

Pathways to Developing Clinical Pharmacist Practitioners: Is There a Better Way Forward? (Path-CPP)

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ABSTRACT

Background: Clinical Pharmacist Practitioners (CPPs) are independent care providers who practise to their full scope and have a positive impact on the quality of patient care. Ideally, all pharmacists in Canada would perform at this level. However, there is significant diversity in pharmacy practice across the country and among practice settings. It would be valuable to better understand how pharmacists attain CPP-level practice and what strategies might enable more pharmacists to practise at this level.

Objectives: To understand the perceptions of current CPPs and stakeholders in the health care system regarding the status of the CPP role in Canada and to propose pathways that would facilitate the attainment and recognition of CPP-level practice.

Methods: A qualitative study was conducted using semistructured interviews of peer-nominated CPPs and health care system stakeholders. Interviews were recorded, transcribed, and then analyzed using thematic analysis.

Results: Interviews involving 13 CPPs and 6 health care system stakeholders, conducted between March and July 2020, yielded 3 theme categories related to CPP roles, each containing subthemes, and 3 distinct themes relating to pathways forward. The 3 pathway themes were the following: that a legislative solution for expanded pharmacist scope is needed, that a new degree program is not required for pharmacy in Canada, and that a unified national credential signifying high-level practice might allow for better recognition of CPPs.

Conclusions: The full potential of pharmacists practising with advanced scope of practice in Canada has yet to be realized. Although significant external challenges exist, pharmacists must reframe the narrative by clearly articulating and defining their role within the Canadian health care system to increase CPP-level practice.

Keywords: clinical pharmacist practitioner (CPP), pathway, Canada, qualitative research, thematic analysis

RÉSUMÉ

Contexte : Les praticiens cliniciens sont des prestataires de soins indépendants qui exercent toutes leurs compétences et ont une incidence positive sur la qualité des soins aux patients. Idéalement, tous les pharmaciens au Canada devraient exercer à ce niveau. Cependant, la pratique de la pharmacie diffère grandement au pays et selon le milieu d'exercice. Il serait utile de mieux comprendre comment les pharmaciens atteignent le niveau de pratique de praticiens clinicien et quelles stratégies pourraient permettre à davantage d'entre eux d'exercer à ce niveau.

Objectifs : Comprendre les perceptions des praticiens cliniciens actuels et des parties prenantes du système de soins de santé concernant le statut du rôle des praticiens cliniciens au Canada et proposer des voies visant à faciliter la réalisation de la pratique au niveau de praticien clinicien et la reconnaissance de celle-ci.

Méthodes : Une étude qualitative a été menée à l'aide d'entretiens semi-structurés avec des praticiens cliniciens désignés par leurs pairs et des parties prenantes du système de soins de santé. Les entretiens ont été enregistrés, retranscrits, puis analysés à l'aide d'une analyse thématique.

Résultats : Des entretiens impliquant 13 praticiens cliniciens et 6 parties prenantes du système de soins de santé, menés entre mars et juillet 2020, ont permis de distinguer trois catégories thématiques liées aux rôles des praticiens cliniciens, chacune contenant des sous-thèmes, ainsi que trois thèmes distincts concernant les voies à suivre. Ces trois derniers thèmes étaient les suivants : la nécessité d'une solution législative pour l'élargissement du champ des compétences des pharmaciens; le fait qu'un nouveau programme diplômant ne soit pas requis pour la pharmacie au Canada; et l'idée qu'une accréditation nationale unifiée signifiant une pratique de haut niveau pourrait permettre de mieux reconnaître les praticiens cliniciens.

Conclusions : Le plein potentiel des pharmaciens exerçant avec une portée de pratique avancée au Canada reste encore à réaliser. Malgré l'existence de défis externes importants, les pharmaciens doivent reformuler le récit en articulant et en définissant clairement leur rôle au sein du système de soins de santé canadien afin d'accroître la pratique au niveau de praticien clinicien.

Mots-clés : praticien clinicien, voie, Canada, recherche qualitative, analyse thématique

INTRODUCTION

The profession of pharmacy in Canadian health care has evolved from traditional dispensing roles toward a focus on direct patient care requiring highly trained practitioners.¹⁻³ This transition has arisen because of a shifting health care landscape and demographic changes that have increased the health care needs of the population.^{1,2} To meet these needs, regulatory bodies in multiple provinces have expanded pharmacists' scope of practice.² The pharmacy educational model has also changed to meet the demand for greater numbers of highly trained pharmacists. Faculties across Canada have transitioned from a Bachelor of Science in Pharmacy degree to entry-to-practice Doctor of Pharmacy programs. Numerous post-entry degree educational opportunities also exist. These changes have enabled pharmacists to take a greater role in the health care system, and pharmacists increasingly have the required skills to practise as independent direct patient care providers. Although a definition of this independent pharmacist practitioner role would be beneficial, one does not clearly exist in the Canadian literature.

For the purposes of the study reported here, we refer to this role as the Clinical Pharmacist Practitioner (CPP). A CPP is a pharmacotherapy expert who practises independently at their full scope, conducts thorough patient assessments, responds to consultations, monitors and adjusts drug therapy, provides education to patients and colleagues, and may prescribe independently or in collaboration with other health care professionals.^{4,5}

Currently in Canada, there are many pharmacists in diverse settings whose practice meets this definition.⁶ However, overall, they represent a small proportion of pharmacists, and most pharmacists continue to practise in traditional dispensing roles. Additionally, despite various training options, there is no single pathway to achieving the competencies of a CPP. Given substantial evidence of their impact, greater uptake of CPPs could provide significant benefits to patients and the health care system.^{3,6}

There is a need to better understand how pharmacists develop into CPPs and the pathways that lead them there. In addition, to utilize CPPs to their maximum potential, a better understanding from health care system stakeholders of their perceptions of CPPs is essential. The objectives of this study were to describe the qualities, characteristics, and pathways that have contributed to pharmacists developing into CPPs and to determine what changes are needed to help more pharmacists achieve this expertise and fulfill these roles.

METHODS

A qualitative descriptive study was conducted using semi-structured key informant interviews. The consolidated criteria for reporting qualitative studies (COREQ) were consulted to ensure transparent reporting.⁷

Two groups of participants were included. The first group consisted of Canadian pharmacists who fit our definition of a CPP, who were nominated by members of the study team or by colleagues and invited to participate. To be eligible, these participants had to be registered Canadian pharmacists with at least 3 years of practice experience. The second group consisted of Canadian health care system stakeholders who provided external perspectives on the issues that CPP respondents articulated. These participants were recruited from relevant academic, regulatory, and practice domains. There were no exclusion criteria for this participant group. All participants were engaged through email communication.

Study recruitment consisted of purposive and snowball sampling.^{8,9} The study team, which included pharmacy professionals meeting the definition of a CPP, nominated potential participants from their professional networks. In addition, 8 clinical pharmacy practice leaders from 6 Canadian provinces were engaged to nominate CPPs in their respective provinces. Finally, study participants were asked to suggest CPP colleagues for consideration.

The interview questions (Appendix 1 and Appendix 2, available from <https://www.cjhp-online.ca/index.php/cjhp/issue/view/216>) were informed by a literature review and were developed with input from study team members to elucidate the qualities and characteristics of CPPs and the steps that might be taken to normalize this level of practice.⁹⁻¹³ A pilot interview was carried out with 1 CPP participant in March 2020, and questions were subsequently refined by 2 of the study investigators (R.P., M.L.).

Participant interviews lasted from 30 to 45 minutes and were carried out by telephone or virtually by video conferencing software between March and July 2020 by R.P. Participant recruitment and interviews were continued until the interview data produced little or no new information relevant to answering the research question ("informational redundancy"). Study ethics approval was obtained from the UBC-PHC Research Ethics Board.

Interview audio recordings were transcribed verbatim, and the text was organized using NVivo 12 Pro (version 12.6.0.959) by one investigator (R.P.). Thematic analysis of interview transcripts was conducted by 2 study investigators (R.P., a hospital pharmacy resident, and M.L., a hospital pharmacist with education and administrative roles), who performed independent coding in an iterative fashion as participants were recruited and interviewed.¹⁴ Both of these investigators reflected on and articulated their internal biases before undertaking the analysis. They independently generated initial codes and collated these codes into potential themes. One of the investigators (R.P.) reviewed the transcripts in NVivo for coding, and the other (M.L.) reviewed the transcripts manually. These 2 investigators met multiple times throughout the process to discuss codes and themes generated, with ongoing refinement. During later meetings, they created thematic maps of the analysis to

ensure the themes fit in relation to the coded extracts. These codes and themes were further interrogated by discussion with the broader study team before finalization.

Member checking was then performed to ensure that the themes aligned with what participants meant during their interviews. Participants were contacted by email with a survey from Qualtrics XM survey software (version 11, 2020), which had a 1-month response deadline. A copy of the preliminary themes was provided with the survey.

RESULTS

Participant Characteristics

Forty-one CPPs and 13 health care system stakeholders were identified as potential participants. A total of 19 participants (13 CPPs and 6 health care system stakeholders) agreed to participate and provided informed consent. A summary of participant characteristics is presented in Table 1. Although participants were recruited from across the country, the majority were from British Columbia.

Thematic Analysis

From the CPP interviews, we identified 3 theme categories, each with its own associated themes related to perceptions

TABLE 1. Participant Characteristics

Characteristic	No. of Participants
Clinical Pharmacist Practitioners	<i>n</i> = 13
Province	
British Columbia	9
Alberta	2
Manitoba	1
Quebec	1
Practice setting	
Hospital	8
Ambulatory	3
Community	2
Average practice experience (years)	20.2
Pharmacist stakeholders	<i>n</i> = 4
Province	
British Columbia	2
Ontario	2
Practice setting	
Academia	2
Regulatory	1
Clinical advocacy	1
Nonpharmacist stakeholders	<i>n</i> = 2
Profession	
Nurse practitioner ^a	2
Practice setting	
Hospital	1
Ambulatory	1

^aBoth of the nonpharmacist stakeholders were from British Columbia.

of CPP roles. We also identified themes related to normalizing CPP roles, which we categorized as “pathways forward”. The theme categories, associated themes, and representative quotes are presented in Tables 2 and 3 and are further described below.

CPP Role

Hallmarks of a Clinical Pharmacist Practitioner

Current CPPs cited internal motivation, strong mentorship, and endorsement of diverse professional pathways as factors in their achievement of CPP practice. In particular, mentorship was cited as a critical factor that helped shape practice. One participant stated the importance of “Mentorship and having that relationship to discuss kind of what your career goals are and modeling your practice” (Participant 2). The importance of strong mentorship was echoed by nearly all CPPs.

Participants endorsed the desirability of having diverse professional pathways to becoming a CPP. When asked whether training needs to be streamlined into a single degree or pathway, one participant stated, “The training has already been established. ...The necessary skills are already there I think for a lot of these advanced practitioners” (Participant 6). This quotation aligns strongly with responses received from the majority of the CPP group.

Dissatisfaction with the Status Quo for Pharmacy Practice

CPPs indicated their feeling that pharmacists are underutilized within the Canadian health care system and that the pharmacist’s role is not well understood by nonpharmacists. Participants also reported some role uncertainty within the profession itself. This uncertainty was thought to stem from significant heterogeneity within the profession: “There is no singular vision as to what we are and what we do, which is a big reason why we struggle as individuals with our identity and as a profession with our identity” (Participant 11).

Nearly all participants felt it was unrealistic and unnecessary to expect CPP-level practice from all pharmacists. However, there was a sense that it would be valuable to have ways to engage pharmacists who aspire to this level of practice early in their career to help them achieve it. One participant stated, “I don’t think everyone’s motivated enough to want to do that [CPP]. I think more importantly we need to identify who would want to do it and ensure those people are getting to their career goals ... to train them or find them mentorship so that they can reach that” (Participant 2).

Need for Pharmacists to Reframe Their Role and Better Advocate for Themselves within the Health Care System

CPPs felt that pharmacists across all practice settings need to move beyond fears of ambiguity and start to welcome clinician roles. One participant stated, “We have to ask ourselves as a profession, do we want to be a double check to

the system and therefore never push forward into sort of a provider role, even though we're potentially teaching the providers" (Participant 12).

Multiple participants indicated that the Canadian profession of pharmacy needs greater numbers of practising CPPs to promote the role and train future CPPs. One participant said, "The more we have individuals that practise at higher levels and that really integrate themselves as part of the team, the more that becomes the norm, then the more it will be recognized" (Participant 3).

A lack of unified leadership and advocacy within the Canadian pharmacy profession was consistently cited as a barrier to progress. One participant stated, "We are honestly our own worst enemy because we're doers and we're not promoters. We're not strong advocates of ourselves. ... So, we need a stronger organization" (Participant 10).

Multiple participants cited pharmacy culture and professional identity as barriers to change, specifically noting role uncertainty both within and outside of the profession, the lack of acceptance of clinician roles, and the need for

TABLE 2. Themes Related to Clinical Pharmacist Practitioner (CPP) Role

Category	Associated Themes
Hallmarks of a clinical pharmacist practitioner	<ul style="list-style-type: none"> • Internal motivation • Strong mentorship • Support from colleagues and teams • Endorsement of diverse professional pathways to CPP • Current training programs are sufficient
Dissatisfaction with the status quo for pharmacy practice	<ul style="list-style-type: none"> • Regulators and health care decision-makers do not recognize the capabilities of CPPs • The pharmacist's role is not understood by patients and some health professionals • Not all pharmacists or people applying to pharmacy aspire to CPP-level practice • Pharmacists need to change their mentality/culture surrounding their role in patient care before they can convince others within the health care system of the need for an expanded role
Need for pharmacists to reframe their role and better advocate for themselves in the health care system	<ul style="list-style-type: none"> • The profession of pharmacy needs to embrace the role of patient care provider across all practice settings • A critical mass of CPPs providing high-quality patient care could change perceptions • Pharmacists and pharmacy leaders need to better promote, market, and advocate for CPP roles • To increase uptake, CPP needs to be a defined role, with a clear description of the skill set and what this practitioner brings to the table

TABLE 3. Thematic Analysis: Pathways Forward

Pathway to Normalizing CPP Roles	Illustrative Quotations
Legislative solution for expanded pharmacist scope is needed in all provinces (e.g., APA in Alberta)	<ul style="list-style-type: none"> • "I think we do need, I think every province in Canada could flip the switch on the legislative ability. They need to have a process of how they're going to give the authority to people, like you have to work through if they need an application process what have you, but we have one in Alberta, it's not like you'd have to start from scratch. Adopt the process and then people gotta get doing it" (Participant 1).
A new degree program (like programs for nurse practitioners) is <i>not</i> required for pharmacy in Canada	<ul style="list-style-type: none"> • "No, I think the model's already been established within the CSHP residency training model. General PGY1 residency program and then a specialized residency program with PGY2. That's a well-established model. And I don't think there's a need to recreate the wheel" (Participant 6).
A unified national credential that signifies high-level practice may allow for better recognition of CPPs	<ul style="list-style-type: none"> • "Nothing's formally in our credentialing, other than in the workplace that's been created by the health authorities, but nothing that's, you know BC based, even Canada based. That's really helpful in differentiating yourself from others, the States do have their board certification program which is somewhat helpful" (Participant 6). • "I think the only other thing I would say would be it would be nice if there was a national approach that could be done" (Participant 13). • "I think one of the challenges with this type of position is that there's no set standard for credentialing for somebody in this type of role so we don't have sort of a specialist type of recognition, whether it be from the regulatory college perspective or even within hospitals to sort of have a standardized expectation of what the role would look like across the country" (Participant 17). • "Even if we provide these credentials, if other people don't recognize what those roles are. Then that, it's just an extra few letters at the end of your name that may or may not mean anything different" (Participant 2).

APA = additional prescribing authorization, BC = British Columbia, CPP = Clinical Pharmacist Practitioner, CSHP = Canadian Society of Hospital Pharmacists, PGY1 and PGY2 = postgraduate year 1 and 2.

increased leadership and advocacy highlighted within the previous 2 theme categories.

Participants identified a need to move past the aforementioned role uncertainty and to define pharmacists' niche within the health care system: "And what becomes clear is that we as a group of pharmacists maybe haven't really defined what that is [our role]. And so, other practitioners don't ultimately know what you're going to do" (Participant 1). The CPP group frequently identified chronic disease management as being an important role for pharmacists.

Pathways Forward

Study participants highlighted a number of potential solutions to normalizing CPP roles (Table 3).

Legislative Solution for Expanded Pharmacist Scope Is Needed in All Provinces

A legislative solution that allows for prescribing, as well as ordering and monitoring laboratory tests, is imperative if pharmacists are to become independent practitioners within the Canadian health care system. To achieve this goal nationally, there are several barriers to overcome, including significant heterogeneity within the profession and the lack of a unified vision, as noted by participants.

Participants practising in provinces where a legislative solution has already been implemented (e.g., Alberta, Manitoba) noted that prescribing authority helps them to provide patient care and increases efficiency in practice. It also gives those who possess the skills a pathway to put their skill set to optimal use.

A New Degree Program Is NOT Required for Pharmacy in Canada

Most participants felt that the pharmacy profession does not need to redesign the Canadian pharmacy education system. It was felt that the entry-level PharmD degree, along with available residency programs, provides sufficient training for CPP-level practice. It was noted that more post-entry-to-practice training seats are needed, especially for advanced residency programs, given that the majority of postbaccalaureate PharmD degrees are no longer available in Canada.

A Unified National Credential that Signifies High-Level Practice May Allow for Better Recognition of CPPs

Although not all participants agreed, many of them felt that a unified national credential signifying high-level practice could be valuable. However, it was clear that such a credential would need to be rolled out thoughtfully by engaging key stakeholders and ensuring that the credential is meaningful. Participants did not feel the pharmacy profession lacks the skills or training for CPP roles. Instead, it was proposed that a credentialing system could demarcate a level of practice that is already in existence (i.e., CPPs) and allow that to be recognized by others within the Canadian health care system. By identifying this role, validating it with a

credential, and then speaking the same language about it nationally, the pharmacy profession could progress.

Perspectives of Health Care System Stakeholders

Pharmacists

There were too few participants in the pharmacist health care system stakeholder group to formally identify themes specific to this group. However, their perspectives aligned closely with the feedback provided by the CPPs relating to role uncertainty, pharmacy culture, heterogeneity of pharmacy practice, and a lack of strong leadership and advocacy. One participant stated, "There's a whole series of perceptions from the other health care providers about what the role of the pharmacist is, so a barrier is sometimes simply role uncertainty" (Participant 19). Another participant echoed this sentiment, saying "I think the first problem is pharmacists themselves. I don't think we have internalized clinician ways of being as our actual identity" (Participant 18). Regarding leadership and advocacy, another participant stated, "Just having a unified voice and mission for what it is we want our profession to do in our health care system is something that I think is gravely lacking in our country" (Participant 19).

Pharmacist health care system stakeholders agreed that an advanced credential could be useful, but noted that pharmacists would need to be purposeful about how it is rolled out. A participant cautioned, "We just need to be careful of things like credential creep and degree creep and adding new titles and new training ... we already have huge numbers of pharmacists across the world saying they're over trained to dispense meds" (Participant 18). Pharmacist health care system stakeholders agreed that chronic disease management could be an important role for CPPs.

Nonpharmacists

The study's 2 external stakeholders (nurse practitioners) expressed uncertainty about pharmacists' physical assessment skills and confusion about their training and degree designations. These stakeholders specifically mentioned the term "PharmD", which to them had previously denoted a pharmacist with advanced training but is now the entry-to-practice degree.

Member Checking

Nine (47%) of the 19 study participants provided responses to the member-checking survey. Options regarding agreement with individual themes were yes, no, or "other", with the possibility of providing free-text comments. Agreement with the various themes identified in the study ranged from 78% to 89%, indicating that most respondents agreed with the themes identified.

DISCUSSION

This study was designed to gain a better understanding of what is required to enable more pharmacists to practise at

the highest level of scope and independence in Canada. We described individuals who practise at this level as “Clinical Pharmacist Practitioners” or CPPs. We explored the perspectives of current CPPs and captured insights from a limited number of health care system stakeholders.

Key findings were that current CPPs felt it was unrealistic to expect CPP-level practice from all pharmacists. There was also clear agreement that novel training programs are not needed to develop more CPPs. When participants were asked about barriers to pharmacists attaining CPP-level practice, there was a strong sense that external barriers, such as inconsistent legislation to support pharmacist prescribing across provinces, need to be addressed. However, many barriers internal to the profession also exist. These include pharmacy culture, role uncertainty, and lack of strong advocacy, which align closely with issues that have been previously noted in the literature.^{15,16}

Although barriers do exist, many pharmacists still manage to practise at the CPP level. The addition of clinical pharmacy services to patient care has been shown to result in better patient outcomes, including improved quality of medication use and reduced rates of hospital readmissions.^{3,17} Tsuyuki and colleagues have shown in multiple studies that pharmacists have a large impact in health care outcomes and costs when managing conditions such as hypertension, heart failure, dyslipidemia, diabetes, and urinary tract infections.¹⁸ In the United States, the implementation of CPPs into primary care settings has shown that they are able to provide services comparable in efficacy to those of primary care providers for chronic disease management.⁴ This literature provides further validity to themes among participants in the current study indicating that many pharmacists already have the necessary skills for CPP-level practice.

In the consideration of possible pathways forward, one solution proposed by the CPPs participating in this study was the development of a unified national credential, which would signify high-level practice. Such a credential would be less focused on certification in a particular specialty and more on the level of practice demonstrated by the individual. This seems like a logical approach, especially if we accept the CPPs’ assertion that the goal would not be to achieve this level of practice for all pharmacists. Similarly, given that current CPPs did not endorse a single preferred training pathway and because no current single-degree designation confers “pharmacist practitioner” status, there needs to be an alternate way to highlight these individuals. A certification could provide much needed clarity both within the profession and to external stakeholders who struggle to understand pharmacists’ capabilities.

Several pharmacy organizations outside of Canada have attempted to address challenges associated with heterogeneity in pharmacy practice. The United Kingdom and Australia have developed frameworks for advanced

pharmacy practice, which include key competency clusters on which pharmacists are ranked.¹⁹⁻²¹ Another approach, used in the United States, involves credentialing systems, such as certification through the Board of Pharmaceutical Specialties (BPS).²² Some study participants pointed to this as a rigorous model in delineating advanced practice. Although Canada does not have a comparable pharmacy specialty credentialing system or separate designation, a survey of Canadian hospital pharmacists in 2015 showed support for the implementation of an analogous system.^{23,24} If Canada were to pursue a similar credentialing system, those developed elsewhere could serve as a guide.

Although respondents did not express the need for a new degree program, the uptake of nurse practitioners in Canada offers learning that could be utilized in CPP expansion. For example, CPPs practising under expanded scopes of practice could potentially perform roles analogous to those performed by nurse practitioners to reduce health care costs and increase health care access.²⁵

This study had multiple limitations. Most participants were from British Columbia and were practising in the hospital setting; as such, the study findings may not reflect the views of pharmacists practising elsewhere and in different practice settings. The peer nomination process may have introduced selection bias, through potential inclusion of participants supportive of the CPP role. Subjective thematic analysis of qualitative data could have introduced the internal biases of investigators. The authors reflected upon these internal biases to minimize their impact on data analysis; in addition, participant triangulation was incorporated through alignment of CPP themes and health care system stakeholder perspectives, and investigator triangulation with thematic analysis conducted by multiple team members was used to increase the validity of findings. Lastly, we were able to engage only a small number of nonpharmacist stakeholders. Going forward, physicians and patients will need to be engaged to determine the role of CPPs in the Canadian health care system and to determine whether there is a societal need for this role.

Despite these limitations, this study adds unique perspectives of primarily Canadian hospital-based CPPs and selected health care system stakeholders on barriers and facilitators of advanced pharmacy practice, as well as pathways forward in normalizing CPP roles. Future studies could further elucidate what optimal credentialing could look like for Canadian pharmacists in CPP roles.

CONCLUSION

The full potential of pharmacists practising with advanced scope of practice in Canada has yet to be realized. The heterogeneous image that the pharmacy profession projects, pharmacy culture, and role uncertainty within the profession and in how pharmacists are perceived remain

as substantial issues within pharmacy practice in Canada. Pathways for increasing CPP-level practice are attainable; however, pharmacists first need to clearly define their role within the Canadian health care system, and a legislative solution is required for expanded pharmacist scope in all provinces.

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