaluation of a Cultural Competency Assessment Instrument for Health Professionals. *Medical Care* 52(2): e7–15. doi:10.1097/MLR.0b013e31824df149.

Horton, K., V. Tschudin and A. Forget. 2007. The Value of Nursing: A Literature Review. *Nursing Ethics* 14(6): 716–40. doi:10.1177/0969733007082112.

Jaruseviciene, L., A. Kontrimiene, A. Zaborskis, I. Liseckiene, G. Jarusevicius, L. Valius et al. 2019. Development of a Scale for Measuring Collaboration Between Physicians and Nurses in Primary Health-Care Teams. *Journal of Interprofessional Care* 33(6): 670–79. doi:10.1080/13561820.2019.1594730.

Keleher, H., R. Parker, O. Abdulwadud and K. Francis. 2009. Systematic Review of the Effectiveness of Primary Care Nursing. *International Journal of Nursing Practice* 15(1): 16–24. doi:10.1111/j.1440-172X.2008.01726.x.

Kerdmuang, S., S. Kalampakorn, S. Lagampan, A. Jirapongsuwan and M.C. McCullagh. 2014. Development and Psychometric Properties of the Occupational Health Service Competency Scale of Nurses Working at Thai Primary Care Units. *Pacific Rim International Journal of Nursing Research* 18(3): 187–202.

Kosteniuk, J.G., N.J. Stewart, C.P. Karunanayake, E.C. Wilson, K.L. Penz, J.C. Kulig et al. 2017. Exploratory Factor Analysis and Reliability of the Primary Health Care Engagement (PHCE) Scale in Rural and Remote Nurses: Findings From a National Survey. *Primary Health Care Research and Development* 18(06): 608–22. doi:10.1017/S146342361700038X.

Landu, Z.K. and T. Crowley. 2023. Primary Health Care Nurses' Knowledge, Self-Efficacy and Performance of Diabetes Self-Management Support. *African Journal of Primary Health Care and Family Medicine* 15(1): a3713. doi:10.4102/phcfm.v15i1.3713.

Lemetti, T., P. Puukka, M. Stolt and R. Suhonen. 2021. Nurse-to-Nurse Collaboration Between Nurses Caring for Older People in Hospital and Primary Health Care : A Cross-Sectional Study. *Journal of Clinical Nursing* 30(7–8): 1154–67. doi:10.1111/jocn.15664.

Lukewich, J., M. Allard, L. Ashley, K. Aubrey-Bassler, D. Bryant-Lukosius, T. Klassen et al. 2020. National Competencies for Registered Nurses in Primary Care: A Delphi Study. *Western Journal of Nursing Research* 42(12): 1078–87. doi:10.1177/0193945920935590.

Lukewich, J., D.S. Edge, E. VanDenKerkhof and J. Tranmer. 2014. Nursing Contributions to Chronic Disease Management in Primary Care. *JONA: The Journal of Nursing Administration* 44(2): 103–10. doi:10.1097/NNA.0000000000000033.

Lukewich, J., R. Martin-Misener, A.A. Norful, M.-E. Poitras, D. Bryant-Lukosius, S. Asghari et al. 2022. Effectiveness of Registered Nurses on Patient Outcomes in Primary Care: A Systematic Review. *BMC Health Services Research* 22(1): 740. doi:10.1186/s12913-022-07866-x.

Lukewich, J., M.-E. Poitras, C. Vaughan, D. Ryan, M. Guérin, D. Bulman et al. 2024. Canadian Post-Licensure Education for Primary Care Nurses Addressing the Patient's Medical Home Model and Canadian Competencies for Registered Nurses in Primary Care: An Environmental Scan. *Quality Advancement in Nursing Education* 10(2): 8. doi:10.17483/2368-6669.1429.

Menear, M., M.-A. Blanchette, O. Demers-Payette and D. Roy. 2019. A Framework for Value-Creating Learning Health Systems. *Health Research Policy and Systems* 17(1): 79. doi:10.1186/s12961-019-0477-3.

Norful, A., G. Martsolf, K. de Jacq and L. Poghosyan. 2017. Utilization of Registered Nurses in Primary Care Teams: A Systematic Review. *International Journal of Nursing Studies* 74: 15–23. doi:10.1016/j.ijnurstu.2017.05.013.

Nundy, S., L.A. Cooper and K.S. Mate. 2022. The Quintuple Aim for Health Care Improvement: A New Imperative to Advance Health Equity. *JAMA* 327(6): 521–22. doi:10.1001/jama.2021.25181.

Peters, M.D.J., C. Godfrey, P. McInerney, H. Khalil, P. Larsen, C. Marnie et al. 2022. Best Practice Guidance and Reporting Items for the Development of Scoping Review Protocols. *JBI Evidence Synthesis* 20(4): 953–68. doi:10.11124/JBIES-21-00242.

Poitras, M.-E., M.-C. Chouinard, F. Gallagher and M. Fortin. 2018a. Nursing Activities for Patients With Chronic Disease in Primary Care Settings: A Practice Analysis. *Nursing Research* 67; 35–42. doi:10.1097/NNR.0000000000000253.

Poitras, M.-E., M.-C. Chouinard, M. Fortin, A. Girard, S. Crossman and F. Gallagher. 2018b. Nursing Activities for Patients With Chronic Disease in Family Medicine Groups: A Multiple-Case Study. *Nursing Inquiry* 25(4): e12250. doi:10.1111/nin.12250.

Poitras, M.-E., M.-C. Chouinard, M. Fortin and F. Gallagher. 2016. How to Report Professional Practice in Nursing? A Scoping Review. *BMC Nursing* 15(1): 31. doi:10.1186/s12912-016-0154-6.

Poitras, M.-È., M.-C. Chouinard, M. Fortin, A. Girard and F. Gallagher. 2016. Les activités des infirmières œuvrant en soins de première ligne auprès des personnes atteintes de maladies chroniques: une revue systématique de la littérature. *Recherche en soins infirmiers* 126(3): 24–37. doi:10.3917/rsi.126.0024.

Queenan, J.A., S.T. Wong, D. Barber, R. Morkem and A. Salman. 2021, May. *The Prevalence of Common Chronic Conditions Seen in Canadian Primary Care: Results from the Canadian Primary Care Sentinel Surveillance Network*. Retrieved February 19, 2025. <https://cpcssn.ca/wp-content/uploads/2021/05/cpcssn-chronic-conditions-report-2021.pdf>.

Rajai, N., A. Ebadi, L. Karimi, S.A. Sajadi and A. Parandeh. 2023. A Systematic Review of the Measurement Properties of Self-Care Scales in Nurses. *BMC Nursing* 22: 288. doi:10.1186/s12912-023-01450-2.

Ruzafa-Martínez, M., S. Fernández-Salazar, C. Leal-Costa and A.J. Ramos-Morcillo. 2020. Questionnaire to Evaluate the Competency in Evidence-Based Practice of Registered Nurses (EBP-COQ Prof©): Development and Psychometric Validation. *Worldviews on Evidence-Based Nursing* 17(5): 366–75. doi:10.1111/wvn.12464.

Rycroft-Malone, J., K. Seers, A. Titchen, G. Harvey, A. Kitson and B. McCormack. 2004. What Counts as Evidence in Evidence-Based Practice? *Journal of Advanced Nursing* 47(1): 81–90. doi:10.1111/j.1365-2648.2004.03068.x.

Slater, P., T. McCance and B. McCormack. 2017. The Development and Testing of the Person-Centred Practice Inventory – Staff (PCPI-S). *International Journal for Quality in Health Care* 29(4): 541–47. doi:10.1093/intqhc/mzx066.

Squires, A., L.H. Aiken, K. Van Den Heede, W. Sermeus, L. Bruyneel, R. Lindqvist et al. 2013. A Systematic Survey Instrument Translation Process for Multi-Country, Comparative Health Workforce Studies. *International Journal of Nursing Studies* 50(2): 264–73. doi:10.1016/j.ijnurstu.2012.02.015.

Starfield, B., L. Shi and J. Macinko. 2005. Contribution of Primary Care to Health Systems and Health. *The Milbank Quarterly* 83(3): 457–502. doi:10.1111/j.1468-0009.2005.00409.x.

Statistics Canada. 2020, October 22. Primary Health Care Providers, 2019. Retrieved February 19, 2025. <https://www150.statcan.gc.ca/n1/pub/82-625-x/2020001/article/00004-eng.htm>.

Streiner, D.L., G.R. Norman and J. Cairney. 2015. *Health Measurement Scales: A Practical Guide to Their Development and Use (5th ed.)*. Oxford University Press.

Swanson, M., S.T. Wong, R. Martin-Misener and A.J. Browne. 2020. The Role of Registered Nurses in Primary Care and Public Health Collaboration: A Scoping Review. *Nursing Open* 7(4): 1197–1207. doi:10.1002/nop2.496.

Terwee, C.B., C.A.C. Prinsen, A. Chiarotto, H.C.W. de Vet, L.M. Bouter, J. Alonso et al. 2018. *COSMIN Methodology for Assessing the Content Validity of PROMs*. Retrieved February 19, 2025. <https://www.cosmin.nl/wp-content/uploads/COSMIN-methodology-for-content-validity-user-manual-v1.pdf>.

Tricco, A.C., E. Lillie, W. Zarin, K.K. O'Brien, H. Colquhoun, D. Levac, et al. 2018. PRISMA Extension for Scoping Reviews (PRISMA-ScR): Checklist and Explanation. *Annals of Internal Medicine* 169(7): 467–73. doi:10.7326/M18-0850.

Upton, D. and P. Upton. 2006. Development of an Evidence-Based Practice Questionnaire for Nurses. *Journal of Advanced Nursing* 53(4): 454–58. doi:10.1111/j.1365-2648.2006.03739.x

Woo, H.M. 2024. Development of a Tool to Measure Slow Nursing for Older Adults in Long-Term Care Hospitals: A Methodological Study. *Korean Journal of Adult Nursing* 36(3): 212–27. doi:10.7475/kjan.2024.36.3.212.

World Health Organization (WHO). n.d. Primary Care. Retrieved May 14, 2024. <https://www.who.int/teams/integrated-health-services/clinical-services-and-systems/primary-care>.

The Future of Registered Nurses in Primary Care: The Patients' Perspectives

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Abstract
This commentary, informed by the lived experience and expertise of two patients, provides insights into the future of registered nurses (RNs) in primary care. The patient perspective is crucial if the healthcare system aims for patient-partnered care to be paramount. This article highlights the envisioned success of an effective partnership between patients and RNs in primary care and illustrates how they can become experts in care together. This reciprocal relationship between the patient partner and the RN demonstrates the importance of combining the expanded role of the RN and patient perspective to drive change in primary care.

Introduction

This commentary is informed by the lived experience and expertise of two patients and provides insight into the future of registered nurses (RNs) in primary care. It explores the partnership between patients and RNs in primary care and discusses implications for nursing leaders, decision makers and educators as an interdisciplinary example of expert patient collaboration.

For many years, Canadians have been fortunate to count on the care of great persons who have left their mark on the history of nursing. Marie de l'Incarnation

comes to our mind in Quebec and Myra Bennett in Newfoundland and Labrador. Even today, nurses make a difference in the lives of many patients by being present in remote areas or in primary care clinics. RNs in primary care, in collaboration with family doctors, are often the gateway to the front line of our health system. Nursing is constantly evolving, just like society and healthcare needs. If RNs fully occupy their scope of practice, they can help improve access to care as well as the continuity and comprehensive care needed to meet current societal challenges such as the aging population, chronic diseases and mental health needs (Lukewich et al. 2022; Mathieu 2019; OIIQ 2014). With these societal challenges, it is required that patients and their loved ones develop their autonomy in their care. The advent of tools to promote access to care, such as telehealth, is another reason to emphasize patient engagement (WHO 2016).

The Partnership of the Patient and the RN in Primary Care

Many factors can influence patients' health outcomes. One important factor is the relationship of trust between patients and nurses (Pozhar et al. 2019; Rørtveit et al. 2015). The literature indicates that without trust, it becomes impossible to effectively meet patients' needs, ensure their satisfaction with nursing care and create a healthy society in the long term (Olshansky 2011).

In our experience, this relationship of trust develops when RNs follow their patients in primary care throughout the continuum of their care. This relationship, initially, is fuelled by patients' need to be listened to, accompanied and understood. The duration of the relationship promotes patient engagement and commitment to their health and wellness. We have observed that the support provided by RNs in primary care allows patients to gradually engage in the changes required to improve their health condition and their life trajectory with illness – changes that they often have difficulty navigating alone. Instead of patients being subjects of care (RNs doing the care for/to them), patients become active partners with RNs in managing their care. This patient engagement comes little by little through small successes, which, when added together, will allow patients to be experts in their care. Patients, by their lived experience, are the true experts in their care journey. RNs in primary care, through helping patients navigate the health system and its varying resources, make them empowered and reinforce their autonomy. Considering patients as "whole" persons, rather than solely treating their illness/ailment, facilitates a connection between primary care RNs and patients that focuses on comprehensive health and wellness. This relationship also empowers RNs in primary care to consider patients more holistically, without believing that their illness defines them. It is essential to consider that the patients are persons who define their own life trajectories through their choices

and engagement in their own care. When RNs in primary care and patients can associate with this humanity, they become true partners in care.

Patients and RNs in Primary Care – Experts Together

Combining both RNs' and patients' expertise is necessary to foster intentional collaboration. This partnership can create meaningful, reciprocal learning between patients and RNs in primary care. Moreover, it creates mutual respect and appreciation for their differing but complementary roles.

By exercising their full scope of practice in accordance with the national competencies for RNs in primary care (CFPNA 2019), RNs in primary care are the experts in providing the knowledge, including explanations, reinforcing therapeutic strategies and demonstrating the use of the necessary equipment for self-management at home (CNA 2015). This knowledge transfer allows patients to integrate the knowledge of RNs in primary care into tangible actions and changes in their everyday lives.

All patients need the autonomy to choose the extent of their involvement in their care, and RNs have an essential role in supporting the level of engagement in care that best fits the patient. This support implies the respect for patients that is developed through their evolving relationship. RNs who develop expertise in patient engagement will respect that, for some patients, not being intensely involved in their care is also a choice.

Indeed, the literature on patient partnership reports different levels of engagement, from information to co-construction (Couturier et al. 2023). The participation and involvement of RNs will be different in these circumstances but just as important and comprehensive. It can be difficult for RNs to shed the expectation of the type of care that "should" be provided to the patient, but meeting patients where they are on their health journey is essential for patient-partnered care. RNs in primary care should value every patient's choice and support them in the process of engaging in their care.

By considering patients as a whole, RNs in primary care can better capture certain aspects of patients' lives and gain a greater understanding of their situation. This allows RNs to make relevant suggestions for extending patients' care, including referring to other services offered within the primary care clinic and beyond. Moreover, RNs in primary care who follow patients' health journeys ensure a smooth transition between care providers and allow services to expertly meet patients' needs (Poitras et al. 2016, 2018).

In our experience of collaboration with RNs in primary care, their knowledge about patients' characteristics also allows the clinic to provide targeted interventions, guiding the clinic's future endeavours to meet the needs of its patient population. For example, if the clinic has many young women, they will deduce that, in a few years, it will be necessary to offer services dedicated to them (e.g., well-women care, sexual healthcare, pre-natal care). They will also be able to plan for future inclusion of services related to menopause and preventative healthcare for aging women.

RNs' scope of practice comprises a teaching and educational role, leading them to engage in prevention and health promotion (CNA 2015). Whether it is cancer screening, sexually transmitted infections, heart disease, diabetes, chronic obstructive pulmonary disease, healthy lifestyle habits or mental health, RNs in primary care are often the first to acknowledge and address these subjects and their importance in patients' overall health and well-being. In particular, prevention promotes access to care by detecting these illnesses promptly and minimizing the associated risks (Pender 2013; Poitras et al. 2018).

Research: Where Patients and RNs in Primary Care Drive Change

As the presence of RNs in primary care promotes access to care and is a key point of entry into the healthcare system, research is needed to support the nursing profession, and patients need education about how these changes can benefit their care.

As patient partners, we have seen too many times that patients are often simply not a part of the equation in research about healthcare and its impacts. What can we do to ensure that patients contribute to and benefit from the outcomes of health research? The key to ensuring patient-oriented research is including patient partners from the beginning (CIHR 2023). For example, we contributed to developing a national training program enabling nurses to integrate Canadian competencies in primary care (CFPNA 2019) and Patient's Medical Home (CFPC 2019) pillars that promote partnership with patients and their families into their practice. Hence, patient involvement in primary care research is constantly growing, and this commentary is another direct example.

As patient partners in primary care research in Quebec and Newfoundland and Labrador, we have provided the patient perspective throughout all aspects of primary care research in our provinces. In Newfoundland and Labrador, Toni Leamon is a long-standing NL SUPPORT Patient and Public Advisory Council member. The council members are experts in viewing projects from a patient perspective, giving guidance and support in patient health literacy and evaluating the success of patient involvement. Toni is also the immediate past-chair of the Canadian Medical Association's Patient Voice group, advocating for patients

nationally. In Quebec, Marie-Dominique Poirier is a music teacher who has lived with chronic pain for many years. She is a patient partner who collaborates with the Quebec Learning Health System Support Unit, the Pôle-PASSERELLE-Hub, the Chaire CRMUS sur les pratiques professionnelles en soins primaires, the Chaire de V1sages (Chaire de recherche du Canada sur la mise en oeuvre de soins intégrés pour les personnes avec des besoins complexes) and the Engage Committee of Université de Sherbrooke. Our seat at the table is no less important than that of the RNs in primary care, researchers, policy makers or government. Our voices represent many healthcare system users who, with patients providing expertise and guidance at the table, will experience more outcomes in research that positively impact their experience with primary care and RNs in primary care.

Educating the Future of RNs in Primary Care

In the current condition of our society, and with the evolution of the RN profession, primary care is becoming increasingly important. For nurses to consider choosing to work in primary care, they need to be exposed to this type of practice right from the beginning of their education (Brzozowski et al. 2023). Nurse educators should explore the role of the RN in primary care with nursing students, promoting a generalist practice where students witness the opportunity to be a part of the patient's life and provide care outside the confines of the hospital setting. In our concurrent primary care and health workforce crisis (Casey 2023; Flood et al. 2023), access to primary care doctors for all patients will likely never be possible. RNs in primary care, by practising to their full scope of practice and role, are an asset to our health system, especially for many of us patients needing support in primary care. When RNs in primary care take leadership and commit to patient-partnered care, patients can feel secure in the quality and continuity of their care. We must consider our approach to primary care access and emphasize the need to access the right professional at the right time for the right reasons. For many of us, the right professional will surely be the expert, supportive and collaborative RN in primary care.

Discussion

Implications (For Nursing Leaders, Decision Makers, Educators)

Including RNs in primary care in the patient care journey is the perfect interdisciplinary example of expert patient collaboration. For nursing leaders, RNs in primary care exhibit the true meaning of nurses contributing their full scope and practising to the complete extent of their role. Not only can RNs feel satisfaction in this autonomy-based practice, but also patients can experience great satisfaction with having care that is comprehensive and familiar, especially when continuity of care is a vital focus.

We implore that decision makers need to understand that patients are craving consistency. With consistent care providers who understand patients as whole persons (not just their designation as patients), we feel that patients can participate and collaborate in their care within their desired level of engagement. Decision makers should consider filling in the gaps in primary care with competent and confident RNs who are experts in patient engagement rather than assuming physicians are the only option. This way, patients will have greater access to primary care. For patients, creating meaningful relationships in care is just as important as the care itself.

Educators need to understand and incorporate the roles and competencies required of RNs in primary care into entry-to-practice education. Without the knowledge of the role and the opportunities that exist in the workforce, how can students be expected to consider it as a career option? We opine that patients' experience with RNs in primary care is also an asset to the education of future nurses. We have seen the effect that nurses can have on a patient's care journey as well as the lived experience and expertise that patients share with nurses. Seeing this can show students the impactful lived outcomes of patient-partnered care.

It has been our experience that educator teams formed with patients as trainers and RNs are efficient in clinical settings to support the empowerment of the RN. A patient-as-trainer's perspective differs from an RN's above literacy, navigating the system, therapeutic education and communication, but this difference is complementary and essential. The patient-trainer is the best person to explain how a strong relationship can improve patients' life trajectory with illness. RNs and patients as trainer teams demonstrate to the decision makers the importance of patients' experiences to reinforce the role of RNs for patients and communities (Morin et al. 2023).

Conclusion

The role of RNs in primary care will continue to expand in the future. Patient partners are the best ambassadors to demonstrate the importance of sustaining RNs in primary care.

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References

Brzozowski, S.L., B. King and L.M. Steege. 2023. Nurses' Perception of Identity, Practice and Support Needed in Primary Care: A Descriptive Qualitative Study. *Journal of Advanced Nursing* 79(9): 3337–50. doi:10.1111/jan.15640.

Canadian Family Practice Nurse Association (CFPNA). 2019. National Competencies for Registered Nurses in Primary Care. Retrieved June 27, 2024. <www.cfpna.ca/>.

Canadian Institutes of Health Research (CIHR). 2023, April. SPOR SUPPORT Units. Government of Canada. Retrieved June 27, 2024. <https://cihr-irsc.gc.ca/e/45859.html>.

Canadian Nurses Association (CNA). 2015. *Framework for the Practice of Registered Nurses in Canada*. Retrieved June 27, 2024. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/Framework_for_the_Pracice_of_Registered_Nurses_in_Canada__1_.pdf>.

Casey, S. 2023, March. *Addressing Canada's Health Workforce Crisis. Report of the Standing Committee on Health.* House of Commons. 44th Parliament, 1st Session. Retrieved February 19, 2025. <https://www.ourcommons.ca/Content/Committee/441/HESA/Reports/RP12260300/hesarp10/hesarp10-e.pdf>.

The College of Family Physicians of Canada (CFPC). 2019. A New Vision for Canada: Family Practice – The Patient's Medical Home. Retrieved June 27, 2024. <https://www.cfpc.ca/en/resources/patient-s-medical-home/a-new-vision-for-canada-family-practice-the-patien>.

Couturier, Y., M.-D. Poirier, M.-E. Poitras and A. Morin. 2023. Par-delà le témoignage : Les patients partenaires comme acteurs de la formation professionnelle continue en soins primaires. In *L'expérience Dans l'innovation en santé: modes éphémères ou nouveau paradigme ? Regards croisés dans l'écosystème de la santé (1ère éd.)*. IST.

Flood, C.M., B. Thomas and E. McGibbon. 2023. Canada's Primary Care Crisis: Federal Government Response. *Healthcare Management Forum* 36(5): 327–32. doi:10.1177/08404704231183863.

Lukewich, J., R. Martin-Misener, A.A. Norful, M.-E. Poitras, D. Bryant-Lukosius, S. Asghari et al. 2022. Effectiveness of Registered Nurses on Patient Outcomes in Primary Care: A Systematic Review. *BMC Health Services Research* 22(1): 740. doi:10.1186/s12913-022-07866-x.

Mathieu, L. 2019. La pleine occupation du champ d'exercices: un leitmotiv en 2019. *Nouvelles de l'OIIQ*. Retrieved June 27, 2024. <https://www.oiiq.org/la-pleine-occupation-du-champ-d-exercice-un-leitmotiv-en-2019?inheritRedirect=true&redirect=%2F>.

Morin, A., Y. Couturier, M.-D. Poirier, V.T. Vaillancourt, S. Massé, A.D. Tardif et al. 2023. The Impact of Patients as Trainers on Registered Nurses' Patient Engagement in Primary Care Clinics: A Qualitative Study. *BMC Primary Care* 24(1): 265. doi:10.1186/s12875-023-02210-6.

Olshansky, E. 2011. Nursing as the Most Trusted Profession: Why This Is Important. *Journal of Professional Nursing* 27(4): 193–94. doi:10.1016/j.profnurs.2011.06.007.

Ordre des infirmières et infirmiers du Québec (OIIQ). 2014. *Optimiser la contribution des infirmières et infirmiers pour améliorer l'accès aux soins, assurer la qualité et la sécurité des soins et contrôler les coûts.* Retrieved June 27, 2024. <https://www.oiiq.org/documents/20147/237836/3417-memoire-commission-revision-programmes.pdf>.

Pender, N.J. 2013. *Health Promotion in Nursing Practice (2nd ed.)*. Appleton & Lange.

Poitras, M-È., M-C. Chouinard, M. Fortin, A. Girard and F. Gallagher. 2016. Les activités des infirmières ouvrant en soins de première ligne auprès des personnes atteintes de maladies chroniques: une revue systématique de la littérature. *Recherches en soins infirmiers* 126(3): 24–37. doi:10.3917/rsi.126.0024.

Poitras, M.-E., M.-C. Chouinard, M. Fortin, A. Girard, S. Crossman and F. Gallagher. 2018. Nursing Activities for Patients With Chronic Disease in Family Medicine Groups: A Multiple-Case Study. *Nursing Inquiry* 25(4): e12250. doi:10.1111/nin.12250.

Pozhar, A., D. Willemin and R.A. Foley. 2019. L'influence de la relation thérapeutique sur l'observance des patients lombalgiques chroniques non spécifiques. *Mains libres*: 29–37.

Rørtveit, K., B.S. Hansen, I. Leiknes, I. Joa, I. Testad and E. Severinsson. 2015. Patients' Experiences of Trust in the Patient-Nurse Relationship – A Systematic Review of Qualitative Studies. *Open Journal of Nursing* 5(3): 195–209. doi:10.4236/ojn.2015.53024.

World Health Organization (WHO). 2016. *Patient Engagement*. Retrieved June 27, 2024. <https://iris.who.int/bitstream/handle/10665/252269/9789241511629-eng.pdf?sequence=1>.

Registered Nurse Leadership in Primary Care: Embracing "Every Nurse a Leader"

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Abstract
The philosophy of "every nurse a leader" recognizes that all nurses possess leadership skills and abilities, emphasizing their role in influencing positive healthcare changes, advocating for patients and advancing the profession. This paper explores leadership as a core competency for registered nurses (RNs) in primary care and examines the opportunities and challenges they face in enacting leadership roles. Key opportunities include optimizing the scope of practice, interprofessional collaboration and policy advocacy. Challenges such as invisibility, workforce factors and financial constraints are addressed, presenting a vision for a future where every RN in primary care is empowered to lead and innovate.

Introduction

The philosophy of "every nurse a leader" emphasizes that leadership potential exists in every nurse, regardless of formal titles or hierarchical positions (Adams et al. 2018). This approach recognizes that every nurse can influence positive change, advocate for patients and contribute to the advancement of healthcare (Manion 2014). This philosophy shifts the perception of leadership in nursing from being a responsibility of a select few to being an inherent part of every nurse's daily practice (Robinson 2014). The evolution of leadership as a core competency for registered nurses (RNs) highlights its importance in delivering effective and patient-centred care, especially within the primary care setting. This paper explores the opportunities and challenges faced by RNs in primary care in enacting leadership roles and presents a vision for the future.

"Every Nurse a Leader"

Every nurse has the capacity to influence the health outcomes of their patients, the effectiveness of their teams and the functioning of the health system. Nurses, often on the front line of healthcare delivery, can identify gaps in care and opportunities for improvement. By fostering a culture where nurses feel empowered to propose and implement innovative solutions, nurses can continuously improve and adapt to changing healthcare needs. Nurses, as leaders, play a pivotal role in fostering cohesive, interprofessional teams that work together to provide comprehensive, patient-centred care (Adams et al. 2018). This collaborative spirit enhances communication, reduces errors and improves overall care delivery (Rawlinson et al. 2021). Embracing the philosophy of "every nurse a leader" entails a commitment to continuous learning and professional development. Leadership skills can be developed and refined through education, mentorship and practical experience.

Situating Leadership as a Core Competency

Leadership is increasingly recognized as a core competency for RNs globally. This recognition spans international definitions/guidelines (ICN n.d.; WHO 2021), national standards within Canada (CCRNR 2018) and primary care-specific competencies (Lukewich et al. 2021). The International Council of Nurses includes nursing leadership as a key element in its definition of nursing (ICN n.d.). The World Health Organization (WHO) also highlights leadership as a critical skill in its *Global Strategic Directions for Nursing and Midwifery* (WHO 2021). They call for strengthening leadership among nurses to achieve universal health coverage and improve health outcomes.

In Canada, leadership is embedded within the national framework for the practice of RNs (CNA 2015) and is an entry-level competency for RN practice. The Canadian Council of Registered Nurse Regulators (CCRNR) outlines entry-level

competencies for RNs in Canada, which include leadership as a key theme. Within the leadership theme, the CCRNR defines 11 leadership competencies, and integration of these competencies contributes to safe, competent and evidence-informed nursing practice (CCRNR 2018).

Within primary care specifically, leadership has further been identified as a key competency domain for RNs. The Canadian Competencies for RNs in Primary Care consist of 47 competencies, organized according to six domains of practice (CFPNA 2019). The leadership domain outlines five competencies, further positioning leadership as a key element of practice for RNs in primary care across Canada. Leadership competencies for RNs in primary care reflect leadership at the level of the individual clinic or team, the health system and the broader society (Mathews et al. 2021). How the leadership competencies are expressed by RNs in primary care may vary by the nature of the nurses' employment, funding model and type of clinic (Mathews et al. 2021). Despite the capacity for leadership among RNs in primary care, they face a myriad of opportunities and challenges to enacting this aspect of their role.

Opportunities for RN Leadership in Primary Care

Optimizing and Expanding Scope of Practice

Scope of practice is defined as the activities nurses are legally authorized, educated and competent to perform, grounded in the knowledge base of the profession (Almost 2021). Legislated scope of practice refers to the outer limits of practice determined by legislation and professional regulation, whereas the actual scope of practice refers to the individual nurses' environment/setting, needs of the clients and nurse competence to perform the activities within the legislated scope of practice (Almost 2021). There is evidence to suggest variation in the scope of practice enactment for RNs in primary care, with some RNs working to their full scope of practice, while other RN roles are dominated by biomedical task-oriented activities (Braithwaite et al. 2022; Norful et al. 2017). In some areas of primary care, nurses are working below their professional full scope of practice, and their current roles are misaligned with the competencies (Braithwaite et al. 2022).

In addition, legislated scopes of practice for RNs are expanding with the addition of new regulatory authority to initiate controlled acts such as psychotherapy and pharmacotherapy prescribing (Almost 2021; CIHI 2022; Moody et al. 2020). This enables RNs to take on more responsibilities, thereby enhancing their leadership role in primary care. Empowering RNs to work to the full extent of their scope of practice and establishing primary care environments where full scope of practice can be enacted can improve access to care and address provider shortages. The

shift toward optimization of the RN scope of practice in primary care and the current and future expansion of the RN legislated scope of practice may present opportunities for RNs to enact their leadership capacity in primary care.

Interprofessional Collaboration

Effective primary care requires collaboration across various health professions (Bouton et al. 2023), and RNs in primary care can leverage their leadership abilities to enhance this interprofessional collaboration. RNs are pivotal in fostering a collaborative environment, working alongside other healthcare professionals, and can proactively coordinate patient care, ensuring that all aspects of a patient's health are addressed comprehensively. This collaboration allows nurses to use their unique skill sets and extensive patient knowledge to deliver holistic care that addresses patient needs and preferences, influences decision-making processes, contributes to the development of care plans and ensures continuity of care, which are fundamental leadership functions. Through effective communication and teamwork, nurses can lead quality improvement initiatives, spearhead efforts to enhance patient safety and implement evidence-based practices. This collaborative approach would not only elevate the standard of care provided but also showcase the critical leadership role that nurses play in driving positive health outcomes.

Policy and Advocacy

Primary care nurses are well-positioned to understand patient needs and the challenges within the healthcare environment. By enacting leadership abilities, they can advocate for changes that enhance patient care, address health disparities and improve community health outcomes (CNA 2009). This involvement allows nurses to leverage their clinical expertise and firsthand experience to shape institutional and public policies that reflect the realities of patient care across various sectors.

Furthermore, leadership in advocacy empowers primary care nurses to serve as champions for their profession and the populations they serve. By participating in professional organizations, health policy forums, public consultations and legislative processes, nurses can raise awareness about critical health issues and advocate for resources needed to deliver high-quality care. This proactive engagement not only elevates the nursing profession but also fosters a culture of collaboration and innovation within the healthcare sector. Through their advocacy efforts, primary care nurses can drive systemic changes that lead to more equitable and efficient healthcare delivery.

Challenges Facing RN Leadership in Primary Care

Invisibility of Primary Care RNs

Although RNs in primary care are well-positioned to enact leadership within their professional roles, the invisibility of nurses within this sector and the public perception of nurses as subservient (Etowa et al. 2024; Lukewich et al. 2021) may jeopardize their ability to enact leadership in practice. In Canada, the term "community health nurse" is often used as an umbrella term that encompasses public health, community health, primary care and homecare nurses (Lukewich et al. 2021). Grouping these unique and distinct groups contributes to the invisibility of primary care nurses, and the lack of distinction between these areas of practice undermines the value of their expertise and their impact on the health system.

The invisibility of RNs in primary care is further exacerbated when RNs are grouped under the umbrella term "nurse." In Canada, the term "nurse" is used to describe four designations of nurses, namely, nurse practitioners (NPs), RNs, licensed practical nurses/registered practical nurses and registered psychiatric nurses. The four designations of nurses each have distinct scopes of practice. The primary care NP role has received much attention in the literature over the past two decades, which aligns with the advancement and integration of this role into Canadian primary care teams. While all nurses are well positioned to support primary care transformation, each designation offers a unique role within the interprofessional team (Brousseau 2024). Given the variation in the respective scopes of practice, it is important to highlight these unique contributions and to further increase the visibility of RNs in primary care.

Invisibility can lead to fewer opportunities for nurses to participate in decision-making processes or to take on leadership roles and can hinder nurses' ability to drive system change (Lukewich et al. 2021). Addressing the invisibility of primary care RNs involves acknowledging their critical role in healthcare, providing opportunities for leadership development, ensuring representation in decision-making processes and fostering a culture that values and recognizes their contributions.

Workforce Factors

The nursing profession is facing significant workforce challenges, including shortages, high turnover and burnout. In 2022, the annual growth rate for the number of RNs in Canada slowed to 1.1%, resulting in shortages that are compounded by the increasing demand for healthcare services with the aging population (CIHI 2024). This exacerbates the challenges of accessing primary care, particularly given the existing shortages of primary care providers (Flood et al. 2023). Nearly

half of the RN participants in a review intended to leave their current position in primary care (Halcomb et al. 2018). Similarly, a recent study conducted in Europe found that over 13% of nurse participants indicated an intention to leave the profession (Maniscalco et al. 2024). In an environment where there are fewer RNs to handle an increasing patient load, RNs may be overwhelmed with day-to-day clinical tasks, leaving them with reduced capacity to engage in leadership responsibilities and activities (e.g., mentoring, political advocacy, quality improvement initiatives). Workforce factors not only affect the delivery of patient care but also impede professional development opportunities, which are crucial for cultivating leadership skills (American Association of Colleges of Nursing 2024). Addressing workforce factors is paramount to empowering RNs to fully exercise their leadership potential.

Financial Constraints

Financial constraints pose a challenge for RNs in primary care seeking to enact leadership roles. Limited funding in healthcare often results in insufficient resources at the level of organizations for professional development, continuing education and leadership training programs. Without access to these essential opportunities, RNs may struggle to build on their foundational leadership knowledge and acquire advanced leadership skills. Financial constraints and budgetary limitations can hinder the implementation of innovative primary care funding models that include RNs and the expansion of RN roles within these models. Consequently, the potential for RNs to drive innovation and improvements in patient care may be diminished. Evidence demonstrating the cost-effectiveness of RN-led initiatives (Lukewich et al. 2022) and advocating for sustained investment in primary care is critical for overcoming these financial challenges. In addition, financial constraints can lead to understaffing and inadequate support systems within primary care settings, further impacting the workforce challenges noted earlier.

Vision for the Future

The vision for the future of RN leadership in primary care involves a transformative shift toward fully integrating and recognizing the critical role that RNs play in healthcare delivery, embracing the philosophy, "every nurse a leader." A positive vision for the future includes a healthcare system where every nurse, regardless of position, is empowered to enact leadership roles, supported by robust professional development opportunities, as well as to being integrated into decision-making processes at all levels. By fostering a culture that values continuous learning, innovation and interprofessional collaboration, RNs in primary care can lead efforts to improve patient outcomes, enhance care quality and address systemic challenges within healthcare. To position every nurse as a leader in primary care, RNs are expected to actively participate in leadership to strengthen their

practice, organization and/or the broader health system. To answer this call, RNs in primary care require psychologically healthy and safe work environments in which they can assert themselves as leaders (Atanackovic et al. 2024).

To realize this vision, it is essential to address the barriers currently hindering RNs in primary care from enacting their leadership skills and abilities. This includes tackling workforce shortages through strategic recruitment and retention initiatives in primary care, advocating for adequate funding to support advanced education and leadership training and ensuring that the unique contributions of RNs in primary care are visible and valued. By creating a supportive and inclusive environment that prioritizes nurse leadership, the healthcare system can benefit from the full spectrum of RN expertise and drive meaningful improvements in patient care and health outcomes. This future vision ultimately positions RNs in primary care not only as caregivers but also as leaders and innovators in the evolving Canadian healthcare landscape.

Conclusion

Every RN in primary care has the potential to advance primary care and the evolution of the health system. Opportunities for RN leadership in primary care include optimizing and expanding scopes of practice, interprofessional collaboration and policy and advocacy. However, challenges such as the invisibility of RNs in primary care, workforce factors and financial constraints must be addressed to enable nurses to enact their leadership skills and abilities. Ultimately, empowering RNs as leaders and innovators will drive meaningful improvements in patient care and health outcomes, positioning them as pivotal figures in the evolving landscape of primary care.

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References

Adams, J., J.S.M. Kennedy, P.R. Ponte and J. Somerville. 2018. *Lead Like a Nurse: Leadership in Every Healthcare Setting*. American Nurses Association.

Almost, J. 2021, February. *Regulated Nursing in Canada: The Landscape in 2021*. Canadian Nurses Association. Retrieved February 18, 2025. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/Regulated-Nursing-in-Canada_e_Copy.pdf>.

American Association of Colleges of Nursing. 2024, May. *Fact Sheet: Nursing Shortage*. American Association of Colleges of Nursing. Retrieved June 25, 2024. <https://www.aacnnursing.org/Portals/0/PDFs/Fact-Sheets/Nursing-Shortage-Factsheet.pdf>.

Atanackovic, J., M. Corrente, S. Myles, H.E. Ben-Ahmed, K. Urdaneta, K. Tello et al. 2024. Cultivating a Psychological Health and Safety Culture for Interprofessional Primary Care Teams Through a Co-Created Evidence-Informed Toolkit. *Healthcare Management Forum* 37(5): 334–39. doi:10.1177/08404704241263918.

Bouton, C., M. Journeaux, M. Jourdain, M. Angibaud, J.-F. Huon and C. Rat. 2023. Interprofessional Collaboration in Primary Care: What Effect on Patient Health? A Systematic Literature Review. *BMC Primary Care* 24(1): 253. doi:10.1186/s12875-023-02189-0.

Braithwaite, S., J. Tranmer, R. Wilson, J. Almost and D. Tregunno. 2022. Measuring Scope of Practice Enactment Among Primary Care Registered Nurses. *Canadian Journal of Nursing Research* 54(4): 508–17. doi:10.1177/08445621211058328.

Brousseau, S. 2024, May 6. Once and for All, It's Time to Recognize That All Nurses Are the Solution to Better Primary Care Access. *Canadian Nurse*. Retrieved June 25, 2024. <https://www.canadian-nurse.com/blogs/cn-content/2024/05/06/nurses-solution-to-better-primary-care-access>.

Canadian Council of Registered Nurse Regulators (CCRNR). 2018. *Entry-Level Competencies for the Practice of Registered Nurses*. Retrieved June 26, 2024. <https://www.ncsbn.org/public-files/ccrnr-rn-entry-level-competencies---2019.pdf>.

Canadian Family Practice Nurses Association (CFPNA). 2019. National Competencies for Registered Nurses in Primary Care. Retrieved June 24, 2024. <https://www.cfpna.ca/copy-of-resources-1>.

Canadian Institute for Health Information (CIHI). 2022. Legislated Scopes of Practice Across Canada: Registered Nurses. Retrieved February 18, 2025. <https://www.cihi.ca/en/legislated-scopes-of-practice-across-canada-registered-nurses>.

Canadian Institute for Health Information (CIHI). 2024, February 29. Keeping Pace With Changing Population Needs. Retrieved June 27, 2024. <https://www.cihi.ca/en/the-state-of-the-health-workforce-in-canada-2022/keeping-pace-with-changing-population-needs>.

Canadian Nurses Association (CNA). 2009. *Position Statement: Nursing Leadership*. Retrieved September 13, 2024. <https://hl-prod-ca-oc-download.s3-ca-central-1.amazonaws.com/CNA/2f975e7e-4a40-45ca-863c-5ebf0a138d5e/UploadedImages/documents/Nursing_Leadership_position_statement.pdf>.

Canadian Nurses Association (CNA). 2015. *Framework for the Practice of Registered Nurses in Canada (2nd ed)*. Retrieved September 13, 2024. <https://www.cna-aiic.ca/en/nursing/regulated-nursing-in-canada/rn-practice-framework2>.

Etowa, J., R. Buckland and J. Wong. 2024. Policy, Politics, and Power in Health Care. In A. Dosani and J.B. Etowa, eds., *Community Health Nursing: A Canadian Perspective* (pp. 20–42). Pearson.

Flood, C.M., B. Thomas and E. McGibbon. 2023. Canada's Primary Care Crisis: Federal Government Response. *Healthcare Manage Forum* 36(5): 327–32. doi:10.1177/08404704231183863.

Halcomb, E., E. Smyth and S. McInnes. 2018. Job Satisfaction and Career Intentions of Registered Nurses in Primary Health Care: An Integrative Review. *BMC Family Practice* 19: 136. doi:10.1186/s12875-018-0819-1.

International Council of Nurses (ICN). n.d. Current Nursing Definitions. Retrieved June 26, 2024. <https://www.icn.ch/resources/nursing-definitions/current-nursing-definitions>.

Lukewich, J., M.-E. Poitras and M. Matthews. 2021. Unseen, Unheard, Undervalued: Advancing Research on Registered Nurses in Primary Care. *Practice Nursing* 32(4): 158–62. doi:10.12968/pnur.2021.32.4.158.

Lukewich, J., S. Asghari, E.G. Marshall, M. Mathews, M. Swab, J. Tranmer et al. 2022. Effectiveness of Registered Nurses on System Outcomes in Primary Care: A Systematic Review. *BMC Health Services* 22(1): 440. doi:10.1186/s12913-022-07662-7.

Manion, J. 2014. Every Nurse a Leader. *Journal of Perianesthesia Nursing* 29(4): 320–23. doi:10.1016/j.jopan.2014.05.002.

Maniscalco, L., M. Enea, N. de Vries, W. Mazzucco, A. Boone, O. Lavreysen et al. 2024. Intention to Leave, Depersonalisation and Job Satisfaction in Physicians and Nurses: A Cross-Sectional Study in Europe. *Scientific Reports* 14(1): 2312. doi:10.1038/s41598-024-52887-7.

Mathews, M., D. Ryan, R. Buote, S. Parsons and J. Lukewich. 2021. Family Practice Nursing in Newfoundland and Labrador: Are Reported Roles Reflective of Professional Competencies for Registered Nurses in Primary Care? *Sage Open Nursing* 7: 1–11. doi:10.1177/23779608211053496.

Moody, E., R. Martin-Misener, J. Carrier, M. MacDonald, K. MacMillan and S. Axe. 2020. The Educational Terrain of Preparing Registered Nurses to Prescribe: An Environmental Scan. *Canadian Journal of Nursing Leadership* 33(2): 54–66. doi:10.12927/cjnl.2020.26237.

Norful, A., G. Martsolf, K. de Jacq and L. Poghosyan. 2017. Utilization of Registered Nurses in Primary Care Teams: A Systematic Review. *International Journal of Nursing Studies* 74: 15–23. doi:10.1016/j.ijnurstu.2017.05.013.

Rawlinson, C., T. Carron, C. Cohidon, C. Arditi, Q.N. Hong, P. Pluye et al. 2021. An Overview of Reviews on Interprofessional Collaboration in Primary Care: Barriers and Facilitators. *International Journal of Integrated Care* 21(2): 32. doi:10.5334/ijic.5589.

Robinson, M.A. 2014. Every Nurse a Leader. *Alberta RN* 70(2): 46.

World Health Organization (WHO). 2021. *Global Strategic Directions for Nursing and Midwifery 2021–2025*. Retrieved February 14, 2025. <https://iris.who.int/bitstream/handle/10665/344562/9789240033863-eng.pdf?sequence=1>.

Commentary: Empowering Primary Care Nurses – Unlocking Access, Enhancing Quality and Addressing Social Determinants of Health

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Introduction

Canadians are facing significant healthcare challenges, including overcrowded emergency rooms, lack of access to primary care (PC) services and an overburdened healthcare workforce. These will require concerted efforts from all levels of government, starting with engaging nurses in the modernization of the Canadian healthcare transformation (Brousseau 2024).

Nurses can help strengthen the health system by improving access to PC and the quality of services by addressing the social determinants of health among vulnerable populations (Poitras et al. 2022) in urban, rural and remote areas, including a range of community health services (Brousseau 2024). Increasing nurse-led PC clinics will expand access care for the population. They assess, prescribe and screen the health of the population, engage in prevention/health promotion activities and provide health education to prevent chronic diseases (Poitras et al. 2022). By providing these multiple services in the community, nurses can also have a significant impact on reducing geographic and economic barriers to PC access (Poitras et al. 2022).

Quality of care is another area where nurses have a significant impact. With their knowledge and expertise in community health services, they provide quality care based on nursing research and clinical reasoning (Hudon et al. 2023). Their ability to provide patient-centred care improves not only health outcomes but also patient satisfaction in providing disease management, prevention and health

promotion information on nutrition, exercise and stress management, thereby reducing the need for emergency care.

Nurses are well positioned to address the determinants of health, such as socio-economic conditions, the physical environment and individual behaviours. They can identify social and environmental risk factors that enhance the health of the people they serve and help implement strategies in line with this intervention. For example, nurses can assess the needs of the population and facilitate access to community resources such as housing services and support groups (Valaitis et al. 2020). This information can influence the choice of interventions and the need to use other community resources. More broadly, PC nurses can advocate for progressive policies that address the social determinants of health to reduce health disparities and improve the lives of vulnerable populations (Poitras et al. 2022).

Recently, the minister of health proposed a new *Canada Health Act* services policy that should include the role of nurses in PC. This policy would help improve patient care by providing better access to a full range of health services within a team of health professionals in the community. Ultimately, it would also help reduce the workload of professionals in emergency departments, thereby improving the overall efficiency of the system and better meet the diverse and complex needs of the population (Lukewich et al. 2022; Karam et al. 2021; Valaitis et al. 2020).

In conclusion, politicians at all levels of government are urged to think outside the box and support investment in public nurse-led clinics in PC areas to improve the quality of care – a more sustainable and equitable health system for all Canadians. Enough talk, it is time for real and concrete action.

References

Brousseau, S. 2024, May 6. Once and for All, It's Time to Recognize That All Nurses Are the Solution to Better Primary Care Access. *Canadian Nurse*. Retrieved Febryary 14, 2025. <https://www.canadian-nurse.com/blogs/cn-content/2024/05/06/nurses-solution-to-better-primary-care-access>.

Hudon, C., M. Bisson, M.-C. Chouinard, A. Delahunty-Pike, M. Lambert, D. Howse et al. 2023. Implementation Analysis of a Case Management Intervention for People With Complex Care Needs in Primary Care: A Multiple Case Study Across Canada. *BMC Health Services Research* 23: 377. doi:10.1186/s12913-023-09379-7.

Karam, M., M.-C. Chouinard, M.-E. Poitras, Y. Couturier, I. Vedel, N. Grgurevic et al. 2021. Nursing Care Coordination for Patients With Complex Needs in Primary Healthcare: A Scoping Review. *International Journal of Integrated Care* 21(1): 16. doi:10.5334/ijic.5518.

Lukewich, J., R. Martin-Misener, A.A. Norful, M.-E. Poitras, D. Bryant-Lukosius, S. Asghari et al. 2022. Effectiveness of Registered Nurses on Patient Outcomes in Primary Care: A Systematic Review. *BMC Health Services Research* 22(1): 740. doi:10.1186/s12913-022-07866-x.

Poitras, M.-E., V.T. Vaillancourt, A. Canapé, A. Boudreault, K. Bacon and S. Hatcher. 2022. Culturally Safe Interventions in Primary Care for the Management of Chronic Diseases of Urban Indigenous People: A Scoping Review. *Family Medicine and Community Health* 10(Suppl 1): e001606. doi:10.1136/fmch-2022-001606.

Valaitis, R., L. Cleghorn, J. Ploeg, C. Risdon, D. Mangin, L. Dolovich et al. 2020. Disconnected Relationships Between Primary Care and Community-Based Health and Social Services and System Navigation for Older Adults: A Qualitative Descriptive Study. *BMC Family Practice* 21: 69: doi:10.1186/s12875-020-01143-8.

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