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.

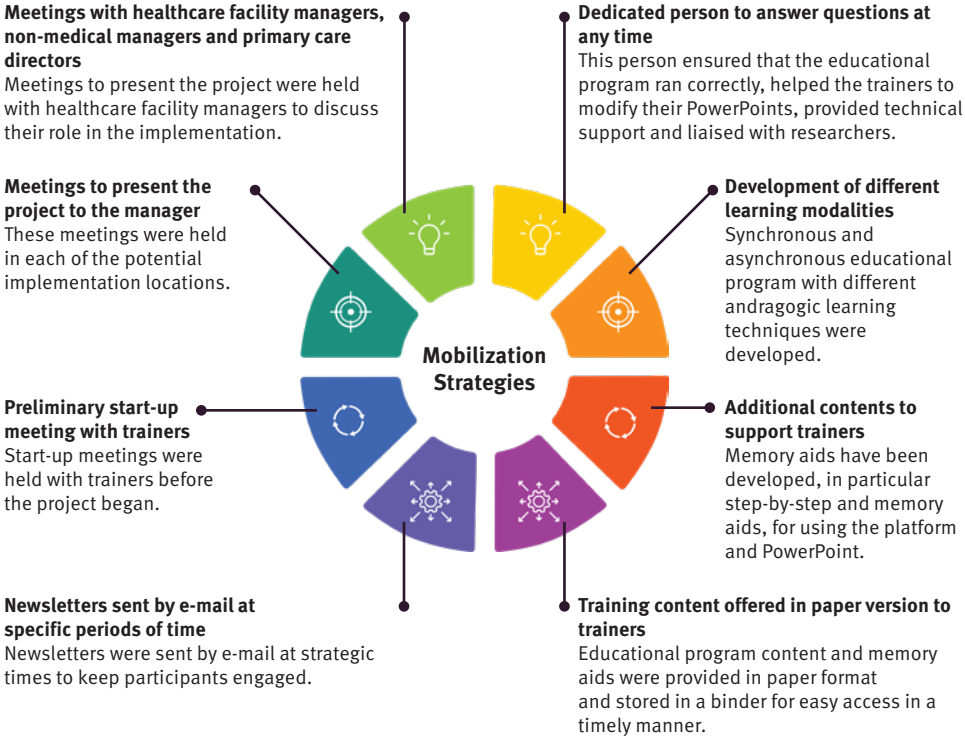
Methodology

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

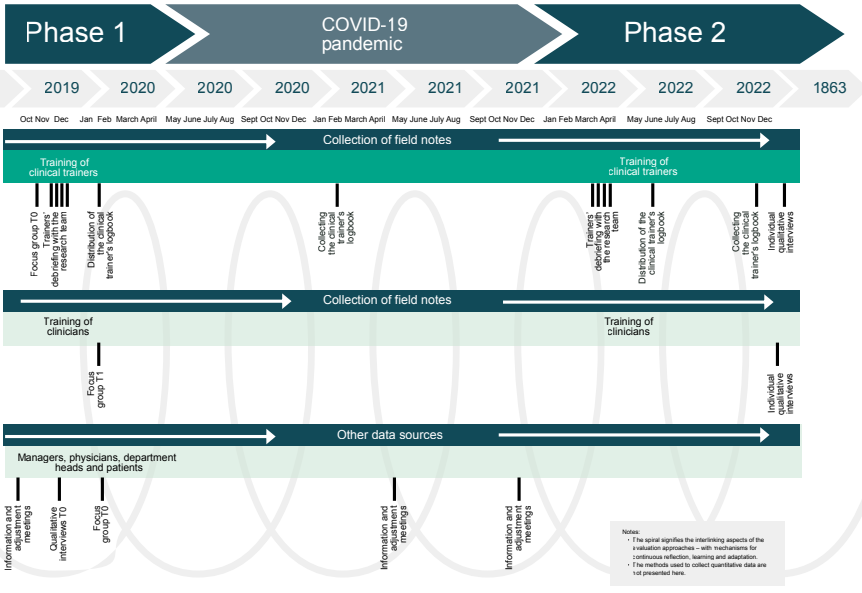
As described in the articles by Poitras et al. (2022, 2024b), during phase 1, PCCs from three administrative regions were targeted based on their area characteristics, including mega-urban, semi-urban and rural classifications, to obtain a representative view of the realities in different settings across 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.

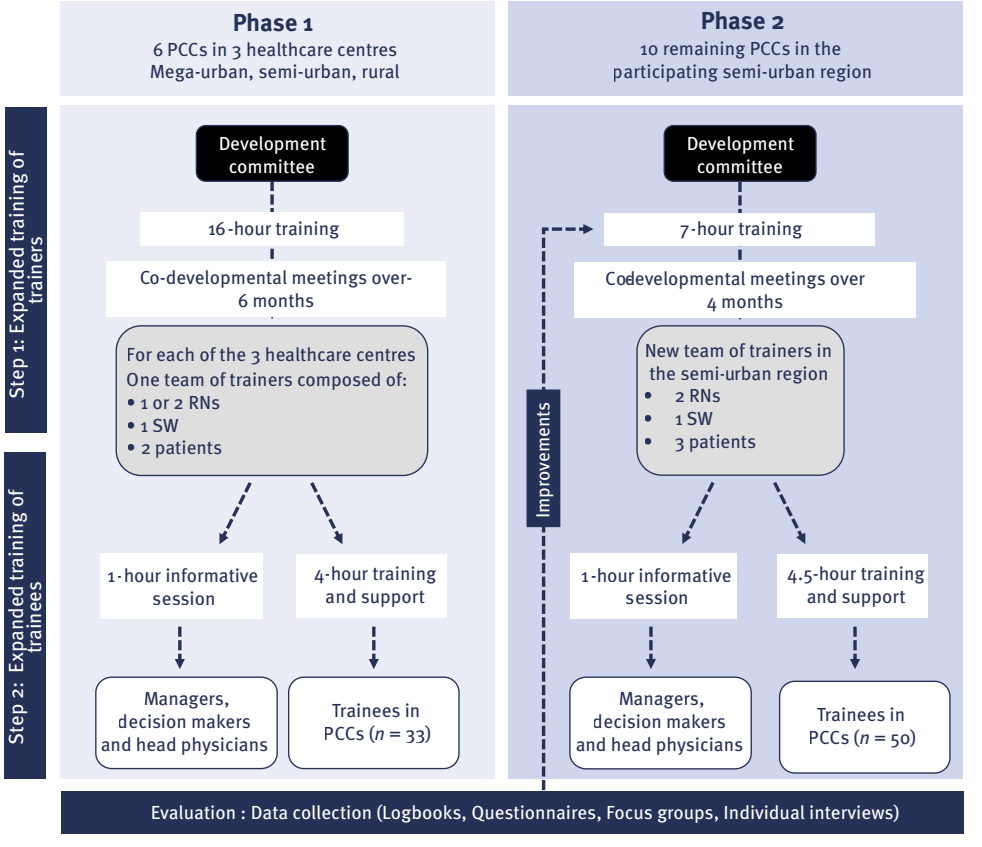
Ethical Considerations

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

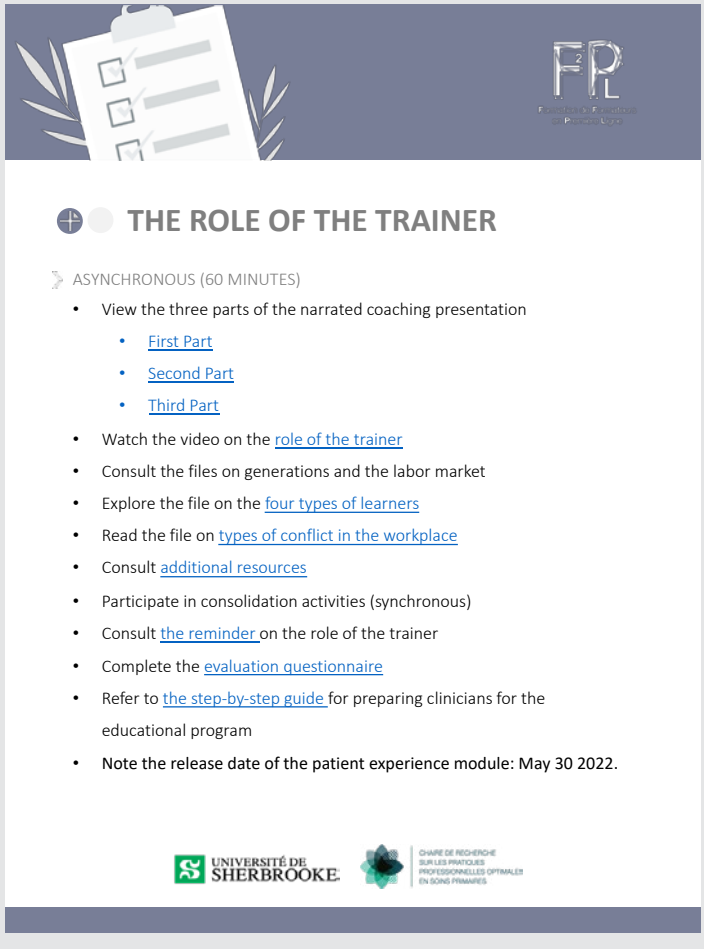
During phase 1, we gave the three teams of trainers the freedom to determine when, where and how they would carry out their training and coaching. It was observed that this freedom to contextualize the training to their PCCs and jurisdiction was a source of hesitation and delay on the part of the trainers. 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.