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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

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Primary care serves as the initial point of contact for patients and involves the delivery of comprehensive and coordinated care tailored to individual needs across various health and social contexts and throughout the lifespan (Jimenez et al., 2021; National Academies of Sciences, Engineering, and Medicine, 2021). In most countries, registered nurses (RNs) do not require preparation beyond entry-to-practice education, such as an undergraduate baccalaureate degree, to work in primary care (Barrett et al., 2021). Worldwide, most nursing education programs at the baccalaureate-level have not prioritized the integration of primary care–specific content into curriculum and have remained heavily focused on preparing students to work in acute care (Calma et al., 2019; Curnew et al., 2023). To date, nurse practitioners (NPs) have been the focus for nursing practice in primary care (Grant et al., 2017), with primary care education being mainly integrated into NP graduate-level training (e.g., nursing programs in Canada offer a primary health care nurse practitioner program). In Canada, the lack of education focused on primary care within the undergraduate curriculum limits the role of nurses and leaves them feeling unprepared when they enter the primary care setting. There are also notable gaps in post-licensure continuing education opportunities for the primary care nursing workforce. This hinders RNs' commitment to their work, can make the care they offer suboptimal, and reduces patients' engagement in their care (Lukewich et al., 2019, 2021). Nurses represent the largest group of regulated health professionals in Canada, and the second-largest workforce in primary care (with physicians being the largest) (Oelke et al., 2014; Registered Nurses' Association of Ontario, n.d.). Therefore, a lack of education for primary care roles is a deficiency that must be corrected to support quality care (Lukewich, Martin-Misener, et al., 2022; Lukewich et al., 2018; Poitras et al., 2018).

The purpose of this environmental scan was to identify post-licensure education programs available to nurses in primary care across Canada. Findings from this study informed the development and implementation of a Canadian post-licensure education program for RNs in primary care that aligns with the Canadian Family Practice Nurses Association (CFPNA) Canadian competencies for RNs in primary care (CFPNA, 2019) and the College of Family Physicians of Canada (CFPC) Patient's Medical Home (PMH) model (CFPC, 2019).

Continuing education is defined as ongoing learning through formal programs that are aimed at enhancing knowledge, skills, and/or attitudes to improve practice, patient care, policy, and research (Gallagher, 2007). As health care systems shift towards interprofessional teams as the optimal model for primary care delivery (Hutchison et al., 2011; Peckham et al., 2018; World Health Organization, 2020), RNs are becoming increasingly central to the overall functioning of primary care (Freund et al., 2015). Recent evidence demonstrates that RNs form the core of primary care teams, engage in a wide range of responsibilities (e.g., screening, case management, prescribing; Poitras et al., 2018), and can provide effective, quality care that is equivalent to or better than that delivered by other providers (Lukewich, Asghari, et al., 2022; Lukewich, Martin-Misener, et al., 2022). Despite the importance of this role, many studies have identified suboptimal integration of RNs and underuse of their scope of practice in primary care (MacLeod et al., 2019; Norful et al., 2017; Oelke et al., 2014). RNs working within Canadian primary care settings often feel as if they are practising in isolation within their clinic and/or jurisdiction, and a clear understanding of their roles and expectations within these settings is lacking. There remains a notable lack of primary care–specific content in Canadian undergraduate curriculum, as well as a lack of access to formalized post-licensure training (Calma et al., 2019), often resulting in nurses seeking out their own professional development in areas that relate to primary care but were not designed with the intention of training primary care RNs (Barrett et al., 2021). There is a need to support the continuing education of RNs in primary care to enhance their professional identity,

highlight their value in primary care, contribute to improved patient care, and strengthen overall comprehensive team functioning (Canadian Nurses Association, 2014; Lukewich et al., 2021; Mlambo et al., 2021). Standardized education intentionally developed for RNs in primary care that provides an informed understanding of their roles, required knowledge and skills, and professional scope of practice in primary care is fundamental to supporting RN professional practice in this setting and realizing the benefits of team-based care (Almost, 2021; Rawlinson et al., 2021; Sirimsi et al., 2022).

To guide primary care nursing education and practice in Canada (also known as family practice nursing), the CFPNA developed national competencies for RNs in primary care (CFPNA, 2019; Lukewich et al., 2020). This framework consists of 47 competency statements organized within six domains—namely, professionalism; clinical practice; communication; collaboration and partnership; quality assurance, evaluation, and research; and leadership. These competencies are unique to the primary care practice setting and outline the expected knowledge and skills for RN practice in primary care. The Canadian competencies for RNs in primary care have also been included as a framework to situate the PMH model pillars within a nursing context. The PMH model consists of 10 pillars that identify areas on which primary care practices should focus to enhance the overall functioning of team-based health care delivery (CFPC, 2019). These pillars highlight system-level factors (i.e., funding, infrastructure, connected care) and foundations in patient care delivery (i.e., connected care, accessible care, community-focused care, team-based care, continuity of care, patient- and family-partnered care) that contribute to the PMH model vision for sustainable primary care delivery. Pillars related to data/measurement, quality improvement, research, and continuous education/professional development are essential to the ongoing delivery of care that is embedded in the PMH model. These frameworks are key to recognizing primary care nursing as a unique specialty within the larger team-based context of primary care (Ortiz, 2020). These frameworks have the potential to guide primary care nursing education and program development and should be directly considered in future education plans for RNs in primary care.

Methods

Design

We conducted an environmental scan to identify and describe the attributes of post-licensure education available to RNs in primary care across Canada. An understanding of what exists sets the groundwork for post-licensure primary care nursing education development in Canada. The scan consisted of two components: (a) a literature review and (b) expert consultations (Charlton et al., 2021). We first analyzed data from the two components separately, then synthesized common themes and patterns and examined them together to allow for a comprehensive understanding of the findings, representing both scholarly data and expert opinions and experiences. We used Covidence software for the literature review to manage references and facilitate a team approach to article screening and selection (Veritas Health Innovation, 2023).

Literature Review

Search Strategy

The literature review included searches of both published and unpublished literature. For published sources, we developed a search strategy of academic research databases in collaboration with a librarian. We conducted a comprehensive search of CINAHL Plus and MEDLINE (via

EBSCOhost) using targeted keywords and controlled vocabulary (e.g., "patient medical home," "professional development," "nurse," "primary care"). Individual search strings were then adapted for each database. We collected unpublished grey literature from Google Scholar and national and provincial website searches of academic institutions (e.g., Michener Institute of Education at UHN), academic-related organizations (e.g., Canadian Association of Schools of Nursing), government health care organizations (e.g., Health Canada), health care authorities (e.g., Alberta Health Services), professional associations (e.g., Canadian Nurses Association, Association of Family Health Teams of Ontario), and nursing regulatory bodies (e.g., College of Nurses of Ontario). We identified additional articles through searches of the reference lists of included published articles. No date limits were applied, and sources in both English and French were included. We conducted initial database and grey literature searches in December 2022 and ongoing searches for grey literature through April 2023.

Selection Criteria

Studies considered for inclusion reported on any post-licensure program available to RNs and NPs involving high-level or macro-level primary care education that had properties related to CFPNA competencies for RNs in primary care and/or PMH model pillars. To be included, programs had to align with the concept of broader, community-based primary care, as defined by its four core functions: first contact, comprehensiveness, coordination, and continuity (Jimenez et al., 2021). We did not include education programs specific to other areas of community health, such as home health, public health, or long-term care. Similarly, we did not include programs situated within community health delivered in rural/remote settings. To ensure findings remained consistent with the study purpose, programs available to other nursing designations (e.g., licensed practical nurses/registered practical nurses [LPNs/RPNs]) were not included. While LPNs/RPNs play an integral role in primary care settings across Canada, this designation has an educational pathway and scope of practice that is considerably different from that of RNs and NPs (i.e., narrower in scope). Post-licensure education exclusive to LPNs/RPNs is likely to reflect competencies that would be part of the entry-level competency profile of RNs and, therefore, would not advance the study purpose. This environmental scan also focused exclusively on post-licensure programs as little is known about post-licensure programs specific to primary care. Additionally, a previous study has examined the extent to which competencies for RNs in primary care were integrated into Canadian undergraduate programs (Lukewich et al., 2023) and a scoping review examining the extent to which primary care–specific content is included in Canadian undergraduate programs is underway (Curnew et al., 2023). Specific inclusion/exclusion criteria are summarized in Table 1.

Table 1

Selection Criteria Applied to Article Screening

Inclusion	Exclusion
Programs involving high-level and macro-level primary care education	Specialized education or activity-focused programs for nurses in primary care (e.g., diabetes, palliative care, wound care)
Programs that have properties related to primary care RN competency domains and/or CFPC PMH model pillars	Curricular programs from academic institutions (i.e., master's- and doctoral-level programs)
Education programs available to RNs and NPs (either nursing-specific or interdisciplinary with nursing component)	Programs available to interdisciplinary team members without a nursing-specific component
English and French sources	Programs available to non-licensed professionals
Programs originating from and delivered within Canada only	Programs available to nurses in Canada but delivered from an international institution/organization
Active or inactive programs, and/or programs in development; inactive programs are those that were previously implemented but are no longer being offered and/or are on hold	Potential programs or programs discussed broadly/theoretically that are not currently in development

Eligibility Screening

We conducted a pilot screening of database and grey literature sources in which two members of the research team independently screened the same subset of articles (n = 5 randomly selected articles retrieved from the initial database search) or relevant websites from Ontario and Quebec (e.g., Ordre des infirmiers et infirmières du Québec, Registered Nurses' Association of Ontario). Reviewers then discussed discrepancies or disagreements and refined the selection criteria to increase clarity (e.g., definitions for active and inactive programs were updated).

Data Extraction

Data from each source were entered into a shared spreadsheet and four researchers (CV, DB, DR, and MG) shared extraction responsibilities. Extracted data included program details (e.g., description and composition, delivery source, time commitment, recognition, costs/funding support, availability, presence of accreditation), the program's relevance to guiding frameworks (i.e., which specific CFPNA competencies and/or PMH model pillars were addressed), and program contact information for consultations and follow-ups with experts.

Data Analysis

Data related to the components of each program were summarized and grouped according to the type of program, content delivered, targeted skills/knowledge, CFPNA competencies for

RNs in primary care and/or PMH model pillars, and methods of administration. Patterns in elements of the continuing education programs (e.g., delivery method, composition) were identified to inform future primary care nursing education. Narrative summaries were used to describe the gaps in post-licensure primary care nursing education within Canada and the differences in primary care nursing education across provinces. Experts in the field were contacted by email and asked to verify data retrieved from the literature review for accuracy and to identify any additional sources that met eligibility criteria.

Expert Consultations

The expert consultation component of the environmental scan involved key informant consultations (during an in-person key stakeholder meeting) and an electronic questionnaire sent to primary care nurses (i.e., RNs) and administrators. Key informants across all Canadian provinces were identified through the literature search, additional online searches, and the professional networks of research team members. Key informants had expertise in primary care, nursing, and/or continuing education within nursing practice and included nurses in primary care, nurse administrators, policymakers, professors/nurse educators, and regulator representatives. First, an in-person key stakeholder meeting was held in January 2023 (Montreal, Quebec) that brought together primary care nurses, nurse researchers, policymakers, patient partners, and nurse educators. One objective of this meeting was to identify training gaps and needs for primary care nurses in Canada and begin the development of a Canadian continuing education program for RNs in primary care (Team Primary Care, 2023). To further build on the findings of the literature review and the in-person key stakeholder meeting, an electronic questionnaire in English and French (via Qualtrics) was sent to RNs in primary care and administrators from the CFPNA executive and membership through electronic mailing lists to gather additional data on available education programs and identify factors that support/hinder nurse involvement. Respondents were asked to identify their province and practice setting, describe any education programs required or recommended by their primary care organization that are specific to their role as a nurse in primary care, and identify any factors that facilitate or hinder their ability to participate in these education programs. Participants were also given an opportunity to provide suggestions regarding education that they would like to see developed at a local, provincial, and/or national level to better support their role in primary care. Questions were open-ended and data were categorized into overarching themes and presented narratively.

Ethical Considerations

Ethics approval to conduct the electronic survey was obtained through Newfoundland and Labrador's Health Research Ethics Board (File Number 20231339).

Results

Literature Review

The initial database search yielded 320 published sources and numerous grey literature sources that were screened independently by four members of the research team (CV, DB, DR, and MG). A total of 10 unique programs were identified across 12 published and grey literature sources (George Brown College, n.d.; Government of Canada, 2019; Lees, 1973; Magee & Malloy, 2011; Michener Institute of Education at UHN, n.d.; Nova Scotia Health Learning Institute for Health Care Providers, 2023; Oandasan et al., 2010; Poitras, n.d.; Poitras et al., 2022; S. Epp, personal communication, January 10, 2023; University of Northern British Columbia, n.d.;

University of Toronto, 2023) (Table 2). At the time of data analysis (April 2023), six of these programs were currently active, two were no longer active, and two were in development. Six of the programs focused exclusively on RNs, one program was targeted at NPs, and three programs were available for nurses of any regulatory designation. Nine of these programs were offered at a provincial level (Ontario = 4, Quebec = 2, British Columbia = 2, Nova Scotia = 1) and one program was offered at a national level—namely, the primary care nurse program offered by the Canadian Armed Forces (Government of Canada, 2019).

Table 2

Overview of the Primary Care Education Programs Identified in the Literature Search

Name of program, province	Institution/ organization	Program description	Delivery method	Length of program	Education type	Recognition	Status	Eligibility
Post-RN Certificate Program in Family Practice Nursing [a,b] Ontario	George Brown College	Participants learn from other professionals and practise within a team-based clinical environment to develop competencies related to health promotion, primary prevention, and chronic disease management and apply best practices related to quality management and e-health	Combination of synchronous and asynchronous Virtual and in-person	Takes place over 2 semesters in 1 academic year Full-time	Theory and clinical	Ontario college graduation certificate	Inactive	Must be a RN in Canada interested in entering primary care or seeking to advance knowledge in this area
Advanced Health Assessment and Clinical Reasoning in Primary Health Care: A Review for Nurse Practitioners [c] Ontario	University of Toronto	Course offers a focused review of advanced health assessment, with an emphasis on clinical reasoning and decision-making skills required to accurately assess and diagnose clients across the lifespan	Asynchronous (with exception of 1 class during 1st week) Virtual	7 weeks (5 weeks of course work and 2 weeks of evaluation)	Case studies, clinical and theory	Certificate of completion	Active	Must be a NP or a NP student
Adult Physical Assessment—Virtual Sessions [d] Ontario	Michener Institute of Education at University Health Network	Course offers an interactive review of primary and secondary assessment skills as they apply to various settings of care, including a case-based simulation to teach participants the appropriate assessment approach	Synchronous Virtual	1-day course	Case-based simulation	Certificate of completion	Active	Available to anyone; intended for nurses working in hospital or clinic settings

Physician Time-Saving by Employment of Expanded-Role Nurses in Family Practice [e] Ontario	Queen's University	In-service training and supplementary formal instruction offered to RNs to expand their skills and enable them to undertake prescribed procedures	Synchronous In-person	In-service training (time not specified), plus 30 hours at Queen's University	Clinical training and theory-based in-class lectures/ seminars	Not applicable	Inactive	Available only to RNs working in 5 designated family practices in Kingston, Ontario
Family Practice Nursing Education Program [f,g] Nova Scotia	Registered Nurses Professional Development Centre	A performance-based program using a conceptual learning approach that supports RNs to advance their clinical judgement, critical thinking, and clinical leadership in family practice and is designed to prepare RNs to work in primary health care settings	Synchronous Virtual and in-person	16 weeks (including 150 hours of clinical placements) Full-time	Theory, simulation, and clinical using a conceptual learning approach	Post-licensure specialty certification	Active	Must be licensed RN and have completed education program in immunization competencies and basic life support Must also have support from employer and access to a primary care site for clinical placement
Expanded Train-the-Trainer Educational Intervention in Primary Care [h] Quebec	Université de Sherbrooke	Training program to support the implementation and deployment of RN practice guideline using a train-the-trainer approach for RNs in clinical primary care settings	Combination of synchronous and asynchronous Virtual and in-person (the training of teams of trainers occurs online and the clinical trainers then coach other RNs in	4-hour program in addition to co-development meetings that take place over 6 months Individual or group coaching sessions are also offered by the team of trainers over a	Theory, activities based on clinical simulation, and mentorship /coaching in clinical settings	No certification but course will be counted towards nurses' continuous development time	In develop-ment	RNs employed by pre-determined primary care clinics. Will be expanded beyond this after program is piloted

			clinical settings)	period of 6 months				
Continuous Professional Development Toolkit: Shared Decision Making for Patients with Complex Care Needs [i] Quebec	Université de Sherbrooke	Dissemination kit for shared decision making centred on patient decision-making needs for primary care professionals involved in patient-centred care	Asynchronous Virtual	1-hour course	Theory, clinical simulation	Education credits	Active	Designed for nurses in family medicine groups in Quebec, but nurses in any other jurisdiction can access the content and complete the course
Remote Nursing Certified Practice [j] British Columbia	University of Northern British Columbia	Course is designed for nurses working, or planning to work, in remote communities throughout British Columbia and explores theories, concepts, and principles foundational to primary care nursing practice	Asynchronous Virtual (except 1 week of in-person practice workshops and examination)	16–18 weeks (course length varies) Self-paced; recommended 20–25 hours per week	Theory	Counts as a 6-credit course	Active	RNs working or planning to work in remote communities throughout British Columbia
Post-Basic Certificate in Primary Care Nursing [k] British Columbia	University of British Columbia Okanagan	Details regarding program content currently not known as course is in development	Not stated Virtual and in-person (course is online, but there will be a practicum component to take place locally)	10-credit course; time will be variable	Not stated	Non-credit micro-credentials	In develop-ment	RNs across Canada

Primary Care Nurse [l] National	Government of Canada	Course covers administrative duties, standards of care, and nursing roles and focuses on primary care in the military	Synchronous (mostly) Virtual	3–4 weeks	Not stated	Not stated	Active	Course is targeted at members of the Armed Forces; civilian nurses who work in Canadian Armed Forces Medical Clinics can also take this course

[a] George Brown College (n.d.). [b] Oandasan et al. (2010). [c] University of Toronto (2023). [d] Michener Institute of Education at UHN (n.d.). [e] Lees (1973). [f] Nova Scotia Health Learning Institute for Health Care Providers (2023). [g] Magee and Malloy (2011). [h] Poitras et al. (2022). [i] Poitras (n.d.). [j] University of Northern British Columbia (n.d.). [k] S. Epp, personal communication, March 10, 2023. [l] Government of Canada (2019).

All programs offered high-level and macro-level primary care content that was generally tailored to specific areas of primary care practice (e.g., health assessment, clinical judgement, chronic disease management) or specific communities or environments (e.g., the Canadian military). Only one program, namely the Post-Basic Certificate in Primary Care Nursing (in development) was contextualized specifically to nursing practice. The Advanced Health Assessment and Clinical Reasoning in Primary Health Care: A Review for Nurse Practitioners was the only program that was targeted specifically at NPs. This program is a certificate course that is not a part of the standard curriculum for obtaining a NP degree/diploma and can be taken by practising NPs. The extent to which the content of these programs aligned with the relevant guiding frameworks varied considerably and at times was difficult to determine. There were no identified programs that explicitly aligned with or applied either of these well-established frameworks. Of the PMH model pillars, patient- and family-centred care; training, education, and continuing professional development; and measurement, continuous improvement, and research were the most commonly addressed. With respect to the Canadian competencies for RNs in primary care, the domains most commonly covered in these education programs were clinical practice and leadership.

The majority of the programs offered virtually only (n = 5) or a hybrid of virtual and in-person learning (n = 4), with only one program (i.e., Physician Time-Saving by Employment of Expanded-Role Nurses in Family Practice, Queen's University; Lees, 1973) delivered entirely in-person. Programs consisted of both synchronous and asynchronous modes of delivery, with some programs (n = 3) offering a combination of both, based on the specific course components. Programs involved self-directed learning modules, clinical placements, professional mentors, workshops, and/or resource toolkits. Most programs contained both theory and clinical components (n = 7), many of which involved case studies and clinical-based simulation as a learning approach. The Train-the-Trainer Educational Intervention in Primary Care identified in Quebec (Poitras et al., 2022) was the only program that mentioned the use of mentorship/coaching. Programs also varied in length, with the completion time ranging from 1 hour to approximately 8 months (described as two semesters of an academic year). Three of these educational opportunities consisted of training that was 1 day or less (i.e., Adult Physical Assessment; Expanded Train-the-Trainer Educational Intervention in Primary Care; Continuous Professional Development Toolkit: Shared Decision Making for Patients With Complex Needs). The majority of programs offered either a certificate (n = 4) or education credits associated with the participant's institution upon completion (n = 2). The Post-Basic Certificate in Primary Care Nursing plans to offer micro-credentials through the University of British Columbia Okanagan (S. Epp, personal communication, March 10, 2023), whereas the Expanded Train-the-Trainer Educational Intervention in Primary Care program plans to allow the program to be counted towards a nurses' professional development time (Poitras et al., 2022) (currently in development).

Expert Consultations

In-Person Key Stakeholder Meeting

Approximately 20 key stakeholders from various provinces across Canada met during an in-person facilitated meeting in Montreal, Quebec. This was a bilingual meeting with professional translation services. During the meeting, findings from the literature review were presented, and the findings were further confirmed and validated with participants. Furthermore, training gaps related to primary care nursing, such as an absence of clarity around the nursing scope of practice in primary care, limited integration of the social determinants of health and patient

experiences/perspectives, and the lack of a nationally relevant continuing education program specific to primary care nursing, were discussed and various topics were identified as being fundamental to address/highlight in a national education program for RNs in primary care (e.g., exemplars of how competencies for RNs in primary care are actualized in primary care practice, social determinants of health, scope of practice clarity, nursing leadership in primary care, psychological safety, patient engagement).

Electronic Questionnaire

A total of 63 respondents completed the electronic questionnaire. Participants resided in one of six provinces across Canada: Quebec (n = 24), British Columbia (n = 14), Alberta (n = 13), Nova Scotia (n = 7), Manitoba (n = 3), and Ontario (n = 2). The majority of respondents classified their practice setting as a family health team, community health centre, primary care network, or family medicine group (in Quebec) and used various terms such as NP-led clinic, medical home, and team-based family practice clinic to describe the setting. Required education for nurses in primary care differed between and within provinces, and the majority of respondents indicated that there was no required education beyond entry-to-practice preparation (e.g., baccalaureate degree in nursing). In some cases, specific employers required nurses to complete courses (e.g., required as part of orientation); however, these were generally skills focused or specialized to a particular area (e.g., mental health, immunizations, prenatal care). Respondents noted having completed only one program that aligns with the programs identified in the literature review, which was the Family Practice Nursing Education Program offered for RNs in Nova Scotia (Nova Scotia Health Learning Institute for Health Care Providers, 2023). While questionnaire respondents alluded to or indirectly referenced other programs identified in the literature review, they did not explicitly name these programs. No high-level or macro-level educational programs not identified in the literature review were offered in response to the questionnaire.

Respondents identified key factors that supported or hindered their ability to participate in education specific to their role as a nurse in primary care, which included the time it takes to complete the program, the costs associated with the program, organizational factors, program availability and accessibility, the specific content of the course, and awareness of educational needs (Table 3). When participants were asked to describe what education they would like to see developed at the local, provincial, and/or national level to support their role in primary care, respondents highlighted a gap in available training at a national level that could provide RNs with a standardized, unified approach to enhance role clarity and networking opportunities among RNs working in primary care across the country. While the value of macro-level education was expressed, participants also communicated the importance of program topics or components that account for individual contexts, such as geography, work experience, and educational level. A variety of suggestions were made as to the ideal mode of program delivery, including webinars, in-person meetings, and virtual platform modalities, but ensuring high levels of accessibility was cited as the most important factor (e.g., multiple start dates, times, and virtual/asynchronous options). Respondents prominently expressed the need to tailor education to the nurses' role in primary care, as a lack of role definition and understanding from the perspectives of providers, patients, and nurses themselves was identified as an area in need of further development. This demonstrates the need for an education program that is representative of a nurse's scope of practice and unique contributions within the primary care setting to enhance patient experiences and support collaborative team-based care.

Table 3

Factors That Influence Nurses' Abilities to Participate in Primary Care Education

Influencing factors identified by respondents (n = 63)
Time (n = 46)[a]
• Difficulties getting time off work (e.g., staffing issues, busy workload)
• Being able to complete the program/course during work time/education days
• Time commitment required to complete training (work–life balance, energy)
• Having to complete program/course on personal time
Cost (n = 25)
• Securing funding/financial assistance from clinic/managers to cover program cost
• Incurring costs associated with training programs
• Difficulties getting reimbursed
Organizational factors (n = 20)
• Organizational/managerial/colleague support needed
• Need for organizational planning to meet educational enrollment deadlines
• Practice model (e.g., private practice versus larger team-based clinic)
• Need to secure employment with a clinic before eligible for training
• Ongoing changes in governance at clinic
Program availability and accessibility (n = 12)
• Availability of programs (e.g., inactive, only provided at certain times of year)
• Availability of virtual options (i.e., programs delivered in-person only)
• Having to travel to complete courses in-person (e.g., geographical/rural factors)
• Lack of necessary equipment (e.g., laptops)
• Wait lists/waiting times to enroll in programs
Course content (n = 10)
• Education not focused or well adapted to nursing and/or primary care specifically
• Lack of programs around roles/responsibilities
• Need for competent trainers
• Lack of consolidated educational resources
Understanding educational needs (n = 4)
• Awareness of what opportunities are available/beneficial
• Lack of clear requirements regarding needs for primary care nursing education
• Lack of understanding of primary care role and scope of practice

[a] Open-ended question responses were categorized into overarching themes. Total participants in each category reflects the number of respondents who identified theme as a supporting/hindering factor to participating in primary care education (will not total to number of survey respondents).

Discussion

Despite primary care reforms moving towards team-based models of care that incorporate more RNs, there is a considerable gap in the education and training available to this workforce. This study identified post-licensure education available to nurses in primary care across Canada. While various programs were found, most focus on certain areas of primary care clinical practice (e.g., skills-based), are only available within specific jurisdictions/provinces (e.g., Quebec, Nova Scotia), or are delivered to a select group of nurses (i.e., Armed Forces or civilian nurses).

Nurses in primary care have identified a lack of education as a barrier to role enactment, which often forces them to work within a limited scope of practice (Busca et al., 2021). Physicians and other providers often lack clarity surrounding nursing roles and their scopes of practice, which has affected the ability of nurses to practise collaboratively in team-based care (McInnes et al., 2015). Moreover, given time constraints and a lack of prioritization of the need for primary care training at the organizational or system level, there remains little incentive for nurses to gain additional training in primary care. Organizations need to recognize the importance of primary care–specific training for nurses and incentivize further credentialing/certification in this area by offering funding and protected professional development time or increasing awareness of available opportunities. Appropriate education for nurses and strengthened ability to clarify their roles may support more fluid transitions into primary care teams (Canadian Interprofessional Health Collaborative, 2010; Poitras et al., 2018). This has the potential to improve workplace efficiency by allowing RNs to practise to their full scope and delegate tasks/activities when indicated, in turn improving the quality of patient care (Besner, 2006; Nelson et al., 2014).

Notable gaps in education for RNs in primary care are highlighted by the study findings. For example, there is a need for educational programs to situate frameworks such as the PMH model within a nursing context to recognize nursing as a unique discipline within primary care. Additionally, it is necessary for national training to be offered in both English and French (the official languages of Canada). RNs in Quebec, a primarily francophone province, compose the second-largest provincial population of RNs in Canada (behind Ontario), accounting for 21.4% of the Canadian RN workforce in community health settings (which encompasses primary care) (Canadian Institute of Health Information, 2021). There is a need for continuing education programs to be available in both official languages in Canada to serve the population of nurses in Quebec and other French-speaking nurses. As well, preceptorship in primary care settings is a component of education that has been challenging to offer in many areas. Preceptorship in primary care has been seen to reduce the time available for direct care (by the mentor) and increase financial demands on the system (Corbett & Bent, 2005; Walker & Norris, 2020), in addition to other limiting factors, such as low numbers of available mentors and placements (Albutt et al., 2013). However, evidence recognizes preceptorship as a valuable component for the transition of new nurses into practice (Whitehead et al., 2013) and for nurses as they transfer from another practice setting into primary care (Ashley et al., 2018). Preceptorship was a component of certain identified programs, such as the Post-Basic Certificate in Primary Care Nursing in British Columbia (S. Epp, personal communication, March 10, 2023).

Participants in the study expressed the need for a national standardized program for primary care nursing education, while also highlighting the importance of education that is applicable to their individual practice contexts. A standardized program that incorporates the unique roles and scopes of practice of nurses in primary care, as outlined by the PMH model pillars and Canadian competencies, can be applied broadly but adapted to individual settings and tailored

to different provincial/territorial health system contexts. Standardized education has shown many benefits to patients, providers, and the health system. For example, previous studies of region- or setting-specific standardized education have shown that such programs led to the delivery of high-quality evidence-based nursing care, improved confidence and perceived competency among nurses, reduced costs (by sharing educational materials), and reduced time devoted to theory-based education during orientation (Calder et al., 2022; Siju et al., 2021). Additionally, certain programs, such as those delivered by post-secondary institutions (e.g., Australia, United Kingdom), provide primary care–specific education that is available to nurses at a national level in recognition of the aforementioned benefits (Barrett et al., 2021).

While a national, standardized education program may not address all the challenges inherent within nursing professional practice in primary care, it would serve as a strategic approach to better equip nurses and clarify their professional role within this setting. There is evidence that increasing content specific to primary care in undergraduate nursing curricula enhances confidence and intention to pursue a career in this environment (Calma et al., 2022). In addition, new graduate transition-to-practice or fellowship programs that offer structured support and mentorship can further contribute to supporting nurse preparation in primary care practices and improve quality of care delivery, confidence, practice autonomy, and team collaboration (Park et al., 2022). Mentorship programs have also been shown to play a role in helping newly placed RNs adapt to the novel working environment and broader skill set required in a primary care setting (Fuller et al., 2015). These strategies should be explored and implemented as a means to complement the theoretical knowledge gained through standardized education and inform the development and expansion of these educational programs (Curnew et al., 2023). Together, these strategies can work to bridge the gap between education and practice as an integrated approach towards the professional development of RNs in primary care.

To address the need for standardized education, the authors of this paper led a national initiative to develop post-licensure education for RNs in primary care that is based on the Canadian competencies for RNs in primary care and the PMH model (launched in April 2024) (CFPNA, 2023). Centring education around these frameworks should foster nurses' development of skills (e.g., collaboration, communication)—an area of skill development that is lacking but has been found to influence primary care delivery internationally (Organisation for Economic Co-operation and Development, 2020). The program involves a unique delivery method that differs from identified programs. It offers asynchronous learning through a digital learning environment, which is also available through a mobile application (i.e., m-learning) to allow for flexible learning on the go. Modules and related learning activities are short and concise to complement the already busy nature of nursing practice and promote learning while maintaining work–life balance. The importance of patients as partners in primary care is highlighted throughout all learning modules. Moreover, practice networks have been developed to support learning and knowledge transfer in clinical settings. These provide mentorship from other nurses, subject matter experts, and patients.

Limitations

This study focused primarily on education for RNs in primary care; however, the authors recognize that nurses across other regulatory designations could be the focus of future research as they also contribute to primary care delivery (i.e., NPs, LPNs/RPNs). Despite the comprehensive approach to identifying all education programs that met our selection criteria, it is possible that we did not capture all of them. We excluded Canadian territories as they are a remote region in Northern Canada, and accordingly, RNs in primary care are uncommon (the more common role is

community health nurse). Also, while the questionnaire was distributed nationally, not all provinces were represented in the responses, and some provinces (i.e., Quebec) may have been over-represented. Last, this research did not include nurses or other stakeholders working with on-reserve Indigenous populations (who are primarily responsible for the delivery of primary care in these settings); therefore, the unique perspectives of this group may not be represented.

Conclusion

There is a notable gap in continuing education that is specific to primary care nursing. This study sets the groundwork for informing the development of future post-licensure education programs that will prepare RNs for care delivery in the primary care setting. As RNs become increasingly embedded in team-based models of primary care, they should receive the education necessary to succeed in interprofessional collaborative environments. This study informed the development and implementation of a national program that offers a strategy to address this gap and provide a professional development opportunity for RNs working or interested in primary care. Standardized education based on existing primary care frameworks may have the potential to improve quality of care by enhancing role clarity, competency enactment, and interprofessional collaboration, to further support the valuable role of RNs in primary care teams.

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