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# From the Guest Editor

**Special Issue On Advanced Practice Nursing In Canada**

As an innovation evolves, it reaches a point when there is enough experience among enough informed people to step back and reflect broadly on the progress made and seek views on its progress from those who have been instrumental in it. Questions to be asked include where has adoption of the innovation been robust, and where is it lagging or absent; what challenges have been encountered and overcome, and where have forces been strong enough to forestall further development; what is the potential for increased adoption of the innovation, or where is a loss of momentum likely, and how may these trajectories play out? Furthermore, it is important to seek explanations for the various outcomes that have resulted.

Advanced practice nursing in Canada is at this point. Nurse practitioners (NPs) in Canada, including primary healthcare NPs, acute care NPs and a blended CNS/NP role, have been in the healthcare environment for more than 40 years; clinical nurse specialists (CNSs) for only slightly less time. Their evolutionary paths have been different and been influenced by different forces, and they are facing quite different challenges in the twenty-first century. Now is the right time to step back and get answers to important questions about how these two types of nursing practice are faring and why. This special issue does that.

Over the time that NPs and CNSs have been prepared and have practised in Canada, considerable research has been undertaken to inform the current picture of their status. When this research is combined with the experience of practitioners, policy makers and nursing leaders who have had direct experience with the two roles, it is possible to provide a comprehensive, substantial and informed assessment. For nurse practitioners, this is aided by data on the numbers of NPs across each province provided by the Canadian Institute of Health Information. As well, all provinces and territories have now passed legislation to regulate NP practice. This is not true of CNSs, and one of the salient questions requiring exploration is, why?

Dr. Alba DiCenso, who holds the CHSRF/CIHR Chair in Advanced Practice Nursing at McMaster University, was the obvious choice to lead a team to undertake this study. She has conducted more research on the topic of advanced practice nursing than any other Canadian researcher. This has included evaluations of the first neonatal nurse practitioner program in Canada and the Council of Ontario

University Consortium Program to prepare primary care nurse practitioners. One of the objectives of her chair is to increase the number and expertise of researchers in Canada to conduct high-quality and policy-relevant health services research in the field of advanced practice nursing. The success of her capacity building is reflected in the team of authors of this special issue, a team that consists of senior and junior faculty, postdoctoral fellows, doctoral students and staff affiliated with the Chair Program.

A core team of eight investigators (DiCenso, Martin-Misener, Donald, Bryant-Lukosius, Kaasalainen, Kilpatrick, Carter and Harbman) was involved with all components of the study, and one of this group took the lead in writing the article for each component, describing the findings and discussion; however, the whole team contributed to developing the outline for the article, reviewing and rewriting elements, and editing it. The team for some sections was augmented by additional individuals who had made specific contributions to that section. The contributing authors are listed for each article.

**Readers may approach this issue as a digest of the history and current status of advanced practice nurses (APNs) in Canada ...**

The decision support synthesis, which included a scoping review, and interviews and focus groups with decision makers and practitioners across the country, provided a rich reservoir of material on the historic and current status of advanced practice nursing in Canada. The result is the most comprehensive picture of the state of advanced practice nursing available to date. Readers may approach this issue as a digest of the history and current status of advanced practice nurses (APNs) in Canada and choose to read through all the articles. Alternatively, they may selectively read articles of particular interest to them.

The issue begins with an overview paper (DiCenso) that provides a detailed discussion of the rationale and objectives for the decision support synthesis and details of the methods used in the scoping review, interviews and focus groups. Each of the other nine articles provides a brief overview of the methods used for that component of the study so that they can be read as standalone articles, without reference to the overview article. The second article is a detailed description of the historical development of advanced practice nursing roles in Canada (Kaasalainen). This is followed by an analysis of the education of APNs (Martin-Misener), including the different provincial educational requirements, how the education of APNs differs from CNSs, and the challenges confronting CNS preparation at this time.

The next three articles provide comprehensive analyses of the roles of the different types of APNs – the primary healthcare NP role (Donald), the acute care NP role (Kilpatrick and Harbman) and the CNS role (Bryant-Lukosius). The last four papers build on this background. Donald describes the differing ways in which NPs and CNSs are treated in terms of such issues as title protection and the overlap in role competencies and the difficulties this creates for employers and policy makers. The article on the role of leadership (Carter) describes the importance of leaders in contributing to the success of both NPs and CNSs in fulfilling their roles, including experiences of nurse leaders and the successful strategies they have used. The article on enabling role integration of APNs (DiCenso) summarizes factors found across all the study components that contribute to the integration of both NPs and CNSs into the healthcare system at the national and local levels. The final article (DiCenso) focuses on two examples – NPs in fee-for-service practices in British Columbia and NP-led practices in Ontario – that demonstrate how NPs have successfully expanded access to primary care.

All the papers in this special issue were peer reviewed and revised based on the reviewers' input. The reviewers represented a broad spectrum of Canadian educators, administrators, researchers and policy advisors. We solicited commentaries for two articles: the education of APNs and the role of nursing leadership in integrating APNs into the healthcare system. Both education and leadership play critical roles in the preparation and implementation of advanced practice roles. Dr. Cynthia Baker, the executive director of the Canadian Association of Schools of Nursing and the former associate dean, nursing at Queen's University, wrote the commentary on education; and Pamela Hubley, a nurse practitioner and the associate chief of nursing practice at The Hospital for Sick Children, an organization that employs over 75 APNs, wrote the commentary on the role of leadership.

The Office of Nursing Policy of the Strategic Policy Branch, Health Canada, the Canadian Health Services Research Foundation (CHSRF) and the Canadian Institutes of Health Research (CIHR), Knowledge Translation (KT) branch co-funded this special issue. These organizations have been enormously supportive of the development of APNs and have played complementary roles in advancing their cause. The Office of Nursing Policy has funded studies, symposia and meetings that allowed investigators, practitioners and administrators to sort through and reach consensus on how to move the roles of APNs forward. CHSRF has funded much of the research into APNs, and the KT branch of CIHR has enthusiastically supported the translation of APN research into policy. The Canadian Nurses Association (CNA) took the lead in developing the Advanced Nursing Practice Framework and spearheaded the Canadian Nurse Practitioner

Initiative. Given this demonstrated commitment, we invited Rachel Bard, chief executive officer of the CNA, and Sandra MacDonald-Rencz, Director of the Office of Nursing Policy, to co-author the introduction to the issue, and Jennifer Ellis and Erin Morrison of CHSRF to write an introduction to the overview article by Alba DiCenso that leads off the issue.

CHSRF's vision is "Timely, appropriate and high-quality services that improve the health of all Canadians." There are a number of ways that CHSRF works to realize this vision that are directly related to advanced practice nursing including commissioning research and promoting dialogue on key healthcare policy issues, and by gathering and sharing information about innovative and effective health-care practices. The progress in research and health policy regarding the education and deployment of APNs is an excellent example of CHSRF's goals being realized. CHSRF's EXTRA (Executive Training for Research Application) program is another way that advanced practice nursing can benefit by training leaders including nurse leaders to use research to advocate for and introduce innovations such as APNs into health care delivery. We would like to congratulate the team of researchers who developed this special issue – we believe it will make a valuable contribution to the public dialogue on the role of advanced practice nursing in Canada.

Dorothy Pringle, OC, RN, PhD, FCAHS
Editor, Special Issue

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# In This Issue

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# The Role for Advanced Practice Nursing in Canada

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**The delivery of modern** health services is a complex activity that increasingly relies on inter-professional collaboration. The different roles of the members of these inter-professional teams may depend not only on traditional job demarcations but also on a division of labour that maximizes efficiency and improves outcomes.

Canadian health policy makers and healthcare managers are continually seeking opportunities to optimize healthcare delivery by modernizing the roles and mix of health professionals, including nurses. Innovations in care are being implemented in response to growing healthcare demands (driven by a rising prevalence of chronic diseases), limited access to physicians (in general or in certain specialties or geographic areas) and tight budget constraints. In addition, in countries where the supply of nurses itself may be an issue, the development of more advanced practice roles may be seen as a way to increase recruitment and retention rates by enhancing career prospects in the profession.

In Canada, discussions about possible extensions of the roles of nurses have taken place in the context of broader efforts to reorganize health service delivery, particularly in the primary care sector and in the development of home- and community-based care options. Two categories of advanced nursing practice roles have emerged to address these needs: nurse practitioners (NPs) and clinical nurse specialists (CNSs). Many NPs practise in primary care, acting as the first contact for people with minor illness, providing routine follow-up for patients with chronic conditions, prescribing drugs and/or ordering tests. Other NPs practise in acute care settings in hospitals or in specialized outpatient settings to provide

advanced nursing care for patients who are acutely, critically or chronically ill with complex conditions. CNSs tend to work in hospitals, where their responsibilities include conducting research and providing leadership and education to the nursing staff to promote high standards of care and patient safety.

A recently published Organisation for Economic Co-operation and Development report cites Canada and the United States as world leaders in the implementation of advanced practice roles (Delamaire and Lafortune 2010). Canada has been experimenting with and implementing new advanced nursing practice roles for many decades. In the United States, the introduction of NPs, who are responsible for delivering a wide range of services with a high level of autonomy, dates back to the mid-1960s. In many European countries, the development of advanced nursing practice roles is still in its infancy, although some countries, such as France, have recently launched a series of pilot projects to test new models of teamwork between doctors and nurses in primary care and chronic disease management.

Research investments to date have identified key areas of action to further the implementation of advanced practice roles. Progress has also been made in providing a framework that delineates whether an advanced nursing practice role is appropriate in given circumstances. Other research on NP practice tells us how positive the health outcomes are, but it does not provide enough economic analysis. We know even less about the impact of CNS practice in Canada. More research that clarifies the true impact of advanced practice can assist the health system as decision makers grapple with financial constraints and seek to maximize value for money. Disseminating the results of such research is no less important.

A number of very promising innovations in care are being driven by advanced practice nurses in intervening with high-acuity patients who require the coordinated actions of a number of specialized professionals in areas such as neonatology and cardiology. We are seeing a growing number of examples where NP–physician collaboration in primary care (in both NP-led clinics and fee-for-service physician practice) has significantly lowered wait times and improved patient access to care. We are also seeing that, with anticipated changes in the nursing workforce, and as CNSs collaborate with and lead inter-professional teams, the role of the CNS is becoming even more critical for supporting nurses and providing clinical expertise. As the adoption of healthcare models based on inter-professional collaboration becomes more widespread, there exists a unique opportunity to identify niches that can best be filled by advanced practice nurses.

The evolution of advanced practice has had as much to do with enhancing patient-centred care as it has with the expertise required to remain at the cutting edge of clinical and technological advancements. Clinical leadership, support

for nursing staff and the advancement of research coalesce to produce synergies leading to better outcomes and enhanced patient experiences. As we increase our ability to capture metrics, particularly financial indicators, on the tangible benefits of advanced practice, we will likely see more opportunities created. However, the great variability in CNS specialties makes it more difficult to capture data relevant to these roles.

The papers presented in this issue do an excellent job of identifying and consolidating the various factors that have both enabled and impeded the development and integration of advanced nursing practice in Canada. It is clear from the research that a collaborative approach is needed to implement the recommendations, address outstanding issues, and help build the necessary infrastructure and networks to support nurses working in advanced practice roles. Many of the identified challenges arise from variations in educational requirements and programs, credentialling, legislation and regulation. The continued collaboration among educators, regulatory bodies, policy makers and governments will, undoubtedly, work to address these inconsistencies.

To this end, professional nursing organizations, regulators, educators and researchers have worked with federal, provincial and territorial governments and with research agencies to develop pan-Canadian measures for integrating the NP role in primary care. The Canadian Nurse Practitioner Initiative, supported through the Primary Health Care Transition Fund between 2004 and 2006, has been particularly successful in this regard.

It is also important for nursing leaders to continue to introduce advanced practice nursing roles that align with current and emerging population health and system needs, and to ensure that these roles meet the criteria developed through broader national frameworks.

The key to the future of the healthcare system lies in successfully integrating health professionals into teams that are cohesive, high-performing units. As colleagues and leaders, we join the authors in stressing the importance of all professional groups working together to develop innovative models of care that can address current and emerging healthcare gaps. We encourage you to learn from the papers, which bring new insights into advanced nursing practice in Canada. This information is especially valuable given that much of the unrealized potential surrounding advanced practice can be linked to a lack of clarity in role definition and implementation. Without such research, the development of advanced practice roles would likely continue to experience growing pains and fall short of the tremendous benefits that could be realized.

Despite the many challenges, the future of advanced nursing practice shows great promise. We will fulfill this potential if we, as nursing leaders, increasingly act in concert to promote clarity and consistency in our collective approach to addressing remaining barriers. Better development and integration of advanced practice roles are crucial to realizing the full contribution of nursing to sustainable, accessible, quality healthcare in Canada.

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# Understanding Advanced Practice Nursing

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**The Canadian Health Services Research Foundation (CHSRF)** is proud to be one of the supporters of this special issue on advanced practice nursing, which represents several decades of research and programming related to the role of nurses in the health system.

Advanced practice nursing has long been a poorly understood area of health services delivery. It is telling that the most popular issue in CHRSF's *Mythbusters* series is *Myth: Seeing a Nurse Practitioner instead of a Doctor Is Second-Class Care*, first published in 2002 and then updated and re-released in 2010 (CHRSF 2010).

Advanced practice nursing has existed in Canada since the 1960s, when nurse practitioners (NPs) were introduced mainly to address shortages of primary care physicians in rural and remote areas. But it is only since the beginning of the twenty-first century that we have seen substantial growth in NP numbers – the NP workforce in Canada doubled from 800 in 2004 to 1,626 in 2008. APNs now work in a wide range of primary and acute care settings. A 2009 Harris/Decima poll of 1,000 Canadians found that 20% had been treated by an NP, more than 75% would be comfortable seeing an NP instead of their family doctor, and 80% thought expanded use of NPs could help control health costs. On the other hand, while NP numbers have been increasing, the opposite has been occurring in the numbers of clinical nurse specialists (CNSs), which, according to a 2010 Canadian Institute for Health Information report (CIHI 2010), dropped from 2,624 to 2,222, a total of 402, between 2000 and 2008.

Over the past 10 years, advanced practice nursing has been transformed from a field with sparse research and literature to one with an increasing body of evidence to demonstrate its valuable role. CHSRF has contributed to this evolution through instruments such as the Chair Program in Advanced Practice Nursing. Researchers have also been able to call on resources through the $25 million Nursing Research Fund, granted by Health Canada and administered by CHSRF. *Clinical Nurse Specialists and Nurse Practitioners in Canada: A Decision Support Synthesis* – the report that inspired this special issue – was funded through CHSRF in partnership with Health Canada's Office of Nursing Policy.

Thanks to the work of Dr. Alba DiCenso and Dr. Denise Bryant-Lukosius, and with the support of a strong research team, that report synthesizes an exhaustive body of evidence and culminates with a series of recommendations reached through consultation with decision and policy makers such as professional associations, employers and governments (DiCenso et al. 2010).

Advanced practice nurses (APNs) are starting to make major breakthroughs across Canada; for example, in British Columbia, NPs are being integrated into traditional fee-for-service practices, and Ontario plans to open 26 NP-led clinics across the province by the end of 2012. The growing trend toward use of interdisciplinary teams in primary healthcare in most provinces is also opening the door to more NPs. Projects like this special issue and the decision support synthesis are essential to broaden understanding of NPs' and CNSs' potential. Bryant-Lukosius et al. (2010) highlight the opportunities for greater expansion of the CNS role in long-term care facilities.

The decision support synthesis contained a number of recommendations to advance the role of APNs in Canada, including standardizing APN regulatory and educational requirements and expanding training on interprofessionalism in health professional education programs. Another recommendation was that a pan-Canadian mutlidisciplinary task force involving key stakeholder groups be established to facilitate the implementation of advanced practice nursing roles.

We sincerely hope that this special issue, along with the decision support synthesis, will help to provide the information needed to encourage health services leaders across Canada to effectively integrate advanced practice nursing into their health human resource planning. However, one important area where research is still lacking is a solid economic analysis of the cost-effectiveness of the role of APNs.

CHSRF's vision is "Timely, appropriate and high-quality services that improve the health of all Canadians." The progress in research and health policy regarding the education and deployment of APNs is an excellent example of CHSRF's

vision being realized. We would like to congratulate the team of researchers who developed this special issue – we believe it will make a valuable contribution to the public dialogue on the role of advanced practice nursing in Canada.

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# Advanced Practice Nursing in Canada: Overview of a Decision Support Synthesis

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## Abstract

The objective of this decision support synthesis was to identify and review published and grey literature and to conduct stakeholder interviews to (1) describe the distinguishing characteristics of clinical nurse specialist (CNS) and nurse practitioner (NP) role definitions and competencies relevant to Canadian contexts, (2) identify the key barriers and facilitators for the effective development and utilization of CNS and NP roles and (3) inform the development of evidence-based recommendations for the individual, organizational and system supports required to better integrate CNS and NP roles into the Canadian healthcare system and advance the delivery of nursing and patient care services in Canada. Four types of advanced practice nurses (APNs) were the focus: CNSs, primary healthcare nurse practitioners (PHCNPs), acute care nurse practitioners (ACNPs) and a blended CNS/NP role.

We worked with a multidisciplinary, multijurisdictional advisory board that helped identify documents and key informant interviewees, develop interview questions and formulate implications from our findings. We included 468 published and unpublished English- and French-language papers in a scoping review of the literature. We conducted interviews in English and French with 62 Canadian and international key informants (APNs, healthcare administrators, policy makers, nursing regulators, educators, physicians and other team members). We conducted four focus groups with a total of 19 APNs, educators, administrators and policy makers. A multidisciplinary roundtable convened by the Canadian Health Services Research Foundation formulated evidence-informed policy and practice recommendations based on the synthesis findings.

This paper forms the foundation for this special issue, which contains 10 papers summarizing different dimensions of our synthesis. Here, we summarize the synthesis methods and the recommendations formulated at the roundtable.


## Introduction

Nurse practitioners (NPs) and clinical nurse specialists (CNSs) have existed in Canada for about four decades. Both are considered advanced practice nurses (APNs), defined internationally as registered nurses (RNs) who have acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice (International Council of Nurses 2008). Advanced nursing practice, according to the national framework developed by the Canadian Nurses Association (CNA), is

> … an umbrella term describing an advanced level of clinical nursing practice that maximizes the use of graduate educational preparation, in-depth

> nursing knowledge and expertise in meeting the health needs of individuals, families, groups, communities and populations. It involves analyzing and synthesizing knowledge; understanding, interpreting and applying nursing theory and research; and developing and advancing nursing knowledge and the profession as a whole (CNA 2008: 10).

Core advanced practice nursing roles include direct patient care, research, education, consultation, collaboration and leadership activities.

Despite the 40-year existence of APNs, the implementation of their roles in Canada has been sporadic and dependent on the changing political agendas shaping the healthcare system. Given the instability of the roles, the Office of Nursing Policy of Health Canada and the Canadian Health Services Research Foundation (CHSRF) commissioned a decision support synthesis. It aimed to develop evidence-informed policy and practice recommendations for optimizing the contributions of NPs and CNSs in meeting Canadians' healthcare needs. A decision support synthesis seeks to address a policy-relevant question through a deliberative process involving the engagement of decision makers, distillation of published and grey literature, data collection from key stakeholders and, finally, integration and analysis of the data to develop policy and management recommendations (CHSRF 2010).

This special issue of the *Canadian Journal of Nursing Leadership* focuses entirely on the synthesis, beginning with this paper, which summarizes the methods and resulting recommendations. The following nine papers focus on various dimensions of the APN role in Canada. They include a historical account (Kaasalainen et al. 2010), an examination of educational issues (Martin-Misener et al. 2010), detailed summaries of the status of primary healthcare NPs (Donald et al. 2010b), acute care NPs (Kilpatrick et al. 2010) and CNSs (Bryant-Lukosius et al. 2010), the role of nursing leadership in integrating APN roles (Carter et al. 2010), an examination of title confusion and lack of role clarity as barriers to role implementation (Donald et al. 2010a), factors enabling role integration (DiCenso et al. 2010c) and, finally, examples of innovative models that utilize NPs to increase patient access to primary healthcare (DiCenso et al. 2010a).

## Types of APNs

In Canada, APNs include primary healthcare NPs (PHCNPs), acute care NPs (ACNPs), CNSs and CNS/NPs (a blended role). The nurse anesthetist role is just emerging and was not addressed in this synthesis. NPs are

> registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously

> diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice (CNA 2009b: 1).

PHCNPs, also known as family or all-ages NPs, typically work in the community in settings such as community health centres, primary healthcare teams and long-term care. Their main focus is health promotion, preventive care, diagnosis and treatment of acute minor illnesses and injuries, and monitoring and management of stable chronic diseases. ACNPs, also known as specialty or specialist NPs as well as adult, pediatric and neonatal NPs, provide advanced nursing care across the continuum of acute care services for patients who are acutely, critically or chronically ill, often with multiple and complex morbidities. These ACNPs might work in settings such as neonatology, nephrology and cardiology. Titling of NP roles is in transition. For the purposes of our synthesis, we refer to NPs who practise in community settings with a focus on families and all ages as PHCNPs. We refer to those who work in hospital in-patient or ambulatory settings with a focus on specialized populations as ACNPs.

CNSs are RNs with a graduate degree in nursing who have expertise in a clinical nursing specialty and perform a role that includes practice, consultation, collaboration, education, research and leadership. They contribute to the development of nursing knowledge and evidence-based practice and address complex healthcare issues for patients, families, other disciplines, administrators and policy makers (CNA 2009a). CNSs specialize in a specific area of practice that may be defined in terms of a population, setting, disease or medical subspecialty, type of care or type of problem.

There are also APNs who combine the CNS and NP roles (Pinelli 1997). The blended CNS/NP role was first introduced in Ontario in tertiary-level neonatal intensive care units (NICUs) in the late 1980s (Hunsberger et al. 1992). At the time, the blended CNS/NP title was chosen to protect time for the nonclinical dimensions of advanced practice. However, current CNS/NP practice is consistent with the ACNP role involving the clinical care of complex medical problems and patient care planning and coordination, in addition to leadership, consultation and research. Given that nonclinical role dimensions have been proposed as essential components of all advanced practice nursing roles, there is no longer a need for a separately titled CNS/NP role, and most of these APNs now are known as ACNPs.

### Numbers of APNs in Canada

Between 2004 and 2008, the number of licensed NPs in Canada more than doubled, increasing from 800 to 1,626 (Canadian Institute for Health Information [CIHI] 2010). This figure, however, is an underestimate of the NP workforce as the

numbers do not include ACNPs from all Canadian jurisdictions. Until recently, in some provinces ACNPs have not been licensed, and therefore it is not currently possible to determine how many exist in Canada. It is also difficult to ascertain the exact number of CNSs in Canada because there is no protected titling or standard credentialling mechanism. Based on self-reported CNS data, the number of CNSs decreased between 2000 and 2008 from 2,624 to 2,222, accounting for about 1% of the Canadian nursing workforce (CIHI 2010; CNA 2006).

## Effectiveness of APNs

There is abundant research demonstrating the safety and effectiveness of PHCNPs, ACNPs and CNSs. In preparation for our decision support synthesis, we conducted searches for all randomized controlled trials ever published internationally comparing APNs to usual care in terms of patient, provider and/or health system outcomes. While our search was not as comprehensive as one would do for a formal systematic review, we found a total of 78 trials: 28 of PHCNPs, 17 of ACNPs, 32 of CNSs and one of CNS/NPs. Findings consistently showed that care by APNs resulted in equivalent or improved outcomes. The complete listing of studies and their findings is included in an appendix to our full decision support synthesis report, found on the CHSRF website (DiCenso et al. 2010b).

A systematic review of NPs in primary care found that patients receiving NP care had higher satisfaction and better quality of care than those receiving physician care, with no difference in health outcomes (Horrocks et al. 2002). A recent study of four primary healthcare delivery models in Ontario found high-quality chronic disease management was associated with the presence of a PHCNP (Russell et al. 2009). Comparisons of ACNP care with usual care showed either no differences in outcomes such as mortality, morbidity/complications and length of hospital stay or an improvement in outcomes favouring the ACNP role (e.g., Dawes et al. 2007; Krichbaum 2007).

In their annotated bibliography of 70 studies, Fulton and Baldwin (2004) found that CNSs were associated with reductions in hospital length of stay, readmissions, emergency room visits and costs, as well as improvements in staff nurse knowledge, functional performance, mood state, quality of life and patient satisfaction. Mitchell-DiCenso et al. (1996) found that CNS/NPs functioning in the blended role in NICUs were equivalent to pediatric residents with respect to neonatal morbidity and mortality, parent satisfaction, costs and incidence of long-term developmental delays.

## Synthesis Objective

The objective of this decision support synthesis was to identify and review published and grey literature and to conduct stakeholder interviews to

(1) describe the distinguishing characteristics of CNS and NP role definitions and competencies relevant to Canadian contexts, (2) identify the key barriers and facilitators for the effective development and utilization of CNS and NP roles and (3) inform the development of evidence-based recommendations for the individual, organizational and health system supports required to better integrate CNS and NP roles into the Canadian healthcare system and advance the delivery of nursing and patient care services in Canada. In this paper, we outline the detailed methods of our synthesis that form the foundation for the papers that follow in this special issue.

## Methods

We received ethics approval from the McMaster University Research Ethics Board on July 15, 2008. The synthesis included a number of elements: (1) an advisory board, (2) a scoping review of the literature, (3) key informant interviews and focus groups and (4) a multidisciplinary roundtable to formulate recommendations from the synthesis findings. Each of these elements is described below.

### Advisory Board

We formed a 23-member multidisciplinary (administrators, policy makers, practitioners, educators, regulators and researchers) and multijurisdictional (international, federal, provincial and territorial) advisory board. Via teleconferences and an all-day face-to-face meeting, advisory board members helped identify relevant documents and key informant interviewees, develop interview questions and formulate implications based on the findings.

### Scoping Review of the Literature

We conducted a scoping review using established methods (Arksey and O'Malley 2005; Anderson et al. 2008) to summarize the literature on advanced practice nursing role definitions, competencies and utilization in the Canadian healthcare system, identify the policies influencing the development and integration of these roles and explore the gaps and opportunities for their improved deployment. Like systematic reviews, scoping reviews use rigorous and transparent methods to comprehensively search for all relevant literature and to analyze and interpret the data. However, a scoping review differs from a systematic review in three ways. First, a scoping review is exploratory in nature and seeks to "map" all the relevant literature on a broad topic and identify recurring themes, while a systematic review addresses a highly specific research question and focuses strictly on empirical studies. Second, in a scoping review, the criteria for exclusion and inclusion are based not on the quality of the studies, but on relevance. Because scoping reviews are exploratory, all papers on a topic are included, be they studies or narrative and commentary pieces such as editorials and essays. Third, all information from the included papers is charted, and themes and key issues are identified. Because

of the broad inclusion criteria, many themes emerge that can inform gaps in the existing research.

We concentrated on Canadian literature of all types to capture context-free, context-sensitive and colloquial evidence (CHSRF 2010). In keeping with the tenets of scoping reviews, we did not exclude articles based on methodological quality. To guide our work, we developed a framework to capture the structure, process and outcome dimensions and descriptors of advanced practice nursing roles. Structure-related dimensions included role description, numbers, types, education, competencies, regulation, scope of practice, practice settings, union membership and liability coverage. Process-related dimensions included barriers and facilitators associated with role implementation and practice patterns. Outcome-related dimensions included patient, provider and health system outcomes.

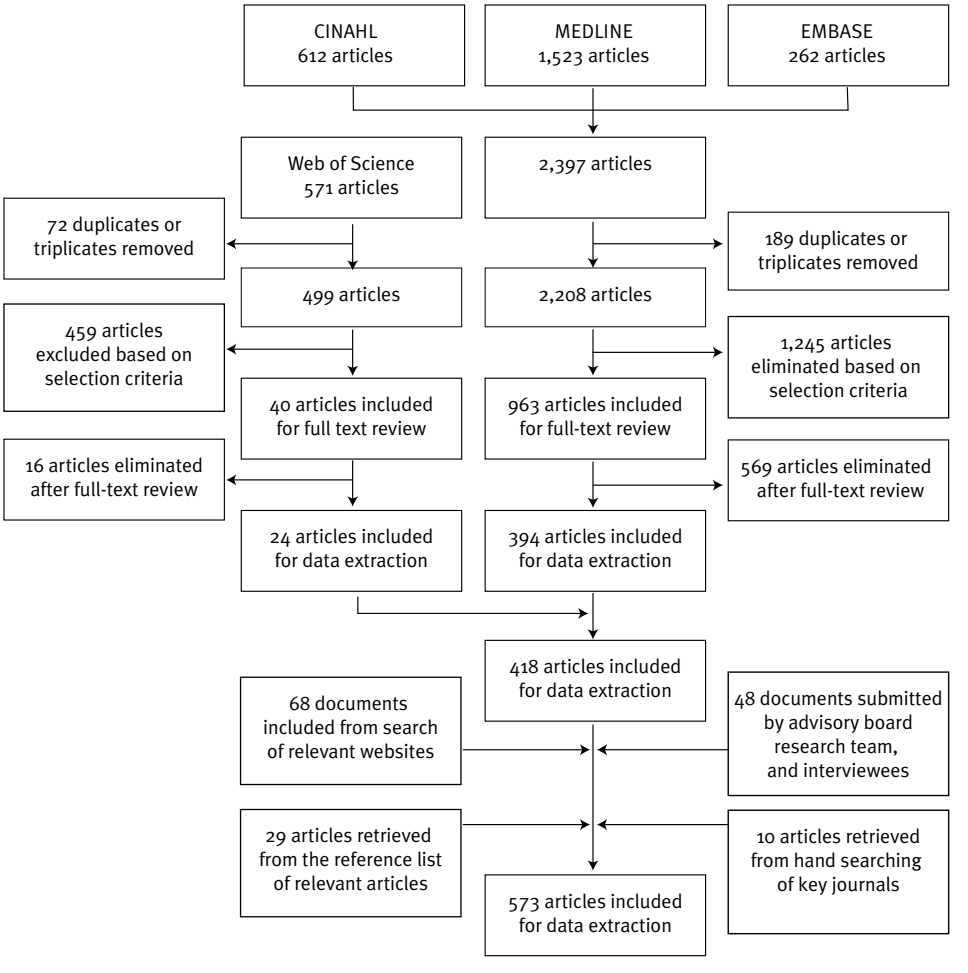
We searched MEDLINE, CINAHL and EMBASE using applicable Mesh headings and free text keywords pertinent to CNSs, NPs and CNS/NPs, and we performed a citation search using the Web of Science database and 10 key papers that directly addressed structure, process and outcome dimensions of advanced practice nursing roles. We scanned the reference lists of all relevant papers and searched websites of Canadian professional organizations and national, provincial and territorial governments. The four journals yielding the greatest number of relevant articles, *Canadian Journal of Nursing Leadership*, *Journal of Advanced Nursing*, *Canadian Nurse* and *Clinical Nurse Specialist*, were hand searched from May 2008 to January 2009 to avoid omitting papers published after the original database search. Advisory board and research team members contributed relevant papers from their personal files.

Papers included in the synthesis met the following criteria:

- All Canadian papers including primary studies, literature and policy reviews, reports, editorials, essays, commentaries and descriptive accounts (any date of publication)
- International review papers published between 2003 and 2008
- International non-review papers only if of unique relevance to the synthesis or if little Canadian literature existed on the topic
- Written in French or English
- Addressing structure, process and/or outcome dimensions of one or more advanced practice nursing roles

The search yielded 2,397 papers (Figure 1). They were divided among three teams of two researchers for title and abstract review (researchers had participated in training to ensure consistency across reviews). We resolved within-team disagree-

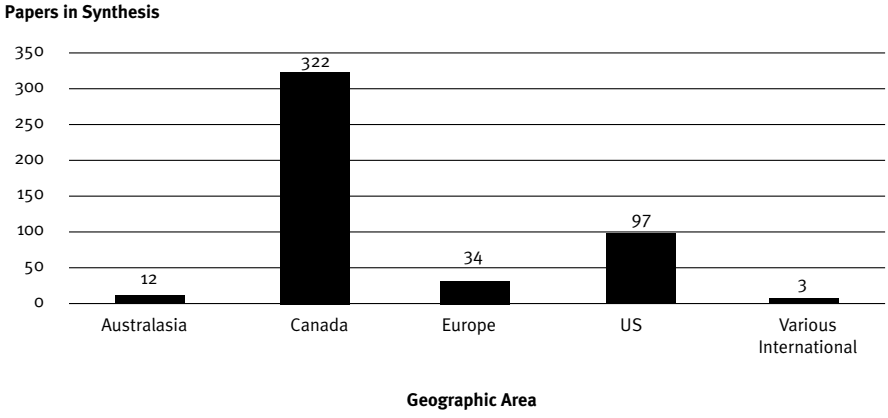
**Figure 1.** Identification of papers for the scoping literature review




ments by having a third team member review the disputed titles and abstracts. If a paper was deemed relevant after title and abstract review, one team member reviewed the full text, using our inclusion criteria. We identified 573 relevant papers for data extraction. The team was divided into triads, and each triad reviewed and extracted data from literature pertinent to a specific advanced practice nursing role (e.g., CNSs). During this stage, 105 papers failed to meet our inclusion criteria, leaving 468 papers in the synthesis. Figure 2 summarizes the country of origin of the 468 papers. They represent all Canadian papers but only recent reviews from other countries, hence the large proportion of Canadian papers (69%). Figure 3 provides the breakdown by publication type, showing that about half the papers represent primary studies and reviews and half represent essays and editorials. Table 1 describes the Canadian papers by type of APN, publication type and publi-

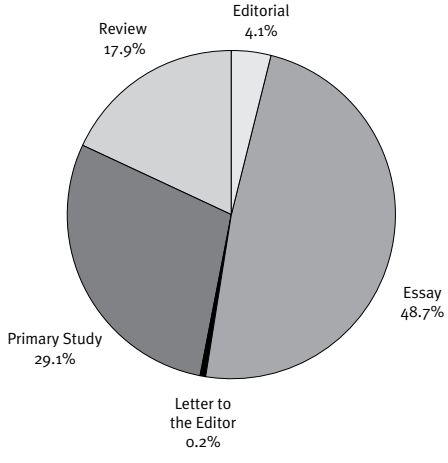
# Figure 2.

Papers in synthesis by geographic area (*N* = 468)




# Figure 3.

Papers in synthesis by publication type (*N* = 468)




cation year. The majority of papers (70%) have been written since 2000, with 17% focused on ACNPs, 47% on PHCNPs, 8% on NPs (type unspecified), 3% on CNS/NPs, 10% on CNSs and 15% on APNs (type unspecified).

To analyze the extracted data, we used a combination of descriptive tables, narrative syntheses (Mays et al. 2005) and team discussions. Each member of each triad independently summarized the data she had extracted. Each triad then met to discuss the tabulated data and their summaries. Three researchers (AD, IB and KK) attended all triad meetings to enable cross-triad continuity. At the triad

## Table 1. Canadian papers by type of APN and publication year

| Type of APN | 1970 to 1999 | | | | 2000 to 2009 | | | | Overall (1970 to 2009) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Primary study or review | Editorial or essay | Total | % | Primary study or review | Editorial or essay | Total | % | Primary study or review | Editorial or essay | Total | % |
| ACNP | 7 | 3 | 10 | 9.5 | 15 | 34 | 49 | 20.1 | 22 | 37 | 59 | 16.9 |
| PHCNP | 27 | 34 | 61 | 58.1 | 61 | 43 | 104 | 42.6 | 88 | 77 | 165 | 47.3 |
| General NP | 2 | 3 | 5 | 4.8 | 11 | 12 | 23 | 9.4 | 13 | 15 | 28 | 8.0 |
| CNS/NP | 1 | 3 | 4 | 3.8 | 2 | 4 | 6 | 2.5 | 3 | 7 | 10 | 2.9 |
| CNS | 2 | 7 | 9 | 8.6 | 13 | 12 | 25 | 10.2 | 15 | 19 | 34 | 9.7 |
| General APN | 4 | 12 | 16 | 15.2 | 13 | 24 | 37 | 15.2 | 17 | 36 | 53 | 15.2 |
| Total | 43 | 62 | 105 | | 115 | 129 | 244 | | 158 | 191 | 349[a] | |

ACNP = acute care nurse practitioner; APN = advanced practice nurse; CNS = clinical nurse specialist; NP = nurse practitioner; PHCNP = primary healthcare nurse practitioner.
[a] Total exceeds the number of Canadian papers in Figure 2 because some papers fit into more than one publication type category.

meetings, the summaries prepared by team members were discussed to compare and contrast themes and to formulate conclusions. The entire team then met to discuss the results of the triad meetings and aggregate data across triads.

### Key Informant Interviews and Focus Groups

In consultation with our advisory board, we used purposeful sampling to identify key informants with a wide range of perspectives on advanced practice nursing issues in Canada and internationally. The advisory board also assisted in developing a semi-structured interview guide, which was piloted on four participants. Feedback from the pilot indicated that the questions were clear and comprehensive and that the length of the interview was appropriate. All key informants were asked the same set of questions, focusing on all types of APNs. The questions included, for example, reasons for introducing the role(s) in their organizations, region or province/territory; how the role(s) were implemented; key factors facilitating and hampering their full integration at the individual, organizational and system levels; the nature of their collaborative relationships; their impact; success stories and recommendations for fully integrating the role(s). Individual interviews were conducted by telephone or in person in English or French. We also conducted four focus groups. All individual and focus group interviews were audio recorded, transcribed and checked for accuracy.

## Table 2. Key informant interviews ($n$ = 62)

| Type | Number | Location |
|---|---|---|
| Clinical nurse specialists | 9 | 5 – Canada (3 provinces)<br>4 – United States |
| Primary healthcare nurse practitioners | 8 | 5 – Canada (3 provinces and 2 territories)<br>2 – United States<br>1 – United Kingdom |
| Acute care nurse practitioners | 5 | 4 – Canada (4 provinces)<br>1 – United States |
| Health administrators | 11 | 11 – Canada (5 provinces) |
| Provincial government policy makers | 6 | 6 – Canada (5 provinces) |
| Nursing regulators | 7 | 6 – Canada (5 provinces and 2 territories)<br>1 – Australia |
| Educators | 5 | 3 – Canada (3 provinces)<br>2 – United States |
| Physicians | 7 | 7 – Canada (5 provinces) |
| Healthcare team members | 4 | 4 – Canada (3 provinces) |

Data collection occurred between August 2008 and February 2009. We interviewed 62 key stakeholders (Table 2) including CNSs ($n$ = 9; five from three provinces in Canada and four from the United States [US]); PHCNPs ($n$ = 8; five from three provinces and two territories in Canada, two from the US, and one PHCNP–researcher from the United Kingdom [UK]); ACNPs ($n$ = 5; four from four provinces in Canada and one from the US); health administrators ($n$ = 11 from five provinces); provincial government policy makers ($n$ = 6 from five provinces; five in chief-nursing-officer or nursing-policy-analyst positions and one without a nursing background); nursing regulators ($n$ = 7; six from Canada representing seven provinces/territories [one regulator represented two territories] and one from Australia); educators ($n$ = 5; three from Canada representing three provinces and two from the US); physicians ($n$ = 7; three family physicians and four specialists from five provinces); and four healthcare team members from three provinces, including two RNs, one pharmacist and one respiratory therapist. Four of the interviews were conducted in French and the remainder in English. The 62 interview participants came from Canada (51), the US (9), the UK (1) and Australia (1). Of the 51 from Canada, 14 were from the Western provinces, 18 were from Ontario, 8 from Quebec, 8 from the Atlantic provinces and 3 from the three territories.

Three of the focus groups were a convenience sample of attendees at the International Council of Nurses (ICN) International Nurse Practitioner/Advanced Practice Nursing Network (INP/APNN) conference in Toronto in September 2008. An invitation to attend the focus group was included in the conference package. A total of 15 individuals participated, representing all types of APNs, as well as educators, administrators and policy makers. The majority of participants were from Canada; others were from the US and Australia. Each focus group had three to six participants and was conducted by two members of our research team, one as interviewer and the other as recorder and observer. The fourth focus group was a purposively selected sample of ACNPs (previously known as CNS/NPs) from Ontario (four participants) who worked in the same setting.

In the interest of having as diverse and representative a sample as possible, we chose to continue interviewing even after data saturation was achieved. In total, through focus groups and interviews, we collected data from 81 individuals: four focus groups with 19 attendees and 62 interviewees.

An initial coding structure of emergent themes from the interviews was developed by the interviewer and one team member (IB). This draft coding structure was then integrated by three team members (DBL, IB and AD) into a broader, theoretically informed framework based on two papers describing factors influencing advanced practice nursing role integration (Bryant-Lukosius and DiCenso 2004; Bryant-Lukosius et al. 2004). A spreadsheet was created to summarize codes, themes and data from each transcript. Three team members (DBL, IB and AD) and the four individuals who would be coding used the framework to independently code one transcript and discussed their coding. Two team members (JA and KK) and two research assistants then used the framework to code all the transcripts, following which they prepared summaries according to type of stakeholder. Themes were compared across stakeholder type. Canadian and international interviews were summarized separately. A French-speaking team member (KK) coded French interviews.

In summarizing the results, we integrated findings from the scoping review and interviews examining similarities and differences in themes and common patterns and trends (Erzberger and Kelle 2003). For barriers and facilitators associated with advanced practice nursing role integration, we concentrated on Canadian papers written since 1990, because barriers or facilitators identified pre-1990 could be outdated. This was especially likely given the implementation of regionalization throughout Canada beginning about 1990.

### Multidisciplinary Roundtable

Once we completed the synthesis and worked with our advisory board to derive

the implications of our findings, CHSRF convened a multidisciplinary roundtable that included representatives from key nursing, medical, government, regulatory and professional associations to develop pragmatic recommendations for policy, practice and research (DiCenso et al. 2010b).

## Discussion

### Roundtable Recommendations

Roundtable participants made 11 key recommendations (DiCenso et al. 2010b). They are grouped below according to which of the key players in our healthcare system would likely assume a leadership role for action or implementation.

**For the Nursing Community (and Partners)**

1. The CNA should lead, in collaboration with other health professional stakeholder groups (particularly the Canadian Medical Association and the College of Family Physicians of Canada), the creation of vision statements that clearly articulate the value-added role of CNSs and NPs across settings, with close attention paid to roles in the delivery of primary healthcare. These vision statements should include specific, yet flexible, role descriptions pertinent to specific healthcare contexts, which would help to address implementation barriers deriving from lack of role clarity.

**For Senior Decision Makers (Policy and Practice)**

2. A pan-Canadian multidisciplinary task force involving key stakeholder groups should be established to facilitate the implementation of advanced practice nursing roles.
3. Health human resources planning by federal, provincial and territorial ministries of health should consider the contribution and implementation of advanced practice nursing roles based on a strategic and co-ordinated effort to address population healthcare needs.
4. A communication strategy should be developed (via collaboration with government, employers, educators, regulatory colleges and professional associations) to educate nurses, other healthcare professionals, the Canadian public and healthcare employers about the roles, responsibilities and positive contributions of advanced practice nursing.
5. Advanced practice nursing positions and funding support should be protected following implementation and demonstration initiatives to ensure some stability and sustainability for these roles (and the potential for longer-term evaluation) once they have been incorporated into the healthcare delivery organization/structure.

6. In order to facilitate provider mobility in response to population health-care needs and improve recruitment and retention to advanced practice nursing roles, a pan-Canadian approach should be taken, in collaboration with regulators, to standardize advanced practice nursing regulatory standards, requirements and processes.

**For Educators**

7. In order to facilitate provider mobility in response to population health-care needs and improve recruitment and retention to advanced practice nursing roles, a pan-Canadian approach should be taken, in collaboration with educators, to standardize advanced practice nursing educational standards, requirements and processes.
8. The curriculum across all undergraduate and postgraduate health professional training programs should include components that address interprofessionalism, in order to familiarize all health professionals with the roles, responsibilities and scopes of practice of their collaborators.

**For the Research and Research Funding Community**

9. Further research should be conducted to quantify the impact of advanced practice nursing roles on healthcare costs. The contexts of education, effectiveness and length of career should be addressed within this research.
10. The focus of advanced practice nursing role effectiveness research should shift away from replacement models and illustrate the "value added" of these roles as compared to other nursing roles.
11. The CNS role in the Canadian context requires further study and should be the focus of future academic work.

## Strengths and Limitations

We used a variety of strategies to ensure comprehensive identification of published papers and grey literature. As a result, we reviewed and retained in the synthesis close to 500 papers representing English- and French-language published and unpublished literature written about APNs in Canada as well as international reviews published in the past five years. We used an electronic program to systematically extract the information from the papers, with training and pilot testing of data extractors. While we identified many relevant keywords to guide the searches, we may have missed papers that used different keywords.

We conducted 62 interviews (four in French) and four focus groups with a breadth of key informants, including all types of APNs, health administrators,

nursing regulators, educators, policy makers, physicians and members of the healthcare team, most from Canada but also from the US, the UK and Australia. While these are more interviews than we had proposed to conduct, the number is still relatively small when considering the vastness of Canada and the different constituencies represented. However, many of the themes arose repeatedly across informant groups and were consistent with the literature. We interviewed at least one key informant from each province and territory (with one interviewee speaking about both Nunavut and the Northwest Territories). The inclusion of French-language literature and French-speaking key informants (interviewed in French) minimized the English-language bias and enabled a fuller exploration of the issues throughout all of Canada.

While we interviewed seven physicians, we conducted only four interviews of other members of the healthcare team: two RNs, a pharmacist and a respiratory therapist. The APN relationship with these and other healthcare team members (e.g., social workers) should be studied further. When our advisory board reviewed the findings, they indicated that some of the data provided by key informants may have been incorrect or incomplete, based perhaps on a limited awareness of the issue; for example, some informants indicated that CNSs did not provide direct patient care. This misperception reinforces the themes that emerged from our synthesis regarding lack of role clarity and title confusion.

The collection of data from patient informants was beyond the mandate and scope of this review. As new models of care emerge in the future, it will be important to involve patients and families to identify their unmet needs.

Our interview data provide a snapshot of key issues identified from diverse informant types across a variety of jurisdictions about different advanced practice nursing roles. Most reviews of advanced practice nursing conducted in Canada to date have focused on one APN type exclusively (e.g., PHCNPs). While the breadth of this decision support synthesis has allowed us to examine issues across APN types, it may have compromised depth of exploration of key issues for specific roles. For example, we were not able to sample APNs from all sectors in which they work.

The advisory board assisted with identifying relevant jurisdictional and organizational grey literature, reviewing the interview guide and suggesting key informants to interview. To ensure comprehensiveness and objectivity in the interpretation of our findings, the board also reviewed our report, provided constructive feedback and assisted in identifying implications

based on our findings.

### Dissemination Plans

The full report of the decision support synthesis is available in English and French on the CHSRF website (DiCenso et al. 2010b). In addition to this special issue of the *Canadian Journal of Nursing Leadership*, manuscripts that target relevant topics for international and healthcare professional audiences will be submitted to journals such as the *Journal of Advanced Nursing* and the *Canadian Medical Association Journal.* We have presented our findings at key national conferences and will continue to seek out these opportunities. We have shared the findings with the provincial/territorial nurse advisors across Canada. The Organisation for Economic Co-operation and Development (OECD) surveyed 12 countries about APNs in 2009, and the Canada-specific responses to the survey were largely informed by the decision support synthesis findings (Delamaire and Lafortune 2010).

Tailored briefing notes that emphasize action plans will be prepared for provincial/territorial Ministers and Deputy Ministers of Health, the Advisory Committee on Health Delivery and Human Resources (ACHDHR), employers and program managers. We will collaborate with key organizations such as the CNA, the Canadian Association of Advanced Practice Nurses (CAAPN), the Canadian Association of Schools of Nursing (CASN), the Academy of Canadian Executive Nurses (ACEN), the Canadian Healthcare Association (CHA), the Canadian Medical Association (CMA) and the College of Family Physicians of Canada (CFPC) to identify strategies for targeted information exchange with the nursing and medical communities and to identify medical and nursing champions to disseminate synthesis findings and recommendations to internal groups and committees of their professional associations and educational/regulatory bodies.

## Conclusion

APNs have been part of the Canadian healthcare system for almost 40 years. Their presence has expanded and contracted based on factors such as physician shortages and surpluses and hospital budgets. Three existing significant reports have examined advanced nursing practice (CNA 2006) and more specifically NPs (Canadian Nurse Practitioner Initiative 2006) and extended nursing roles such as NPs in primary care from a Canadian perspective (Advisory Committee on Health Human Resources & The Centre for Nursing Studies in collaboration with The Institute for the Advancement of Public Policy, Inc. 2001). Our synthesis differs from these earlier works

by providing an examination of CNS, ACNP and PHCNP roles through a systematic scoping review of Canadian and international literature and by conducting interviews and focus groups with national and international key informants from a variety of stakeholder groups.

The findings of our synthesis demonstrate (1) the yet unfulfilled or unrealized contributions APNs could make to address important gaps in maximizing the health of Canadians through equitable access to high-quality healthcare services, (2) the important interplay and influence of dynamic and often competing values, beliefs and interests of provincial and national governments, healthcare administrators and health professions on the policies and politics that shape the education, regulation and ad hoc deployment of advanced practice nursing roles, and (3) the continued vulnerability of advanced practice nursing roles to changes in health policies and economic conditions. The papers in this special issue both consolidate and augment our current knowledge base about advanced practice nursing. These papers provide readers with a comprehensive understanding of topics such as Canada's historical journey in integrating APNs into our healthcare system; the inconsistencies in educational requirements for PHCNPs across the country and limited access to CNS-specific graduate education; the central issues and challenges to the full integration of PHCNPs, ACNPs and CNSs in Canada; the important role leaders play in supporting advanced practice nursing; and innovative PHCNP-related approaches to increasing patient access to healthcare.

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# A Historical Overview of the Development of Advanced Practice Nursing Roles in Canada

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## Abstract

Advanced practice nursing has evolved over the years to become recognized today as an important and growing trend among healthcare systems worldwide. To understand the development and current status of advanced practice nursing within a Canadian context, it is important to explore its historical roots and influences. The purpose of this paper is to provide a historical overview of the major influences on the development of advanced practice nursing roles that exist in Canada today, those roles being the nurse practitioner and the clinical nurse specialist. Using a scoping review and qualitative interviews, data were summarized according to three distinct time periods related to the development of advanced practice nursing. They are the early beginnings; the first formal wave, between the mid 1960s and mid 1980s; and the second wave, beginning in the late 1980s and continuing to the present. This paper highlights how advanced practice nursing roles have evolved over the years to meet emerging needs within the Canadian healthcare system. A number of influential factors have both facilitated and hindered the development of the roles, despite strong evidence to support their effectiveness. Given the progress over the past few decades, the future of advanced practice nursing within the Canadian healthcare system is promising.

## Introduction

Advanced practice nursing has evolved over the years to become recognized today as an important and growing trend among healthcare systems worldwide (Sheer and Wong 2008). It is defined as,

> … an advanced level of clinical nursing practice that maximizes the use of graduate educational preparation, in-depth nursing knowledge and expertise in meeting the health needs of individuals, families, groups, communities and populations. It involves analyzing and synthesizing knowledge; understanding, interpreting and applying nursing theory and research; and developing and advancing nursing knowledge and the profession as a whole" (Canadian Nurses Association 2008: 10).

In Canada, the roots of advanced practice nursing can be traced to the efforts of outpost nurses who worked in isolated areas such as the Northwest Territories,

Labrador and Newfoundland during the early 1890s (Graydon and Hendry 1977; Higgins 2008). These early beginnings of advanced practice nursing have been accepted but largely unrecognized within the Canadian healthcare system (McTavish 1979). Since the 1960s, advanced practice nursing roles have become more formalized within Canada.

To understand the development and current status of advanced practice nursing within a Canadian context, it is important to explore its historical roots and influences. The purpose of this paper is to provide a historical overview of the major influences on the development of advanced practice nursing roles that exist in Canada today, those roles being the nurse practitioner (NP) and the clinical nurse specialist (CNS).

## Methods

This paper draws on the results of a scoping review of the literature and key informant interviews conducted for a decision support synthesis commissioned by the Canadian Health Services Research Foundation and the Office of Nursing Policy in Health Canada. The overall objective of this synthesis was to develop a better understanding of advanced practice nursing roles, their current use, and the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system (DiCenso et al. 2010a). The detailed methods undertaken for this synthesis are described in an earlier paper in this issue (DiCenso et al. 2010b). Briefly, it consisted of a scoping review of 468 papers that represent Canadian papers ever written about advanced practice nursing and international reviews published between 2003 and 2008. It also included 62 interviews and four focus groups with national and international key informants, including CNSs, NPs, physicians, allied health providers, educators, healthcare administrators, nursing regulators and government policy makers. For this paper, the data have been summarized according to three distinct time periods of advanced practice nursing development: the early beginnings; the first formal wave, between the mid-1960s and mid-1980s; and the second wave, beginning in the late 1980s and continuing to the present. Major historical drivers for advanced practice nursing development during each of the two waves will be described for the CNS and NP roles.

## Early Beginnings of Advanced Practice Nursing

Informally, nurses have been practising in expanded roles in rural and remote areas of Canada for some time, where "nurses have for years been safely accepting many responsibilities traditionally taken by family and general practitioners" (Hodgkin 1977: 829). The chronic shortage of physicians in remote areas of Canada, in particular, created a demand for nurses to work in these underserviced areas. According to a national report (Kulig et al. 2003), the first outpost nurses

came from England in 1893 as part of the Grenfell Mission (Graydon and Hendry 1977; Higgins 2008). The mission, led by British medical missionary Wilfred Grenfell, provided some of the earliest permanent medical services in Labrador and northern Newfoundland (Higgins 2008). Before this mission, almost no healthcare resources or formally trained nurses existed in the area. By 1920, nurse midwives were recruited to rural areas of Newfoundland to provide healthcare under challenging conditions (e.g., lack of professional support, lack of equipment and resources, poor transportation and limited communication). Nurses also practised in remote areas of other provinces. For example, an interview participant from Saskatchewan describes the following:

> We've always had nurses working in expanded roles here in the province from the early days, particularly in northern Saskatchewan. And it started expanding particularly in the rural and northern areas for the most part because of difficulty in finding continuous physician coverage for those areas.

An NP who works in the Yukon elaborates further:

> Historically, nurses have worked in an expanded capacity in remote regions of northern Canada out of necessity, so when health services were being regionalized in the north in the 1960s and they started looking for nurses to work up here, they initially looked at midwives from Britain because of the high birth rate and the aboriginal community, and eventually, it just evolved that nurses had to take on many roles that were traditionally within the medical realm, and doing things like suturing and reading X-rays and those types of things, and so we have evolved. We are almost, you could say, the first generation of the NP.

## Drivers for Development of Advanced Practice Nursing Roles: Mid-1960s to Mid-1980s

The major impetus for the formal development of advanced practice nursing, particularly for the CNS role, was the fallout of World War II, in which "the depletion of experienced nurses on the home front during the war necessitated the preparation of other nurses to fill this gap" (Montemuro 1987: 106). More funds were allocated to train and educate veteran nurses to meet societal needs (e.g., the tuberculosis pandemic and the emergence of psychiatric nursing as a specialty), leading to more specialty training and the development of advanced skills for both junior and senior nurses. However, some nurses felt that their profession was not ready to accept a more advanced and independent role within the healthcare system (McTavish 1979). Others argued that nurses should seize the opportunity to develop their profession because they believed that nurses were appropriately positioned

to meet society's emerging healthcare needs. Another controversial issue was the potential medicalization of nursing and loss of a nursing philosophy of practice as nurses in expanded and advanced roles took on functions traditionally performed by physicians (Brown 1974; King 1974; MacDonald et al. 2005). During this time, two types of advanced practice nursing roles emerged: the NP and the CNS.

### Nurse Practitioner

In Canada during the mid 1960s and early 1970s, the major driving forces for implementing the NP role (also known as an "expanded role" or the "family practice" nurse) (Allen 1999; Chambers and West 1978a; Glass et al. 1974; King 1974) were (1) the introduction of universal publicly funded medical insurance, (2) the perceived physician shortage, (3) the increased emphasis on primary healthcare, and (4) the trend toward increased medical specialization (Angus and Bourgeault 1999; de Witt and Ploeg 2005; Torrance 1998; van der Horst 1992). In response, the Boudreau report (1972) was released, receiving widespread acceptance across the country. It recommended that NPs be trained to meet primary healthcare needs in Canada, proposing that NPs could be the first contact for people entering the healthcare system ("Nurse Practitioner" 1978). Boudreau (1972: 7) contended that the NP should be "an extension of the present nursing role, with the nurse's unique skills in the provision of health care being developed and utilized more effectively, and the nurse's role in assisting the physician expanded through increased delegation of certain tasks by physicians to suitably prepared nurses." Following this report, the Canadian Nurses Association (CNA) and the Canadian Medical Association (CMA) issued a Joint Statement (CNA and CMA 1973) that addressed priorities, roles and responsibilities, education and work situations for nurses working in expanded roles (Witter du Gas 1974). The statement recognized the interdependent nature of nursing and physician roles and envisioned increased nursing responsibilities for health maintenance ("Canadian Medical" 1973).

Provincial nursing groups across Canada led a number of initiatives aimed at legitimizing expanded nursing roles (Baumgart and Grantham 1973; "Nurse Practitioner" 1978), such as the development of (1) the Nurse Practitioners' Association of Ontario (1973), (2) the British Columbia Committee on the Expanded Role of the Nurse in Provision of Health Care (1973), (3) the Saskatchewan Nurse Practitioner Demonstration Project (Cardenas 1975), (4) the Manitoba Nurse Practitioner Interest Group (1975), (5) the Report on Nurses in Nova Scotia Performing in an Expanded Role (1975), and (6) a report entitled Employment Opportunities for Nurse Practitioners in Alberta (1977).

Soon after the Boudreau report and the CNA/CMA's Joint Statement were released, a number of educational programs were developed across Canada to prepare nurses for expanded roles. Two types of programs emerged: one that prepared

nurses to provide health services in outpost settings and in remote areas of northern Canada, and another that focused on developing nurses with primary care skills to work in family practice settings or in community nursing roles ("Nurse Practitioner" 1978). Dalhousie University in Nova Scotia led the way by establishing the first program for midwifery and outpost nursing in 1967; six other universities (Alberta, Manitoba, Western Ontario, Toronto, McGill and Sherbrooke) followed suit in 1972. The curriculum for these programs was influenced by the Kergin Report (Kergin 1970), with the goal of preparing clinically trained nurses (CTNs) to practise in isolated settings (Hazlett 1975). McMaster University and the University of Montreal started programs in 1971 that focused on preparing "family practice nurses" to work in urban settings. Other similar university programs began later at the University of British Columbia and Memorial University.

Several program descriptions were published (Chambers et al. 1974; Herbert and Little 1983; Kergin and Spitzer 1975; Kergin et al. 1973; Spitzer and Kergin 1973, 1975); their curricula emphasized preparing nurses to work collaboratively with physicians but in more independent and expanded roles. For example, at McMaster, physicians had to agree to "take on" the nurse and to attend certain clinical and educational sessions with the nurse. Spaulding and Neufeld (1973: 98) described the McMaster program positively: "The nurses learn enough history taking and physical examination to carry out the initial assessment of patients, most prenatal and postnatal care, well-baby care, and the management of certain diseases such as hypertension and diabetes." However, programs varied across institutions, with Dalhousie University offering a two-year diploma and McMaster offering an eight-month program beyond a baccalaureate degree or a diploma.

A key issue for facilitating the development of advanced practice nursing roles was the debate about educational requirements for entry-to-practice during the early 1970s, with recommendations for baccalaureate education for NPs (Buzzell 1976; Riley 1974) and master's level for CNSs (Boone and Kikuchi 1977). Moreover, arguments for increased standardization of NP education were made and continue to be debated today (Canadian Nurse Practitioner Initiative 2006; Hubert et al. 2000; Schreiber et al. 2005). Confusion regarding the required educational preparation for advanced practice nursing roles has contributed to the slow acknowledgement, growth and integration of these roles into the Canadian healthcare system (Schreiber et al. 2005).

Several pilot or demonstration projects were subsequently initiated across the country, as suggested in the Boudreau report. Generally, evaluation of these projects was positive; 93% of NPs gained employment, more time was spent with patients, NPs reported doing less clerical work, and job satisfaction stayed the same for MDs and NPs (Scherer et al. 1977; Spitzer et al. 1975). Using a descriptive survey, Chenoy

et al. (1973) found that patients had favourable views about nurses being involved in health promotion activities, but they preferred physicians in "worry-inducing" situations. In isolated settings such as northern Newfoundland or Ontario, outpost nurses were responsible for providing primary care to the entire community and for seeing patients in clinics for preventative health, prescription refills or common problems such as upper and lower respiratory infections (Black et al. 1976; Dunn and Higgins 1986; Graydon and Hendry 1977). A pilot evaluation of four NPs working in rural Saskatchewan showed that role implementation varied according to community needs (Cardenas 1975). Research also supported the NP role in pediatric settings (McFarlane and Norman 1972), outpatient clinics (King et al. 1974; Ramsay et al. 1982) and emergency settings (Vayda et al. 1973).

Rigorous evaluation studies of NP outcomes were also conducted during this time. In Ontario, two landmark randomized controlled trials, often referred to as the Burlington Trial (Sackett et al. 1974; Spitzer et al. 1974) and the Southern Ontario Study (Spitzer et al. 1973a, 1975), demonstrated the effectiveness of the NP role. The studies showed that NPs could safely manage 67% of the problems reported in a family practice setting and that patients were satisfied with NP care (Batchelor et al. 1975; Sackett et al. 1974; Spitzer et al. 1976). Studies conducted in Newfoundland showed positive results, adding further support for the safety and effectiveness of NP roles (Chambers and West 1978a). NPs were also found to improve resource utilization and access to care (Chambers 1979; Denton et al. 1983; Kushner 1976; Lees 1973; Lomas and Stoddart 1985; Spitzer et al. 1973a) and to increase primary care services in the community (Chambers et al. 1977).

Despite the strong research evidence supporting the effectiveness of NPs, integration and sustainability of this role failed during the 1970s. A number of factors led to the failure, but the primary reason was lack of funding for NP services (Chambers and West 1978b; Mitchell et al. 1993). Since provincial ministries of health did not provide funding for NPs, physicians who partnered with NPs had to pay their salaries out of their income. This arrangement soon created a financial loss and disincentive for physicians to work with NPs because they were unable to bill for unsupervised NP services (Jones 1984; Spitzer et al. 1973b). Other factors included a perceived oversupply of physicians, particularly in urban areas; lack of NP role legislation for an extended scope of practice; insufficient public awareness of the role; and inadequate support from policy makers and other health providers (Mitchell et al.1993). In particular, lack of support from the medical community created substantial tension around NP role implementation (Haines 1993).

The direct relationship between the perceived demand for NPs and the undersupply of physicians as the traditional and primary driver for NP services was troublesome for the sustainability of the NP role. While comparing the different ways

that the expanded role in nursing was implemented across the country during the 1970s, Allen (1977, 1999) found that it was perceived in one of two ways: either as a replacement function or a complementary one. In the former, NPs were vulnerable to the supply of physicians and considered an "assistant to the physician," whereas in the latter, the emphasis was on the unique and added value of NPs and their co-existence with others as a distinct healthcare professional.

Moreover, a double standard existed, whereby NPs were supported to practise in areas where physicians did not want to (i.e., rural and remote communities), but, otherwise, there was little perceived need for the role (CNA 2006; de Witt and Ploeg 2005). Similar opinions of the NP role existed in the United States and may have influenced the way it was perceived in Canada. For example, Roemer (1976: 41), a family physician, compared NPs to "medical corpsmen discharged from the military services," stating that NPs were acceptable for servicing the poor and that "in America or other affluent nations, to abandon primary care to others [such as NPs] is to acknowledge failure in medicine and inequity in society."

Other physicians have been more supportive of NP role integration within the healthcare system. In 1978, the president of the College of Family Physicians of Canada, Dr. Hollister King, noted that "the family practice nurse was never intended to provide cheaper medical care for the citizens of our country, but rather comprehensive care that the Canadian public would soon learn to appreciate" (King 1978: 21). Many of the 250 NPs who graduated from Canadian university programs between 1970 and 1983 continued to practise through the 1980s and 1990s, primarily in community health centres and northern remote health centres (Haines 1993).

### Clinical Nurse Specialist

The impetus for the introduction of CNS roles arose after World War II, when the shortage of skilled nurses and progressive developments in healthcare science and technology led to the need for more advanced and specialized nursing roles and nurses with the knowledge and skills to support nursing practice at the bedside. An educator interview participant from Quebec comments:

> The CNS was introduced mainly in acute care … I think the main reason why we introduced the CNS role was because the level of care was getting more and more complex … we needed these CNSs in larger hospitals to promote a greater level of care and to promote continuing training [and] coaching and to create a dynamic in the nursing care field to improve the level of care. I think this was the main driver to include the CNS in the field.

The term "specialist" was one of the first used to describe what is today the clinical nurse specialist. In 1943, Frances Reiter introduced the term "nurse clinician"

to describe a nurse with advanced knowledge and clinical skills who was capable of providing a high level of patient care (Davies and Eng 1995; Hamric et al. 2009; Montemuro 1987; Reiter 1966). Over time, the CNA has put forth many iterations of Reiter's definition for the CNS role (1978, 1986, 2009).

Although not specifically designed to educate or produce CNSs, the University of Toronto introduced a master's degree program in nursing in 1970 that offered a focus on clinical specialization. By 1986, most CNSs practising in the role were prepared at a master's level (Montemuro 1987). Beaudoin et al. (1978) argued that the CNS role was more in keeping with nursing values, as opposed to the NP role, which was described as an extension of medicine because of the medical role functions it incorporated. Stevens (1976: 30) contended that the CNS role "has contributed so much, so rapidly, in attempts to professionalize nursing and to substantiate its existence as an independent profession."

The CNS role development and implementation was often challenged by issues related to role ambiguity, lack of involvement or recognition in the organizational structure, and lack of administrative support (Davies and Eng 1995; Hagan and Côté 1974; Ingram and Crooks 1991; Montemuro 1987). A quote from a health-care administrator participant supports these claims:

> I think what happened starting back in the late 60s or 70s, nurses who were prepared at the master's level – employers knew they wanted them and needed them, but they didn't quite know what to do with them, so they put them into CNS roles and that has happened over the last 20 or so years. So the role is very varied and not very well understood … I think that is part of the problem with the successful implementation – you don't have a clear role that you are implementing .... I think it is historical, it just happened that way. It's not a bad thing; that is just the history of the role.

### Drivers for Development of Advanced Practice Nursing Roles: Late 1980s to Present

A number of initiatives related to advanced practice nursing were implemented at the federal level, for example, (1) the CNA's (2006) Dialogue on Advanced Nursing Practice (ANP), (2) the decade-long development and revisions to the Advanced Nursing Practice framework (CNA 2000, 2002, 2008), (3) a 10-year Chair Program (2001–2011) funded by the Canadian Health Services Research Foundation (CHSRF) and the Canadian Institutes of Health Research (CIHR) to increase Canada's capacity of nurse researchers to conduct policy and organizationally relevant research focused on advanced practice nursing, and (4) a decision support synthesis funded by the CHSRF, in partnership with the Office of

Nursing Policy of Health Canada, to inform the integration of CNSs and NPs in the Canadian healthcare system (DiCenso et al. 2010a).

At the provincial level, numerous initiatives have supported advanced practice nursing roles; for example, the Association of Registered Nurses of Newfoundland (1997) developed a Plan of Action for the Utilization of Nurses in Advanced Practices throughout Newfoundland and Labrador, the Registered Nurses' Association of Nova Scotia (1999) developed a Position Paper on Advanced Nursing Practice, and CHSRF supported work that resulted in a report on Advanced Nursing Practice: Opportunities and Challenges in British Columbia (Schreiber et al. 2003).

### Nurse Practitioner

Due to rising healthcare costs during the early 1990s, a number of government-initiated healthcare reforms occurred with the goals of using resources more efficiently and placing more emphasis on health promotion and community-based care (Angus and Bourgeault 1999; deWitt and Ploeg 2005; Stoddart and Barer 1992). Stoddart and Barer (1992), in their national report "Toward Integrated Medical Resource Policies for Canada," argued for a reduction in the number of physicians in the healthcare system, recommending that other healthcare professionals should be substituted for physicians, "in which their superior effectiveness, appropriateness or efficiency has been demonstrated" (Stoddart and Barer 1992: 1654). Also, the release of the Regulated Health Professions Act (1991) "weakened medicine's jurisdictions by preventing any single profession from monopolizing health care" (deWitt and Ploeg 2005: 126). As a result, key tasks were organized and allocated according to their appropriateness for individual professions (Angus and Bourgeault 1999). In the meantime, concerns emerged about a future oversupply of physicians in urban settings, while rural and remote areas continued to be underserviced (deWitt and Ploeg; Haines 1993). All of these factors created a renewed interest in advanced practice nursing roles in the early 1990s, particularly for the NP role in Ontario. An interview participant adds,

> They [NPs] were part of solutions for other problems, for example, if there were times of shortages in primary care physicians and those sorts of things. When we got to the '90s, we recognized through a number of reports that there needed to be revitalization of primary care and that advanced practice roles may well be an important part of increasing access to primary care. Then the nurse practitioner program was reintroduced.

During the early 1990s, many nursing professional organizations began to advocate for revitalizing the NP role across Canada (Haines 1993). However, in Ontario, the new regulations proposed by the Ontario Ministry of Health and Long-Term

Care to increase the scope of practice of NPs created concern from the Ontario Medical Association and the Ontario College of Family Physicians. They argued that NPs would be more expensive and that the evidence used to support NP utilization in Ontario was flawed (Evans et al. 1999). Despite these arguments, two reports provided recommendations to the contrary – one commissioned by the CNA (Haines 1993) and another prepared at the request of the Ontario Ministry of Health's Nursing Secretariat (Mitchell et al. 1993). The Ontario government funded a consortium of 10 universities to mount a common post-baccalaureate primary healthcare NP educational program, beginning in 1995 (Cragg et al. 2003).

The momentum to support NP roles continued into the twenty-first century with the completion of two prominent studies: (a) "The Nature of the Extended/Expanded Nursing Role in Canada" (Advisory Committee on Health Human Resources et al. 2001), and (b) "Report on the Integration of Primary Health Care Nurse Practitioners into the Province of Ontario" (DiCenso et al. 2003). Also, two national reports (Kirby 2002; Romanow 2002) that have been influential in advancing the NP role were released. The Romanow report emphasized strategies to reduce wait times and suggested improvements to primary healthcare, including using nurses in case manager roles and better utilization of NPs:

> Across Canada, there has been an increasing emphasis on the role of nurse practitioners who can take on roles that traditionally have been performed only by physicians. This could even include providing nurse practitioners with admitting privileges to hospitals so that they could refer patients and begin initial treatment in hospitals (Romanow 2002: 106).

A new NP role emerged in the late 1980s, called the blended CNS/NP. This role was first introduced in Ontario in tertiary-level neonatal intensive care units (NICUs) to help offset the cutbacks in pediatric residents (Hunsberger et al. 1992; Pringle 2007). The addition of CNS to the title was deliberate, to legitimize the nonclinical advanced practice role dimensions, including education, research and leadership (DiCenso 1998; Hunsberger et al. 1992). A healthcare administrator interview participant describes:

> The individuals who came into those roles [CNS/NP] very much valued their background in nursing. They used their nursing knowledge, their assessment, their intervention, their skills and capacity to work with families, provide education to nurses … their view of the world was very much about the holistic needs of the patient and family and their desire to provide mentorship and professional development for nurses. All of those things came together for those individuals who were in that role, and

> they really saw themselves as providing components of the clinical nurse specialist role as well as the more medical components of the nurse practitioner role, and they did not want to give that up. They didn't want to be slotted into the view that they were medical replacements, because they really perceived themselves to be much more. And they are much more.

NPs in these roles were soon introduced into other specialty areas within hospitals because of a shortage of medical residents and lack of continuity of care for seriously ill patients (Pringle 2007). A few years later, as our focus group participants informed us, advanced practice nurses in these roles were renamed acute care NPs (ACNPs). The term ACNP was first coined in the United States to describe NPs working in critical care (Kleinpell 1997); it was later adopted in Canada in the mid-1990s to describe NPs working with specialized populations in acute care settings (Simpson 1997).

In contrast to the primary healthcare NP (PHCNP) programs, all ACNP education programs were developed at the graduate level throughout Canada (Alcock 1996; Dunn and Nicklin 1995; Faculté des sciences infirmières, Université de Montréal 2008; Haddad 1992; Roschkov et al. 2007). An interview participant offers her perspective about the ACNP programs:

> I think nursing leaders in organizations saw that as an opportunity to start to explore the nurse practitioner role for acute care. The University of Toronto in the early '90s put together a program – I guess it was around 1994 if I'm not mistaken – and that program has been evolving since that time at U of T. It started out to be a program that was a post-master's program that was offered to clinical nurse specialists.

The introduction of the ACNP role in neonatology in Ontario was based on a comprehensive research program (DiCenso 1998) that began with a needs assessment (Paes et al. 1989). This was followed by surveys to delineate the role (Hunsberger et al. 1992), evaluations of the graduate-level education program (Mitchell et al. 1991, 1995), a randomized controlled trial to evaluate the effectiveness of the role (Mitchell-DiCenso et al. 1996a) and assessments of team satisfaction with the role (Mitchell-DiCenso et al. 1996b). A healthcare administrator interview participant adds,

> I think there's absolutely no question that the nurse practitioner role, and particularly in NICU, has been very positive. I mean it's only enhanced the quality of the care that the infants receive; it's enhanced the continuity of care that the infants receive; it's enhanced the linkages and support, education and emotional support with families; and it's assisted in

> developing probably better collaboration among the teams and all of the disciplines that work [there].

Advanced practice nursing roles have evolved differently across provinces and territories for a number of reasons. In Quebec, the ACNP was the first NP role formally introduced into the healthcare system, according to this healthcare administrator:

> The first wave that the government allowed was in neonatal ICU, cardiology/cardiovascular and nephrology, and the reason why those were chosen versus let's say something like primary care was because politically it was a specialist in the university teaching hospitals who wanted, who really backed the support of advanced practice nurses and lobbied within their associations and at a larger collective with the government to say, we absolutely need these people ... on the other hand, the group of family practice professionals here in Quebec opposed the NPs.

Prior to 1998, all acute and primary care NPs working in Canada utilized medical directives or care protocols, under the delegation of physicians, to perform the competencies of their training that were beyond the scope of a registered nurse. In 1998, the first legal recognition for NP scope of practice began with legislated authority for primary care NPs in Ontario (CIHI and CNA 2006). Many jurisdictions implemented regulations for both PHCNPs and specialty/ACNPs at the same time (i.e., Alberta, British Columbia, Manitoba, Newfoundland, and Nova Scotia). Each jurisdiction provided the authority whereby the ACNP's professional scope of practice was defined (CIHI and CNA 2006). However, there were many barriers to practice. For example, the Public Hospitals Act in Ontario prohibited NPs from admitting or discharging a patient. Because of the Act, ACNPs in Ontario require medical directives even with regulation of their role. Jurisdictions where ACNPs have not been regulated require medical directives, negotiated at the institutional level, for ACNPs to carry out extended controlled acts. In most provinces and territories, successful completion of a national (or in some cases provincial) examination is a requirement for NP licensing. Currently the CNA offers examinations for family/all-ages (PHCNPs), adult NPs and pediatric NPs (for more information see http://www.cna-nurses.ca/CNA/nursing/npexam/default_e.aspx). Eligibility of candidates and permission to take these exams are determined by provincial/territory regulatory bodies. In Quebec, NPs must have a specialty certification in order to practise.

In 2005, the federal government provided funding for the Canadian Nurse Practitioner Initiative (CNPI), sponsored by the CNA. The CNPI mandate was to develop a framework for the integration and sustainability of the NP role in Canada's healthcare system (CNPI 2006). The final report, "Nurse Practitioners:

The Time is Now," along with its companion technical reports, includes discussion papers on (1) standardization of NP education, (2) regulation, (3) recruitment and retention, (4) professional practice and liability and (5) the core competency framework for NPs (CNPI 2006).

During the second wave of implementing the NP role in Canada, new challenges, particularly for nurses in rural and remote settings, emerged as NPs continued to develop. For instance, the variation in education, regulation and credentialling raised concerns about the competency of some NPs by both nursing and medical colleagues. This had negative consequences for establishing the credibility and legitimacy of the roles (Advisory Committee on Health Human Resources et al. 2001). Also, the requirement for NP licensure, and in some provinces master's education, created difficulties for nurses who practised in rural and remote regions throughout Canada. In 2008, only 5.9% of all registered nurses (RNs) practising in rural and remote areas in Canada were NPs, with the highest percentage in the territories (11.5%) and lowest in the Atlantic provinces (2.1%) (Stewart et al. 2005). Stewart and colleagues found that these nurses reported a need for more education, particularly for practice in remote areas. In addition, although primary care delivery to First Nations and Inuit communities has been improved by using NPs, an increased scope of practice has led to the need for higher education for NPs (Health Canada, and First Nations and Inuit Health Branch 2006). As a result, decreased numbers of RNs were able to practise as NPs in First Nations because of strict criteria for registration with the provincial and territory regulators (Health Canada, and First Nations and Inuit Health Branch 2006). A healthcare administrator interview participant elaborates on this issue:

> In 2002 the government changed legislation around NPs. Prior to that in Alberta, NPs were only working in our very remote northern areas of the province. So in 2002 the legislation changed, and the regulation was such that for people to practise as an NP they had to be registered on a roster with CARNA [College and Association of Registered Nurses of Alberta]. So at that point, we were starting at ground zero because there weren't any [licensed] ones [NPs].

Similar activities were occurring in Saskatchewan at about the same time, as a government stakeholder adds,

> Now back in the early '90s, it was recognized that the nurses were requiring more consistent education to work in these roles, particularly in the north. So an Advanced Clinical Nurse course was organized through the Saskatchewan Institute of Applied Science and Technology. This course started in 1993 and consisted of about six courses to help nurses upgrade

their education in diagnosis and prescribing of medications and common treatments like suturing.

Efforts have focused on overcoming some of the challenges that were previously experienced during the first wave of implementing NPs. For example, in Alberta, the Taber Project represents one initiative that was recognized as being a successful model in implementing the role of the NP (Reay et al. 2006). The success was largely due to the NP funding model, whereby costs were shared between the clinic and the provincial government so that the improved billing potential surpassed the costs of employing the NP (Reay et al. 2006). In most jurisdictions, the government pays for NP salaries because direct billing of provincial insurance plans is not permitted.

All provinces and all territories currently have legislation in place for the NP role (Government of Yukon 2009; Hass 2006). Alberta was the first province, in 1996, to legislate NPs to practise, and the Yukon was the most recent to pass legislation for NPs, in December 2009 (Government of Yukon, 2009; see Table 1). As of fall 2009, there were almost 2500 licensed NPs in Canada, over half of whom were in Ontario (see Table 1). National leaders in advanced practice nursing propose that the establishment of pan-Canadian legislation for NPs marks the beginning of a "third wave" of development of the NP role, one characterized by the recognition of NPs as essential components of the Canadian healthcare system (CNA 2006).

**Table 1.** NPs in Canada – year of legislation and workforce numbers by province

| Province | Year legislation was passed | Nurse practitioner workforce (as of fall 2009) |
|---|---|---|
| Newfoundland | 1997 | 104 |
| Prince Edward Island | 2006 | 3 |
| Nova Scotia | 2002 | 96 |
| New Brunswick | 2002 | 57 |
| Quebec | 2003 | 41 |
| Ontario | 1997 | 1,463 |
| Manitoba | 2005 | 75 |
| Saskatchewan | 2003 | 120 |
| Alberta | 1996 | 294 |
| British Columbia | 2005 | 129 |
| Yukon | 2009 | NA |

Table 1 Continued.

| | | |
|---|---|---|
| Northwest Territories/Nunavut | 2004 | 60 |
| Total | | 2442 |

Source: provincial/territorial regulators
NA=There are no licensed NPs in Yukon yet, as legislation just passed in 2009.

## Clinical Nurse Specialist

Unlike the NP, the CNS role continued to formally exist and be supported during the 1980s and did not experience the same wave effect as the NP role did. However, the CNS role experienced different forms of ebbs and flows, largely reflective of the current needs and economic situation of the Canadian healthcare system.

In 1986, the CNA released its first position statement on the CNS role, describing it as,

> an expert practitioner who provides direct care to clients and serves as a role model and consultant to other practising nurses. The nurse participates in research to improve the quality of nursing care and communicates and uses research findings. The practice of the clinical nurse specialist is based on in-depth knowledge of nursing and the behavioural and biological sciences…. A CNS is a registered nurse who holds a master's degree in nursing and has expertise in a clinical nursing specialty (CNA 1986: 1).

Following this report, two provincial statements on the CNS role were released – one by the Registered Nurses' Association of Ontario (1991) and another by the Registered Nurses Association of British Columbia (1994) – that identified the major components of the CNS role as clinical practice, education, research, consultation and leadership/change agent. These components of the CNS role have remained constant throughout two subsequent iterations of CNA position statements on the CNS role in 2003 and 2009 (CNA 2003, 2009).

However, in Quebec, the inclusion of a clinical component to the CNS role has been a long-standing point of discussion among the licensing board, researchers and healthcare providers (Allard and Durand 2006; Beaudoin et al. 1978; Charchar et al. 2005; Laperrière 2006; Ordre des infirmières et infirmiers du Quebec (OIIQ) 2002, 2003; Roy et al. 2003). Historically, the lack of a clinical component was due to a shortage of master's-trained nurses and the need to strategically place them in administrative roles (Beaudoin et al. 1978). Yet international leaders in advanced practice nursing argue the clinical component is the hallmark of the CNS role (Hamric and Spross 1989).

One of the most significant developments in advancing the CNS role across Canada was the formation of a national interest group, initially called the Canadian Clinical Nurse Specialist Interest Group (CCNSIG) in 1989. Leaders within this group worked closely with CNSs from other provinces to help develop their own provincial organizations as well as organize conferences to advance their professional practice. In 1991, CCNSIG became an associate group of CNA. By 1998, CCNSIG was renamed the Canadian Association of Advanced Practice Nurses (CAAPN), to include other types of advanced practice nurses.

According to Hamric et al. (2009), the 1990s was a challenging decade for the sustainability of the CNS role in the United States due to financial problems and cutbacks within the healthcare system. During this time, CNSs tended to assume different positions such as administrators or staff educators (Hamric et al. 2009). However, toward the end of that decade, interest in the CNS role returned with the intent of bringing clinical leadership back into healthcare environments; this leadership was lacking due to reductions in nurse executive and nurse educator positions. The movement toward evidence-based practice has created greater need for the CNS role in practice settings to help staff nurses incorporate research into practice.

Unlike for NPs, no formal education program in Canada has been developed specifically for CNSs. Although graduate education is a standard precursor to becoming a CNS, graduate programs have not been specifically designed to meet the needs of CNSs but, rather, tend to be more generalized in nature. As a current co-chair of the CNS Council of Canada, Gauthier (2009) recommends standardizing CNS education across Canada at the specialization level, with a requirement of 500 clinical hours for a master's degree. This has been accepted as a requirement for CNSs practising in the United States. However, Calkin (2006) argues that the lack of clarity about the meaning of specialization in nursing and its relationship to advanced practice nursing has created barriers to embedding advanced practice nursing within the Canadian healthcare and educational systems. She claims "disciplinary education is the basis for graduate education for CNSs who develop a knowledge base and skills in applying concepts to healthcare challenges well beyond those developed in their basic education" (2006: 48). According to Alcock (1996), the most common areas of clinical specialization for the CNS were psychiatry, maternal/child, gerontology, palliative care, women's health, community health, oncology and pediatric chronic care.

In Quebec, the regulatory body, the Ordre des Professions, determines each professional group's scope of practice and regulates the use of the title "Specialist" (Bussières and Parent 2004). Professionals must complete specialized training in a recognized university program to use the terms "specialized" or "specialist."

Challenges to the development of the CNS role that were apparent during its initial implementation in the 1970s continued to plague its implementation in later years (Davies and Eng 1995; Fulton and Baldwin 2004; Ingram and Crooks 1991; Montemuro 1987). For example, Davies and Eng (1995) found that a complex interplay of factors including role clarity, organizational structure and administrative support influenced how well the CNS role was implemented. Moreover, the diversity and range of functioning among CNSs were apparent across healthcare agencies, with most of their time devoted to four components: practice, consultation, education and research (Davies and Eng 1995). Recommendations have been put forth to address some of these issues, such as standardizing the CNS role, by developing clear role definitions and promoting the use of similar job descriptions and position titles (CNA 2006). Basic structures and resources are also required to support the development of CNS roles and promote their sustainability within the Canadian healthcare system, such as standardized education, credentialling and regulation (Bryant-Lukosius et al. 2010).

Evaluations of the CNS role have been consistently positive, with improvements demonstrated in patient health status and satisfaction, quality of life, quality of care, health system costs and length of stay (Fulton and Baldwin 2004). However, very little of the research has been conducted in Canada (Bryant-Lukosius et al. 2010).

Based on CIHI data (2010), there were about 2,227 CNSs in Canada in 2008 (Table 2); however, the true number of CNSs is unknown because current CNS estimates are based on self-report and many of these individuals lack graduate education or specialty-based experience. Based on these data, the largest numbers of CNSs are found in British Columbia, Quebec and Ontario.

**Table 2.** CNSs in Canada – workforce numbers by province for 2009

| Province | Clinical nurse specialist workforce |
|---|---|
| Newfoundland | 25 |
| Prince Edward Island | 5 |
| Nova Scotia | 48 |
| New Brunswick | 25 |
| Quebec | 555 |
| Ontario | 415 |
| Manitoba | 115 |
| Saskatchewan | 63 |

Table 2 Continued.

| | |
|---|---|
| Alberta. | 303 |
| British Columbia | 663 |
| Yukon | NA |
| Northwest Territories/Nunavut | 10 |
| Total | ~2,227 |

Source: Canadian Institute for Health Information (CIHI 2010)
NA=Data not applicable or do not exist.

CNS positions are often vulnerable to being reduced or eliminated during times of poor hospital economic situations or financial cutbacks (CNA 2009). With the increased focus on NP roles and lack of recognition of the valued contribution of CNSs, some employers have shifted funding from CNS to NP positions (CNA 2006). Variability in CNS practice and the many role dimensions have led to role confusion and have made evaluation of role outcomes challenging (CNA 2006; Sparacino and Cartwright 2009). As a result, organizations and administrators struggle to appreciate CNS contributions for achieving clinical and institutional outcomes.

Momentum seems to be building in recognizing the importance and value of the CNS role internationally. For example, the American Nurses' Credentialing Center (ANCC) recommends employment of CNSs for hospitals to achieve "magnet status." To be deemed a "magnet" hospital, specific criteria need to be satisfied as a reflection of the strength and quality of nursing services. These include using evidence-based nursing to achieve excellent patient outcomes and maintaining a high level of job satisfaction and low staff nurse turnover rate (Center for Nursing Advocacy 2009). Walker et al. (2009) found that CNSs were perceived as important in achieving and maintaining magnet status within American hospitals. Within Canada, "as concern over the quality of care builds in the 21st century, there is reason to believe that the CNS role will regain prominence" (CNA 2008: 6).

## Conclusion

Advanced practice nursing has evolved to meet gaps and emerging needs in the healthcare system. This historical analysis of the development of advanced practice nursing roles in Canada highlights a number of influential factors that have both facilitated and hindered the development of the roles, despite strong evidence to support their effectiveness. Understanding the theoretical, empirical and experiential efforts and achievements of the visionary leaders of the past will better position advanced practice nursing to

meet the healthcare needs of Canadians into the future. Given the progress over the past few decades, the future of advanced practice nursing within the Canadian healthcare system is promising.

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# Education of Advanced Practice Nurses in Canada

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## Abstract

In Canada, education programs for the clinical nurse specialist (CNS) and nurse practitioner (NP) roles began 40 years ago. NP programs are offered in almost all provinces. Education for the CNS role has occurred through graduate nursing programs generically defined as providing preparation for advanced nursing practice. For this paper, we drew on pertinent sections of a scoping review of the literature and key informant interviews conducted for a decision support synthesis on advanced practice nursing to describe the following: (1) history of advanced practice nursing education in Canada, (2) current status of advanced practice nursing education in Canada, (3) curriculum issues, (4) interprofessional education, (5) resources for education and (6) continuing education. Although national frameworks defining advanced nursing practice and NP competencies provide some direction for education programs, Canada does not have countrywide standards of education for either the NP or CNS role. Inconsistency in the educational requirements for primary healthcare NPs continues to cause significant problems and interferes with interjurisdictional licensing portability. For both CNSs and NPs, there can be a mismatch between a generalized education and specialized practice. The value of interprofessional education in facilitating effective teamwork is emphasized. Recommendations for future directions for advanced practice nursing education are offered.


## Introduction

Education is essential for securing the future supply of advanced practice nurses (APNs) and for the continued development of those already in the workforce. In Canada, education programs for clinical nurse specialist (CNS) and nurse practitioner (NP) roles began 40 years ago. NPs are "registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice" (Canadian Nurses Association [CNA] 2008: 16). The CNA defines a CNS as "a registered nurse who holds a master's or doctoral degree in nursing and expertise in a clinical nursing specialty" (CNA 2009: 1).

Both national and international organizations have endorsed graduate education as the entry to practice for APNs (CNA 2008; International Council of Nurses [ICN] 2008). Education was one of the key components examined by the Canadian Nurse Practitioner Initiative (CNPI), a two-year Health Canada-funded project created to develop a framework for the integration and sustainability of the NP role. Programs for CNS and acute care nurse practitioner (ACNP), also known as NP (adult), NP (pediatrics) and NP (neonatal), education are uniformly at the graduate level across Canada. Though in transition, education for the primary

healthcare nurse practitioner (PHCNP), also known as the NP (family/all-ages) role, currently includes post-baccalaureate and master's programs (Canadian Association of Schools of Nursing [CASN] 2004; Rutherford and Rutherford Consulting Group Inc. 2005). Since the NP is a separately legislated role, education programs require regular formal approval by provincial and territorial regulatory nursing organizations. Matters pertaining to NP education, along with other issues relevant to graduate education, are discussed annually at the Canadian Association of Schools of Nursing Graduate Program Coordinators' Forum during the Association's conference. In follow-up to the report from the CNPI, NP educators from across the country signalled their desire for a national forum to address issues of importance to NP education. Two meetings have been held, and a national list-serv was established through the Canadian Association of Schools of Nursing.

According to the CNA (2009: 2), universities "are responsible for preparing CNS roles by providing curricula based on the competencies of advanced nursing practice and by developing innovative programs that facilitate access to graduate education." The CNA's Advanced Nursing Practice Framework (2008: 14) identifies that graduate credentials alone do not equate with advanced nursing practice and that "It is the combination of graduate education and clinical experience that allows nurses to develop the competencies required in advanced nursing practice." Some Canadian graduate nursing programs include courses in a clinical nursing focus, for example, family, adult, community and mental health. However, while many universities identify that their master's program provides preparation for advanced nursing practice, none have a specifically titled CNS program and, with one exception, do not have specifically titled CNS courses (Personal communication with 27 of 31 universities March 2010). For example, the University of Manitoba offers a Master of Nursing with a cancer focus for advanced practice nurse roles (University of Manitoba Faculty of Nursing 2009).

The aim of this paper is to provide a critical analysis of current advanced practice nursing education in Canada with a view toward what will be needed in the future. We briefly summarize the history of CNS and NP education and examine the current status of education for these roles in relation to curriculum, interprofessional education, resources and continuing education. We conclude with recommendations to promote advanced practice education in Canada.

## Methods

This paper was developed using the results of the scoping review of the literature and key informant and focus group interviews conducted for a decision support synthesis commissioned by the Canadian Health Services Research Foundation (CHSRF) and the Office of Nursing Policy in Health Canada (DiCenso et al. 2010a). The objective was to develop a better understanding of advanced practice

nursing roles, their current use, and the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system. The synthesis methods included a comprehensive appraisal of published and grey literature on Canadian advanced practice nursing ever published, as well as international literature reviews from 2003 to 2008. After all levels of review, 322 papers representing all Canadian papers (69% of 468) and recent reviews from other countries were retained in the synthesis. The 62 individual interview participants included 22 APNs, 11 health administrators, 6 provincial government policy makers, 7 nursing regulators, 5 educators, 7 physicians and 4 healthcare team members. Four focus groups were held and attended by a total of 19 participants, who were APNs, educators, administrators and policy makers. A complete description of our methods is provided in an earlier paper in this issue (DiCenso et al. 2010b). For this paper, we focus on articles and key informant interviews that address education.

## Results

### History of Advanced Practice Nursing Education in Canada

The first Canadian education program for NPs, the Outpost Nursing Program, was initiated in 1967 and offered at Dalhousie University in Halifax until 1997. Its emphasis was on preparation for primary healthcare practice in remote communities (Chaytor Educational Services 1994; Haines 1993; Martin-Misener et al. 1999). Programs at McMaster University in Ontario and in other provinces followed quickly thereafter (Haines 1993; Herbert and Little 1983; Kergin et al. 1973). These early programs were housed in universities and offered post-diploma or post-baccalaureate preparation for what was often referred to as the "expanded role of the nurse" and "family practice nursing" (Advisory Committee on Health Human Resources et al. 2001; Chambers et al. 1974; Jones and Parker 1974; Riley 1974). The McMaster University PHCNP initiative included a program of research to evaluate the NP training and role (Kaasalainen et al. 2010). Despite evidence of the program's success in preparing safe and effective NPs, funding for the education and employment of NPs in all but remote areas virtually disappeared once the physician shortage was resolved (Spitzer 1984). In the 1990s, however, cutbacks in medical residency positions along with a healthcare reform agenda focused on fiscal efficiency and a shift toward community-based care brought renewed government interest in the NP role and funding for NP education in some provinces (DiCenso et al. 2007).

The Council of Ontario University Programs in Nursing (COUPN), a consortium of 10 nursing faculties, developed the COUPN PHCNP Program, which began in the fall of 1995 (Andrusyszyn 1999; Cragg et al. 2003; DiCenso et al. 2003; van Soeren et al. 2000). Funding for the program was provided by the Ontario government and came with a requirement that the program be offered at the post-

baccalaureate level. The curriculum was developed and offered jointly by 10 schools in French and English, full-time and part-time, distance and on-site, in post-baccalaureate certificate and post-RN baccalaureate programs. These characteristics make it a unique model of NP education in Canada.

The COUPN PHCNP Program was extensively evaluated soon after it began (DiCenso et al. 1997, 1998). The outcome component of the evaluation used a before-after study design with first-year students and program graduates to determine knowledge acquisition in the program. A cohort study compared the knowledge, problem-solving and clinical skills of NP program graduates with second-year family medicine residents. Knowledge was evaluated using a multiple choice examination, problem solving using the College of Nurses of Ontario's Case Assessment Tool (written case-based short answer test), and clinical skills using six simulated patient scenarios scored by physician-NP teams with controls in place to detect examiner bias.

The study investigators found that NP program graduates' knowledge scores were significantly higher than those of first-year NP students. There was no statistical difference between the NP and resident groups for questions related to obstetrics/gynecology, psychiatry, prescribing, vaccines/immunization and prevention/health promotion. However, the resident group scored higher than the NP group on medicine and pediatric questions. With respect to problem solving, there was no difference in overall scoring between the two groups; however, the residents scored higher than the NP graduates in health assessment and diagnosis, and the NP graduates scored higher than the residents in health promotion and disease prevention. In terms of clinical skills evaluation, the NP group scored similarly to the family medicine resident group in all six simulated patient scenarios and in interviewing, history taking, counselling, management and physical examination skills.

Soon after the COUPN NP Program was established, other programs followed suit in almost every province. Some programs were initiated at the post-diploma level, some at the post-baccalaureate level and others at the master's level (Rutherford and Rutherford Consulting Group Inc. 2005).

The first ACNP education programs were initiated during the 1980s and 1990s and, in contrast to PHCNP programs, all began at the graduate level (Alcock 1996; Dunn and Nicklin 1995; Haddad 1992). The first ACNP program, designed to train neonatal nurse practitioners, was first offered at McMaster University in 1986. Program development was guided by the results of an interprofessional role definition study (Hunsberger et al. 1992). The educational program was evaluated extensively, both in the form of a before-after study (Mitchell et al. 1995) to ensure that those completing the program had acquired the expected competencies in

knowledge, problem-solving, communication and clinical skills and in the form of a cohort study (Mitchell et al. 1991) to compare the skills of graduating neonatal NPs with those of pediatric residents.

Recently released statistics from the Canadian Institute for Health Information (CIHI) (2010) show that in 2008, there were 1,626 licensed NPs in Canada. These data do not distinguish between PHCNPs and ACNPs. Of the 1,626 NPs, 597 (36.7%) had obtained a master's or doctoral degree as their highest education in nursing, 834 (51.3%) had a baccalaureate degree and 195 (12%) had a diploma. Compared to the registered nurse workforce, the proportion of NPs with a graduate degree is more than 10 times higher (36.7% versus 3.0%).

The CNS role emerged in Canada and the United States in response to post–World War II employment and education opportunities (Boone and Kikuchi, as cited in Montemuro 1987). From its inception, graduate education was required for the CNS role and articulated as such in the position statements of professional nursing organizations (Alcock 1996; Montemuro 1987). Although it was not specifically developed to educate CNSs, the first Canadian program offering clinical nursing specialization was the University of Toronto in 1970 (Montemuro 1987). There are limited data about CNSs in Canada (Bryant-Lukosius et al. 2010).

## Current Status of Advanced Practice Nursing Education in Canada

While Canada does not have country-wide standards of education for either the NP or CNS role, two national consensus frameworks of importance to education have been developed: the CNA's *Advanced Nursing Practice: A National Framework* (2008) and the *Canadian Nurse Practitioner Core Competency Framework* (CNA 2005). Both provide guidance to the curricula of advanced practice nursing educational programs. Data collected by CNPI provided a comparative analysis of PHCNP and ACNP programs offered in Canadian educational institutions in 2005 (CNPI 2006). At the time, 25 NP programs were offered by 33 educational institutions; of these 25 programs, 13 trained PHCNPs, 9 trained ACNPs and 3 combined PHCNP and ACNP training. Exit credentials from these programs included a post-RN certificate/diploma ($n = 3$), post-baccalaureate certificate/diploma ($n = 2$), master's ($n = 15$), master's or post-master's diploma/certificate ($n = 4$) and post-master's certificate ($n = 1$). The greatest variability was and continues to be in PHCNP programs.

Realizing the master's degree as the exit credential for PHCNP education has been challenging, though some progress has been made. Barriers have included the reluctance of some governments to fund NP programs at the master's level and the reluctance of institutions without graduate programs to be excluded from offering NP education (Cragg et al. 2003). Nevertheless, the recent Canadian

nursing literature resounded with the strong endorsement that graduate education was needed to achieve the broad theoretical and clinical knowledge and skill requirements of advanced practice nursing roles and should be the entry to practice requirement (CNA 2008; CNPI 2006; Schreiber et al. 2005a, 2005b). Based on their interviews with graduate prepared nurses when investigating the current understanding of and perceived need for advanced practice nursing in British Columbia, Schreiber et al. (2005a: 14) suggested that "graduate preparation itself contributes to the ability to analyze and practice in complex situations at a sophisticated level." In a second phase of the same qualitative study, participants from diverse stakeholder groups including physicians concluded the complexity of the work required of PHCNPs warranted graduate education (Schreiber et al. 2005b). Similarly, a qualitative study from Australia concluded graduate education was needed for NPs to meet the demands of the role and foster the credibility of their preparedness for the role (Gardner et al. 2006).

Interview participants in our synthesis differed in their views about the educational requirements for PHCNPs. An APN participant explained how the knowledge acquired during graduate education enables NPs to practise autonomously and to offer comprehensive patient care services in this way:

> I have worked with very many of the nurse practitioners who are advanced certificate-prepared and they're good, but it only extends to a certain role, basically very much focused on the diagnosis and treatment. When you get into the true population health community development perspective, they lack…. What the master's brings to people is the complete picture. I've noticed sitting in with a few different nurse practitioners when I was doing my own education to see the difference, and I saw a total difference between a master's-prepared and a certificate-prepared [NP] just in how they approached it, the completeness they brought to the interaction with the patient and the follow-ups.

Many educator, regulator and administrator participants and some government participants talked about the legitimacy and credibility graduate education provides. Some linked graduate education with the ability to practise autonomously with a broad scope of practice. The following quote illustrates this.

> Primary care is clearly recognized across the country as a significant problem.… So on the advice of many we positioned our primary care nurse practitioners to have a very wide prescriptive and diagnostic authority, which meant they had to have a really rigorous education program at the master's level.

In contrast, other interview participants indicated that the push to move PHCNP education to the master's level was misguided. Although intended to benefit NPs, it was unlikely to improve patient care or healthcare system efficiency. Some government informants stated they did not support graduate education for PHCNPs because it was unjustified by evidence. The longer program reduced the number of NPs in the system, and the higher tuition costs were likely to lead to higher salary demands by NPs, without concomitant increases in their accessibility and number of patients served.

While not arguing against graduate education, several authors (CNPI 2006; Schreiber et al. 2005a, 2005b) identified that the requirement of graduate education for PHCNPs was a concern for northern jurisdictions because of the limited access to graduate education in rural and remote communities. This is an important concern since only 5.9% of all registered nurses practising in rural and remote areas are APNs (Stewart et al. 2005). Although master's NP programming is available by distance education from several universities, accessibility has been confounded by other factors such as competing demands in the workplace, technological challenges and other difficulties related to geographical remoteness (CNPI 2006; Tilleczek et al. 2005). Our interview participants also identified the importance of distance education for both CNS and NP roles, explaining that family and financial obligations limited their mobility, and voiced similar concerns about the accessibility of educational programs. Despite these challenges, some northern jurisdictions indicated they envisioned having at least one PHCNP in each remote community by 2010 (Northwest Territories Health and Social Services 2004). In addition to distance education, another strategy some northern educational institutions are using is to forge collaborations with universities to enable master's level PHCNP education to be offered using a combination of face-to-face and distance modalities (Registered Nurses Association of Northwest Territories and Nunavut 2009).

Regulators, educators and government informants in our synthesis reported that inconsistency in educational requirements was continuing to cause significant problems, especially when education was tied to licensing. For example, NPs educated at the post-baccalaureate level were not able to become licensed in British Columbia or Quebec. Several interview participants referred to imminent changes through the Agreement of Internal Trade that would enable NP mobility across Canadian jurisdictions by prohibiting discrimination on the basis of educational preparation. For the most part, this was regarded as positive for NPs, although some interview participants were concerned about the potential out-migration of NPs from provinces that paid lower salaries.

A review from the United States indicated CNS programs there are expanding (Fulton and Baldwin 2004). In our study, CNS education was discussed most often by APN interview participants. The following quotes from three APNs from different provinces convey concerns about the absence of programs specific to the CNS role.

> I have concerns at the education level about how CNSs are being able to access their education. [University] master's program used to have a CNS role. Now they have one course on advanced practice. They have a whole NP program, but if you want to become a CNS it's becoming more and more difficult to get that kind of system-thinking, system-support level of education to be able to understand where your role is at the systems level.

> Well, my understanding is that there aren't that many master's programs that have a CNS stream. Now they're being developed as an advanced practice nursing role – that's the stream. It's [CNS] no longer a clinical specialty that you develop at the master's level of preparation and that's unfortunate.

> The key concern around the CNS role which is of grave concern to me is the lack of specific education for the CNS role. There used to be programs that had a very well designed course content that would prepare them for evaluation, for project management, for the whole piece of work at the systems level, policy, developing policy and protocols. All of those pieces are not necessarily lumped together in a nice package so that when you come out you can really step out in the role and fly, and in the United States there are some of those educational programs directed for the CNS. There were in Canada, but there aren't anymore.

One educator interview participant indicated that progress toward development of a CNS educational stream was being made at one Canadian university. The following quote describes this innovation and how program developers have distinguished CNS and NP education.

> We've had various meetings with the CNS community to work with them to be part of the educational programs. We've ramped up. We've actually changed some of our core courses from advanced practice nursing courses to CNS courses. We've done lots of marketing to help nurses make distinctions. We've held information nights to help potential candidates make distinctions between how they might choose what sort of role they were going for. We do it in a visual image that shows a triangle with system knowledge and research inquiry and direct patient care skills and [we] really demonstrate that this pyramid, this triangle, is diametrically

> opposite. What a CNS [and NP] learn. The thing at the top of the pyramid of the one is at the bottom of the pyramid for the other, and vice versa. So that educationally they are very differently prepared and the roles that they're going to take are very different.

### Curriculum Issues

A number of papers identified a need for national curriculum standards and a consistent core curriculum for both NP and CNS programs (CASN 2004; CNA 2006, 2008; CNPI 2006; Olson 2004; Schreiber et al. 2005a). The rationale for improved consistency, coherence and alignment of educational programs was to enhance the credibility and visibility of NP and CNS roles, improve their integration into healthcare systems, facilitate better use of NP and CNS resources and enable labour mobility. Many interview participants echoed this, as reflected in the following comment from an administrator.

> There probably needs to be a national standardization, or some sort of process to look at accreditation, standardization of programs.

Other participants signalled their caution that curriculum standardization should not be so rigid that it impeded creativity and innovation. As one American educator commented,

> CNS education is pretty diverse and needs to come together a little bit more around what are the standards for educating CNSs. Where in my opinion, as an educator, the nurse practitioners stuff is too contrived, it is lock step standard curriculum. You need curricular standards; you don't need a standardized curriculum. It makes it hard to try and change, to be able to adapt and adjust, if you've locked yourself in to a standardized curriculum.

The CNPI's (2006) review of the curricula of NP programs across Canada identified some commonalities in the types of courses that were included, such as health assessment, pathophysiology and management of health and disease, including prescribing. It did not assess differences or commonalities in the content or methods of appraisal used in these courses. The CNPI review reported inconsistencies among educational programs in the types of core graduate theoretical courses being offered, the balance between theory and clinical experience, and program length. Differences in program length were attributed to whether the program was a master's or not, the former being consistently two years in length and the latter 12 months. A recent review of the university calendars of 24 Canadian master's nursing programs found the number of research course requirements ranged from one to three, and one program had no mandatory research course (J. Ritchie, personal communication, March 23, 2009). In some programs the

number of required research courses varied according to thesis, course-based and NP streams. This review did not include a comparison of curriculum content related to the leadership, consultation, collaboration and education components of advanced practice nursing.

Making decisions about what to include in education programs for entry level practice and, more importantly, what to leave out, has been a long-standing challenge (Martin-Misener et al. 1999). Our interview participants suggested the addition of a variety of topics to the curricula, such as more in-depth pathophysiology, conflict resolution, APN-physician collaboration, government lobbying, political navigation, writing job descriptions and a final formal residency or internship. At the same time, as reflected in the following quotes from an administrator and APN, they expressed concerns about program length and the balance between clinical experience and theory.

> Education was viewed as a long process that may not meet the needs of the work setting where a large number of credits were related to research and less on the actual role in the setting.

> Nothing is long enough, if you want to learn everything, and some things are too long, students will tell you.

Although there was support for the distinctiveness of CNS and NP roles (Urquhart et al. 2004) and the importance of having a match between advanced practice nursing education and role expectations in the practice setting (Roots and MacDonald 2008), the Canadian literature was silent on the debate about the merits or lack thereof of a shared curriculum for different types of APNs. The literature from the United States highlighted some commonalities in the CNS and NP roles, but reflected divergent perspectives about whether a shared educational curriculum was desirable (Carper and Haas 2006; Chan and Garbez 2006; Goudreau et al. 2007; Stark 2006).

The comments from our interview participants supported a need for educational curricula specific for CNS, ACNP and PHCNP roles. Educator and physician participants commented on the limited availability of NP programs in some parts of the country, resulting in situations where NPs educated for primary healthcare were employed and expected to have the skill set to practise in a specialized ACNP role. The result was "not that great of a fit." Government participants from different provinces added that inadequate communication about NP roles and competencies contributed to the discordance between education and ACNP positions.

A similar problem was identified about the CNS role by ACNP and administrator participants. They commented that CNSs obtain generic master's degrees in nursing but practise with specialized populations without a certification process or protected titling. Consequently, there are a number of nurses prepared at the graduate level with clinical specialization who address the components of the CNS role and yet are not titled CNS. At the same time, as the following quote illustrates, the lack of precision in the education and titling of CNSs means that anyone with a master's degree in nursing can claim to be a CNS.

> They think that just because they have a master's degree means they can be a CNS. And so that is a problem within all of the nursing community. Nurse practitioner education is very specific – you graduate with your NP.... As a CNS, it's not that specific. What is the education for a CNS? I don't know. How do you get to be a CNS? Lots of people would say, "I don't know."

Thus both the non-CNS titled nurse in the role of a CNS, and the indiscriminate use of the CNS title, contribute to role confusion within and outside the profession. Improvements are needed in how the role is described and how the title is controlled (Bryant-Lukosius et al. 2010).

### Interprofessional Education

The value of interprofessional education in facilitating effective teamwork was a consistent theme in the literature (Barrett et al. 2007; Jones and Way 2004; van Soeren et al. 2007). It is supported by both nursing and medical associations (Canadian Medical Protective Association and Canadian Nurse Protective Society 2005; CNA 2003; Ontario Medical Association and Registered Nurses Association of Ontario 2003) and educational institutions (CASN 2004; Pringle et al. 2000). Writing specifically about NPs and physicians, Bailey et al. (2006) identified synergistic decision making and bi-directional consultation and referral as hallmarks of optimal collaboration but acknowledged collaboration of this calibre was not easily achieved, even with education. They recommended more research to understand the effectiveness of education interventions.

Many interview participants also spoke of the importance of interprofessional education. They identified a need for more interprofessional learning opportunities among health disciplines, commenting that "students need to be learning together." The following quotes from an administrator and educator emphasize the value of interprofessional education to enable advanced practice nursing and other health professional students to learn about and trust in the capabilities of each other's roles.

> I think within the healthcare system just educating about the role as part of the clinical education process and trying to ensure that physicians and others have an opportunity to have interprofessional placement opportunities as part of their education would be a critical factor.

> I think if there was more interprofessional education so that there was a better understanding of who does what, how and why and trust in it [interprofessional collaboration would improve]. Part of this is about trust that they really know what they are doing. You could do this with some of the physical assessment stuff; there are ways you could thread things through common shared knowledge.

### Resources for Education

The literature (Cross and Goodyear 2004; Cummings and McLennan 2005; Lachance 2005) and key informants concurred that funding for advanced practice nursing education was insufficient, resulting in implications for students, faculty and programming. Educators and administrators expressed concern over the cost of NP education and low earning potential of NPs in some jurisdictions, explaining that it could create recruitment challenges. Physician, regulator and administrator participants recommended support in the form of student bursaries; some indicated NP students were already being supported financially.

The need for funding to develop faculty, preceptors and mentors to teach advanced practice nursing students and to support role socialization was stressed in the literature (CNPI 2006; Goudreau et al. 2007; Schreiber et al. 2003; 2005a; van Soeren et al. 2007). Competition for clinical placements and physician time to train both medical residents and ACNPs was another concern (Fédération des médecins résidents du Québec 2004). We found one Canadian study that evaluated NP education from a cost perspective. Kushner (1976) reported on the economic returns of the McMaster University program, concluding that NP education was profitable from the point of view of the student since costs were recuperated within two years of program completion. The introduction of NPs was desirable from a societal point of view in that the rate of return on the investment in the program exceeded the rate of social discount, and the investment was profitable to the government if the NP stayed in the workforce 30 years (Kushner 1976).

Many of our interview participants expressed concerns about whether clinical placement sites would be able to support the learning needs of all the various types of students who require this experience as part of their educational program. They indicated that there was already competition for clinical placements and expected this to be exacerbated by increasing numbers and types of students. Participants called for better mentorship opportunities for advanced

practice nursing students and stressed the importance of having academically and clinically qualified faculty and preceptors. Many indicated a need to recruit more faculty and strategic planning to ensure a supply of qualified faculty to meet the needs of advanced practice nursing programs.

Interview participants did not comment specifically on the cost of education, except to acknowledge it was resource intensive. Some participants recommended sharing academic resources across universities throughout the country, as well as intra-university sharing among the various health disciplines. The following quote offered by an educator exemplifies this idea.

> We're looking at a limited number of graduate students and limited numbers of faculty, and so I think there may be ways to deliver some of the programs in different ways and I think there needs to be cooperation across the country.

### Continuing Education

The importance of ongoing learning and removal of barriers to continuing education for NPs was evident in the Canadian literature (CNPI 2006; Donald et al. 2009). The lack of opportunity for relevant continuing education was a challenge for NPs in long-term care (Stolee et al. 2006) and remote settings (Martin-Misener et al. 2008). Tilleczek et al. (2005) found face-to-face learning venues were valued by all NPs, but rural and northern NPs found distance modalities useful because of travel and distance constraints. Other barriers to continuing education were difficulty taking time off work, insufficient resources, family responsibilities, lack of information regarding the availability of courses, geographical barriers, fatigue, unsatisfactory previous learning experiences (Centre for Rural and Northern Health Research 2006) and the lack of faculty (Schreiber et al. 2003, 2005a).

Interview participants echoed findings from the literature commenting on both the importance of continuing education and barriers to it, as the following quote from a physician demonstrates.

> Our APNs need more attention paid, in my opinion, to their continuing professional development – their ongoing education. I mean that's important for all healthcare personnel, but it's especially important for these people. Most often they're in leadership positions either because it's written down on paper or simply because they command the leadership because of their abilities. It is important that they keep up with what is going on.

Educator interview participants added that lack of funding impeded their delivery of continuing education. Regulator interview participants supported a compre-

hensive plan for continuing education for APNs and called attention to the need for additional education for NPs who provide care for patients with urgent and emergent conditions in remote settings, where there are few resources. CNS interview participants advocated for improved continuing education for CNSs in remote settings, highlighting it as a retention strategy.

## Discussion

Canada is not unique in its struggle to move forward with advanced practice nursing roles and education reforms. Worldwide, countries are endeavouring to define NP roles and establish educational standards (ICN 2008; Royal College of Nursing 2008; Sheer and Wong 2008). Justifying the need for advanced education for the PHCNP role is a recurrent challenge (Gardner et al. 2006). Globally, nursing organizations have recommended that the educational standard for APNs be a graduate degree (Pulcini et al. 2010). While there has been some progress toward attaining this goal in Canada, discrepancies persist in the educational requirements for PHCNPs. Two provinces (Newfoundland and Labrador, and Saskatchewan) continue to offer PHCNP education programs at less than a graduate level. While Ontario has prepared PHCNPs at the post-baccalaureate level for many years, this is in transition with all universities that offer PHCNP education now offering graduate courses. Given this, it is unlikely that Canada will realize master's education for all APNs by the close of 2010, as the CNPI hoped; perhaps the fallback goal of 2015 will be achieved.

Furthermore, the quest to realize master's education for all NPs is occurring in a context in which most other disciplines in the health professions have established a master's or doctorate degree as their requirement for entry to practice. Just to the south, in the United States, the doctorate of nursing practice (DNP) will become the entry level credential for APNs by 2015. The DNP differs from a PhD in that its focus is advanced clinical education, whereas the focus of a PhD is advanced research preparation. The discussion about the advantages and disadvantages of DNP education for the Canadian context has begun (Acorn et al. 2009; Joachim 2008; Nelson 2008). However, given that master's level preparation for all NPs in Canada has yet to be achieved, it is difficult to see how a case for doctoral preparation could be argued convincingly or successfully at the present time.

Clearly there are still significant challenges to overcome. Governments persistently demand evidence to support the need for higher education for PHCNPs and so far have not been convinced by the consensus-based

expert opinion studies that exist. There are also concerns that higher training requirements will increase the expense, and reduce the health human resource benefit, of NPs when regarded as substitutive healthcare professionals (Evans et al. 2010).

Our scoping review and key informant interviews identified a number of issues related to advanced practice nursing program access and curricula. There is a tension between the length of advanced practice nursing programs and the development of the full range of advanced practice nursing competencies – clinical, research, leadership, consultation and collaboration (CNA 2008). According to the CNA's *Advanced Nursing Practice: A National Framework* (2008: 23) "generating, synthesizing and using research evidence is central to advanced nursing practice," and APNs are able to "as either primary investigator or collaborator with other members of the healthcare team or community, identify, conduct and support research that enhances or benefits nursing practice." Despite these aims, APNs consistently report that research is the most underdeveloped aspect of their role (Bryant-Lukosius et al. 2004, 2007). The findings from our study raise questions about what the research content of an advanced practice nursing curriculum should include and whether it should be the same for all advanced practice nursing roles. In addition, while there is clear support for inter-professional education, the knowledge base that underpins and guides the best practices for inter-professional education in advanced practice nursing education requires further development. As the evidence base of pedagogical effectiveness expands, advanced practice nursing curricula will need to respond accordingly. This and the push for increased efficiencies in education, accessible distance education opportunities and improved clinical training for APNs will challenge the creativity and flexibility of program planners.

Another important finding of our synthesis was that for both CNSs and NPs, there can be a mismatch between a generalized education and specialized practice. Universities in the United States offer specialty and subspecialty education during entry level master's programs (Richmond and Becker 2005). It is unclear how much specialty education a country the size of Canada, with its relatively small number of APNs can support, especially since specialty education requires substantial resources not only at the university level but also for credentialling and certification (CNA 2006; CNPI 2006). The Canadian examinations for NPs, which many provinces and territories have incorporated into their licensing processes, include family/all ages (primary healthcare), adults, pediatrics and neonatal. While

primary healthcare and neonatal are defined specialized areas of practice, adult and pediatric descriptors are broader.

Still, creative solutions to the challenge of access to specialty education have emerged that may have wider application. For instance, the consortium distance model to education used by COUPN has proven to be an effective approach to PHCNP education in Ontario (Andrusyszyn et al. 1999; Baxter et al. 2009; Cragg et al. 2003; van Soeren et al. 2000, 2003). Such a model could be adapted and applied to address other education needs including specialization. Another example of a partnership approach is the specialized interprofessional psychosocial oncology education courses offered to a national audience by faculty from multiple institutions using distance technology (www.ipode.ca). This model is particularly attractive from a cost-effectiveness perspective when the specialty area is small and could potentially be replicated for other specialties.

For the time being, the limited access to specialty education in Canada means that NPs and CNSs may be working in clinical areas in which they initially do not have specialized knowledge and skills. Given this reality, mentorship is a role development support that could be further exploited to enhance specialized knowledge acquisition. The Ontario oncology advanced practice nursing mentorship program is an example of an interprofessional mentorship program accessible by distance modalities throughout Ontario (http://apn.webexone.com/login.asp?loc=&link). Continuing education is another means of enabling APNs to develop and maintain specialist knowledge and stay up-to-date with current evidence-informed practice. However, attention to the barriers associated with the delivery of and accessibility to continuing education for APNs is needed.

A multidisciplinary roundtable convened by CHSRF formulated evidence-informed policy and practice recommendations based on the synthesis findings. All of their recommendations are reported in an earlier paper in this issue (DiCenso et al. 2010b). Specifically pertinent to advanced practice nursing education are the following: (1) a pan-Canadian approach should be taken to standardize advanced practice nursing educational standards, requirements and processes, and (2) the curricula across all health professions should address interprofessionalism (DiCenso et al. 2010b). These recommendations mirror those of the CNPI (2006) and resemble those of American scholars who have argued for reforms that will lead to standardization of education programs and accreditation or other regular review

processes (Hanson and Hamric 2003; Olson 2004). The most convincing argument for moving forward on these recommendations is the potential impact it could have on patient care. We need to be able to determine and provide the best possible education for the various types of advanced practice nursing roles so that these roles can best meet the needs of patients and healthcare organizations (Bryant-Lukosius and DiCenso 2004).

The environment in which all of these changes and challenges are happening is fiscally constrained. That said, an ongoing supply of qualified faculty, preceptors and appropriate clinical placements is essential for Canadian programs to educate safe, competent practitioners. These are scarce resources and careful planning is needed to ensure there will be sufficient numbers to meet the learning needs of future generations of APNs. For students, the high cost of education, especially in lengthy programs, may affect recruitment and retention, particularly when taking into account lost salary and unattractive earnings post-graduation. Provincial and territorial financial support for advanced practice nursing programs varies across the country, though our synthesis did not investigate this specifically. Comparisons of the financial support for the education of various health professionals, particularly newly introduced professionals, are not available. Such information could be useful for determining the equity of funding across programs.

How then should we move forward on the findings of the synthesis and CHSRF roundtable recommendations? The CNPI was an extraordinary pan-Canadian example of what can be accomplished when the combined efforts of multiple sectors, resources and champions use a systematic, evidence-based approach to achieve a common goal. Surely the way forward is to find a way to build on this model. Because leadership in nursing education is the mandate of the Canadian Association of Schools of Nursing, this organization is well positioned to take the initiative to move this agenda forward in partnership with other national organizations such as the Canadian Association of Advanced Practice Nurses, the CNA and the Office of Nursing Policy, as well as provincial regulatory bodies and academic institutions. Further development of advanced practice nursing education is critical for ensuring that Canadians nationwide receive accessible healthcare of the highest quality. We know what needs to be done. The time has come for all of us to step up to the plate and make it happen.

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# Advancing the Educational Agenda

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**This timely paper provides** a thought-provoking analysis of current advanced practice nursing education in Canada. It comes at a critical juncture in the evolution of Canadian healthcare services and the redefinition of nursing roles. Increasingly, multiple sectors of society are calling for more nurses with advanced practice preparation and for a wider range of advanced practice nursing specialties. Advanced practice nurses (APNs) are being proposed as a solution to a financially overburdened national healthcare system, the increasing complexity of healthcare services, and a crisis in access to primary healthcare. Thus, governments seeking greater fiscal efficiency, medical specialists needing sophisticated collaborative support, and healthcare consumers see APNs as the way forward.

As is often the case with social change, and as the authors of the article demonstrate, there was no master professional plan underpinning the introduction of advanced nursing practice or education. There was also no overarching professional vision of how responsibilities associated with advanced practice nursing should be organized into subgroups. Instead, the historical analysis demonstrates that educational programs were developed ad hoc by individual schools or a consortium of schools in response to specific health needs of service institutions or regional communities, typically at the request of government and often before the roles had been created in the healthcare system. Thus, the curricula and program goals were introduced in an ad hoc fashion across the country to address local or regional health service needs rather than to prepare learners for professional practice as defined by the profession or its representative associations.

Given the discursive path of the introduction of advanced practice nursing, as well as the provincial/territorial control of health and education, it is not surprising that Canada lacked nationwide standards for both nurse practitioner and clinical nurse specialist roles However, two significant advances have addressed this issue. The authors point out the importance of the publication of the *Canadian Nurse Practitioner Core Competency Framework* (Canadian Nurses Association [CNA] 2005) and *Advanced Nursing Practice: A National Framework* (CNA 2008). These documents provide a national consensus on APNs' roles and responsibilities. Additionally, the authors note that many provincial regulatory bodies now include the Canadian national entry to practice exam for nurse practitioners in their licensing processes. This exam follows the National Framework of Nurse Practitioner roles and encompasses family/all ages (primary healthcare), adults, paediatrics and neonatal. Thus, the profession has moved forward to a national conceptualisation and classification of advanced practice roles, and a national articulation of nurse practitioner competencies.

It is also not surprising that educational requirements for nurse practitioners are inconsistent from one jurisdiction to another. While commonalities exist in the curricula across the country, standards vary. The authors identify major discrepancies in the level of preparation required, particularly in primary healthcare nurse practitioner programs. To some extent this is related to the ad hoc introduction of the programs. The initial demand for nurse practitioners coincided with a dearth of physicians in remote rural areas of the North. To fill the gap, nurses were provided with additional post-registration or post-baccalaureate training to work more autonomously. In southern Canada, with an oversupply of physicians at the time, the situation was different. Acute care nurse practitioner programs at the master's level were established in the eighties and nineties to prepare practitioners for work in high-tech institutions in urban centres, where clinical nurse specialists were already employed and required a master's degree. The overwhelming perception in the literature reviewed by the authors is that all advanced practice nursing education should be at the master's level in Canada.

In contrast with nurse practitioners, the clinical nurse specialist has required a master's degree since the inception of the role. There are no CNS titled programs, however, and a lack of clarity regarding what type of master's degree programs prepares one for the CNS role. In fact, holding a master's or doctoral degree in nursing is part of the CNA definition of what a clinical nurse specialist is.

The article demonstrates a significant need for national educational requirements and quality indicators for advanced nursing educational programs in this country. With the recent pan-Canadian articulation of advanced professional practice, the resurgence of the CNS role in the United States, regulatory approval

of nurse practitioner programs and a national entry to practice examination, a solid foundation is in place for the elaboration of national educational standards. It is clearly the moment in the evolution of Canadian advanced practice nursing to develop a national educational framework that is aligned with, and reflective of, the national vision for nurse practitioners and clinical nurse specialists.

The authors challenge the Canadian Association of Schools of Nurses (CASN) to take the lead in advancing this educational agenda in partnership with organizations such as the Canadian Association of Advanced Practice Nurses (CAAPN), the CNA and provincial/territorial regulatory bodies. CASN is strongly committed to advancing the quality of educational programs for APNs across the country. As a first step, following the approach of our sister organization the American Association of Colleges of Nursing, a national task force with broad representation is being set up to delineate the essential components of nurse practitioner education in Canada for primary healthcare, adult, pediatric and neonatal programs. It is important that a similar initiative follows with respect to the educational preparation of clinical nurse specialists.

The successful development of educational and practice standards involves the engagement of professional associations, practice leaders and educators in a complex, interactive, iterative and multilinear process. Despite the educational inconsistencies identified in the article, this process has begun for advanced practice nursing education in Canada. CASN's aim, as the national voice of nursing education, is to generate further momentum and take the process forward.

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# The Primary Healthcare Nurse Practitioner Role in Canada

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## Abstract

Primary healthcare nurse practitioners (PHCNPs), also known as family or all-ages nurse practitioners, are the fastest growing advanced practice nursing role in Canada. All 10 provinces and three territories now have legislation that authorizes their role. Their introduction is linked to countrywide health reform efforts to improve the accessibility and quality of primary healthcare.

This paper focuses on the PHCNP role and draws on the results of a scoping review of the literature and qualitative key informant interviews conducted for a decision support synthesis commissioned by the Canadian Health Services Research Foundation and the Office of Nursing Policy in Health Canada. The overall objective of this synthesis was to develop a better understanding of advanced practice nursing roles and the factors that influence their effective development and integration in the Canadian healthcare system.

Based on synthesis findings, we describe the current status of PHCNP roles in Canada and describe three important challenges to their integration and long-term viability: restrictive legislation and regulation, inconsistencies in educational preparation across Canada and working relationships between PHCNPs and family physicians. We conclude that although there has been considerable progress made in integrating PHCNPs into the Canadian healthcare system and there is mounting evidence to support the value of the role, there is more to do to fully integrate and sustain the role. A pan-Canadian approach is needed to the education, supply, legislation and regulation of PHCNPs, as well as further dialogue at all levels to enhance how PHCNPs and family physicians can work together to provide optimal primary healthcare.

## Introduction

The predecessors of today's primary healthcare nurse practitioners (PHCNPs) began their practice in the Canadian North more than 100 years ago. These early PHCNPs, known most commonly as outpost nurses, were introduced by religious organizations to improve primary healthcare services for underserviced populations (Graydon and Hendry 1977; Kaasalainen et al. 2010; Kulig et al. 2003).

It was not until the early 1970s, when the Canadian healthcare system was experiencing a shortage of family physicians, that the first wave of PHCNPs was introduced in southern urban communities. National and provincial attention was directed toward defining their role and scope of practice, determining education standards and evaluating the effectiveness of the role (Kaasalainen et al. 2010). PHCNPs provided expanded primary healthcare services to individuals and families, mostly in family practice offices or community health centres (Kergin et al. 1973). Collaboration with family physicians and other healthcare team members was an expectation of the PHCNP role and was integral to PHCNP role descriptions. Despite the positive results of several randomized controlled trials evaluating the effectiveness of PHCNP care (Chambers and West 1978; Spitzer et al. 1973, 1974), implementation efforts ground to a halt in the mid-1980s for a variety of reasons. These included a lack of remuneration mechanisms for PHCNPs, reduced physician income, lack of nurse practitioner (NP) role legislation for an extended scope of practice, inadequate support from policy makers and other health providers, and a perceived oversupply of physicians, particularly in urban areas (Kaasalainen et al. 2010; Spitzer 1984). Consequently, PHCNPs disappeared in all but remote areas and a few sites in southern Canada.

In the mid-1990s to the early 2000s, numerous federal and provincial government reports, all calling for major primary healthcare reform, identified that the use of nurses and other healthcare professionals could improve patient access to health services (Kirby 2002; Mhatre and Deber 1992; Romanow 2002; Stoddart and Barer 1992). Reform efforts were fuelled by unprecedented federal and provincial investments in primary healthcare infrastructure and interdisciplinary healthcare teams, leading to a countrywide emphasis on enhancing health promotion and improving equitable healthcare access and quality (Hutchison 2008). This context prompted the revival of governments' interest in the PHCNP role and initiated the second wave of PHCNP role implementation, supported by legislation, regulation, remuneration mechanisms and funded education programs. Foundational to implementing this role is the abundant research that has shown PHCNPs are effective, safe practitioners who positively influence patient, provider and health system outcomes (Dierick-van Daele et al. 2010; Horrocks et al. 2002).

In this paper we examine the current status of the PHCNP role in Canada, including supply, deployment and practice settings; education; and regulation and scope of practice. We summarize key issues and challenges to the integration and long-term viability of the PHCNP role and offer recommendations to address the challenges. While PHCNPs are also known as family or all-ages NPs, we will use "PHCNPs" for the purposes of this paper.

## Methods

This paper was developed using the results of the scoping review of the literature and key informant interviews conducted for a decision support synthesis commissioned by the Canadian Health Services Research Foundation (CHSRF) and the Office of Nursing Policy in Health Canada (DiCenso et al. 2010b). The literature review and interviews were carried out to develop a better understanding of advanced practice nursing roles (NP and clinical nurse specialist [CNS]), their current use, and the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system.

The synthesis methods are described in detail in an earlier paper in this issue (DiCenso et al. 2010c). Briefly, we conducted a comprehensive appraisal of published and grey literature ever written about Canadian advanced practice nursing roles as well as reviews of the international literature from 2003 to 2008. The overall search yielded a total 2,397 papers, of which 468 were included in the scoping review. Data were extracted from each paper and themes were developed. The PHCNP-related papers contributed 47% of the Canadian papers included in the synthesis. A total of 69 papers were primary studies, 19 were reviews and the remaining articles were essays or editorials.

Interviews ($n = 62$) and focus groups ($n = 4$ with a total of 19 participants) were conducted in English or French with national and international key informants including NPs, CNSs, physicians, healthcare team members, educators, healthcare administrators, nursing regulators and government policy makers. We used purposeful sampling to identify participants with a wide range of perspectives on advanced practice nursing issues in Canada and internationally. All key informants were asked the same questions, some of which related to the PHCNP role. The interview questions are described in detail elsewhere (DiCenso et al. 2010c); briefly, they focused on reasons for introducing the advanced practice nursing role(s) in interviewees' organizations, regions or provinces; how the role(s) were implemented; key factors facilitating and hampering their full integration at the individual, organizational and system-level; the nature of their collaborative relationships; their impact; success stories; and interviewees' recommendations for fully integrating the role. Nearly all of the key informants discussed the PHCNP role. We developed an initial coding structure of emergent themes from the interviews and integrated this structure into a broader, theoretically informed framework that included factors influencing advanced practice nursing role integration (Bryant-Lukosius and DiCenso 2004; Bryant-Lukosius et al. 2004). When our synthesis was completed, CHSRF convened a multidisciplinary roundtable to develop recommendations for policy, practice and research.

We synthesized the literature and interview/focus group data by examining the similarities and differences in themes and common patterns and trends. For this paper, we focus on findings specific to the PHCNP role in Canada and refer to the roundtable recommendations where relevant.

## Results

We begin our presentation of the findings with a review of the current status of the PHCNP role in Canada, describing supply, deployment and practice settings; education; regulation and scope of practice; and liability. Subsequently, we describe the issues and challenges that most frequently and consistently emerged from our various data sources: restrictive legislation and regulation, inconsistencies in educational preparation, and the working relationships between PHCNPs and family physicians.

### Current Status of the PHCNP Role in Canada

The potential of PHCNPs to enhance the accessibility and quality of primary healthcare services has sparked nationwide interest. Perhaps because of this, the PHCNP role is the fastest-growing advanced practice nursing role in Canada (Canadian Institute for Health Information [CIHI] 2010). This growth has been supported by professional, regulatory and government nursing leaders (Carter et al. 2010) and by the establishment of provincial/territorial NP associations, some of which are connected with the Canadian Association of Advanced Practice Nurses (CAAPN).

During the latter part of the 1990s and throughout the 2000s, provinces and territories each developed their own legislation and regulation for the PHCNP role (CIHI 2010). Although there was some inter-jurisdictional consultation, the timing and pace of development depended on factors internal to each province and territory. The result was a mélange of legislation and regulation. Titles, title protection and scope of practice were common points of difference. Realizing that an integrated approach was needed for sustainability of the role within the country, nursing leaders proposed development of a pan-Canadian framework. Subsequently, the Canadian Nurse Practitioner Initiative (CNPI) was funded by Health Canada and sponsored by the Canadian Nurses Association (CNA) (CNA 2008). Under the leadership of the CNPI, extensive literature reviews and discussion papers were prepared on practice, education, legislation, human resource planning and social marketing, all in relation to the NP role in the Canadian healthcare system. Specific accomplishments included development and revision of the Canadian Nurse Practitioner Core Competency Framework (CNA 2005, 2010), a framework that identified the competencies common to all NPs irrespective of specialization; the Canadian Nurse Practitioner Examination (CNPE) (CNPI 2006b), developed for PHCNPs only; the Implementation and Evaluation

Toolkit for Nurse Practitioners in Canada (CNPI 2006a); and frameworks for practice, education, legislation and regulation (CNPI 2006c).

The purpose of the CNPI's legislative and regulatory framework (2006c) was to protect public interests, facilitate healthcare access, ensure nationwide consistency, support workforce mobility and position NPs to enable their maximum contribution to the Canadian healthcare system. The following generic definition of NPs was developed and recommended for use in Canada:

> Nurse practitioners are registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice (CNA 2008: 16, 2009).

Although there is no national definition for a PHCNP, it is generally accepted that PHCNPs provide services to individuals and families across the lifespan and work in a variety of community-based settings (DiCenso et al. 2003, 2007). The focus of their practice is health promotion, preventive care, diagnosis and treatment of acute common illnesses and injuries, and monitoring and management of stable chronic conditions (Caty et al. 2000; DiCenso et al. 2003; Goss Gilroy Inc. Management Consultants 2001; Sidani et al. 2000; Way et al. 2001). Using an evidence-informed holistic approach that emphasizes health promotion and partnership development, NPs complement rather than replace other healthcare providers. Interview participants concurred, explaining that PHCNPs were introduced to improve accessibility to a range of primary healthcare services and enhance the quality of chronic disease management. A government interview participant summarized this perspective as follows:

> I think that in the guidelines produced by the [provincial] Nurses' Association, it [PHCNP role] is very well defined; it's the intake of vulnerable clients that say they are dealing with a chronic disease. I think that forms an integral part because as time goes on … this clientele is going to increase, so we think about diabetes, heart failure, chronic obstructive lung disease, kidney failure, heart failure … all the chronic diseases that worsen and will increase in number…. Monitoring pregnancies, also the intake of routine health problems, that is essential, and the monitoring they [PHCNPs] can conduct with people from birth to adulthood, people who are ambulatory, in terms of [disease] prevention, [health] promotion, to ensure that they help people adopt suitable healthy behaviours to care for themselves. I would say that it [PHCNP role] centres primarily around these roles.

**Supply, Deployment and Practice settings**

Since 2005, CIHI has reported the numbers of NPs in Canada along with demographic data. These reports are based on annual registration data from provincial and territorial nursing regulatory bodies. The most recent statistics, reflecting 2008 registration data, indicate that the number of licensed NPs in Canada more than doubled between 2004 and 2008, increasing from 800 to 1,626 (CIHI 2010). In 2008, 95% of NPs were female; approximately 76% worked in urban areas while 24% worked in rural and remote areas; and over 50% of NPs were located in Ontario. The majority of NPs worked full-time (76%), and 94% reported their main responsibility was direct patient care. Although these data do not distinguish between types of NPs, in 2008 it is reasonable to assume that the majority of licensed NPs in Canada were PHCNPs. This is because in Ontario, where the largest number of NPs are registered, acute care NPs (ACNPs) did not begin writing registration examinations until 2008 (Nurse Practitioners' Association of Ontario 2009), and therefore very few would be counted as licensed in the 2008 regulatory data provided to CIHI. In addition, some provinces, for example, New Brunswick, license only the PHCNP role.

In 2008, approximately 40% of PHCNPs worked in the community sector, 32% in the hospital sector and 2.4% in the nursing home or long-term care sector; the remainder worked in "other" places or did not state their place of employment (CIHI 2010). Another survey of 371 Ontario PHCNPs in 2004–2005 found that the majority of respondents reported working with marginalized populations (low-income earners, unemployed persons, substance abusers, people with mental illness, cultural minorities, recent immigrants and HIV/AIDS patients), and over half (57%) worked in underserviced locations (van Soeren et al. 2009). There is evidence that PHCNP deployment is expanding to settings that have not previously employed PHCNPs, such as emergency departments, long-term care settings and cancer care centres (DiCenso et al. 2007; Donald et al. 2009; Ordre des infirmières et infirmiers du Québec 2009; Stolee et al. 2006).

Practice and expectations for the role, as well as the longevity of the role in the setting and amount of experience in the role, influence PHCNP practice patterns (Caty et al. 2000; DiCenso et al. 2003; Goss Gilroy Inc. Management Consultants 2001; Sidani et al. 2000; Way et al. 2001). DiCenso et al. (2003) identified three major focuses for PHCNP practice: condition based, population based or scope based. In each of these practice models, the PHCNP worked autonomously and consulted or collaborated with the physician as needed. With a condition-based focus, the PHCNP practice was primarily based on a specific patient condition (e.g., congestive heart failure, diabetes, mental health issues or for chronic disease management). With a population-based focus, the PHCNP practice was primarily based on a specific type of patient population or geographic area (e.g., teenagers,

children, marginalized people or First Nations people). With a scope-based focus, the PHCNP primarily saw a broad-based primary care patient population and consulted or collaborated with the physician mainly with respect to issues beyond the PHCNP's scope.

Data from interview participants concurred with the literature. The following quotes from PHCNP interview participants show how their day-to-day practice activities vary in different settings:

> So I see patients from birth to death, for a variety of problems – complex to simple problems. So there's nothing that I really am not able to see, and generally if there's something that's out of my scope, I'll do what any family doctor would do, either consult or refer to a specialist.

> I go to the school every Monday morning, and I'm a resource person and have some teen clients that find it easier to come and see me there.… I probably spend half to three-quarters of a day and probably eight hours a week seeing diabetic clients, and I do a monthly presentation at the library.... The bulk of my time is direct patient care, but I have implemented a number of different educational programs and outreach, and I collaborate with mental health and public health and the different nurses and practitioners in other areas with some of the projects they have.

> So in some ways our role [in northern remote communities] is broader than that of a family NP in that we see anybody who comes in through the door. So we provide public health services, maternal-child, well-women, prenatal care and, in addition, we see what would normally be seen in a walk-in clinic, so acute, episodic illness. We also provide emergency care, which can extend from minor emergencies to life-threatening emergencies. We work Monday to Friday in the clinic, and then we provide on-call services after hours. This is the model across northern Canada and in most First Nations and Inuit communities.

The estimated average length of time Canadian PHCNPs spend per patient visit is 30 minutes (CNPI 2006c). This is consistent with an Ontario study that found PHCNPs in primary care settings provided services for an average of 14 patients per day; in long-term and acute care the daily number was 26 (van Soeren et al. 2009).

**Education**

Since the 1970s, there has been countrywide consensus that additional specific education beyond a baccalaureate or diploma program is needed to prepare for PHCNP role requirements. During the second wave of NP implementation,

PHCNP education programs were initiated in most provinces and territories, beginning in the mid-1990s with the Council of Ontario University Programs in Nursing (COUPN) post-baccalaureate PHCNP Certificate Program (Cragg et al. 2003; Kaasalainen et al. 2010). Other provinces and territories followed suit, with some developing programs at the post-diploma or post-baccalaureate level and others at the master's level (CNPI 2006c). As of 2008, a master's degree from an approved graduate level PHCNP program became the recommended educational standard in Canada and internationally (CNA 2008; International Council of Nurses 2008). That said, only about a third (36.7%) of Canadian NPs meet this standard (CIHI 2010), and two provinces continue to offer PHCNP education at the baccalaureate or post-baccalaureate level (Newfoundland and Labrador, and Saskatchewan). While Ontario prepared PHCNPs at the post-baccalaureate level for 12 years, the PHCNP education program now provides graduate levels courses at all nine universities that offer the program. The inconsistency in the education of PHCNPs is a key issue challenging PHCNP role integration and is discussed later in this paper and in another paper in this special issue (Martin-Misener et al. 2010).

**Regulation and Scope of Practice**

All 10 provinces and three territories in Canada now have legislation authorizing PHCNPs to implement their advanced nursing role (CIHI 2010; Government of Yukon 2009). Many, but not all, provinces and territories protect the title "nurse practitioner" and licensing nomenclature (e.g., RN–NP), and processes vary. Although most jurisdictions require entry-level PHCNPs to complete an examination to qualify for licensure and/or registration, they differ with respect to the nature of the examination; some use the national CNPE, which is written, while others use examinations approved by their province. For example, the Quebec PHCNP certification exam consists of three parts: a written short answer exam, a structured oral interview and an objective structured clinical exam (Personal Communication with Judith Leprohon, Scientific Director, Ordre des infirmières et infirmiers du Québec, March 22, 2010), whereas British Columbia uses the American Nurses Credentialing Center exam (not marked on questions relating to the American healthcare system) and an objective structured clinical exam (College of Registered Nurses of British Columbia 2009).

In most jurisdictions, PHCNPs are authorized to make and communicate a diagnosis of disease, order and interpret diagnostic and screening tests, and prescribe medication (CIHI and CNA 2006). However, some jurisdictions apply restrictions on which diseases NPs may diagnose (Prendergast 2009), and in Quebec, establishing a primary diagnosis remains the exclusive domain of physicians (Gouvernement du Québec 2005).

Other inter-jurisdictional variations in the scope of PHCNP practice include differences in prescribing privileges and the ability to refer to a specialist. Some provinces have prescribing legislation and regulation that restrict PHCNPs to prescribing from a specified list of drugs (Marchildon 2005), whereas other provinces use an approach based on individual knowledge, education and competence. Schreiber et al. (2005: 9) describe such a professional practice model as one "in which each provider has sole authority for his or her own practice, responsibility for decision-making and maintenance of competencies, and assessment of limitations and areas for professional development." Recently some jurisdictions, for example Nova Scotia and Newfoundland and Labrador, have changed to a broader approach because the list method is cumbersome and cannot keep pace with changes in evidence–informed practice. In December 2009, Ontario passed Bill 179, which will do away with the use of lists for prescribing and ordering diagnostic and laboratory tests (Ministry of Health and Long-Term Care 2009).

**Liability**

PHCNPs are expected to carry adequate liability coverage. Many receive this through the Canadian Nurses Protective Society (CNPS) provided through CNA membership; the CNPS provides $5 million of occurrence-based coverage for NPs (http://www.cnps.ca). The autonomous nature of PHCNP practice has created physician concerns related to liability, as physicians have expressed confusion regarding their medico–legal responsibility when in practice with an NP, the adequacy of NP liability insurance coverage and vicarious liability (for example, DiCenso et al. 2003; Jones and Way 2004; Martin-Misener et al. 2004; Turris et al. 2005). Two joint policy statements by the CNA, the Canadian Medical Association and the Canadian Pharmacists Association (CNA 2003) and by the Canadian Medical Protective Association (CMPA) and the CNPS (2005) provided principles and criteria for defining scopes of practice and clarified liability issues. A government interview participant commented that the joint statement from the CMPA and CNPS has alleviated concerns around liability. However, issues remain, since not all PHCNPs are required to choose CNPS coverage and other malpractice insurance plans may not be as comprehensive. Bill 179 in Ontario requires all regulated healthcare providers to carry liability coverage (Ministry of Health and Long-Term Care 2009).

## Key Issues and Challenges to PHCNP Role Integration

Synthesis of the literature and the participant interview and focus group data revealed that the most frequently and consistently identified challenges limiting the full integration of the PHCNP role into the Canadian healthcare system are (1) restrictive legislation and regulation, (2) inconsistencies in the educational preparation of PHCNPs across Canada and (3) working relationships between PHCNPs and family physicians.

**Restrictive Legislation and Regulation**

Although there have been some successes, legislation and regulation issues continue to create barriers to PHCNP practice, restricting role integration and compromising efficiencies. Many papers in our scoping review reported legislative and regulatory restrictions on PHCNP scope of practice (e.g., Advisory Committee on Health Human Resources et al. 2001; de Witt and Ploeg 2005; DiCenso et al. 2007; Fahey-Walsh 2004; Goss Gilroy Inc. Management Consultants 2001; Gould et al. 2007; Humbert et al. 2007; Nova Scotia Department of Health 2004; Nurse Practitioners' Association of Ontario 2007). One of these barriers is legislation that restricts PHCNP prescribing. At the provincial/territorial level the issue is the use of drug lists and formularies, while at the federal level it is the prescribing of narcotics and controlled substances.

Interview participants in our synthesis repeatedly indicated the "list approach" to prescribing was problematic. Lists became rapidly out of date, were restrictive to practice and added costs and inefficiencies to health service delivery because NPs had to wait for a physician to sign a prescription or to order a test. The following quotes from two interview participants – an administrator and a regulator – reflect this dissatisfaction:

> [Lists are] a real barrier to practice. So you hire an NP and the NP needs to work around if there are certain drugs that come on the market – it would actually be better for her to prescribe but she can't prescribe them. She's got to go to a physician to prescribe this particular drug. So those are the kinds of things that add to the barriers from a systems perspective, and they add to the inability to hire. I think it adds to the barriers that nurse practitioners come up against. There's a lack of knowledge of what their [NP] full scope of practice can and should be.

> We just have to get rid of lists because we have lists of medications and we have lists of tests that an [NP] can order. Of course, healthcare changes all the time. I think rather than having all those lists that are very constraining and out of date pretty much the day that they're passed, we really need to move beyond that into more broad categories and allowing nurses to use their own knowledge, skill and judgment to decide when and what they can order within those categories, which might be constrained but I think the legislation as it stands right now doesn't work. I actually think that there's starting to be some realization at the level of the government that it doesn't work.

Another example of a jurisdictional difference in scope of practice resulting from legislative and regulatory policy was the ability of PHCNPs to refer to medical

specialists. In some jurisdictions, higher rates of remuneration are paid to medical specialists for patient referrals made by a physician, thereby preventing PHCNPs from making referrals to specialists (DiCenso et al. 2003; Gould et al. 2007). Interview participants commented further that other legislative barriers restricted NP practice and interrupted continuity of patient care. The following quotes from healthcare administrator participants in two provinces illustrate this:

> One of the other biggest barriers is the *Public Hospitals Act* in Ontario. So for example, the *Public Hospitals Act* doesn't allow an NP to admit or discharge. They [NPs] can care for the person [using medical directives] while they're in the hospital, but they can't admit them and they can't discharge them. And if they truly are a PHCNP, and particularly in the rural and remote areas, you have to have a physician to admit a person but that physician doesn't know that person at all. The NP knows the person. And the argument the physician would make on that is that that's not primary healthcare then. But it's about being client centered. And I think that's the piece … and the *Public Hospitals Act* has a whole bunch of other barriers in it.… It's archaic is what it is.

> Although we have a very broad scope of practice in BC, there are a couple of regulations that do create some barriers. So there's some regulations related to some of the different forms that they [NPs] can be responsible for. I'm thinking of things like motor vehicle forms and WCB [Worker's Compensation Board] forms. The NPs aren't able to complete those independently, and they have to have a physician co-signing those. That created a barrier because basically they've [NP] done all the work with the patient but then they have to just involve a physician simply because of the regulation. I know those have been put forward, and there's work underway to have them resolved.

Other examples of barriers included legislation that governs other disciplines and multiple health system activities (CNPI 2006c). For example, when PHCNPs were introduced in Nova Scotia, changes had to be made to the *Pharmacy Act* so that pharmacists could fill prescriptions written by PHCNPs (Martin-Misener et al. 2004).

Our scoping review identified a need for a pan-Canadian approach to legislative and regulatory framework development and implementation to ensure consistency for PHCNPs (CNPI 2006b, 2006c; Thille and Rowan 2008). This recommendation was supported by the multidisciplinary roundtable convened by CHSRF to formulate evidence-informed policy and practice recommendations based on the synthesis findings (DiCenso et al. 2010c). The CHSRF roundtable specifically recommended that a pan-Canadian approach to regulatory standards and

requirements would facilitate provider mobility in response to population health-care needs and improve recruitment and retention to advanced practice nursing roles (DiCenso et al. 2010c).

**Inconsistencies in the Educational Preparation of PHCNPs across Canada**

Although the CNA (2008), CNPI (2006b) and International Council of Nurses (2008) have specified that graduate degree preparation is required for all advanced practice nursing roles, uptake of this standard for PHCNP education is variable across Canada (Martin-Misener et al. 2010). The need for graduate education for ACNPs and CNSs, both of which typically provide services in organizations with many resources and supports, unlike the PHCNP role, has not been questioned. Only the PHCNP role has been at the centre of the debate over education requirements in Canada (CNPI 2006c; Schreiber et al. 2005). Even if nursing registration and education organizations in provinces and territories decide they want graduate education to be the standard of PHCNP education, their governments may decide the proposed change to the educational requirements for PHCNPs should first be reviewed by the Health Canada and Federal, Provincial, Territorial Advisory Committee on Health Delivery and Human Resources (Dault et al. 2004; Health Canada, and Federal, Provincial, Territorial Advisory Committee on Health Delivery and Human Resources 2006).

The controversy about PHCNP education requirements was reflected in comments from our interview participants. Most participants strongly supported graduate education for all advanced practice nursing roles and told us that until recently the inconsistent educational requirements across provinces had created barriers to the internal mobility of PHCNPs without graduate degrees. One participant used the term "ghettoized" to describe what was happening to PHCNPs educated with a post-baccalaureate or post-diploma certificate, as these PHCNPs could not practise in a province that required graduate education for PHCNPs. This may change now that the Agreement on Internal Trade (AIT) prohibits refusal of a license to a PHCNP, or other professional, previously licensed in another province or territory on the basis of their education qualification (Forum of Labour Market Ministers and Labour Mobility Coordinating Group 2009). Requests for exceptions to the requirements of the Act must justify why a particular measure is needed to meet a "legitimate objective." It remains to be seen what impact the AIT will have on PHCNP mobility and whether provincial nursing organizations will try to defend the need for graduate education for the PHCNP role.

Nursing regulator participants indicated that the requirement for graduate education in British Columbia and Quebec was heavily influenced by physicians, who insisted graduate education should be the basis for the advanced knowledge and skills required of the PHCNP role. Physician endorsement of the need for

graduate education was regarded as a key facilitator in these provinces. However, a small number of government participants in our synthesis expressed worries about the time lag associated with higher educational standards, the absence of evidence to justify the need for a master's degree, the tuition costs associated with a higher level of training, the impact on the number of NPs in the system and the possibility that NPs would then request higher salaries without increasing patient volume and access.

**The Working Relationships between PHCNPs and Family Physicians**

Several papers identified the importance of the working relationship between PHCNPs and family physicians (e.g., Way et al. 2000). Simply stated, if their relationship was good, it was a key facilitator of PHCNP role implementation and integration, but if not good, it became a significant barrier (DiCenso et al. 2003; Nova Scotia Department of Health 2004).

Physician interview participants indicated that positive, respectful and trusting NP–physician relationships, along with good communication, willingness to deal with conflict, organizational structure and matching of personalities, all contributed to NP role integration. One physician we interviewed commented that "if everybody feels they're getting more out of it than they're losing, then it's going to be successful," adding that by working together, NPs and physicians could see more patients, provide better services and ensure patients did not "fall through the cracks."

Nevertheless a large number of papers described physician resistance to the PHCNP role (e.g., Cusson 2004; D'Amour et al. 2009; DiCenso et al. 2003; Hass 2006; Ontario Medical Association and Registered Nurses' Association of Ontario 2003; Pong and Russell 2003; Sloan et al. 2006). The principal reasons for this resistance related to liability concerns (e.g., Bailey et al. 2006; Martin-Misener et al. 2004; Way et al. 2001), scope of practice issues (Beaulieu et al. 2009; DiCenso et al. 2003), lack of role clarity (Beaulieu et al. 2009; D'Amour et al. 2009) and concern about NP independent practice (Gosselin 2001; Laguë 2008). Several reasons for the inter-professional tension between PHCNPs and family physicians were suggested, with some authors attributing it to system factors, such as how the Medicare system structure and funding had established physicians as the gatekeeper to the healthcare system (van der Horst 1992).

Another important reason cited for physician resistance related to the various funding arrangements for physician services. Funding arrangements that created financial competition and an employer–employee relationship between a physician and PHCNP were reported to obstruct collaboration (Jones and Way 2004; Nurse Practitioners' Association of Ontario 2008). The need for adequate compensation models for physicians was stressed by healthcare administrator

and physician interview participants. Not being able to bill for collaborating with PHCNPs was reported to be a disincentive for physicians to work with them. The literature (Advisory Committee on Health Human Resources et al. 2001; deWitt and Ploeg 2005; DiCenso et al. 2003; Jones and Way 2004; Schreiber et al. 2005) and many interview participants indicated fee-for-service reimbursement impeded PHCNP integration when healthcare activities shifted to NPs and resulted in loss of physician income. One participant explained,

> If the physician thinks, if I don't see that person I don't get paid, it's a huge barrier because they don't want somebody else to see that person. Or they want that person [NP] to see them but then they need to see them just so they can get paid. That's a problem to the whole health system.

Participants also highlighted that physicians paid through fee-for-service essentially run their practice as a small business. As such, they have expenses and obligations that other healthcare professionals may not be aware of, as well as a sense of ownership based on their investment in the practice. As one physician explained,

> It is often forgotten that the physicians, in our case, own the practice. We've invested in it, we have debts and we bought all the equipment and somehow that doesn't seem to be [recognized].… it is still our business.

Several interview participants commented on how financial incentives for physicians interfered with PHCNP role integration. For example, incentives offered to physicians to hire PHCNPs position the PHCNPs as employees rather than colleagues. The unintended consequences of incentives to physicians for meeting preventive care target numbers were also problematic, because the work of PHCNPs was included in target achievement, yet sharing the incentive was at the discretion of the physician. Voicing their disapproval, the Nurse Practitioners' Association of Ontario stated that "in the spirit of team development, the notion that one provider is being paid an incentive for the work of others is incompatible and inconsistent with the interprofessional approach to care" (2008: 2); instead, they advocated for team-related bonuses. Some primary care practices have converted these physician-specific incentives into team-based incentives in recognition of team members' contributions to preventive care services. A government interview participant commented that remuneration mechanisms need refinement to ensure fair compensation of primary healthcare teams and suggested a team-based approach to remuneration negotiations.

A new practice model for PHCNPs in Ontario is the NP-led clinic, which has had unplanned consequences for relationships between PHCNPs and family physicians. This model was developed to facilitate PHCNPs working collaboratively

with physicians to provide healthcare to patients who previously did not have a primary healthcare provider (DiCenso et al. 2010a). However, the NP-led clinics encountered strong opposition from the Ontario Medical Association, which alleges that these clinics promote an independent practice model that conflicts with the principles and philosophy of collaborative practice (Ontario Medical Association 2008; DiCenso et al. 2010a); yet these PHCNPs have established strong collaborative relations with the consulting physicians and other healthcare providers who work in these clinics.

There is a recognized overlap in the scope of practice of PHCNPs and family physicians (Marchildon 2005), illustrated clearly by this PHCNP interview participant, who said, "my role really entails a lot of what a family doctor would do." Depending on how well this overlap is understood and managed, it can be a source of tension (Jones and Way 2004; Way et al. 2000). Many interview participants acknowledged the overlap in practice between a PHCNP and family physician, identifying that strong collaborative relationships were needed to negotiate shared areas of practice. One family physician commented,

> I think the first step is you sit down and start from square one and say, who are we and what do we really need in this particular setting in terms of a skill set. What is it that you feel comfortable doing? What is it that I'm doing? How can we complement each other? Working through it, sort of compromising.

Another family physician offered further thoughts about the specific approaches PHCNPs and family physicians can use to establish and enhance their collaboration:

> So you do it in a very conscientious and concerned fashion to ensure that at the end of the day we're meeting the needs of our patients. We have to make sure that the providers, in this case the NPs and family docs, have worked through how we are going to do this and how do we make sure that we support each other in doing it. So it's a balance between (1) identifying how we can do this, (2) setting up the structures [and] (3) making sure that the other people in the clinic, particularly reception staff, understand their [PHCNP] roles and how to refer to them, because often we leave them [reception and other staff] out and they have no clue.… So that the whole team understands how these roles, how this new team, new way of doing business, is going to unfold, you have to factor in meetings to be able to debrief and figure it out, and you've got to be able to, when it's not working, talk about it. You have to look at the professional development that's needed for individuals both in terms of their clinical skills as well as potentially just to understand how you work as a team.

Many of these suggestions were also found in the literature. For example, some authors advocated for a structured approach to developing collaboration that emphasizes the importance of respect, communication and trust (Jones and Way 2004; Way et al. 2000, 2001). Others reported specific strategies to improve communication and collaboration, such as collaborative practice agreements that plainly define mutual responsibilities (Martin-Misener et al. 2004; Sebas 1994), clearly established prompt communication mechanisms (Donald et al. 2009) and processes to recognize and openly explore "turf protection" in the context of the public's need for accessible quality healthcare (Caprio 2006; Donald et al. 2009).

## Discussion

The purpose of this paper was to provide an overview of the current status of the PHCNP role in Canada and the challenges impeding full integration of the role into the Canadian healthcare system based on the findings from our decision support synthesis. The numbers of PHCNPs are increasing in Canada, they are practising in a wide range of practice settings and PHCNPs are supported with legislation and regulation in every province and territory. It remains to be seen whether this trend will continue nationally and whether the increase in the uptake of the PHCNP role will be evident in all provinces and territories. Ongoing studies are needed to monitor these trends. While several provinces are gathering annual data about PHCNPs in their own jurisdictions, a national tracking method is needed to better understand and compare nationwide practice pattern trends and barriers to practice. A national tracking system could facilitate comparisons and contrasts of PHCNP practice in different contexts and settings, thereby informing policy, scope of practice and legislative decisions.

While much has been accomplished to advance the implementation and integration of PHCNPs in Canada, a number of hurdles and obstacles block the path to full integration and sustainability of the role. Our synthesis findings and the recommendations from the CHSRF roundtable point to the need for clear, consistent legislation and education standards across all provinces and territories to support PHCNP role clarity, credibility and portability.

The restrictions on PHCNPs' legislated scope of practice interfere with the ultimate goal of providing safe, effective and timely care for patients. Limiting the ability of PHCNPs to prescribe and adjust patients' medications based on the most recent evidence and the inability to refer patients directly to a specialist result in additional system costs and delays for patients,

because they must first see a family physician. Moreover, the drugs and diagnostic tests that a PHCNP orders in a community health centre, a traditional setting in which PHCNPs practice and for which drug lists usually have been designed, may be quite different from the typical tests and medications required in a nursing home, emergency department or palliative care setting, some of the newer settings in which PHCNPs are practising. In addition to prescribing policies, each province and territory will need to review the various legal acts and regulations that form the basis of health and social policy to identify and remove barriers to NP practice in order to improve the quality and efficiency of primary healthcare. The same process needs to occur at the federal level. The extent of the legislation and policy changes needed is astonishing; see for example, the legislated restrictions on NP practice identified in the frequently asked questions in the newly released NP toolkit developed by the College of Registered Nurses of Nova Scotia (2010).

A number of Canadian jurisdictions have a health professions act that provides a regulatory structure to govern registered nurses, physicians, NPs and other regulated healthcare professionals (College of Registered Nurses of British Columbia 2010). Provincial and territorial acts, policy and dialogue among and between professions typically help to determine the specific bylaws and regulations that determine scope of practice in each province and territory. The emphasis on primary healthcare has enhanced the shared scope of practice between PHCNPs and family physicians. These shared areas of practice are highly valued because they facilitate timely patient access to primary healthcare services. However, tensions between PHCNPs and physicians can arise when there are misunderstandings of the differences between autonomous and independent practice and when funding requirements impede collaboration and delay the provision of healthcare services. The context of contemporary healthcare reform is requiring many healthcare professions to adjust to changes in the activities they and others carry out, creating fears related to loss of autonomy and control and leading to resistance. Healthcare team collaboration depends on respect, trust, and mutual understanding of and willingness to negotiate and re-negotiate professional roles. It depends on a non-hierarchical dynamic and a conviction that every healthcare team member is "getting more out of it than they are losing."

The variability in educational preparation may place PHCNPs with graduate degrees at an advantage when applying for jobs, compared with their post-baccalaureate-prepared colleagues. A graduate degree typically prepares PHCNPs to practise at an advanced level (i.e., critiquing research and its

application to patient care, purposely selecting and applying theories based on patient needs, leading community development and healthcare intervention programs, and evaluating and understanding policy and ways to influence it). The roundtable recommended that in order to facilitate provider mobility in response to population healthcare needs and improve recruitment and retention to advanced practice nursing roles, a pan-Canadian approach should be taken, in collaboration with educators, to standardize advanced practice nursing educational standards, requirements and processes (DiCenso et al. 2010c). The inclusion of policy makers in these discussions is critical in order for educators and policy makers to understand and appreciate their mutual concerns regarding health human resources and quality of healthcare. Following agreement on educational standards, an accreditation or another type of review process for PHCNP education programs is important to ensure that educational institutions adhere to the national standards.

The interest in the PHCNP role is closely tied to the reawakened nationwide awareness of the importance of primary healthcare in renewing and sustaining the publicly funded healthcare system that Canadians clearly value (Romanow 2002). Increasingly, evidence and value for money are becoming key considerations in decision making about the initiation and continuation of innovations (Health Council of Canada 2009). The need for further research to better understand the benefits of the care provided by PHCNPs was underscored by the CHSRF roundtable (DiCenso et al. 2010c). Some of this evidence is beginning to accumulate in Canada. Russell et al. (2009) found that the inclusion of PHCNPs in primary healthcare models in Ontario was associated with improved chronic disease management and that longer patient consultations benefited those with chronic conditions. Other studies have shown that healthcare teams that include PHCNPs improve accessibility to primary healthcare, especially in rural areas (Centre for Rural and Northern Health Research 2006; Martin-Misener et al. 2009). In addition, an Ontario study found that the addition of PHCNPs to an emergency department resulted in a significant reduction in wait times, length of stay and left-without-treatment rates (Ducharme et al. 2009). A similar study in Alberta found reduced wait times and improved throughput for low-acuity patients (Steiner et al. 2009). Patient satisfaction with the role continues to be high; according to a July 2009 Harris/Decima survey, the Canadian public is increasingly aware of and comfortable with NPs, and many more citizens are willing to see an NP instead of their physician than have had the opportunity to do so (Harris/Decima 2009).

## Conclusion

In summary, there is a need for a pan-Canadian approach to the education, supply, legislation and regulation of PHCNPs that builds on the foundational work of the CNPI. The overlapping scope of practice between PHCNPs and family physicians requires open dialogue and recognition of the historical context of role development to enable both professions to work collaboratively to provide optimal care to patients in an effective healthcare system for all Canadians.

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# The Acute Care Nurse Practitioner Role in Canada

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## Abstract

The acute care nurse practitioner (ACNP) role was developed in Canada in the late 1980s to offset rapidly increasing physician workloads in acute care settings and to address the lack of continuity of care for seriously ill patients and increased complexity of care delivery. These challenges provided an opportunity to develop an advanced practice nursing role to care for critically ill patients with the intent of improving continuity of care and patient outcomes. For this paper, we drew on the ACNP-related findings of a scoping review of the literature and key informant interviews conducted for a decision support synthesis on advanced practice nursing. The synthesis revealed that ACNPs are working in a range of clinical settings. While ACNPs are trained at the master's level, there is a gap in specialty education for ACNPs. Important barriers to the full integration of ACNP roles into the Canadian healthcare system include lack of full utilization of role components, limitations to scope of practice, inconsistent team acceptance and funding issues. Facilitators to ACNP role implementation include clear communication about the role, with messages tailored to the specific information needs of various stakeholder groups; supportive leadership of healthcare managers; and stable and predictable funding. The status of ACNP roles continues to evolve across Canada. Ongoing leadership and continuing research are required to enhance the integration of these roles into our healthcare system.

## Introduction

The integration of nurse practitioner (NP) roles into acute care settings began in the late 1980s with their introduction into tertiary-level neonatal intensive care units (NICUs) in Ontario (DiCenso 1998). At that time, the acute care nurse practitioner (ACNP) role was developed to offset rapidly increasing physician workloads resulting from a shortage of pediatric residents (Paes et al. 1989) and to address the lack of continuity of care for seriously ill patients (Pringle 2007) and the need to deliver increasingly complex care (Hravnak et al. 2009). These challenges provided an opportunity to develop an advanced practice nursing role to care for critically ill infants (Hunsberger et al. 1992). The increasing complexity of healthcare services across medical conditions for all ages (Canadian Institute

for Health Information [CIHI] 2008b; Hogan and Hogan 2002) speaks to an ongoing need for these roles in the Canadian healthcare system.

The Canadian Nurses Association (CNA) has defined NPs as "registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals, and perform specific procedures within their legislated scope of practice" (CNA 2009b:1). ACNPs, also known as specialty or specialist NPs, as well as adult, pediatric and neonatal NPs, provide advanced nursing care for patients who are acutely, critically or chronically ill with complex conditions. To facilitate comparisons with existing literature, the term "ACNP" will be used to describe specialty NPs practising in acute care in hospital or in specialized outpatient settings.

Numerous randomized controlled trials of ACNPs have been conducted in the United States (Allen et al. 2002; Ettner et al. 2006; Fanta et al. 2006; Ganz et al. 2000; Gordon 1974; Krichbaum 2007; Pioro et al. 2001; Powers et al. 1984; Rawl et al. 1998; Shebesta et al. 2006), and in the United Kingdom (Cooper et al. 2002; Dawes et al. 2007; Harris et al. 2007; Hill et al. 1994; Sakr et al. 1999; Stables et al. 2004), with fewer studies in Australia (Chang et al. 1999) and Canada (Mitchell-DiCenso et al. 1996a). These studies have consistently demonstrated the effectiveness and safety of ACNPs in a variety of clinical settings (e.g., emergency department, medical inpatient setting, NICU, outpatient clinic), based on a variety of patient and healthcare system outcomes (e.g., patient health status, quality of care, patient or provider satisfaction, health system costs and length of stay). The contribution of the ACNP role is in the delivery of multidimensional (D'Amour et al. 2007) and patient-centred care that includes pharmacological and non-pharmacological therapies and that enhances patient self-care abilities, improves symptom management and improves patients' abilities to perform regular activities (Sidani 2008; Sidani et al. 2006a). Staff nurses, physicians, administrators and ACNPs have reported that the ACNP role improves continuity of care (van Soeren and Micevski 2001).

The purpose of this paper is to describe the current status of ACNP roles in Canada. We provide an overview of ACNP education, legislation and regulation, and supply, deployment and work settings. In addition, we summarize key issues influencing the full integration of ACNP roles into the Canadian healthcare system.

## Methods

This paper was developed using the results of a scoping review of the literature and key informant interviews conducted for a decision support synthesis commissioned by the Canadian Health Services Research Foundation (CHSRF) and the

Office of Nursing Policy in Health Canada to develop a better understanding of advanced practice nursing roles, their current use, and the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system (DiCenso et al. 2010a).

The synthesis methods are described in detail in an earlier paper in this issue (DiCenso et al. 2010b). Briefly, we conducted a comprehensive appraisal of published and grey literature ever written about Canadian advanced practice nursing roles and reviews of the international literature from 2003 to 2008. The overall search yielded a total of 2,397 papers, of which 468 were included in the scoping review. The ACNP-related papers contributed 17% (59/349) of the Canadian papers included in the synthesis. A total of 20 papers were primary studies, two were reviews and the remaining articles were essays or editorials. Forty percent of the Canadian papers related to the ACNP role were from Quebec, attributable to the fact that this province recently implemented specialty-specific roles in cardiology, nephrology and neonatology (Ordre des infirmières et infirmiers du Québec [OIIQ] and Collège des médecins du Québec [CMQ] 2006a, 2006b, 2006c, 2006d).

Interviews ($n = 62$) and focus groups ($n = 4$ with a total of 19 participants) were conducted in English or French with national and international key informants, including clinical nurse specialists (CNSs), NPs, physicians, healthcare team members, educators, healthcare administrators, nursing regulators and government policy makers. We used purposeful sampling to identify participants with a wide range of perspectives on advanced practice nursing issues in Canada and internationally. All key informants were asked the same questions, some of which related to the ACNP role. We developed an initial coding structure of emergent themes from the interviews and integrated this structure into a broader, theoretically informed framework that included factors influencing advanced practice nursing role integration (Bryant-Lukosius and DiCenso 2004; Bryant-Lukosius et al. 2004). When our synthesis was completed, CHSRF convened a multidisciplinary roundtable to develop recommendations for policy, practice and research. For this paper, we focus on key informant interviews and papers that address the ACNP role in Canada and refer to roundtable recommendations where relevant. International literature has been used to provide global context and for further discussion about key issues when relevant. Data from the different sources are presented separately and where appropriate are synthesized (O'Cathain 2009).

## Results

We begin our presentation of the findings with a review of key contextual factors affecting the ACNP role in Canada, followed by the most frequently identified issues and challenges that emerged from the literature and the interviews.

## Current Status of ACNP Roles in Canada

Within the Canadian and international literature, there is agreement on the components of the ACNP role (Almost and Laschinger 2002; Howie-Esquivel and Fontaine 2006; Royal College of Nursing 2008; Sidani and Irvine 1999). ACNPs share the core competencies with other types of advanced practice nursing roles; these core competencies include direct patient care, research, education, consultation and leadership activities (Schober and Affara 2006; Schreiber et al. 2005a). An advanced level of practice integrates graduate-level education, in-depth nursing knowledge, and expertise in meeting the needs of individuals, families, groups, populations or communities (CNA 2008). The average amount of time that ACNPs spend in clinical practice is 70% to 80% (D'Amour et al. 2007; Sidani et al. 2000), although it ranges from 25% to 100% (Hurlock-Chorostecki et al. 2008; Roschkov et al. 2007; Turris et al. 2005).

## Education

McMaster University established the first graduate program to train ACNPs in neonatology in 1986. The program included problem-based learning and supervised clinical practice (Mitchell et al. 1995). Evaluation of the neonatal ACNP graduates found their knowledge levels and problem-solving, clinical and communication skills to be similar to those of pediatric residents (Mitchell et al. 1991). Further, using a before-and-after outcome evaluation of the ACNP program, Mitchell et al. (1995) found that the program met its competency objectives for students.

The ACNP program at the University of Toronto, which began in 1993, was the first to offer a graduate-level NP program outside neonatology (Simpson 1997). Educational programs for ACNPs include a combination of graduate education and clinical experience (CNA 2008). Most provinces offer generic graduate ACNP programs, for example in an adult-focused specialty (CNA 2008), where the knowledge and skills specific to the desired clinical specialty are obtained through learning opportunities such as clinical placements and preceptorships (Rutherford and Rutherford Consulting Group Inc. 2005). The exceptions to this are neonatology, which remains a specialized program in all provinces where it is offered (Rutherford and Rutherford Consulting Group Inc. 2005), and ACNP training in Quebec (OIIQ 2009). ACNPs in Quebec are authorized to practise only in the clinical specialty area in which they are trained (Allard and Durand 2006; OIIQ/CMQ 2006d), and specialty training and certification are required for using the title "specialized" (Bussières and Parent 2004). D'Amour et al. (2009) recommended a re-evaluation of the training requirements for ACNPs in Quebec because the course work and clinical requirements were extraordinarily heavy, a result of joint input into curriculum content by both the medical and nursing licensing boards. Other jurisdictions, such as Alberta, recognize specific streams according to educational preparation and a certification exam, including family (all ages), pediatric

or adult (College and Association of Registered Nurses of Alberta [CARNA] 2010). A more detailed description of the educational requirements of advanced practice nurses, including ACNPs, can be found in Martin-Misener et al. (2010).

In our synthesis, we found that access to clinical specialty education was limited in Canada and that this was notable because specialty education has been shown to be significant in developing role confidence and job satisfaction (Bryant-Lukosius et al. 2007), as well as in developing self-confidence and the ability to solve complex problems (Richmond and Becker 2005). Roots and MacDonald (2008) conducted an exploratory study of NPs and stakeholders to identify the factors influencing NP role implementation in British Columbia and reported a mismatch between NP education and available positions. For example, some NPs educated as primary healthcare NPs were working in acute care or with specialized populations. Schreiber et al. (2005a) found that advanced practice nurses in British Columbia needed to engage in both formal and informal education opportunities to further role development. ACNP interview participants in our synthesis suggested that the length of current NP programs is adequate, but increasing the intensity of the practice component would better prepare them for practice expectations after graduation. They suggested increasing the practice component via a residency or internship program.

### Legislation and Regulation

All 13 provinces and territories in Canada have enacted legislation for the NP role (Hass 2006; Yukon Registered Nurses Association [YRNA] 2009). Ten of these jurisdictions have provisions for NPs to practice in acute care sectors (Association of Registered Nurses of Prince Edward Island 2007; CIHI and CNA 2006; Health Professions Regulatory Advisory Council [HPRAC] 2007a, 2007b). In New Brunswick, the Northwest Territories and Nunavut, only primary healthcare/family NPs are eligible for registration (HPRAC 2007a, 2007b). The Yukon government has recently enacted legislation that allows NPs to practise in acute, primary and long-term care settings using the NP designation, and work is currently under way to develop regulations and guidelines in this jurisdiction (Government of Yukon 2009; YRNA 2009).

ACNPs in most jurisdictions are authorized to perform the following functions: (1) diagnose a disease, disorder or condition, (2) order and interpret diagnostic and screening tests and (3) prescribe medications (CIHI and CNA 2006). The level of autonomy to perform these functions varies across jurisdictions and depends on the laws regulating practice in each jurisdiction (CIHI and CNA 2006). For example, in Quebec, activities such as determining the initial diagnosis of disease and completing death certificates remain the exclusive domain of physicians (OIIQ and CMQ 2006d). However, ACNPs in Quebec can identify and manage complications

related to a primary diagnosis made by a physician (Gouvernement du Québec 2010; OIIQ and CMQ 2006d). Taking another example, in Ontario, the Regulated Health Professions Act (RHPA), in conjunction with individual professional acts such as the Nursing Act, regulates which professions have the authority to perform 13 controlled acts. These controlled acts include activities considered potentially harmful if performed by an unqualified person (Government of Ontario 1991). Through these mechanisms, NPs have the authority to diagnose, order laboratory and diagnostic testing, and prescribe treatments (College of Nurses of Ontario [CNO] 2009a). However, the Public Hospitals Act (Regulation 965) restricts NPs' prescribing authority for medications to outpatients only (CNO 2007). Due to this regulation, ACNPs in Ontario who provide services to inpatients must continue to utilize medical directives to carry out the extended controlled acts (CNO 2007). The government is currently considering these regulations (Ontario Ministry of Health and Long-Term Care [MoHLTC] 2009b).

Another legislative issue experienced in many jurisdictions, for example Alberta, British Columbia, Ontario and Quebec, pertains to the lack of patient admission and discharge privileges for ACNPs (CARNA 2005; CNO 2007; College of Registered Nurses of British Columbia 2008, 2009; Gouvernement du Québec 2010). Hurlock-Chorostecki et al. (2008) argue that the lack of admission and discharge privileges limits the ACNP's ability to provide coordinated and timely care to patients. On the other hand, the lack of admission and discharge privileges has not been identified as a significant issue for ACNPs in British Columbia (Roots and MacDonald 2008). Some authors have noted that these types of legislative and regulatory barriers indicate a lack of organizational and system-level structures to fully develop ACNP roles (D'Amour et al. 2007; OIIQ 2009).

### Supply, Deployment and Work Settings

Until recently, in some provinces ACNPs have not been licensed and, therefore, not included in the regulatory data provided to CIHI. Thus the actual number of ACNPs in Canada is difficult to determine. Nevertheless even with these limitations, according to CIHI the numbers of ACNPs in Canada increased between 2003 and 2007 in all jurisdictions by about 5% overall (CIHI 2008a). In a recent provincial report (OIIQ 2009), the number of ACNPs in Quebec increased from 16 in 2007 to 41 in 2009.

Approximately 31% of the identified NP workforce in Canada works in the acute care sector (CIHI 2010). In Canada, ACNPs are found in various clinical settings including palliative care (Williams and Sidani 2001), oncology (Bryant-Lukosius et al. 2007), cardiovascular surgery, geriatrics, medicine, pediatrics, nephrology, trauma (Sidani et al. 2000), cardiology (Roschkov et al. 2007; Thompson and Dykeman 2007), neonatology (DiCenso 1998; Morneault 2002) and mental health

(CIHI 2008a). The most common specialties reported in a recent Ontario ACNP workforce study were cardiology, internal medicine, surgery, critical care, pediatrics and neonatology (Hurlock-Chorostecki et al. 2008). Forty percent of the ACNPs who participated in this study worked in ambulatory care, and approximately one quarter of these worked exclusively in that area (Hurlock-Chorostecki et al. 2008).

ACNPs are reported to provide services for an average of 11 patients per day (Hurlock-Chorostecki et al. 2008). However, this number varies considerably across specialties, ranging from two to four patients in palliative care (Williams and Sidani 2001), seven to eight patients in cardiology (Griffiths 2006) and 27 patients in dialysis (Harwood et al. 2004).

Using a descriptive correlational design and a convenience sample of 57 ACNPs working in a variety of medical and surgical specialties, Irvine et al. (2000) found that ACNPs perform an average of 24 clinical (patient care) and non-clinical (e.g., education, administration and research) activities per day. ACNPs engage most in direct patient care activities, followed by diagnostic activities, care planning and coordination (Sidani et al. 2000). In contrast to these patient-focused clinical activities, the activities identified as non-clinical are those performed by ACNPs with or for nursing or other organizationally based staff. The clear identification of the ACNP's non-clinical activities is important to highlight, because such activities have a strong clinical focus and contribute to improvements in the quality of patient care as well as provider and system outcomes.

## Key Issues and Challenges

Synthesis of the literature and the participant interview and focus group data revealed four factors consistently identified as affecting the full integration of the ACNP into the Canadian healthcare system: (1) full utilization of role components, (2) scope of practice, (3) team acceptance and (4) funding issues.

### Full Utilization of Role Components

Many ACNPs have difficulty integrating all components of their advanced practice nursing role, given their heavy patient care responsibilities (D'Amour et al. 2007). For example, in Quebec, it is recommended that 70% of ACNP work time be spent in clinical activities and 30% in non-clinical activities such as education, leadership and research (OIIQ and CMQ 2006d). Our interviews with ACNPs, regulators, healthcare administrators and physicians illustrated the different expectations regarding the amount of time spent in each role component. For ACNPs, adding the non-clinical functions to a heavy patient care load tended to create high or unrealistic expectations, and confusion with the CNS role in the organization. Regulators noted a discrepancy between the expectations of healthcare administrators and hospital physicians regarding the amount of time ACNPs

spent in direct patient care. Physicians wanted the ACNPs' time devoted mainly or exclusively to clinical practice, whereas healthcare administrators wanted ACNPs to also have some protected time to engage in leadership, research and education activities and, in so doing, be more aligned with nursing and supportive of nurses within the organization. The following quotes illustrate these various perspectives. A regulator interview participant noted:

> For directors of nursing, given that these nurses are experts in their field, they would want to use them extensively for nurse development, and I would tell you this even occasionally creates conflicts with the physicians, who would like to have the [ACNPs] with them more often and less often teaching nurses, let's say. They would want them working more with clients, performing medical procedures.

A healthcare administrator interview participant stated:

> They are delivering excellence in clinical care, personally working well with the team, with other interdisciplinary team members as well, but they have not been making as strong a contribution to the science of nursing, or to the development of the practice of nursing and certainly not to the development of the system.

One ACNP interview participant noted:

> How do you find protected time to do things [non-clinical role components]? In our contract, within our job description, what we agreed on as an institution [was that] we should have one day as protected time. How do you operationalize that [non-clinical role components]? It's difficult to operationalize in this clinic setting where I work, so basically that is stuff I do at home.

Another ACNP interview participant identified that a facilitator to full utilization of role components was adequate coverage for clinical responsibilities:

> I think I am able to implement all the parts. I have just completed two research projects; they are both written up for publication. I am involved in education. I'm involved in some administration because I am one of the people that does the assignments for the neonatal NPs and then the 80% on the unit. But there are enough of us that we cover each other, and we are now at full complement after all of these years. We are up to the number of NPs that we need to run the unit, to cover the unit 24 hours a day, 7 days a week.

These concerns about role utilization are not new. At the time of its introduction in 1986, the role title used for the ACNPs in neonatology was "CNS/NP." This was chosen to reflect the need for nurses to develop the non-clinical components of the ACNP role in addition to technical and patient management skills (Hunsberger et al. 1992). The title "CNS" refers to registered nurses who have a graduate degree in nursing and expertise in a clinical nursing specialty (CNA 2009a). CNS and ACNP roles share a number of similarities. Both require education at the graduate level. CNS roles include clinical practice, consultation, education, research and leadership (CNA 2009a). According to Schreiber et al. (2005b), the CNS promotes evidence-based practice, acts as a mentor and role model for staff nurses, and is involved in the hiring and orientation of new personnel. In addition, Canam (2005) highlights the contribution of CNSs to health services delivery at the policy and population level. An in-depth discussion of the differences between these roles can be found in Donald et al. (2010a) in this special issue. In our interviews, CNS/NPs self-identified as ACNPs and believed the term "CNS/NP" was no longer necessary to fully implement all the components of their advanced practice nursing role.

The literature and interviews identified that role expectations can be enhanced by strong leadership from healthcare managers that includes facilitating collaboration among ACNPs, physicians and nurses (Irvine et al. 2000; Roschkov et al. 2007; Sarkissian and Wennberg 1999; Schreiber et al. 2005b; van Soeren and Micevski 2001). Reay et al. (2003, 2006) explored managers' roles and perspectives when introducing an ACNP role into the healthcare team and found that nurse managers faced three major challenges: task reallocation, the management of altered working relationships, and ongoing management of the team in an evolving situation. To effectively implement the ACNP role, managers need to facilitate a clear vision for the ACNP role, communicate with groups involved with the ACNP and support the role within the organization (Reay et al. 2003, 2006).

Communication that clearly articulates ACNP role expectations aids role implementation (van Soeren and Micevski 2001). The development of detailed written job descriptions (Cummings et al. 2003) and ACNP involvement in their development (Nhan and Zuidema 2007) are helpful strategies that enhance job satisfaction. Ongoing discussions between managers and team members promote a greater understanding of the ACNP role (Wall 2006) and help stakeholder groups develop clear expectations of the ACNP role (Rosenthal and Guerrasio 2009). Tailoring the message about ACNP roles to the needs of each stakeholder group facilitates their integration into the healthcare team (Cummings et al. 2003). For example, by considering the priorities and key questions of physician stakeholders (e.g., standards of care and competence), the appropriate scientific evidence on outcomes can be presented (Cummings and McLennan 2005). Some stakeholders

may be most interested in the cost-effectiveness of the role, while others will want to see evidence of how the ACNP benefits organizations striving to meet escalating patient needs, including the timeliness of patient care delivery (Harwood et al. 2004). An in-depth discussion of leadership and APN roles can be found in the article by Carter et al. (2010) in this special issue.

**Scope of Practice**

"Scope of practice" refers to the activities that members of a profession are educated and authorized to perform (Davies and Fox-Young 2002; Oelke et al. 2008). Activities included in the ACNP scope of practice differ across specialties (Hunsberger et al. 1992; OIIQ 2009). Depending on jurisdictional and institutional regulations, the extension of activities beyond the scope of practice of the registered nurse may require delegation of tasks using protocols, medical directives and drug lists (Keizer et al. 2000; MacDonald et al. 2005; OIIQ and CMQ 2006d; Vlasic et al. 1998). Medical directives are developed within organizations in collaboration with physicians, administrators, ACNPs and other members of the healthcare team to specify the requirements and conditions for such activities (CNO 2009b; Ordre des pharmaciens du Québec [OPQ], 2007). Once accepted by the appropriate medical advisory board or similar authority in the organization, the directives provide legal authority to ACNPs to prescribe medications, and order treatments and tests (Nurse Practitioners' Association of Ontario [NPAO] 2007; OPQ 2007). The use of protocols or drug lists allows ACNPs to work autonomously within the parameters defined by the medical directives (Harwood et al. 2004), which expedites care delivery by eliminating the need to wait for a physician's approval of the plan of care (Hurlock-Chorostecki et al. 2008).

The development of medical directives is complex and onerous (D'Amour et al. 2009; Hurlock-Chorostecki et al. 2008; OPQ 2007; Schreiber et al. 2005b), and some physicians are uncomfortable with the responsibility and liability associated with medical directives (D'Amour et al. 2009). Physician and healthcare administrator interview participants talked about the substantial amounts of time it takes to develop the detailed directives, which could be out-of-date before they are approved. The use of directives could lead to decreased quality of care, untimely access to care, blurred accountability for care, and ACNP dissatisfaction with workload and the quality of care (Hurlock-Chorostecki et al. 2008; NPAO 2007; OIIQ 2009; Roschkov et al. 2007).

The involvement of physicians in the development of medical directives is important (D'Amour et al. 2009; OIIQ 2009) and may facilitate collaboration among professions (Jones and Way 2004; Mundinger et al. 2000; Shapiro and Rosenberg 2002). Certain structures maintain a high level of physician control over the activities that are performed by ACNPs and other healthcare providers (D'Amour et al.

2009; Hurlock-Chorostecki et al. 2008; Patterson et al. 1999; Roots and MacDonald 2008; Vlasic et al. 1998). Particularly problematic structures were those that required physician approval at all levels of the ACNP role implementation process and extensive physician involvement in ACNP decisions about patient care, follow-up and referrals (D'Amour et al. 2009). Although the policies in healthcare organizations may support the principle of collaboration when developing ACNP roles, in actuality physicians have the final say on whether or not they will accept ACNP-related policies in their day-to-day practice (D'Amour et al. 2007). This affects the ability of ACNPs to work to their full scope of practice (McNamara et al. 2009). In Quebec, the lack of agreement between licensing boards about ACNP scope of practice and the scope of the medical directives created additional barriers to the development of collaboration between physicians, ACNPs and pharmacists, and impeded the development of medical directives (Desrosiers 2009; D'Amour et al. 2007, 2009; McNamara et al. 2009; OIIQ 2009).

In our interviews, healthcare administrators, government informants, regulators, physicians and ACNPs also identified barriers such as the lack of ACNP admission and discharge privileges, prescribing authority issues, and the difficulties ACNPs experienced with referring to specialists in some jurisdictions. With respect to prescribing privileges, the issues differed by jurisdiction, but examples included problems with prescribing according to drug lists, lack of prescribing authority for hospital-based NPs and resistance from pharmacists. Interview participants highlighted the need to update regulatory frameworks to reflect current practice realities, and the importance for all healthcare providers to clearly understand their respective responsibilities when providing patient care services.

Some jurisdictions have introduced regulations that support a broad scope of NP practice, and others have worked to overcome restrictions in scope of practice. In 2005, the College of Registered Nurses of British Columbia developed a regulatory framework that established a broad scope of practice for NPs in different settings that does not require physician supervision (Wearing et al. 2010). The nursing regulatory body establishes the limits and conditions of practice. More recently, Ontario passed Bill 179, which will do away with the existing lists for prescribing and ordering diagnostic and laboratory tests (MoHLTC 2009a).

**Team Acceptance**

Physician and ACNP interview participants identified factors that support NP role implementation including having positive, respectful and trusting relationships between physicians and NPs, good communication, a willingness to deal with conflict, the right organizational structure and matching of the right personalities. A physician we interviewed noted that "if everybody feels they're getting more out of it than they're losing, then it's going to be successful," and by working together

the ACNP and physician could provide better services and ensure patients do not "fall through the cracks." A medical specialist stated:

> If a nurse practitioner tells me something, I'm going to listen to that. And she may not always be right and I may not always be right, but I'm going to listen because she's got that experience.

Findings regarding nurses' views of ACNP roles appear mixed. D'Amour et al. (2007) reported that in Quebec bedside nurses were concerned with the increasing hierarchy within the nursing profession following the recent introduction of ACNP roles. Other researchers (Harwood et al. 2004; Mitchell-DiCenso et al. 1996b) found that nurses had positive views of the ACNP role in the healthcare team because ACNPs are a source of patient information, deal with team member concerns about patients in a timely manner, improve communication among team members, and provide consistency in patient care because they remain on the units and are not subject to rotation. It may be that nurses' perceptions are related to the length of time they are exposed to ACNPs, as some studies have shown that, over time, nurses are no longer concerned they will be replaced by ACNPs (Irvine et al. 2000) and they appreciate the ACNP's role as a resource (Cummings et al. 2003; Jensen and Scherr 2004; MacDonald et al. 2005). An RN interview participant stated:

> I think having the ACNP in the unit makes a huge impact. Nursing staff can get their smaller problems dealt with earlier, quicker, first thing in the morning. They don't have to wait till the end of the day, or if they have a question they can ask her and it's not wasting her time, so that's great. I think families and patients have that face, that person, that contact, whereas normally the surgeons are in the ORs [operating rooms] all day.

The healthcare team informants in our synthesis talked about turf wars as team members renegotiated their roles, and noted that lack of written information about ACNP credentialing, scope of practice and drug formulary approvals created uncertainty and confusion about the role. Some team members feared their roles would be replaced by the ACNP. The literature highlighted that in acute care settings, medical residents expressed concern about losing control of patient care decisions and having to compete with ACNPs for opportunities to perform medical activities (D'Amour et al. 2007; Fédération des médecins résidents du Québec 2003a, 2003b, 2003c, 2004). Mitchell-DiCenso et al. (1996b) found that all respiratory therapists surveyed in their study reported a diminished quality in their worklife following the introduction of the neonatal ACNP role. A healthcare team member noted:

> Well, I think it's making sure that you involve the healthcare professionals that are going to be working very closely with either the CNS or the NP. I think that's the key issue involved, whether it's a physiotherapist, respiratory therapist and the nurses too, themselves. I know that at the beginning even the bedside nurses were having some issues. A lot of them felt, well you're a nurse and I'm a nurse – why should I be taking orders from you? Sort of this little power struggle during the first year, and once things sort of settled in and everybody understood what everybody was doing and everybody understood also the level of training that they have received, that put things in perspective, and then things fell into place. So number one, I think involvement of the healthcare professionals obviously is very important.

The overlap of roles may be greater between CNSs and ACNPs in the same specialty, given that they both have graduate-level education and share care coordination functions (Sarkissian and Wennberg 1999; Sidani et al. 2006a, 2006b; Williams and Sidani 2001). Griffiths (2006) described CNS and ACNP roles in one clinical setting and highlighted the importance of clearly defining and articulating each role and its scope of practice. Informants in our synthesis identified co-location of CNSs and ACNPs as a way of facilitating the development of complementary roles within a specialty. Co-location brings people together in a physical space (Kahn and McDonough 1997) and has been found to improve patient adherence to treatment plans and staff member education (Knott et al. 2006), facilitate the development of a common understanding and improve work coordination (Hudson et al. 1997; Reddy et al. 2001). However, co-location of CNSs and ACNPs may also increase role confusion if providers do not have sufficient time to examine and understand each other's roles (Griffiths 2006).

**Funding Issues**

The lack of stable funding in global hospital budgets for ACNP roles and the insufficient salaries for ACNPs have consistently been identified in the literature as barriers to implementing and sustaining these roles (CNA 2006; Cummings and McLennan 2005; D'Amour et al. 2007; Desrosiers 2007; Irvine et al. 2000; Patterson et al. 1999; OIIQ 2009; Roots and MacDonald 2008; Réseau québécois de la cardiologie tertiaire 2003; Roschkov et al. 2007; Schreiber et al. 2005a, 2005b). These same issues were raised by many of the interview participants. The lack of physician remuneration to supervise ACNP practice and the reduction in physician remuneration, if their income is tied to the number of patients they see (fee-for-service) (Gosselin 2001), have also been identified as barriers to the development of ACNP roles. One regulator we interviewed said:

> What is also unclear is all the financial support to implement a new nursing role; at present, the support is fairly minimal, whether for nurses

studying to be trained as nurse practitioners, or for the clinical settings that subsequently hire them, where the support is minimal and lasts for only two years, after which these settings must be self-funding.

D'Amour et al. (2007) reported that ACNP salaries are insufficient, and government funding does not adequately cover the large investments required by universities and healthcare organizations to train students. Healthcare administrator and ACNP interview participants were concerned that the diminished earning potential for these roles poses a barrier to recruitment of ACNPs, and salary inequities make it difficult for some jurisdictions to retain ACNPs. According to ACNP, healthcare administrator and regulator interview participants, most ACNPs are not part of the nursing union, and even when they are, the poor fit between the role and the union means that they do not have suitable bargaining rights regarding issues such as salary increases, wage disparities, benefits and working conditions. A number of authors (CNA 2006; D'Amour et al. 2007; OIIQ 2009) have questioned the long-term survival of ACNP roles, without stable funding schemes for these positions and salaries that clearly recognize their scope of practice and level of responsibility. Participants in the CHSRF roundtable discussions echoed the need for stable and sustained funding for advanced practice nursing positions once they have been successfully incorporated into the healthcare delivery organization (DiCenso et al. 2010b).

## Discussion

This paper provides a description of the current status of ACNP roles and summarizes the key issues influencing the full integration of this role into the Canadian healthcare system. The number of ACNPs appears to be increasing in Canada. There have been difficulties with accurate tracking of the role, but these will be resolved as more jurisdictions establish their licensing and registration processes for ACNPs.

Important differences were noted in the way ACNP roles were implemented in the healthcare system. The requirement for medical directives by many organizations has led to frustration for providers and highlighted the political nature of delegating prescribing authority to ACNPs (McNamara et al. 2009). Consistent support from physicians, healthcare administrators and leaders is essential for the development of clear role expectations for ACNPs to enact all their role components. Clear, consistent legislation across all provinces and territories would support the full utilization of role components, facilitate interprofessional collaboration and enable ACNPs to function autonomously to their full scope of practice.

There appears to be a tug-of-war between the health care manager's support for the non-clinical components of the ACNP role and physicians' needs for a full-time clinical care provider. An important added value of the ACNP role in healthcare teams lies in the ability of ACNPs to enact both the clinical and non-clinical components of their role, including education, leadership and research. Stakeholder involvement in the development of ACNP roles needs to occur as early as possible in the process of role development to foster an agreement about expectations (Bryant-Lukosius and DiCenso 2004). Healthcare managers play a central role in the implementation and full utilization of ACNP roles (Carter et al. 2010). They help identify the expectations of the role, collaborate on written agreements that outline ACNP activities (Madgic and Rosenweig 1997), help to develop a mutual understanding of ACNP role components to align with expectations (Knaus et al. 1997) and facilitate role implementation for all those involved.

This study highlighted the need for more emphasis on the development of a research component for ACNP roles as a hallmark for any advanced practice nursing role. However, in the context of a high clinical workload and time pressures, this component remains difficult for ACNPs to implement. A focus on the research component was evident in the literature and interviews related to the CNS role but not as evident in the literature and interviews for NP roles (Bryant-Lukosius et al. 2010; Donald et al. 2010b). As managers play a critical role in ACNP role implementation, they may be able to facilitate the involvement of ACNPs in research activities. Such activities could include advancing the profession through conducting original research, critiquing and using research evidence in ACNPs' practice, collaborating in research studies, recruiting study participants or disseminating research findings to colleagues. It is likely that ACNPs are already applying research findings to practice and disseminating findings to colleagues, but the extent of these research activities is not known and requires further study.

Co-location of ACNPs with other team members, particularly CNSs, is a helpful strategy for role implementation, but it has received little attention in the healthcare literature. Humbert et al. (2007) suggest that co-location of primary healthcare NPs and members of the healthcare team can decrease professional isolation and may facilitate team integration. The proximity of team members makes it easier to communicate and develop good working relationships and facilitates collaboration (Knott et al. 2006). Collaboration among professionals may be an effective way to preserve the essential characteristics of each team member's role (Beaulieu et al. 2008) and facilitate

working to full scope of practice (CHSRF 2006; Oelke et al. 2008). Time appears to be an important consideration in order for ACNPs and team members to have an opportunity to reflect on their roles within the team and develop different aspects of their roles (Kilpatrick 2008).

Short-term funding for ACNP positions does not ensure the sustainability of the role to address patient needs. Stable and predictable funding mechanisms for the implementation and ongoing development of ACNP roles were identified in the roundtable discussions as important to the long-term sustainability of these roles (DiCenso et al. 2010b). Remuneration mechanisms that do not disadvantage the physician or the ACNP enable them to work collaboratively and efficiently to achieve patient benefits.

Finally, the scoping review used a variety of search terms and different search strategies to locate the literature related to advanced practice nursing roles. However, to the best of our knowledge, no study has focused primarily on the interprofessional relationships between ACNPs and members of the healthcare team. This needs to be explored in greater depth, because some members of the healthcare team described turf wars and dissatisfaction with the integration of ACNP roles. Nevertheless, perceptions of ACNP roles by members of the healthcare team appear to be improving.

## Conclusion

In summary, we found that the number of ACNPs in most Canadian jurisdictions is increasing. Key issues identified in our synthesis where improvement is needed for ACNP roles to be fully integrated into the Canadian healthcare system include utilization of non-clinical role domains, consistency in implementing full scope of practice across all jurisdictions, team acceptance and collaboration within the healthcare team, and secure funding and competitive salaries for ACNPs. The evidence from the sources used for this scoping review (literature, key informant interviews and roundtable discussions) supports an encouraging evolution of the ACNP role in Canada; this evolution will require ongoing nursing leadership and continuing research to enhance the integration of these roles into our healthcare system.

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# The Clinical Nurse Specialist Role in Canada

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## Abstract

The clinical nurse specialist (CNS) provides an important clinical leadership role for the nursing profession and broader healthcare system; yet the prominence and deployment of this role have fluctuated in Canada over the past 40 years. This paper draws on the results of a decision support synthesis examining advanced practice nursing roles in Canada. The synthesis included a scoping review of the Canadian and international literature and in-depth interviews with key informants including CNSs, nurse practitioners, other health providers, educators, healthcare administrators, nursing regulators and government policy makers. Key challenges to the full integration of CNSs in the Canadian healthcare system include the paucity of Canadian research to inform CNS role implementation, absence of a common vision for the CNS role in Canada, lack of a CNS credentialing mechanism and limited access to CNS-specific graduate education. Recommendations for maximizing the potential and long-term sustainability of the CNS role to achieve important patient, provider and health system outcomes in Canada are provided.

## Introduction

Since the late 1960s, the clinical nurse specialist (CNS) has played a prominent role in the Canadian healthcare system (Canadian Nurses Association [CNA] 2006a; Davies and Eng 1995; MacDonald et al. 2005; Montemuro 1987). CNSs were introduced to support and improve the quality of nursing care at the bedside in response to increasing specialization, technology, patient acuity and the complexity of healthcare. Clinical expertise in a specialized area of practice is characteristic of the CNS role (CNA 2009; National Association of Clinical Nurse Specialists [NACNS] 2004). As an advanced practice nursing role, the CNS is envisioned as a multidimensional clinical role based on the principles of primary healthcare and with a focus on health, health promotion and patient-centred care (CNA 2008, 2009).

In addition to specialized clinical expertise, the CNS has a graduate degree in nursing and provides an advanced level of nursing practice through the integration of in-depth knowledge and skills as a clinician, educator, researcher, consultant and leader (CNA 2009; Clinical Nurse Specialist Interest Group [CNSIG] 2009). CNSs have responsibilities for patient care and for promoting excellence in nursing practice by educating and mentoring other nurses, generating new nurs-

ing knowledge, promoting the uptake of research into practice, developing and implementing new practices and policies, providing solutions for complex healthcare issues and leading quality assurance and change initiatives (CNA 2009).

Through innovative nursing interventions, the CNS role has the potential to make a significant contribution to the health of Canadians by improving access to integrated and coordinated healthcare services (CNA 2009). However, the profile and deployment of CNS roles across the Canadian healthcare landscape have fluctuated over the past 40 years and the full benefit of the role has yet to be realized (CNA 2006a, 2009).

The purpose of this paper is to examine the CNS role in terms of its current status in Canada; education; regulation and scope of practice; supply, deployment and practice settings; and role outcomes. Key issues and challenges influencing role integration and long-term role viability are identified and recommendations to address these challenges are summarized.

## Methods

This paper is based on a decision support synthesis (DSS) that was conducted to develop a better understanding of advanced practice nursing roles, their current use, and the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system (DiCenso et al. 2010a). A DSS combines research and knowledge translation strategies to summarize and integrate information and provide recommendations on a specific healthcare issue (Canadian Health Services Research Foundation [CHSRF] 2009). It generally includes a synthesis of published and grey literature and, when appropriate, may include data collected from key informants. DSSs use deliberative strategies to engage decision makers in formulating questions, framing the project scope and reviewing the draft report to generate recommendations (CHSRF 2009).

An earlier paper in this issue provides a detailed description of the methods for this synthesis (DiCenso et al. 2010b). In brief, it included a comprehensive examination of published and grey literature on Canadian advanced practice nursing roles from the time of inception and international literature reviews from 2003 to 2008. A total of 2,397 papers were identified, of which 468 were included in the scoping review. Interviews ($n = 62$) and focus groups ($n = 4$ with a total of 19 participants) were also conducted with national and international key informants including CNSs, nurse practitioners (NPs), physicians, other health providers, educators, healthcare administrators, nursing regulators and policy makers.

A structure–process–outcome framework relevant to advanced practice nursing (APN) role implementation was used to develop a data extraction tool and data-

base for the literature review and to create a semi-structured guide for the interviews and focus groups (Bryant-Lukosius and DiCenso 2004; Bryant-Lukosius et al. 2004). Data related to structures included policies, education, and the human, physical, practical and information resources known to be important for APN role implementation. Information about processes related to where, what and how APN roles were enacted. Outcome data referred to the impact of APN roles on patients, providers and the health system. Possible solutions to improve the integration of APN roles were also identified.

Four research team members were assigned CNS publications to review and extract information that was entered into a database. Using printouts of the extracted data, each reviewer provided a summary report on their publications. At a team meeting, each report was examined and discussed to compare and contrast themes and to formulate conclusions about the data as a whole.

The semi-structured interview and focus group guide asked key informants about their knowledge and experience with different types of APN roles, including the CNS. All key informants were asked the same questions, some of which related to the CNS role. Participants were asked to describe how CNS roles were implemented in their organization and/or jurisdiction, to provide examples of promising models of CNS practice and CNS role outcomes, and to identify barriers, facilitators and solutions to enhancing CNS role integration. A team of four reviewers analyzed and summarized the interview data. Content analysis of the transcribed audiotaped interviews was conducted using an agreed-upon coding scheme and documentation form to identify themes related to APN role structures, processes and outcomes. A spreadsheet was used to summarize codes, themes and data from each transcript so that themes about CNS and other APN roles could be compared across the transcripts. All interview and focus group data specific to CNS roles were included in the analysis for this paper. To synthesize the literature and interview/focus group data, the similarities and differences in themes, common patterns and trends, and implications for the CNS role from both data sets were compared and summarized in relation to current status in Canada; education; regulation and scope of practice; supply, deployment and practice settings; role outcomes; and challenges to role integration.

When the synthesis was completed, CHSRF convened a multidisciplinary roundtable to develop recommendations for policy, practice and research based on the synthesis findings. For this paper, we have focused attention on interview and focus group data, descriptive reports, primary studies and reviews about the CNS role in Canada, as well as related roundtable recommendations. We have drawn on international literature to provide global context and for further discussion about key issues when relevant.

## Results

The CNS-related papers contributed 9.7% (34/349) of the Canadian papers included in the synthesis. The 34 papers consisted of 19 essays and 15 reports of primary studies (DiCenso et al. 2010b). Table 1 summarizes these 15 articles (4 are based on the same study). Most studies were conducted at single sites or institutions in a western province between 2003 and 2006 and employed qualitative and descriptive research methods. None investigated CNS practice across the country. One third of the studies examined a mix of CNS roles in various specialties, and the remaining studies focused on CNS roles in specific specialties such as pediatrics, cardiology, neonatology, medicine and geriatrics. We begin our presentation of the findings with a summary of key contextual issues related to the CNS role, followed by the issues and challenges that most frequently and consistently emerged from our data analysis: the paucity of Canadian research on the CNS role, absence of a common vision for the CNS role in Canada, lack of a CNS credentialing mechanism and limited access to CNS-specific graduate education.

**Table 1.** Canadian CNS role studies between 1950 and 2008

| Author | Year | Study design | Area of specialization or practice | Location |
|---|---|---|---|---|
| Alcock | 1996 | Descriptive | Mixed | Ontario |
| Canam | 2005 | Qualitative | Pediatrics | British Columbia |
| Carr and Hunt | 2004 | Program evaluation | Geriatrics | British Columbia |
| Charchar et al. | 2005 | Qualitative | Cardiac | Quebec |
| Davies and Eng | 1995 | Descriptive | Mixed | British Columbia |
| Forster et al. | 2005 | Randomized controlled trial | Acute medicine | Ontario |
| Hogan and Logan | 2004 | Descriptive/program evaluation | Neonatal | Ontario |
| Lasby et al. | 2004 | Program evaluation | Neonatal | Alberta |
| Pauly et al.[a] | 2004 | Descriptive qualitative | Mixed | British Columbia |
| Pepler et al. | 2006 | Qualitative/program evaluation | Oncology and neurology | Quebec |
| Profetto-McGrath et al. | 2007 | Descriptive | Mixed | Western health region |

Table 1 Continued.

| | | | | |
|---|---|---|---|---|
| Schreiber et al.[a] | 2003 | Descriptive | Mixed | British Columbia |
| Schreiber et al.[a] | 2005[a] | Descriptive qualitative | Mixed | British Columbia |
| Schreiber et al.[a] | 2005 | Descriptive qualitative | Mixed | British Columbia |
| Smith-Higuchi et al. | 2006 | Qualitative | Geriatrics | Western health region |

[a] Four publications about the same study.
CNS= Clinical nurse specialist

## Current Status of the CNS Role in Canada

The CNA (2009) defines a CNS as "a registered nurse who holds a master's or doctoral degree in nursing and has expertise in a clinical nursing specialty." The most recent position statement on the CNS reaffirms the multidimensional nature of this role, with integrated responsibilities for clinical practice, education, research, consultation and leadership (CNA 2009). The multi-faceted aspects of this role were also reported in the literature and by key informants familiar with the CNS role. Healthcare administrators and physicians perceived the CNS role as more varied than the NP role, with more involvement in supporting other health providers and leading education, evidence-based practice, quality assurance and program development activities. Healthcare administrators identified that the strength of CNSs was their ability to blend clinical expertise with leadership and research skills to support administrative decision making and to achieve academic agendas in teaching hospitals. One healthcare administrator explained:

> They [CNSs] have broad responsibilities in quality development, nursing leadership, program development, administration, practice, research and education … they are very valued contributors as a nursing leadership role and as a role model and mentor for clinical practice. And [they] participate actively in our academic agenda as well.

A multiple-case study documented a number of ways CNSs promoted research-based nursing practice. This involved questioning current practice and developing researchable clinical questions, conducting research and engaging staff in the research process, meeting learning needs through mentorship and education, building on staff expertise, managing resistance to change and through publications and presentations (Pepler et al. 2006). CNSs also use varied sources of evidence to influence decision-making at the bedside and at administrative levels (Profetto-McGrath et al. 2007). CNSs report that their research, education and

administrative knowledge and skills are necessary to effect change and improve patient care at the individual, unit and organizational levels (Pauly et al. 2004; Schreiber et al. 2005a). In one qualitative study, pediatric CNSs described how they intervened at several levels, including the patient, patient populations, nurses and other health providers, and the health system (Canam 2005). Interview and focus group participants also concurred that CNS interventions were systems oriented, population focused and staff targeted.

CNSs work in various specialties that may be defined by type of illness, such as cancer or cardiovascular disease (Griffiths 2006; Ingram and Crooks 1991); health needs, such as pain management (Boulard and Le May 2008); type of care, such as palliative or critical care (Peters-Watral et al. 2008; Urquhart et al. 2004); or by patients' age, for example, pediatrics, neonatology or gerontology (Canam 2005; Lasby et al. 2004; O'Rourke et al. 2004; Smith-Higuchi et al. 2006).

Interview participants agreed that CNS roles were the least understood of all advanced practice nursing roles (Donald et al. 2010). The multiple dimensions of the role and the varied ways CNSs implemented their roles contributed to poor role clarity and may explain why CNSs felt they were viewed as a "jack of all trades." Another factor is the lack of clarity about the nature of the clinical component of the role. A nurse regulator interviewed for the synthesis highlighted this issue:

> In my view the ideal CNS role is of a clinical expert … is to facilitate and foster the development of excellence in colleagues.… Others see the role as solely developing a niche expertise in a clinical area for the purpose of direct care delivery.

Most of our study participants felt that CNS roles had limited involvement in the direct clinical care of patients. Notable exceptions were in oncology and palliative care, where CNSs had extensive clinical roles in pain and symptom management and care coordination. In contrast, Canadian studies described a number of ways CNSs were involved in direct patient care, including the assessment and management of acute and chronic illnesses, health promotion, discharge planning, care coordination and education (Bryant-Lukosius et al. 2007; Canam 2005; Charchar et al. 2005; Lasby et al. 2004; Schreiber et al. 2003). Interview participants observed that CNSs without a direct clinical role were more vulnerable to funding cutbacks because the loss of the role may not have immediate impact on practice settings. Lack of clarity about the clinical component also makes it difficult to distinguish CNSs from other types of nursing roles. Interview participants identified difficulties in knowing when to recruit a CNS versus an NP in acute care settings. Several studies reported role confusion (Canam 2005; Smith-Higuchi et al. 2006) and role overlap with master's-prepared nurse educators (Pepler et al. 2006; Wall 2006).

## Education

The recommended education for advanced practice nurses in Canada and internationally is a master's degree from a graduate nursing program (CNA 2008; International Council of Nurses 2008). While data are collected regularly about NP education programs in Canada (Canadian Association of Schools of Nursing [CASN] and the CNA 2008), information about graduate nursing education programs to prepare CNSs in Canada is not routinely gathered. To identify existing CNS-related education courses and/or programs, we reviewed the websites of graduate nursing programs in Canada and collaborated with the CASN to survey these 31 programs. Of the 31 programs, 27 responded to the survey. Based on combined website and survey data, one of 31 programs offered a CNS-specific program, but enrolment to this program was closed due to lack of funding, a second program offered an advanced practice leadership option to prepare CNSs and clinical leaders and a third program was exploring the possibility of developing a CNS stream. Another program offered two CNS-specific courses, and six programs offered general advanced practice courses that could be relevant to but were not specifically designed for CNSs. The types of courses varied among graduate programs but focused on developing clinicians, educators, leaders and/or researchers to practise at an advanced level. The limited access to CNS-specific graduate education in Canada is a key issue challenging CNS role integration and is discussed later in this paper and in another paper in this special issue (Martin-Misener et al. 2010).

## Regulation and Scope of Practice

In Canada, the scope of practice for the CNS is the same as that of the registered nurse, and to date, most provinces or territories do not have additional legislation or regulation for this role. In Alberta, the title of "'Specialist"' is restricted to registered nurses who are practising in a specialty, with a graduate degree that is relevant to the area of practice and three or more years' experience in the specialty (College and Association of Registered Nurses of Alberta 2006). However, the title "Specialist" is not limited to CNS roles and can be applied to other advanced practice nursing roles. In Quebec, NPs in primary care, neonatology, nephrology or cardiology who have completed a specialist certificate in addition to master's education can call themselves specialists (Gouvernement du Québec 2005). These specialist certificates are not available for CNSs and thus the title, CNS, is not formally recognized.

None of our interview participants identified CNS involvement in extended role activities outside the scope of nursing practice. However, in one province, CNSs, particularly those in rural and remote settings, provide some medical role functions. Authority for these extended practice activities occurs through formal and informal transfer of function agreements with physicians, clinical protocols, orders or organizational policies (Schreiber et al. 2005a).

### Supply, Deployment and Practice Settings

An accurate assessment of the current number of CNSs in Canada is not possible because of the lack of standardized regulatory and credentialing mechanisms to identify those who qualify as CNSs and the absence of provincial or national processes to track these roles. The data are based on nurses who self-identify as CNSs, even though they may not have the recommended graduate education or specialty preparation for the role. Based on these self-reports, between 2000 and 2008 the number of CNSs declined from 2,624 to 2,222 and accounted for about 1% of the Canadian nursing workforce (Canadian Institute for Health Information [CIHI] 2010; CNA 2006b). The greatest drop in CNS numbers occurred in Ontario and British Columbia, but there was a modest rise in the number of CNSs in Newfoundland, Nova Scotia, Quebec and Saskatchewan.

Key informant perceptions were consistent with our findings from the literature about the falling number of CNSs and the need for better mechanisms to monitor the supply and deployment of CNS roles. When commenting on how CNSs were utilized in their practice setting or jurisdiction, interview and focus group participants noted that once the role was introduced it was generally well received. However, limited data existed to support health human resource planning for the role, and the role was not well understood or integrated into the health system. As these policy makers and regulators explained:

> I don't think it [CNS role] is really embedded into the system the same way that NPs are.

> There is an uncertainty of the real supply of CNSs in the system.

> So they're kind of like lost souls that kind of [have] ... fallen out of favour. So it's actually … having a process to ensure that their role is recognized as well, and I think that's going to take some time because first of all we have to identify who are CNSs.

Educator and administrator participants also painted a picture about the patchwork deployment of CNS roles, with some jurisdictions eliminating the role and others having some role sustainability or resurgence:

> The CNS role has been very alive and active in British Columbia for many years, since probably the late '60s.

> The CNS is an interesting role in that it has not always been a role the people have always sanctioned or understood.… In times of economic crunch … CNSs were laid off.… So it has been an interesting role to

> re-establish and get moving again in our region. And there are pockets of them, and when they are there they are very effective.

During times of economic constraint, the perceived lack of CNS role impact on the provision of clinical services made the role vulnerable to cutbacks. This NP explained that once the roles were eliminated, they were often not re-introduced:

> There has been a reduction in the CNS as a consequence of the '90s. I can only speak to [our] region … when in the early '90s many of the CNS roles were deleted because they were seen to be extraneous to direct care.

CNSs are typically found in acute care settings such as inpatient units, critical care units and hospital-based clinics (Alcock 1996; Davies and Eng 2005; Forster et al. 2005; Hogan and Logan 2004; Pepler et al. 2006). Recent reports document the introduction of CNS roles in community-based practices and in assisted living and long-term care facilities to address the unmet and specialized health needs of underserviced populations in rural and remote settings (Health Canada 2006; Smith-Higuchi et al. 2006). In 2005, the Office of Nursing Services for the First Nations and Inuit Health Branch introduced 16 CNS positions across Canada to address concerns in three key areas: maternal child health, mental health and chronic disease/diabetes. The major drivers for introducing these roles were difficulty in recruiting and retaining nursing staff in First Nations communities and the need for enhanced clinical resources and supports for front-line nurses (Veldhorst 2006). Their responsibilities include nursing education, developing standardized orientation programs, clinical and professional development and improving communication between nursing leadership and front-line staff. A national study of First Nations' health services also identified the need for similar CNS roles for the prevention and management of communicable diseases (Davies 2005).

A three-year project in rural western Canada led to the introduction of a CNS role for assisted living in enhanced lodges and long-term care facilities (Smith-Higuchi et al. 2006). The role provided specialized expertise and leadership in the care of older adults, including coaching and guidance of professional and non-professional staff, collaborative care and consultation services for other health providers. An administrator participant from our synthesis described the introduction of a similar CNS role designed to transition older adults across acute and community healthcare sectors:

> We have a CNS who works in our emergency department – bringing into the emergency department the geriatric specialized care.… The work that she is doing as far as outreach to our nursing homes has been amazing … it's helping to build skill sets in the nursing homes that will prevent

> unnecessary hospitalization, which contributes greatly to the hospital being able to meet the needs of the community and building capacity within the nursing home itself for nursing care.

### Outcomes of CNS Roles

Some interview participants, such as this nurse educator, were able to articulate the value-added outcomes of CNS roles:

> So the CNS really got … direct improvement in nursing development and quality of care … improving the care pathways, improving continuity of information, continuity of care.… If I want to improve my care, these are the persons who can help me. So this [the CNS role] has a very large impact and [can act] very rapidly in the field to improve the level of care, to improve the continuity of care and the level of evidence-based care….

Interview and focus group participants, including this administrator, identified that the potential benefits of CNS roles were not universally well known or understood by key stakeholders:

> One of the key barriers to integrating the [CNS] role is that people do not understand the contributions that they make. Big contributions … to make that role really sustainable, we really need to increase the awareness and understanding of the value of that role ... across certainly our region, and I think our province and I am sure across the country.

There is a growing body of international data about the effectiveness of CNS roles, but the limited number of Canadian studies may explain the lack of awareness of CNS outcomes by some interview participants. Two American authors, Fulton and Baldwin (2004), provide the most comprehensive compilation of international studies assessing CNS role outcomes in an annotated bibliography. Multiple high-quality randomized controlled trials in the United States involving varied complex and high-risk patient populations consistently demonstrate that when compared to standard care alone, patients who received CNS care can be discharged from hospital sooner with equal or better health outcomes, fewer hospital readmissions, higher satisfaction with care, improved health-related quality of life and lower acute care health costs (Brooten et al. 2002). CNS home care reduced healthcare costs and improved the quality of life and survival rates for elderly patients following surgery for cancer (McCorkle et al. 2000). In long-term care, patients randomized to CNS care had improved or maintained better levels of physical and cognitive function. They also had better outcomes related to incontinence, pressure ulcers and mental health compared to those who received standard care (Ryden et al. 2000). CNSs also promote staff satisfaction and qual-

ity of care (Gravely and Littlefield 1992) and increase patient and health provider knowledge and skills (Barnason et al. 1998; Linde and Janz 1979). They promote patient safety and reduce complication rates (Carroll et al. 2001; Crimlisk et al. 1997), and CNSs improve patient and health provider uptake of best practices (Patterson et al. 1995; Pozen et al. 1997).

Table 2 summarizes the results of four Canadian studies we identified that included some kind of outcome assessment of CNS roles or CNS-led initiatives. In terms of determining effectiveness, the evaluation methods are weak, with most studies using descriptive post-implementation surveys (Carr and Hunt 2004; Hogan and Logan 2004; Lasby et al. 2004). One study evaluating the effects of a CNS role on the outcomes of hospitalized medical patients used a comparative study design (Forster et al. 2005); however, the use of outcome measures insensitive to CNS role activities may have led to the findings. These included no differences in readmission rates, deaths or adverse events between the CNS and control groups. Despite design limitations, the pattern of results for all four studies is similar to those reported in the international literature indicating that CNS care is associated with improved quality of care, enhanced nursing knowledge and skills, better patient satisfaction with care and increased patient confidence in self-care abilities (Fulton and Baldwin 2004).

## Table 2. Canadian studies reporting CNS role outcomes

| Author and year of study | CNS intervention | Study design | Results | Comments |
|---|---|---|---|---|
| Carr and Hunt 2004 | The purpose of the Acute Care Geriatric Nurse Network (ACGNN) was to enhance nurses' ability to provide evidence-based care to acutely ill older adults in gerontology, medicine, psychiatry, rehabilitation and orthopedics. In this provincial program, teams of CNSs travelled to 25 communities in participating health authorities to provide educational workshops and mentorship. | Post workshop, qualitative feedback | Nurses reported feeling renewed, reconnected and empowered, and more motivated to improve their practice. | |

Table 2 Continued.

| | | | | |
|---|---|---|---|---|
| Forster et al. 2005 | CNS functioned as a nurse team coordinator, facilitating hospital care for patients on a medical unit by retrieving preadmission information, arranging in-hospital consultations and investigations, organizing post-discharge follow-up visits, and checking up on patients post-discharge with a telephone call. | Randomized controlled trial (CNS group, *n* = 307; control group *n* = 313) | No differences in readmissions, deaths, or adverse events<br><br>Patient ratings of quality of care were higher in the CNS group. | Incongruence between outcome measures and CNS role may have contributed to lack of differences in study results. |
| Hogan and Logan 2004 | Implementation of a research-based family assessment instrument developed by a CNS and application of the Ottawa Model of Research Use to guide the piloting of the assessment instrument with members of a neonatal transport team. | Formative evaluation using a post-implementation survey | Improved team member perceptions of knowledge, family centredness and ability to assess and intervene with families. | |
| Lasby et al. 2004 | Neonatal transitional care for parents going home with low-birth-weight babies; care delivered by a team of CNSs and a dietician providing in-home and telephone support for four months after discharge. | Post-discharge questionnaire completed by parents | Lengthened breast milk provision, decreased demand on healthcare resources (particularly emergency departments and pediatrician offices) and enhanced maternal confidence and satisfaction with community service. | |

CNS=Clinical nurse specialist

## Key Issues and Challenges to CNS Role Integration

Synthesis of the literature and the participant interview and focus group data revealed four challenges limiting the full integration of the CNS role into the Canadian healthcare system: (1) paucity of Canadian research to inform CNS role implementation, (2) absence of a common vision for the CNS role in Canada, (3) lack of a CNS credentialing mechanism and (4) limited access to CNS-specific graduate education.

### Paucity of Canadian Research to Inform CNS Role Implementation

Our search for research on the CNS role in Canada revealed only a small number of primary studies or reviews ever conducted in this country. Of 158 primary studies or reviews of advanced practice nurses, only 15 focused specifically on

the CNS role (Table 1) while, in contrast, 126 focused on the NP role (another 17 focused on the APN role in general). There have been no Canada-wide studies of the CNS role to learn more about, for instance, the number of CNSs required to meet healthcare needs, trends in CNS deployment, CNS practice patterns and implementation of role dimensions (i.e., clinician, educator, researcher, consultant, leader), number of vacant CNS positions and reasons for vacancy, CNS job satisfaction, CNS education needs, and evaluation of non-clinical role dimensions (e.g., promotion of evidence-based nursing practice). A specific recommendation by the CHSRF roundtable was that the CNS role in the Canadian context requires further study and should be the focus of future academic work.

**Absence of a Common Vision for the CNS Role in Canada**

A striking observation based on both limited national research and participant interview data was the invisibility of CNS roles in the Canadian healthcare system. Aside from nurse administrators, educators and CNSs, interview participants such as physicians, regulators and government policy makers reported limited experience and/or understanding of CNS roles. The increased visibility of NP roles in Canada corresponds with provincial and national primary healthcare reform policies, funding of primary healthcare NP education programs and roles, and investments in role supports such as the Canadian Nurse Practitioner Initiative (CNPI 2006; Health Canada 2000). However, healthcare administrator, nursing regulator and government policy maker interview participants noted that similar provincial or national investments to support CNS roles are lacking. As a nurse regulator explained,

> There's still a lot of work to be done with the CNS role in this province … basically I don't know what to tell you about that group. There's been so little done in terms of developing the role and what they actually do … so in this province it's not a well-developed role.

Administrators also identified the need to increase awareness and better align CNS roles with important policy issues where CNSs can make an important contribution:

> I would like to see massive increased investment in CNS roles in practice environments, and I think they would have a strong, positive contribution to patient safety, quality and advancement of nursing practice.... I think that would be an important step to … successfully integrating the role.

In the 1990s, CNSs formed the Canadian Clinical Nurse Specialist Interest Group (CCNSIG) to develop practice standards, hold annual national conferences and produce quarterly newsletters. These activities would link colleagues from across the country to profile and share experiences about their roles and to tackle practice and

role implementation issues (CCNSIG 1997). With the assimilation of this interest group into the Canadian Association of Advanced Practice Nurses (CAAPN), which represents both CNSs and NPs, the national voice of CNSs has weakened.

One challenge to organizing CNSs as a professional group is that they often align their professional interests, activities and connections with organizations associated with their specialty field rather than with their role (CNA 2006a). This minimizes their collective power and opportunity to address nursing and healthcare issues relevant to CNS practice at provincial and national policy tables. As one administrator described,

> I think that CNSs themselves need to be maybe a little bit more vocal. NPs were certainly more vocal … so when the NP role came into the province … it got a lot of attention and the CNS role hasn't.

CNS participants identified the need for networking and national support. A CNS interview participant notes,

> It's really important for myself as a CNS to be able to meet with people in other similar positions to talk about … what are they doing, how do they manage this, [and] how can we work together to plan some collaborative efforts that will make a difference … for the whole.

Partly to address the absence of a common vision for the CNS role, the recommendation most frequently identified by the CHSRF roundtable was that the CNA lead the creation of vision statements that clearly articulate the value-added roles of CNSs and NPs across settings. These vision statements should include role descriptions to help address implementation barriers deriving from the lack of role clarity.

**Lack of a CNS Credentialing Mechanism**

There is no credentialing mechanism for CNSs in Canada. As a result, nurses can identify themselves as CNSs even if they lack the required graduate education and expertise in a clinical specialty. Consequently, current CIHI data do not provide an accurate indication of the number of CNSs in Canada, as defined by the CNA (2009). Many of the interview participants, especially the CNSs, advocated for title protection. However, this poses a significant challenge because the regulation that would enable title protection is not required, since CNS practice does not extend beyond the scope of the registered nurse. CNS interview participants felt that title protection would strengthen role recognition and ensure that those in the role have the appropriate education and experience.

Administrators we interviewed commented,

> I don't think there's much support in policy for the regulation and legislation around the CNS, and that again is a barrier to the CNS role being implemented.

> I think the CNSs are the least understood. I think with the legislation around NPs and the protection of the title, the CNSs got lost. Everybody sort of jumped on the bandwagon because we had legislation to protect the NPs … everyone was talking about NPs. The funding was for NPs, and I think the CNSs got lost in that.… I think people still don't understand.

The issue is further complicated by the limited access to standardized CNS-specific graduate education in Canada, described in the next section.

**Limited Access to CNS-Specific Graduate Education**

As noted above, even though the recommended education for CNSs in Canada and internationally is a master's degree from a graduate nursing program (CNA 2008; International Council of Nurses 2008), many nurses without a graduate degree self-identify as CNSs. Interview participants and one Canadian study suggest the educational preparation of those who call themselves CNSs influences how the role is operationalized. Pauly et al. (2004) and Schreiber et al. (2005a), reporting on the same study, found that self-identified CNSs without a master's degree focused their activities on the care of individual patients, while in contrast, CNSs with a master's degree implemented their roles in a manner more consistent with national standards for advanced practice (CNA 2008). They applied a broader depth of research, education and administrative knowledge and skills to improve patient care at the individual, unit and institutional level.

Our survey of Canadian nursing graduate programs described above revealed that there are very few CNS-specific graduate programs. A review from the United States indicated CNS programs there are expanding (Fulton and Baldwin 2004). The following quotes from three APNs from different provinces convey concerns about the absence of programs specific to the CNS role:

> I have concern at the education level about how CNSs are being able to access their education. [The university] master's program used to have a CNS role. Now they have one course on advanced practice. They have a whole NP program, but if you want to become a CNS, it's becoming more and more difficult to get that kind of system thinking [and] system-support level of education to be able to understand where your role is at the systems level.

Well, my understanding is that there aren't that many master's programs that have a CNS stream. Now, they're being developed as an advanced practice nursing role – that's the stream. It's [CNS] no longer a clinical specialty that you develop at the master's level of preparation, and that's unfortunate.

> The key concern around the CNS role which is of grave concern to me is the lack of specific education for the CNS role. There used to be programs that had a very well designed course content that would prepare them for evaluation, for project management, for the whole piece of work at the systems level, policy, developing policy and protocols. All of those pieces are not necessarily lumped together in a nice package so that when you come out you can really step out in the role and fly, and in the United States there are some of those educational programs directed for the CNS. There were in Canada, but there aren't anymore.

Specialty education is important for developing APN role confidence and job satisfaction (Bryant-Lukosius et al. 2007) and for establishing the clinical competence and credibility necessary for successful role implementation (Richmond and Becker 2005). Consistent with our earlier findings about the general nature of advanced practice education provided by the majority of graduate nursing programs in Canada, CNS interview participants felt their educational preparation for the role was too broad. Educators, CNS and administrator participants also identified that lack of consistent and clearly defined CNS competencies and shortages of faculty with CNS experience limited opportunities to promote role understanding and role socialization and to develop skills for managing challenges to role implementation. As these participants explained,

> There is a lack of consistency amongst education programs for CNSs. Generally speaking they don't have a clear sense of what should be involved in CNS education. So you end up with very broad and multidimensional characters who are out there carrying out what they think is the role of the CNS, but everyone is doing it differently.

> I don't necessarily know that faculty always understand the differences between these [APN] roles. If all their education has been at the master's level as administrators, educators or NPs, then how can they fully understand the CNS role? They don't. So I think as educators we have to do a better job at making certain … what we teach our students and how to operationalize their role.

Limited access to CNS-specific education may also contribute to role shortages in areas with identified needs. A major barrier to recruitment of CNSs for First Nations

communities was the limited pool of nurses available to fill the positions (Health Canada 2006; Veldhorst 2006). Key informants identified similar concerns about health human resource planning and the need for recruitment efforts to ensure a sufficient supply of CNSs to fill future roles. One CNS key informant explained,

> Well, number one, the biggest barrier is they aren't preparing them out of university. This is a very specific role. The CNSs that are practising right now, we've been around a long time, and a lot of retirements are occurring right now. There's no succession planning.

The CHSRF roundtable recommended that APN educational standards, requirements and processes across the country be standardized.

**Discussion**

It is possible that inconsistent use of CNS role titles and the use of different terms to describe CNS practice in the literature contributed to the low number of Canadian publications identified in our scoping review. However, a recent international review of the CNS literature identified a similar number of Canadian articles that accounted for only 4% of total publications (Lewandowski and Adamle 2009). This suggests that our scoping review has been effective in capturing most Canadian publications. Factors contributing to the low output of CNS-related research have not been systematically identified. Possibilities include the lack of funding opportunities and a limited supply of PhD-prepared CNSs and other investigators interested in developing research programs in this area. Also, CNSs may be more involved in research on clinical issues relevant to their specialty than in health services research focused on their role (Bryant-Lukosius 2010).

Research will play a critical role in establishing the foundation for the continued evolution of the CNS role. The PEPPA framework outlines a nine-step participatory, evidence-based and patient-centred process that utilizes research methods to determine the need for, define the role of, promote implementation for, and evaluate the outcomes of APN roles (Bryant-Lukosius and DiCenso 2004). The model can be applied to introduce new or redesign existing CNS roles from a local practice setting, or regional, provincial or national perspective and would be useful for developing a strategic research plan. An important benefit of this framework for CNSs is the extent of decision-maker and stakeholder involvement. This involvement has been shown to facilitate the development of well-defined roles and promote stakeholder understanding, acceptance and support for the APN role (Bakker et

al. 2010; McAiney et al. 2008; McNamara et al. 2009).

In applying the PEPPA framework, a key area for CNS research is to provide a more accurate assessment of the current supply and demand for CNSs and to monitor trends in CNS employment and integration within the healthcare system. The framework encourages needs-based health human resource planning to provide rational data for decision-making about the introduction of APN roles and helps to maintain a focus on patient health needs and avoid undue emphasis on the self-interest of APNs and other stakeholders (Myers 1988). Role delineation studies that engage key stakeholders and utilize consensus-based research strategies to determine CNS role priorities and the competencies required to implement the role will be important for achieving role clarity and role understanding and refining CNS curricula. National roundtable participants who reviewed the DSS report also recommended a similar approach for the future planning of CNS roles.

There is substantial international data about the effectiveness of CNS roles. However, interview and national roundtable participants identified the need for better evidence about the cost-effectiveness of these roles from a Canadian context. Studies that assess CNS role outcomes and identify how various components of the role contribute to these outcomes will be important for ongoing role clarification. If decision-maker uncertainty about role benefits persists, CNS roles will remain vulnerable to layoffs and potential replacement by other providers. The shortfall of CNS-related research in Canada is very striking. Strategies are required to increase capacity to conduct CNS research and to develop an academic community of APN faculty, researchers and CNSs in this field.

The role of advanced practice nurses in global and Canadian healthcare systems has never been stronger. As clinical experts, leaders, and change agents, APN roles are in high worldwide demand as a strategy for developing sustainable models of healthcare (Bryant-Lukosius et al. 2004; Schober and Affara 2006). The same cannot be said about the CNS role in Canada. Despite four decades of experience, growing international evidence about their effectiveness, and recognition among some study participants about the potential benefits of CNSs for patients, providers and the health system, there is a lack of national vision about the role of the CNS in Canada. This lack of vision corresponds with absent provincial or national policies or investments to support CNS role development and integration.

While the evidence indicates that CNSs can positively impact the health of Canadians and address important policy priorities related to patient access to care, patient safety, quality of care, healthcare costs, evidence-based practice and improved nursing practice, they have no national voice or influential champions to communicate this information to key policy and healthcare decision-makers. The declining number of CNSs over the last decade suggests that the future of CNSs in Canada is in jeopardy. Several factors known to be important for the development of professional and advanced nursing roles and for role legitimacy within the Canadian healthcare system are limited or absent. They include the collective commitment of the nursing profession, ongoing development of the scientific basis for the role, and access to relevant education and curricula to ensure role clarity and the competency of CNS practitioners (Brown 1998; Bryant-Lukosius et al. 2004; Registered Nurses' Association of Ontario 2007). The sustainability of CNS roles will depend on the extent to which CNSs, the nursing profession, APN educators, regulatory agencies, healthcare funders and decision makers can be galvanized to address these role barriers.

If the role is to survive over the next decade, CNSs will need to regain their national voice and prominence as clinical leaders in the health system. Stronger national leadership by CAAPN and its CNS Council to facilitate networking and relationship building with key stakeholders and champions will be important for gaining CNS access to policy tables. CNSs also need to re-establish their own vision for their role. A good model for these activities has occurred in the United States, where CNSs also experienced a declining workforce. Over the past six years there has been an influx of CNS-related publications and policy activities driven by the National Association of CNSs (NACNS 2003, 2004). They encompass efforts to establish a national vision (Goudreau et al. 2007), clarify credentialing and certification issues (Goudreau and Smolenski 2008), establish an empirical base for CNS education (Stahl et al. 2008), increase enrolment in CNS education programs (NACNS 2004) and document the impact of the role on patient, provider and health systems outcomes (Fulton and Baldwin 2004). There are also numerous reports of recent innovations in CNS practice, including perioperative care (Glover et al. 2006), cardiovascular care (Aloe and Ryan 2008), emergency care (Chan and Garbez 2006), rapid response teams (Polster 2008) and a shared care CNS–MD model (Sanders 2008). In the United States, "Magnet" status is a prestigious designation awarded to hospitals that attract and retain highly qualified nurses and that have achieved excellence in professional nursing practice. In a recent study of Magnet-status hospitals,

87% and 92% of administrators reported that CNSs were important for, respectively, achieving and maintaining Magnet status (Walker et al. 2009).

CNSs will also need to do a better job of communicating their roles and how they make a difference to key stakeholders. In contrast to the five integrated sub-roles (clinician, educator, researcher, consultant and leader) that define the CNS role in Canada (CNA 2009), CNSs in the United States are described as having three spheres of influence: patients/populations, nurses/nursing practice and organizations/health systems (NACNS 2004). A recent international review of the CNS literature supports the spheres of practice identified by the NACNS (2004) and confirms three areas of CNS practice: managing the care of complex and vulnerable populations, educating and supporting interdisciplinary staff, and facilitating change and innovation within the health system (Lewandowski and Adamle 2009). Examining this model and its relevance to the Canadian healthcare system may be a first step in clarifying the CNS role and in particular coming to consensus about the nature of the clinical aspects of the role. The CNA (2008) emphasizes the clinical role of the CNS enacted through direct interactions with patients or through supportive and/or consultative activities. Lack of clear direction about clinical role responsibilities that reflect advanced practice or what constitutes supportive and consultative clinical activities has made this aspect of CNS roles open to various interpretations.

The goal of regulation and title protection is the protection of the public. The arguments put forth for CNS title protection have more to do with role clarity and role preservation than public safety. We found few reports of CNS involvement in expanded practice, and thus the need to expand CNS scope of practice beyond that of the registered nurse with the associated regulatory changes has not been established. Furthermore, we know from experience with the integration of NP roles that significant policy changes such as title protection occur slowly, with small incremental changes over many years and only when the policy change is consistent with government agendas (Hutchison et al. 2001). Thus energy focused on obtaining title protection will be misspent and unsuccessful, given the lack of political support for this policy among nursing regulators and government decision-makers. Finally, title protection will not address the fundamental barriers to role integration, namely the lack of CNS role clarity and the need for a national stakeholder consensus about the role CNSs should play in the Canadian healthcare system. These issues must be addressed first, before the need for title protection can be determined.

A more comprehensive examination of APN education programs and the barriers to providing CNS-specific curricula is required. However, the generic nature of some advanced practice programs or course offerings suggests that compared to the CNA (2008), graduate programs may view advanced practice more broadly as a level of practice relevant to a number of nursing roles rather than relating to specific clinical roles such as the CNS or NP that integrate education, leadership, research and consultative expertise. National roundtable and interview participants were in agreement about the need for improved consistency and national standards for CNS education. Given that the last national review of CNS role competencies occurred in 1997, a pan-Canadian initiative to evaluate and update these competencies and to provide the basis for educational review and curricula development is warranted. Clear education standards and role competencies will provide faculty and prospective students with a better understanding of the CNS role and may facilitate recruitment to education programs with curricula that offer a good match with CNS practice.

## Conclusion

This decision support synthesis provides the most comprehensive examination of CNS roles in Canada to date. While the published data are limited, the integration of data from key informant interviews and focus groups was particularly useful in providing a current snapshot of this role. Important issues and challenges confronting CNSs include the lack of empirical data to support role development, the lack of national leadership and a clear vision of the role, and the need for more relevant and consistent CNS education. The consistency between study participant perceptions of these challenges and those reported in the national and international literature lends strength to our study findings.

CNSs have much to offer Canadian patients, health providers, organizations and health systems. Full integration of the CNS role could address many key policy issues confronting the healthcare system. These include improving timely patient access to highly specialized and complex care, particularly for vulnerable and high-risk populations; containing healthcare costs through improved coordination of services and evidence-based care; and maximizing nursing health human resources through improved clinical support and retention of nurses at the bedside. Achieving this potential and the long-term sustainability of the CNS role in Canada will require intersectoral approaches and the national commitment of CNSs and the nursing profession.

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# The Role of Nursing Leadership in Integrating Clinical Nurse Specialists and Nurse Practitioners in Healthcare Delivery in Canada

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## Abstract

Supportive nursing leadership is important for the successful introduction and implementation of advanced practice nursing roles in Canadian healthcare settings. For this paper, we drew on pertinent sections of a scoping review of the literature and key informant interviews conducted for a decision support synthesis on advanced practice nursing to describe and explore organizational leadership in planning and implementing advanced practice nursing roles. Leadership strategies that optimize successful role integration include initiating systematic planning to develop the roles based on patient and community needs, engaging stakeholders, using established Canadian role implementation toolkits, ensuring utilization of all dimensions of the role, communicating clear messages to increase awareness about the roles in the organization, creating networks and facilitating mentorship for those in the role, and negotiating role expectations with physicians and other members of the healthcare team. Leaders face challenges in creating and securing sustainable funding for the roles and providing adequate infrastructure support.

## Introduction

Nursing leaders play a key role in shaping the nursing profession to be more responsive to our changing healthcare system. In Canada, nursing leaders can be, but are not limited to, chief executives; frontline, middle and senior managers; administrators; professional practice leaders; leaders in regulatory bodies; government officials; and policy makers. Important qualities of effective nursing leaders include being an advocate for quality care, collaborator, articulate communicator, mentor, risk taker, role model and visionary (Canadian Nurses Association

[CNA] 2002). This is a challenging era for both nursing and healthcare because of complex issues such as inadequate funding, health human resource shortages and the increasing need for services for our aging population. Effective planning and implementation of advanced practice nursing roles in healthcare settings have the potential to help address these challenges.

Advanced practice nursing is an umbrella term for both clinical nurse specialist (CNS) and nurse practitioner (NP) roles. CNSs are registered nurses (RNs) who have a graduate degree in nursing and expertise in a clinical nursing specialty (CNA 2009a). NPs are "registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice" (CNA 2009b: 1). Core advanced nursing practice dimensions include direct patient care, research, leadership, consultation and collaboration (CNA 2008), but considerable variability exists across advanced practice nursing roles in terms of time spent in each activity. CNSs and NPs work in a variety of practice settings and have gained some traction in the Canadian healthcare system since their first introduction in the 1960s (Kaasalainen et al. 2010). However, many obstacles continue to impede their full integration (DiCenso et al. 2010c).

The integration of advanced practice nurses (APNs) into healthcare systems has relied heavily on nursing leaders at the national, provincial, regional and local organizational levels. At the national level, nursing leaders in government and professional associations have supported the integration of APNs in Canada in a number of ways. Examples of this support include (1) the development of an advanced nursing practice framework (CNA 2008) and position statements for CNSs (CNA 2009a) and NPs (CNA 2009b) by the CNA, (2) the Canadian Nurse Practitioner Initiative (CNPI) ( 2006b), (3) the formation of a national Canadian Clinical Nurse Specialist Interest Group (CCNSIG) in 1989 (CCNSIG became the Canadian Association of Advanced Practice Nurses [CAAPN] in 1997), (4) the collaboration of the Canadian Nurses Protective Society with the Canadian Medical Protective Association to address liability issues for NPs (Canadian Medical Protective Association and Canadian Nurses Protective Society 2005), (5) the conceptualization of innovative CNS roles in remote communities by First Nations and Inuit Health of Health Canada, formerly known as the First Nations and Inuit Health Branch (Veldhorst 2006), and (6) the funding of a decision support synthesis on advanced practice nursing by the Office of Nursing Policy, Health Canada and the Canadian Health Services Research Foundation (CHSRF) (DiCenso 2010b). There are also many examples of nursing leadership at the provincial/territorial and regional levels that support advanced practice nursing, for example, the development and implementation of provincial and territorial

legislation authorizing the NP role. This paper will focus on the roles of nursing leaders at the organizational level in facilitating the integration of CNSs and NPs in healthcare settings.

## Methods

This paper is based on a scoping review of the literature and qualitative interviews completed for a decision support synthesis that was conducted to develop a better understanding of advanced practice nursing roles, their current use, and the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system (DiCenso et al. 2010b). The synthesis methods are described in detail in an earlier paper in this issue (DiCenso et al. 2010d).

We conducted the scoping review using established methods (Anderson et al. 2008; Arksey and O'Malley 2005) to map the literature on advanced practice nursing role definitions, competencies and utilization in the Canadian healthcare system; identify the policies influencing the development and integration of these roles; and explore the gaps and opportunities for their improved deployment. We conducted a comprehensive appraisal of published and grey literature ever written about Canadian advanced practice nursing roles, as well as reviews of the international literature from 2003 to 2008. In keeping with the tenets of scoping reviews, we did not exclude articles based on methodological quality. To identify the relevant literature, we searched Medline, CINAHL and EMBASE, performed a citation search using the Web of Science database and 10 key papers, reviewed the reference lists of all relevant papers, and searched websites of Canadian professional organizations and national, provincial and territorial governments. Teams of researchers extracted data from relevant papers and analyzed the data using a combination of descriptive tables, narrative syntheses and team discussions.

We conducted interviews ($n = 62$) in English or French with national and international key informants including NPs ($n = 13$), CNSs ($n = 9$), nurse administrators ($n = 11$), nursing regulators ($n = 7$), government policy makers ($n = 6$), nurse educators ($n = 5$), physicians ($n = 7$) and healthcare team members ($n = 4$). We also conducted four focus groups with a total of 19 participants. We used purposeful sampling to identify participants with a wide range of perspectives. All key informants were asked the same questions that addressed reasons for introducing the role(s) in their organization, region or province, how they were implemented, key factors facilitating and hampering their full integration, the nature of their collaborative relationships, their impact, success stories, and interviewees' recommendations for fully integrating the role. When our synthesis was completed, CHSRF convened a multidisciplinary roundtable to develop recommendations for policy, practice and research.

For this paper, we integrated findings from the Canadian literature that described the role of nursing leaders in facilitating the integration of APNs with interview data from those who identified leadership issues, especially the 11 Canadian nurse administrators. These administrators came from five provinces and worked in academic teaching centres, regional health authorities, community care agencies and a rehabilitation and continuing care centre. International literature has been used to provide global context and for further discussion about key issues when relevant.

## Results

We highlight the most frequently mentioned themes that emerged from the literature and that were identified by our interview participants specific to leadership. We begin with a general description of the importance of organizational leadership in supporting advanced practice nursing roles and then focus on the leadership role specific to planning for and implementing these roles.

### Importance of Leadership in Supporting Advanced Practice Nursing Roles

Many papers address the importance of nursing leadership in facilitating, enhancing and supporting the introduction and integration of advanced practice nursing roles in organizations (D'Amour et al. 2007; Hamilton et al. 1990; Lachance 2005; MacDonald et al. 2005; Martin-Misener et al. 2008; Reay et al. 2003; Schreiber et al. 2005a; Stolee et al. 2006). Senior nursing administrators play an important role in linking APNs to organizational priorities to improve nursing practice (Bryant-Lukosius et al. 2004).

Reay et al. (2003) interviewed NPs and their supervisors (a mix of frontline and senior managers) in Alberta to identify leadership challenges for managers of NPs. They identified challenges related to clarifying the reallocation of tasks, managing altered working relationships within the nursing team, and continuing to manage the team as new issues emerged. Based on these results, Reay et al. (2003) proposed eight leadership strategies for managers introducing NP roles. These strategies include (1) encouraging all team members to sort out "who does what," (2) ensuring that task reallocation preserves job motivating properties, (3) giving consideration to how tasks have been allocated when issues identified as "personal conflict" arise, (4) paying attention to all perspectives of the working relationships within the team, (5) facilitating positive relationships between team members, (6) leading from a "balcony" perspective, (7) working with the team to develop goals that are not overly focused on the NP and (8) regularly sharing with other managers the experiences and lessons learned in introducing NPs. These strategies place an emphasis on working with the team and managing working relationships among all team members rather than focusing solely on individual NP roles. Consistent with this literature, the administrators we interviewed recognized the importance of their role in providing support to APNs and enabling the integra-

tion of advanced practice nursing roles in their work settings, as the following quotes illustrate:

> In my experience, the best way to help APNs to grow and to move their role forward is to continually be in partnership with them to plan what's going to happen next and to not let yourself get so busy that you're just going to let them go because they're obviously fine.

> I think the number one key factor is having the administrative support, and by administrative support I mean administrative leadership in the organization to help introduce, shape and help the role evolve. And I think that really is the number one in a hospital setting. I think in the community we have a gap in terms of nursing leadership being available in the PHCNP settings where they work.

As more organizations have moved to program management, many CNSs and NPs report to supervisors who are not nurses but are from other health or business backgrounds; some NPs also report to medical directors or other physicians. While there is limited research about the most effective models of advanced practice nursing role supervision, reporting to a senior nurse administrator may be important for negotiating the continued implementation of the role, addressing nursing practice–related role barriers, role socialization and supporting the development of a nursing orientation to practice (Bryant-Lukosius et al. 2004). Participants commented on the important role administrators can have in ensuring that different reporting relationships for APNs are clear, as this administrator did:

> So an administrator does well when they can work at reducing that feeling of isolation for them [APNs] and having lots and lots of infrastructure support and having a very clear reporting relationship. What does it mean to have a dual reporting relationship? Most APNs have one. It is the responsibility of those two, to whom they report, to figure out what does that look like and what can they expect from us as a team. So those are really important.

Nursing administrative leadership is critical to help streamline the advanced practice nursing integration process and to work with APNs to smooth the way for day-to-day practice.

### Systematic Planning for Advanced Practice Nursing Roles

Responsibilities for planning for and hiring APNs are usually those of the nursing administrator. The importance of undertaking a systematic process to assess patient or community needs, develop the advanced practice nursing role to

address those needs, and introduce, implement, and evaluate the role was emphasized both in the literature (Bryant-Lukosius et al. 2004, 2007; Dunn and Nicklin 1995; Mitchell et al. 1995) and interviews. Many of our participants highlighted how poor planning for CNS and NP role implementation under tight time pressures, sometimes in response to funding availability, was a barrier to the successful integration of the roles. Furthermore, as the following quote from an administrator illustrates, participants reported that it was a crucial determinant of successful role integration to first identify the service need or practice gap and, based on that assessment, then select the most suitable role for the position.

> It is important to choose the appropriate NP role. And that's based on the population need, the fit among the individual NP, the position, other stakeholders and in some cases, the community.

Developing guidelines, expectations and priorities for the CNS or NP position and creating a supportive environment facilitate role implementation and integration (Bryant-Lukosius et al. 2004; CNPI 2005; Chaytor Educational Services 1994). Cummings and McLennan (2005) discuss the importance of individualizing advanced practice nursing positions to ensure there is a good fit between the CNS or NP role requirements and the individual filling the role. Participants suggested that CNS and NP roles need to be dynamic and continuously negotiated based on the needs of patients, organizations and the healthcare system, and on the skill set of the individual CNS or NP. As the following quote shows, NP and CNS participants agreed a role negotiation process was desirable:

> I wish there was some way when a new role was introduced that you could truly negotiate and work that out with the program that you are working with because I think it's at that level that things happen, in terms of the full integration of the role. There certainly has to be recognition and acceptance at the administration level.

**Adopting Toolkits**

Various participants highlighted the importance of utilizing existing advanced practice nursing implementation toolkits (Advanced Practice Nursing Steering Committee, Winnipeg Regional Health Authority 2005; Avery et al. 2006; CNPI 2006a) to facilitate CNS and NP role implementation. The Participatory, Evidence-based, Patient-focused Process for Advanced practice nursing role development, implementation and evaluation (PEPPA) framework as described by Bryant-Lukosius and DiCenso (2004) is a systematic healthcare planning guide used to minimize or prevent commonly known barriers to the effective development, implementation and evaluation of advanced practice nursing roles. A number of participants from different provinces commented on how their use of the PEPPA

framework gave them a structured, systematic, thorough and organized role implementation plan, as demonstrated by a quote from a nursing administrator.

> We've taken a very structured approach to the introduction of the role. We took the PEPPA framework right from the beginning, and we used the framework to build our call for applications for funding for a nurse practitioner. We shared the research. We shared the information about what are the common barriers and common facilitators to the role. Right from the beginning we've asked communities or teams or directors or physicians or whoever it might be to answer some of those key questions. What's your current model of care, what's your current population, where are the gaps and what are the needs? And based on those gaps and those needs and what your current model of care looks like, we can then have a conversation with them about, well, is it really a nurse practitioner that's going to meet those needs, or in fact, has [their] going through that exercise identified that what they need is some pharmacy resources, or maybe they need some social worker resources. I think using the PEPPA framework right from the start has been of tremendous value. We've had a very organized approach to it. We've managed the introduction carefully.

It is with reference to the PEPPA framework where we see the clear overlap between the insights garnered from literature and from the key informant interviews.

**Engaging Stakeholders**

An important consideration when planning for new health practitioner roles is the engagement of key stakeholders within and outside of the organization. MacDonald et al. (2005, 2006) and Schreiber et al. (2005a, 2005b), in their studies on the introduction of advanced practice nursing roles in British Columbia, identified the importance of engaging nursing leaders from healthcare settings, government, professional organizations and education in systematically planning for role introduction and implementation.

Stakeholder participation at the onset of CNS and/or NP role development and introduction is critical for ensuring support for the planned change, even if it lengthens the planning process (Cummings and McLennan 2005; MacDonald et al. 2006; Martin-Misener et al. 2009). Participants emphasized the importance of the early involvement of key stakeholders such as physicians, staff nurses and other healthcare providers in planning and implementing NP and CNS roles. Some administrators developed working groups of stakeholders to plan for CNS and NP roles. Most participants reported that the extra time, energy and resources needed to ensure stakeholder participation was worth the effort. In the words of one administrator participant:

> We really did stop, consulted with key stakeholders, met with our physician colleagues, looked at the populations we are serving and then identified where we thought we had the best opportunity for capacity and readiness to integrate the roles.

Administrators noted that a lack of stakeholder involvement contributed to poor role clarity. Many described the effect that successful advanced practice nursing integration had on an organization's willingness to integrate more APNs, as described by the two administrators below.

> Getting more into the same programs is not an issue because they [APNs] are well received.

> The organization has already proven very successful with an APN in another area, so I get people knocking on my door, saying, "how do I get one of those?

There was a sense from participants that strategies to enlist stakeholders have had good results in gaining their support and in addressing their concerns.

### Implementing the Advanced Practice Nursing Role in Healthcare Settings

Nursing leaders have many responsibilities related to the implementation of advanced practice nursing roles. Reay et al. (2003, 2006) developed a conceptual model based on their longitudinal study of the introduction of a new NP role into Alberta's healthcare system. The central theme of the model was titled "Recognizing and Celebrating Small Wins," in which managers, based on their experience working with the inter-professional team, acknowledged that "their best chance for success was through small steps that moved them toward the larger goal of gaining acceptance for the role" (Reay et al. 2006: 993).

Our results suggest the most significant responsibilities of nursing leaders implementing advanced practice nursing roles include finding and sustaining funding, providing adequate infrastructure and resources, ensuring utilization of all role dimensions, creating awareness of the roles, and enabling network support and mentorship. Each is described below.

#### Finding and Sustaining Funding

Nursing leaders often have the responsibility to find funding for advanced practice nursing roles. Administrators working in acute care organizations reported being forced to choose between funding an advanced practice nursing position or other registered nurse services, as this administrator explains:

> The mistake we made is that when the ministry told us that we had to find those NP salaries within nursing, we did a disservice in the sense that nursing said, "Okay fine. We'll figure it out somehow … We'll find it somehow" rather than saying, "No, this is not acceptable; if we want this, it can't be a staff nurse or NP." Someone has to find the money. Now six years later and we can't find the money, and the comeback has been, "You've always been successful," and "Dig a little harder and I'm sure you'll find it."

Some participants, as exemplified in the following quote from an administrator, commented on the interplay between financial support required for the role and the support needed from many sources to substantiate the importance of the role and associated funding requirements.

> When you're looking at the integration of the CNS and the NP, there needs to be support from a government level in terms of funding. There needs to be support from an administrative level in terms of support for the development of new roles and responsibilities and the implementation, and that implementation needs to involve support and evaluation. There needs to be support from other healthcare professionals, particularly physicians in terms of the collaboration. That support is critical because if you don't get that support then your ability to implement needs a lot more tenacity in order to make it work, to make it successful. When you've got the support and funding, then you have the opportunity to show what you can do.

The multidisciplinary roundtable convened by CHSRF to formulate evidence-informed policy and practice recommendations based on the synthesis findings recommended that advanced practice nursing positions and funding support should be protected. Funding protection should follow implementation and demonstration initiatives to ensure stability and sustainability for these roles (and the potential for longer-term evaluation) once they have been incorporated into the healthcare delivery organization/structure (DiCenso et al. 2010b).

**Providing Adequate Infrastructure and Resources**

Inadequate resources to support the CNS and NP roles (e.g., support staff, physical space, technology and infrastructure) is a frequently reported concern (Allard and Durand 2006; CNA 2008; D'Amour et al. 2007; Lachance 2005; MacDonald et al. 2005; Martin-Misener et al. 2008; Turris et al. 2005; Worster et al. 2005). Most administrator participants commented on the insufficient infrastructure resources, as the following two quotes from an administrator and an APN demonstrate.

> It's a slow and steady approach to implementation. We need to keep thinking about it and have those infrastructures in place to make sure we are setting them up for success and not setting them up to fail.

> The system needs to be prepared to support them [CNSs] in that you need an office; you need a phone; you need a pager. I've seen CNSs hired and then it comes time for them to fill out an annual report and they don't have a file folder to put it in. You know you need space. It is very hard to put six CNSs in an office the size of a closet and think they can work there.

Inattention to basic resources such as office space, clerical support, communication and technology marginalizes the purpose and legitimacy of CNS and NP roles. Participants also noted a lack of supportive policies that would allow APNs to function to their full scope. Cummings and McLennan (2005) suggest that nursing leaders in healthcare settings can influence policy change and shape the healthcare system by facilitating changes in the workplace that continually improve quality of care and meet fiscal realities.

**Ensuring Utilization of Role Dimensions**

CNSs and NPs value the non-clinical aspects of their role, and these activities contribute to role satisfaction (Bryant Lukosius et al. 2004; Sidani et al. 2000). However, insufficient administrative support and competing time demands associated with clinical practice are frequently reported barriers to participating in education, research and leadership activities (Bryant-Lukosius et al. 2004; Hurlock-Chorostecki et al. 2008; Irvine et al. 2000; Pauly et al. 2004; Sidani et al. 2000). This is particularly problematic for NPs in acute care, who usually report to both a nursing and a medical director. In our interviews, we learned that physicians wanted the NPs' time devoted mainly or exclusively to clinical practice, whereas nursing administrators wanted the NPs to also have some protected time to engage in leadership, research and education activities. A nursing administrator stated:

> They are delivering excellence in clinical care, personally working well with the team, with other interdisciplinary team members as well, but they have not been making as strong a contribution to the science of nursing, or to the development of the practice of nursing and certainly not to the development of the system.

Role expectations can be enhanced and negotiated by strong leadership from healthcare managers who can communicate a clear vision for the multiple dimensions of the role to team members and support the role within the organization

(Reay et al. 2003, 2006; van Soeren and Micevski 2001). The development of detailed written job descriptions (Cummings et al. 2003) and ongoing discussions between managers and team members promote a greater understanding of the role (Wall 2006).

As shown in the following quote from an APN, a key strategy to protect the various dimensions of the role is administrative support.

> Structuring the role [is needed] so that they're actually successful in allowing individuals the time to do the research, to do the education, to go to the conferences, to do the learning that needs to be done so that they can come back and mentor other individuals. It's not just about seeing a hundred patients in a month.

Actively shaping roles allows fulfillment of advanced practice nursing role dimensions in addition to patient care, and this in turn contributes to successful integration as well as advancement of the nursing profession.

**Creating Awareness of Advanced Practice Nursing Roles**

Nursing leaders raised concern about the lack of awareness of advanced practice nursing roles within healthcare organizations. Administrators reported regularly articulating information about advanced practice nursing to physicians, healthcare team members and other administrators to increase awareness. Inadequate healthcare team awareness of the CNS and NP roles has been identified as a barrier to advanced practice nursing role integration (for example, Bailey et al. 2006; CNPI 2006a, 2006b; Hass 2006; Urquhart et al. 2004). Among the six government interview participants in our scoping review, lack of awareness among healthcare team members and the public was the most commonly identified barrier to successful advanced practice nursing role integration (DiCenso et al. 2010c), and many felt it was the role of national and provincial/territorial nursing leaders to increase awareness, as shown in the following quote:

> It needs to come from the professional nursing associations. Those that represent nurses need to create a conscious awareness in the system of the [CNS and NP] roles. There needs to be the consistent and constant information, resources and tools that employers can access to understand how they can integrate these nurses into the system to improve their efficiency and quality. There is a need for ongoing research, definitely because the environment is constantly changing and we are seeing advanced practice nurses that are practising in different settings, doing different sorts of care and treatment and therapies.

The roundtable recommended that a communication strategy be developed (via collaboration with government, employers, educators, regulatory colleges and professional associations) to educate nurses, other healthcare professionals, the Canadian public and healthcare employers about the roles, responsibilities and positive contributions of advanced practice nursing (DiCenso et al. 2010b).

**Enabling Network Support and Mentorship**

Administrators working in healthcare settings can play an important role in advanced practice nursing integration by providing opportunities for network support and mentorship. Co-location of APNs is a suggestion in the literature to prevent CNSs and NPs from becoming isolated (Hamilton et al. 1990; Humbert et al. 2007). A number of papers emphasize the importance of mentorship, especially for those in their first CNS or NP role (Lachance 2005; Reay et al. 2003, 2006; van Soeren et al. 2007). The importance of networking support systems (Micevski et al. 2004; Roots and MacDonald 2008) and enhanced professional development opportunities was noted (CNA 2008). Participants echoed the value of these strategies to support advanced practice nursing roles and suggested a number of networking support systems. These included the establishment of NP or NP and CNS joint committees or special interest groups to assist with ongoing planning for advanced practice nursing roles and to share and address common issues. This could also assist with the development of a community of practice model to foster professional development. In the following quote, an administrator describes her role in facilitating an opportunity for networking:

> I facilitated an NP community of practice, recognizing that we were going to be hiring really novice NPs, even though they were experienced registered nurses, and putting them into a brand new role in sometimes distant communities, where there were no NP mentors in the system and not many NPs anymore in the province. What we did is structure our community of practice to say that, okay, we're going to come together regularly in face-to-face meetings as well as connecting electronically to support one another as they try to pioneer this new role. When I've surveyed the community over the last couple of years, they've [NPs] said there's no question that having that support network, that support structure, was critical to that first integration of their role.

Leaders can play an important role in organizing supportive networks and coordinating mentorship opportunities for CNSs and NPs helping to integrate these roles into their organizations.

## Discussion

The purpose of this paper was to describe and explore the roles of nursing leaders at the organizational level in facilitating the integration of CNSs and NPs in healthcare settings. The issues facing nursing leaders responsible for integrating CNS and NP roles are complex and require multiple strategies for the variety of sectors in which APNs work.

Our synthesis (DiCenso et al. 2010b) provided an important opportunity to combine relevant literature and qualitative interview data to understand the role of nursing leaders – particularly at the organizational level - in the integration of CNS and NP roles in Canada. The 11 nursing leaders worked in various sectors including acute care, rehabilitation, community care and regional health authorities. There was remarkable consistency in leadership issues identified by the interview participants and the relevant literature.

A strength of our study is that the nurse leaders we interviewed were informed about advanced practice nursing, had experience in planning and implementing advanced practice nursing roles and understood the importance of the nursing leadership role. However, it is not clear if this is true of all nurse administrators. Further exploration of the information needs of nursing leaders and other team members about advanced practice nursing roles is required. A limitation of our study was that we did not interview administrators of small community hospitals, long-term care facilities, or primary healthcare settings such as community health centres or family health teams. They may have had different perspectives, and this is an area for future research.

Nursing leaders have multiple responsibilities and play a key role in the integration of APNs in healthcare settings. Their role in the integration of CNSs and NPs is not an event but a continuous process, characterized by regular communication, negotiation, and management of people and processes. Successful leadership strategies for integrating APNs in healthcare organizations that were identified through the interviews and literature included (1) using established Canadian implementation toolkits (Advanced Practice Nursing Steering Committee, Winnipeg Regional Health Authority 2005; Avery et al. 2006; CNPI 2006a) and frameworks such as the PEPPA framework (Bryant-Lukosius and DiCenso 2004) to carefully plan and structure role introduction, (2) engaging stakeholders, (3) communicating clear messages to increase awareness of CNS and/or NP roles in their organization, (4) providing leadership to support individuals and create networks, and (5) negotiating

role expectations with physicians and other members of the healthcare team. Introducing and implementing CNSs and NPs into healthcare settings is not without its challenges. One of the biggest problems facing nursing leaders is creating and securing sustainable funding for the roles and the provision of resources. Finding a resolution to this problem is critical, because the changing demographics of the Canadian population and the increased incidence and prevalence of chronic diseases will create more opportunities for CNS and NP roles. Innovative models of interdisciplinary care that include NPs have increased patient access to care in different regions of the country (DiCenso et al. 2010a). Both CNS and NP roles are expanding into new practice sites such as long-term care, and future studies are needed to better understand their role implementation in these settings (Donald et al. 2009).

The development and implementation of advanced practice nursing roles is influenced by economic conditions and health human resources issues. Current budgetary crises threaten administrators' ability to sustain funding for APNs and to create new, innovative CNS and NP roles. This cyclical economic influence on advanced practice nursing roles not only threatens a relatively small pool of highly trained practitioners, but also negatively impacts recruitment of future APNs. Nurse administrators need the support of professional organizations and regulatory bodies to influence healthcare policy and to lobby for sustained funding. Health human resource planning is needed to break the all too familiar cycle of not having enough qualified individuals to fill vacant CNS and NP roles, and then having waves of organizational layoffs that result in insufficient employment opportunities. Clearly, we need to create a more consistent and sustainable approach to funding APN roles to make them less vulnerable to the economic ebbs and flows of our healthcare system.

An awareness of the value and effectiveness of NP and CNS roles will support the development of positive CNS and NP policy. Nurse administrators can play an important role in increasing awareness of successful NP and CNS roles in their organizations. Professional organizations, regulatory bodies and researchers can reinforce and contribute to a nationwide awareness of the positive benefits of CNSs and NPs for patient care and the healthcare system.

In conclusion, nursing leaders are vital to the integration of CNSs and NPs into the Canadian healthcare system. This paper draws attention to the various roles nursing leaders in organizations are playing as they plan, implement and support this process. Future research is needed to distinguish the

roles leaders in organizations, professional associations, regulatory bodies and government can play and specific strategies they can use to successfully integrate NP and CNS roles in Canada.

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# Close to the Tipping Point

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**Nursing leaders play a** critical role in creating and enacting a vision for collaborative practice with advanced practice nurses (APNs). In this special issue, Nancy Carter and colleagues have identified many important influences and outcomes of successful nursing leadership in the context of promoting advanced practice nursing roles. The authors make a strong case for the importance of nursing leadership to facilitate large-scale systems change, noting the multiple levels on which nursing leaders work to ensure advanced practice nursing roles are well introduced to improve patient care. Nursing leadership can move an innovation like advanced practice nursing practice forward toward the "tipping point," when the new idea takes hold and becomes socially acceptable and desired, when the early adopters have influenced the early majority and about 15 to 20% of the population have adopted the idea (Berwick 2003). In many ways our nursing leaders have achieved this with advanced practice nursing roles, and we should celebrate. APNs are now more common, and certainly members of the public are proud to speak of the roles APNs play in their health services. An idea that once captured the minds of a select few has spread, thanks in large part to the nursing leaders who had a vision, believed in an idea, fought for it and worked to embed the change in the system.

Despite these early successes, awareness of advanced practice nursing roles among nursing leaders varies considerably. Yet widespread awareness is essential if we are to advance advanced practice nursing roles and realize the benefits of their potential. All 11 nursing leaders that Carter and colleagues interviewed for their study were well informed about advanced practice nursing roles and had practical experience in planning and implemented them. However, many nurses in leadership positions do not know what an APN is. How can this be? Are we educating ourselves and our future leaders sufficiently to find creative solutions to care

delivery challenges? The authors recognize that further investigation of nursing leaders' information needs is required, particularly in small community hospitals, primary healthcare settings and long-term care facilities.

Carter and colleagues found many papers in their study that recognized the essential role of nursing leaders in facilitating and supporting the introduction of advanced practice roles into their organizations. Strategies are proposed in the literature for successfully introducing an advanced practice nursing role. No one would doubt the importance of meticulous planning, however, it is not the only way to introduce an advanced practice nursing role into the health system. In my experience, effectively supporting the advancement of advanced practice nursing roles has sometimes been deliberate, while at other times a product of synchronistic events – the consequence of stars aligning, some would say. While logical, systematic leadership is essential, advancing advanced practice nursing roles in a system that is slow to change sometimes happens when the right leaders, the right APN, the patient population, the right funding mechanism and the right timing come together, rather than when all is carefully planned.

Participants in Carter et al.'s study stressed the importance of using specifically designed toolkits to implement advanced practice roles. While successful leaders plan and carefully use systematic approaches like the PEPPA framework, they must also seek opportunities to align linear planning with creative and reflective processes. Paying attention to the idea of "emerging futures" connects practical planning with creative thinking and possibilities. One of the crucial elements to leadership I have learned is that leaders succeed when they see an emerging future and generate enthusiasm for its possibilities. Seeing that emerging future involves more than painting a picture of your vision; one must also use contextual cues to help catapult ideas and innovations, and know when to act and when to wait. In the context of advanced practice nursing, for example, when a team is talking about the complexities of patient care and their dissatisfaction with gaps in the system, an astute leader might facilitate a conversation about how things could be different, pulling out ideas about the potential contribution an APN could make, without directly or forcefully suggesting an advanced practice nursing role as the solution. This kind of leadership seizes the moment and draws on local intelligence and creativity, recognizing that timing is key and that change is dynamic and organic.

The future of advanced practice nursing integration into the healthcare system will require continued attention and collaboration across sectors. We need nursing leaders from practice settings, education, regulatory, health policy and government organizations deliberately working together to further shift systems of care delivery. We need researchers to examine best practices, answer questions about

outcomes and their impact and generate new knowledge that APNs can apply in their practice. We need leaders in nursing administration to advocate for new ways of delivering care and focus efforts toward quality, safety and the creation of healthy and healing environments where diverse professionals offer value-added services. Our regulators and government agencies need to advocate for legislative frameworks that make sense and allow APNs to practise without barriers, without needing to create workarounds that waste time and money. We need more education programs for APNs and educators to teach nurses who are interested in becoming leaders how to advocate for advanced practice nursing roles and effect systems change. We need to teach them how to create supportive infrastructures and be effective nursing leaders, able to articulate business cases that advance collaborative models and engage physicians and other health providers in partnership and teamwork.

Ultimately, individual APNs who have been trailblazers have pushed the boundaries to create new partnerships and new ways of delivering patient care. Their success has been possible with support from nursing practice and academic leaders, creating infrastructures to sustain roles and education for building capacity in advanced practice nursing. In turn, scholarship has gathered the evidence to substantiate the impact that advanced practice nursing roles have made on the system and on patient care. The truth is, we all need each other, working together to shift the system to where there is no question about why an advanced practice nursing role would be useful and what an advanced practice nursing role could contribute. We have early adopters and we have influenced the early majority. Now we are close to the tipping point where we continue to spread the innovation of advanced practice nursing and collaborative models of care. Working in partnership, I am sure we will rise to this next leadership challenge!

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# Clinical Nurse Specialists and Nurse Practitioners: Title Confusion and Lack of Role Clarity

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## Abstract

Title confusion and lack of role clarity pose barriers to the integration of advanced practice nursing roles (i.e., clinical nurse specialist [CNS] and nurse practitioner [NP]). Lack of awareness and understanding about NP and CNS roles among the healthcare team and the public contributes to ambiguous role expectations, confusion about NP and CNS scopes of practice and turf protection. This paper draws on the results of a scoping review of the literature and qualitative key informant interviews conducted for a decision support synthesis commissioned by the Canadian Health Services Research Foundation and the Office of Nursing Policy in Health Canada. The goal of this synthesis was to develop a better understanding of advanced practice nursing roles and the factors that influence their effective development and integration in the Canadian healthcare system. Specific recommendations from interview participants and the literature to enhance title and role clarity included the use of consistent titles for NP and CNS roles; the creation of a vision statement to articulate the role of CNSs and NPs across settings; the use of a systematic planning process to guide role development and implementation; the development of a communication strategy to educate healthcare professionals, the public and employers about the roles; attention to inter-professional team dynamics when introducing these new roles; and addressing inter-professionalism in all health professional education program curricula.

## Introduction

Confusion about role titles and lack of role clarity pose barriers to the integration of advanced practice nursing roles in the Canadian healthcare system. At a conference held by the Canadian Association of Advanced Practice Nurses in 2007, both barriers were identified as pressing issues influencing the future development of these roles. In Canada, clinical nurse specialists (CNSs) and nurse practitioners (NPs) are recognized as advanced practice nurses. In some countries, such as the

United States, nurse anesthetists and nurse midwives are also advanced practice nurses; however, in Canada, the nurse anesthetist role is just beginning to be introduced and midwives are not required to be nurses. The Canadian Nurses Association (CNA) defines advanced nursing practice as:

> … an umbrella term describing an advanced level of clinical nursing practice that maximizes the use of graduate educational preparation, in-depth nursing knowledge and expertise in meeting the health needs of individuals, families, groups, communities and populations. It involves analyzing and synthesizing knowledge; understanding, interpreting and applying nursing theory and research; and developing and advancing nursing knowledge and the profession as a whole (CNA 2008: 10).

Core advanced nursing practice competencies include direct patient care, research, leadership, consultation and collaboration (CNA 2008). The extent of involvement in each of these activities varies depending on the specific nature of the NP and CNS roles.

Titles and activities typically delineate roles within the healthcare system. However, there is confusion about advanced practice nursing titles, a lack of clarity about the roles and role overlap (Griffiths 2006). For our purposes, the term "title confusion" implies that CNS and NP role titles can be difficult to understand and that one role title may be mistaken for the other, whereas "lack of role clarity" indicates that NP and CNS roles are poorly differentiated and lacking in clearly defined role activities. In this paper, we provide an overview of CNS and NP role definitions and characteristics, explicate the title confusion and role clarity issues, and describe their effect on healthcare team and public awareness and acceptance of the roles. We also summarize recommendations that have been made to enhance title and role clarity so that the roles can be better integrated into the Canadian healthcare system.

## Methods

This paper is based on a scoping review of the literature and qualitative interviews completed for a decision support synthesis that was conducted to develop a better understanding of advanced practice nursing roles, their current use, and the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system (DiCenso et al. 2010a). The synthesis methods are described in detail in an earlier paper in this issue (DiCenso et al. 2010b). Briefly, we conducted a comprehensive examination of all published and grey literature ever written about Canadian advanced practice nursing roles and reviews of the international literature from 2003 to 2008. The

overall search yielded a total 2,397 papers, of which 468 were included in the scoping review. Interviews ($n = 62$) and focus groups ($n = 4$ with a total of 19 participants) were conducted in English or French with national and international key informants including CNSs, NPs, physicians, healthcare team members, educators, healthcare administrators, nursing regulators and government policy makers. When our synthesis was completed, the Canadian Health Services Research Foundation (CHSRF) convened a multidisciplinary roundtable to develop recommendations for policy, practice and research. For this paper, we focused on the concepts of title confusion and lack of role clarity as described in the literature and by our interview and focus group participants. Data from the literature, interviews and roundtable were then synthesized to form the basis for recommendations to reduce title confusion and enhance role clarity.

## Results

### Role Definitions and Characteristics

In Canada, NPs are "registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to autonomously diagnose, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice" (CNA 2009b: 1). During the early years of NP registration, regulators used various titles to describe NPs, such as "registered nurses providing extended services" in Alberta (Canadian Institute for Health Information [CIHI] 2010: 37) and "registered nurse, extended class" or "RN(EC)" in Ontario (College of Nurses of Ontario 2007). Titling of NP roles is in transition; for the purposes of this paper we refer to NPs who are registered as family/all-ages or primary care NPs as primary healthcare NPs (PHCNPs), and to those who are registered as adult, pediatrics or neonatal NPs as acute care NPs (ACNPs).

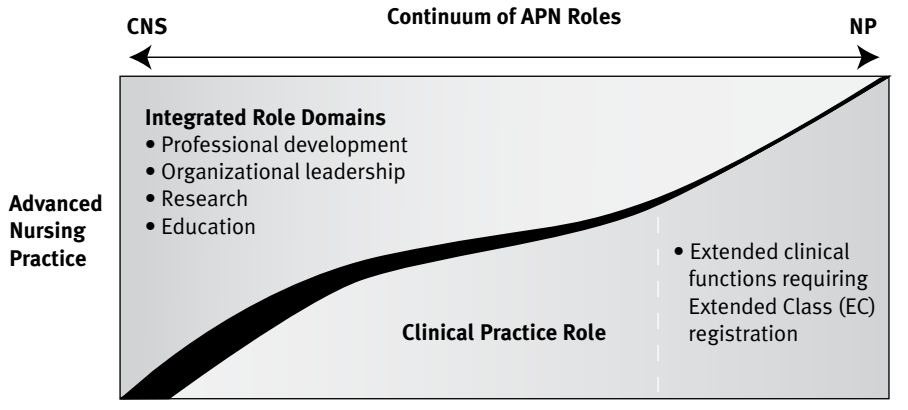
Work settings and the primary focus of NP practice vary. For instance, PHCNPs typically work in the community in settings such as community health centres, family physician offices, primary care networks and long-term care (CIHI 2008). The PHCNP's main focus is health promotion, preventive care, diagnosis and treatment of acute common illnesses and injuries, and monitoring and management of stable chronic diseases. ACNPs typically provide advanced nursing care across the continuum of acute care services for patients who are acutely, critically or chronically ill with complex conditions; they work in settings such as oncology, neonatology and cardiology (Kilpatrick et al. 2010). The amount of consultation, education, research and leadership activities that NPs do varies depending on the needs of patients and the setting. Education programs exist across Canada specifically to prepare nurses for the PHCNP and ACNP roles, the majority of which are at the master's of nursing degree level (College and Association of Registered Nurses of Alberta n.d.; Martin-Misener et al. 2010).

The title CNS refers to registered nurses (RNs) who have a graduate degree in nursing and expertise in a clinical nursing specialty (CNA 2009a). The primary responsibilities of the CNS depend on the particular needs of the setting and include varying amounts of clinical practice, consultation, education, research and leadership activities. CNSs mentor nurses, contribute to the development of nursing knowledge and evidence-based practice, and address complex healthcare issues for patients, families, other disciplines, administrators and policy makers. They are leaders in the development of nursing and inter-professional policies and practice guidelines. Specialty practice areas for CNSs are usually defined by a population, setting, disease or medical subspecialty, type of care or type of problem. To the best of our knowledge, Canada does not currently have a specifically titled CNS graduate education program, and only one program offers specifically titled CNS courses (Martin-Misener et al. 2010). Education for CNSs typically occurs through generic graduate education programs that complement clinical expertise with broad-based knowledge and skills that can be applied to advanced nursing practice. A healthcare administrator participant captured the confusion regarding CNS education and credentials:

> I think we need education that is a standard level of education. So to be a CNS, you must have x, y and z, and then you will get a certificate or something that you can put on your wall that says 'I am a CNS.' The NP exam, you know, they're regulated. Clearly there's an exam. There wasn't for a while, but now there is for the Acute Care NPs and the specialties. I think it adds credence to the role; it really does. And so from the policy perspective, at the government tables, people know what the NP does. I don't think they even know that the CNS exists.

Understanding the differences between CNS and NP roles is challenging because they share common role competencies (CNA 2008; Canadian Association of Nurses in Oncology 2001). Figure 1 (Bryant-Lukosius 2004 and 2008) illustrates the differences between CNS and NP roles. At one end of the continuum, CNSs spend proportionately more of their work time on professional development, organizational leadership, research and education activities and may have fewer responsibilities related to direct clinical practice. At the opposite end of the continuum, NPs spend more of their work time providing direct patient care compared to other role activities. Another important difference relates to scope of practice. CNSs are authorized to perform the same controlled acts as an RN. However, NPs have expanded clinical functions and legislated authority to perform additional activities (i.e., diagnose, order tests and prescribe medication) traditionally performed by physicians.

# Figure 1. Continuum of advanced practice nursing roles




CNS= Clinical nurse specialist
Bryant-Lukosius, D. 2004 and 2008. *The Continuum of Advanced Practice Nursing Roles.* Unpublished document.

The wavy diagonal line in Figure 1 illustrates the fluid or flexible nature of these roles. By definition, advanced practice nursing roles are dynamic and continually evolving in response to the changing contexts and healthcare needs of patients, organizations and healthcare systems (CNA 2008; International Council of Nurses 2008). Our key informants noted that this context-dependent nature of advanced nursing practice made it difficult to understand the roles. No two CNS or NP roles are alike, and the balance of clinical and other responsibilities for individual roles may vary and shift with changing patient health needs and practice priorities in the work environment.

## Title Confusion

Lack of title protection and confusion about CNS and NP titles have been identified in the past (Schreiber et al. 2005a); however, recent legislation throughout Canada has protected the NP title, requiring registration as an NP in order to use the designation (CIHI and CNA 2006). Title protection is not in place for CNSs (Bryant-Lukosius et al. 2010). Healthcare administrators whom we interviewed noted inconsistencies in the requirements for and the use of the CNS title that contribute to the reduced awareness of and lack of role clarity for the CNS role. In Alberta, the title "Specialist" is restricted to registered nurses (RNs) practising in a specialty who have a graduate degree and three or more years of experience in that specialty (College and Association of Registered Nurses of Alberta 2006); however, the title "Specialist" is not limited to the CNS role and may be applied to

other nursing roles such as clinical nurse educators. The absence of CNS-specific education programs and the lack of title protection for CNSs in Canada have resulted in contrasting situations where nurses with graduate education and a clinical specialty are working as CNSs but are not titled as such and, conversely, others who do not have CNS qualifications claiming to be a CNS. Both the non-CNS-titled nurse in the role of a CNS and the indiscriminate use of the CNS title contribute to role confusion within and outside the profession.

Interview and focus group participants widely agreed that the NP is the most recognized advanced practice nursing title; yet the variety of NP titles for similar positions across provinces and territories creates confusion for the public and those in the healthcare system. For instance, a nursing regulator stated,

> Some of the issues are actually around the title "nurse practitioner," what does that mean to people, and not only to the community but other disciplines as well?… We're still using a lot of different titles. We're still using advanced practice, nurse practitioner, nurse practitioner specialist, nurse practitioner primary healthcare, nurse practitioner family-all ages. So I think that's confusing in itself around the title.

Interview participants consistently cited the CNS as the least well known and least understood advanced practice nursing role, and they described confusion about the CNS and NP roles, as demonstrated in this quote from a nursing regulator:

> I think that the CNS is probably less understood than the NP. I think there's still some misunderstanding about NP kind of practice, but I think the CNS role is … perhaps not as well known … because of the kind of things that they're involved in. They're involved more in a systems level and a research level and consultation level, so I'm not sure that it's well understood. I think that's shown by the fact that a lot of times people were demanding an NP position when really what they wanted was a CNS.

A variety of titles for CNS roles were found in the literature (e.g., Schreiber et al. 2005b) and cited by interview participants; examples of the diverse titles included "nurse clinician," "advanced practice nurse (APN)" and "clinical leader," as well as numerous specialty titles such as "diabetic nurse." In the United States, there is a plan to move to a single role title, "Advanced Practice Registered Nurse," by the year 2015 for all nurse midwife, nurse anesthetist, CNS and NP roles (Advanced Practice Registered Nursing [APRN] Consensus Work Group and the National Council of State Boards of Nursing APRN Committee 2008). The educators, physicians and healthcare team members who participated in our study agreed that the many different titles were confusing. However, at the same time, they

indicated that using generic language for both CNS and NP roles, such as APN or CNS/NP (DiCenso 2008; Registered Nurses' Association of Nova Scotia 1999), was not the answer to the problem and in fact contributed to role blurring and further misunderstanding. Administrator participants felt the use of the title, APN, was least helpful. A physician commented,

> Well, actually I get a little lost in the nomenclature about APNs versus NPs versus CNSs plus or minus master's. They're not well understood I think, on the medical side, and even for somebody like myself who is actually involved in and supportive of the idea, I still don't understand a lot of the nomenclature, what the difference is, what the expectations might be.

Clearly, title confusion and inconsistent titles make it difficult for healthcare team members and the public to discriminate between CNS and NP roles.

### Lack of Role Clarity

In a systematic review identifying barriers and facilitators to advanced practice nursing role development and practice, Lloyd Jones (2005) identified role ambiguity as the most important factor influencing role implementation. The ambiguity was related to confusion among stakeholders about the objectives, scope of practice, responsibilities and anticipated outcomes of the roles (Lloyd Jones 2005). This was consistent with the key informants in our synthesis, many of whom directly associated lack of role clarity with lack of planning for the role, explaining that without clearly defined goals, the outcomes and potential impact of CNS and NP roles could not be adequately identified or evaluated. Similarly, in a large study of PHCNPs in Ontario, an important contributor to role clarity was the purposeful matching of the skill and experience of the NP hired into a position with the practice setting expectations for that role (DiCenso et al. 2003).

Variable stakeholder awareness and competing stakeholder expectations also contribute to a lack of role clarity (Bryant-Lukosius et al. 2004). When the role means different things to different people and there is lack of consensus about role expectations, role conflict and role overload can occur. A healthcare team member stated,

> We had the NPs start to practice before anyone really understood what the role was. So the individuals were in place and everyone was trying to figure out what are you going to do, and I don't know that this is true in every hospital but whenever we introduce a new role it always seems as though you might be stepping on another's role.

Participants also indicated that the lack of clarity between the CNS and NP roles limits the ability to actualize the appropriate and full scope of each role and in turn leads to issues with role sustainability, particularly within the context of competing system and fiscal priorities. Lack of clarity regarding NP and CNS roles can influence decisions about if and how these roles are funded. For example, participants identified that while the funding for both CNS and NP roles is vulnerable to economic downturns, the CNS role is more at risk because the direct impact of this role on patient care and the organization is not readily visible to those who do not understand the role. If funders do not understand the full potential or scope of CNS and/or NP roles, then they may be apt to fund a more established or well-defined role to attempt to meet their needs.

**Healthcare Team Awareness and Acceptance of CNS and NP Roles**

Lack of role clarity contributes to an inadequate awareness of the CNS and NP roles among healthcare team colleagues, and this can influence their acceptance of the roles and ultimately the success of role integration (Alcock 1996; Goss Gilroy Inc. Management Consultants 2001; Irvine et al. 2000; Lloyd Jones 2005; McNamara et al. 2009). Lloyd Jones (2005) notes that role ambiguity may underlie healthcare professionals' negative attitudes toward advanced nursing roles. She suggests that changes in role boundaries create uncertainty in relation to professional identity, leading to increased stress and unproductive behaviour such as communication breakdown.

Multiple reports from our scoping review documented that healthcare team understanding of CNS and NP roles is a facilitator for role integration (Besrour 2002; Davies and Eng 1995; Jones and Way 2004; Roschkov et al. 2007; Schreiber et al. 2003). The importance of increasing team awareness about CNS and NP education, certification, scope of practice, roles and, where relevant, liability coverage was emphasized (e.g., Centre for Rural and Northern Health Research n.d.; DiCenso et al. 2003, 2007).

Interview participants (nursing regulators, healthcare administrators, government, CNSs, ACNPs, PHCNPs) agreed that other health professionals, including nurses, were not aware of the CNS and NP competencies and scope of practice. A CNS stated, "We're [CNSs] known kind of individually within the programs or within the hospital, but overall, as a group, we don't have a high enough profile." A PHCNP discussed patient experiences when going to other healthcare providers for services:

> If they [patients] go to the hospital, they'll get the question, "Who is your doctor?" "I have a nurse practitioner." "Well who is your doctor though?" So it's not helping when other healthcare providers don't acknowledge our [NP] role.

Inadequate professional awareness of NP and CNS roles leads to ambiguous role expectations within healthcare teams, turf protection and concerns about whether the CNS or NP is practising outside their scope of practice. This is especially pronounced when roles overlap among healthcare team members. Healthcare team participants in our interviews expressed their uncertainty about the nature of NP and CNS roles. They noted that the lack of written information about credentials, scope of practice and drug formulary approvals contributed to this uncertainty. They described turf wars as team members renegotiated their roles and feared their roles would be replaced by a CNS or NP.

To maintain quality and sustainable patient care, participants identified that many professions are adjusting to role shifts and overlap in the activities carried out by other healthcare providers (e.g., physicians and NPs, NPs and RNs, CNSs and RNs, and RNs and practical nurses), engendering understandable fears related to loss of autonomy and control that can lead to resistance. Participants identified that ultimately, healthcare team collaboration depends on respect, trust, a mutual understanding of one another's roles, a willingness to negotiate specific role functions based on patient needs and team goals, a non-hierarchical structure, and the perception that everyone is "getting more out of it than they are losing."

In the study of PHCNPs in Ontario described earlier (DiCenso et al. 2003), challenges with other healthcare team members were most often related to role expectations and the lack of role clarity between RNs and NPs, particularly with respect to the support expected of RNs by NPs in regard to daily activities, and the expectation of RNs that NPs should contribute to nursing care activities when needed. The lack of role clarity had the potential for a negative impact on team communication and professional confidence, particularly for newly graduated NPs who were making the transition from the RN role.

A lack of understanding and support of NP and CNS roles by the nursing community was documented by others (de Leon-Demare et al. 1999; Haines 1993), and Higuchi et al. (2006) reported role confusion between the CNS role and other nurses. The staff nurse participants in our interviews did not describe conflicts or strain with CNSs and NPs, although they did report challenges in understanding the nature of the roles. Regulators and administrators reported that some staff nurses perceived NPs as being aligned with medicine and sometimes had difficulty seeing the NP's contribution to nursing. PHCNPs agreed with the regulators' perspective and added that the strained relationship that sometimes occurred between themselves and staff nurses was also related to salary differences and feelings of professional alienation among RNs.

Healthcare administrators noted that the NP role was understood more easily once healthcare providers had interacted and worked with the NP; however, they did not believe this was the same for the CNSs. Government participants identified a lack of understanding about the differences between NPs and CNSs among health authority managers and said that both roles were best understood by physicians who worked closely with them and by healthcare administrators who employed them.

**Public Awareness and Acceptance of CNS and NP roles**

Inadequate public awareness of CNS and NP roles has also been identified as a barrier to their integration (Desrosiers 2007; DiCenso et al. 2003, 2007) and is associated with title confusion and lack of role clarity. All nursing, regulator, administrator, educator and government interview participants noted the lack of public awareness of CNS and NP roles. Regulators identified that it was sometimes difficult for the public to know which services were provided by which nurses, for example, when both an RN and an NP worked in a primary care setting. This was also a finding in a study that investigated parental willingness to be seen by an NP in a pediatric emergency (Forgeron and Martin-Misener 2005). The study authors found that many parents lacked an understanding of the roles RNs have in an emergency department, and this hindered their ability to comprehend the role of NPs. In our study, a variety of interview participants stated that they perceived there was greater public visibility and awareness of the NP role than of the CNS role. A CNS working in a First Nations community stated, "One of the biggest barriers that we deal with is that people … First Nation communities … don't know what to expect from the [CNS] role itself."

Research conducted primarily on PHCNPs has demonstrated that once informed about the role, the public is supportive and accepting of it (Canadian Nurse Practitioner Initiative (CNPI) 2006b; DiCenso et al. 2003; Harris/Decima 2009). Participants identified public awareness and acceptance as facilitators for role integration in the healthcare system. For instance, a nursing regulator stated,

> Some of the patients are not used to seeing a healthcare provider outside of their family physician. So for those who are not familiar with the NP role, there's anxiety over what may be deemed to be a less qualified person providing services. So it's still that referral or … assurance that their physicians know [they are seeing an NP]. Although for the patients who have experience with NPs, either from coming from other provinces or other countries where they have NPs, they look for them or they ask for NPs. And that's actually the group that is most vocal in terms of questioning why they don't have any NPs in their communities.

An administrator in a health authority recounted that by making the work of the NP role visible, public support grew in the region and facilitated role implementation.

### Recommendations to Enhance Title and Role Clarity

A number of key recommendations to enhance title and role clarity were identified through our review of the literature, in key stakeholder interviews and by the CHSRF roundtable.

A single title to capture all advanced practice nursing roles, such as CNS/NP or APN, was not supported by our interview participants. Those who had experienced the dual role found the single title confused their co-workers and patients. A recent policy document written to clarify the role of oncology CNSs and NPs also recommended avoidance of the term APN as a role title (Cancer Care Ontario Oncology APN Community of Practice 2009). Clear and consistent CNS and NP titles and roles would reduce confusion about their purpose and contributions, and it would enable each to address specific needs of patients and organizations. Attaining such clarity and consistency would also facilitate streamlining and standardizing education for NP and CNS roles. The adoption of consistent titles for NPs across Canada was recommended by the CNPI (2005).

Specific to role clarity, the most frequently and consistently mentioned recommendation at the CHSRF roundtable was that the CNA should lead, in collaboration with other health professional stakeholder groups, the creation of vision statements that clearly articulate the value-added role of CNSs and NPs across settings. These vision statements should include specific yet flexible role descriptions pertinent to particular healthcare contexts; this would help address knowledge and implementation barriers deriving from lack of role clarity.

Confusion is likely to occur when CNS and NP roles are not linked to clearly defined patient and healthcare system goals and when key stakeholders are not involved in the planning process (Bryant-Lukosius and DiCenso 2004). Tools are available to assist in effectively planning for and implementing NP and CNS roles. For instance, a national framework (CNA 2008) is in place to help define CNS and NP roles, and several toolkits have been developed to guide and assist with role implementation for NPs (Advanced Practice Nursing Steering Committee, Winnipeg Regional Health Authority 2005; CNPI 2006a) and CNSs (Avery et al. 2006). In addition, the PEPPA (participatory, evidence-based, patient-focused process for advanced practice nursing role development, implementation and evaluation) framework provides a clear process for determining the need for and implementing new advanced practice nursing roles (Bryant-Lukosius and DiCenso 2004). The framework has been used successfully to introduce advanced

practice nursing and other advanced provider roles in orthopedic joint replacement (Robarts et al. 2008), cardiac (McNamara et al. 2009) and long-term care (McAiney et al. 2008). The framework promotes role clarity and understanding of CNS and NP roles through stakeholder education about the roles and through improved role planning and healthcare team involvement in developing the role description. Lloyd Jones (2005) recommends that when new CNS and NP roles are introduced, clear role definitions and objectives be developed and communicated to healthcare team colleagues.

Government interview participants indicated that a strategic communication plan about NP and CNS roles is needed to achieve full integration, acceptability and support for the roles within healthcare teams and to increase public awareness of the roles. All participants echoed this, emphasizing the need for deliberate communication at the local, provincial and national levels to educate all stakeholders in order to achieve a broad-based awareness and understanding of the roles to maximize patient care. There was a strong recommendation by NPs and CNSs for professional nursing associations to conduct a far-reaching communication campaign. Media releases were specifically suggested; for instance, British Columbia issued a media release when the province reached 100 NPs (Fayerman 2008). A television commercial in Nova Scotia was a first step in succinctly communicating the NP role to the public and other healthcare providers (NPCanada.ca 2008). Following up on what the CNPI (2006b) began, developing a national nursing media campaign to highlight NP and CNS roles, repeated and/or updated every six months, would enhance and maintain public awareness of the roles (Matthews et al. 2007). The CHSRF roundtable also recommended that a communication strategy be developed (via collaboration with government, employers, educators, regulatory colleges and professional associations) to educate nurses, other healthcare professionals, the public and healthcare employers about the roles, responsibilities and positive contributions of CNSs and NPs.

The identification of nursing leaders and physicians to champion the NP and CNS roles was recommended to facilitate role implementation and integration into the healthcare team. The following quote from an ACNP typifies a common recommendation made by other participants (nursing regulators, government participants and healthcare administrators):

> Physician champions can do a marvellous job of turning things over with their own colleagues. Giving people the opportunity of experiencing the role really is probably the biggest selling point of what you can do with it, and then being flexible for when you have that role and making sure that you structure the role so that it truly is an advanced practice role.

At the team level, interview participants suggested a number of strategies to promote inter-professional relationships between CNSs and NPs and the healthcare team. For example, they suggested that administrators and managers involve team members in creating a "fit" between the various scopes of practice represented on the team and the role of the inter-professional team as a whole in meeting patient needs. Some healthcare team interview participants described their involvement in educating NPs and CNSs in the clinical setting and appreciated being involved early in determining what training would be needed; they felt this collaboration helped them understand the roles.

The study of PHCNPs in Ontario (DiCenso et al. 2003) revealed that the most important facilitators for improving role clarity were identifying the patient needs that NPs were expected to meet; understanding healthcare team members' practice styles and readiness to implement an NP role; circulating a written description of the NP role to team members; providing education about the role; and allowing time for the NP, physicians and other team members to get to know one another, including their mutual practice styles.

Finally, to familiarize health professionals with the roles, responsibilities and scopes of practice of their collaborators, the CHSRF roundtable recommended that curricula across all undergraduate and postgraduate health professional training programs include components that address inter-professionalism.

## Discussion

Though numerous studies have demonstrated the effectiveness and high levels of patient satisfaction with NPs (Horrocks et al. 2002) and CNSs (Fulton and Baldwin 2004), title confusion and lack of role clarity pose substantial barriers to their full integration into the Canadian healthcare system. These barriers stem from the use of a variety of role titles, the absence of systematic planning to explicate the specific role definition and objectives, inadequate communication with healthcare team members and the public about the role dimensions, and failure to address inter-professional team dynamics when these roles are newly introduced.

NPs are licensed practitioners and their title is protected. For healthcare colleagues and the public, this means that those calling themselves NPs have a specific scope of practice they are licensed to perform, affording a degree of standardization and clarity to the title. However, confusion arises in the various terms used to describe NP specialties. For example, in some jurisdictions, NPs who work in the community are known as primary healthcare

NPs, while in other jurisdictions, they are known as family or all-ages NPs. NPs who work in acute care have for some time been known as acute care NPs but now are called specialty or specialist NPs or, more specifically, adult, pediatrics, or neonatal NPs. As time goes on, additional specialty titles may emerge, such as geriatric NP and mental health NP. Such titles are likely helpful in conveying the NP's area of specialized knowledge and expertise to colleagues and the public. To reduce the confusion caused by different titles for the same specialty and to facilitate national communication campaigns about NPs, nursing regulators across the country should consider agreeing on common specialty titles.

Because the CNS title is not protected, health administrators and managers who are hiring CNSs should ensure that those being considered for the position meet the basic qualifications of a CNS (i.e., graduate education, specialty practice area, skills in system change). Consistent application of these criteria across the country for all CNS job postings would go a long way to ensuring that those who hold CNS positions are appropriately qualified and would help reduce title confusion. Once the CNS was hired, title confusion would be further reduced if the position was titled CNS with specific roles and responsibilities (e.g., diabetes education) incorporated into the job description rather than into the title. These strategies would also facilitate national communication campaigns about CNSs. To further support this, educators are encouraged to develop graduate education programs specifically designed to prepare CNSs, based on the advanced nursing practice competencies and specialty practice.

To ensure the clarity of these roles, it is important to develop proposals for CNS and NP positions at the local level that clearly identify the need for the role based on a needs assessment, define the role that best meets the identified needs and goals, plainly describe the role (Bryant-Lukosius and DiCenso 2004; DiCenso et al. 2003), and identify the team strategy for incorporating the role and how it will fit in the specific setting (Matthews et al. 2007). Determination of the healthcare team's practice styles and willingness to accept a new role is important in establishing future role clarity. Inclusion of healthcare team members and an NP or CNS in the planning and hiring process has the potential to increase awareness of the role, as well as the need for and consequently the acceptance of the role.

Inadequate planning for role introduction is a particularly challenging issue for the CNS role because the role has multiple dimensions that enable

it to address a broad range of patient, nursing, organizational and system needs. While the flexibility and responsiveness of NPs and CNSs to changing healthcare needs is advantageous for employers and patients, it can also be a liability if it contributes to lack of role clarity. Strategies to clarify NP and CNS roles and to communicate the responsive nature of the roles are needed at the national, provincial/territorial and local levels.

Nursing leaders and administrators need specific knowledge about the CNS and NP roles to ensure that the right role is implemented to meet the identified needs (Gardner et al. 2007; Griffiths 2006). Role selection depends on knowing the needs, goals and general tasks required to meet the goals. In general, if the needs and goals of the position require a large component of direct patient care, with activities that are beyond the legislated scope of practice of the RN, then the NP is likely the best role to select (Griffiths 2006). If the position primarily requires quality improvement initiatives and nurse mentorship and consultation, with a smaller component of patient care, then the CNS is likely the best role to select.

Healthcare team members, including nurses, are not aware of the CNS and NP scope of practice. A strategic communication plan within organizations, including detailed orientation for team members, nurses and physicians is essential to achieve a broad awareness and understanding of the CNS or NP role that is being introduced and how the role will be operationalized in that setting. The public's inadequate awareness of the roles (Forgeron and Martin-Misener 2005; Thrasher and Purc-Stephenson 2007) may lead to unclear role expectations on the part of patients, particularly with respect to hospital-based roles such as the CNS and ACNP.

The application of knowledge translation and marketing principles can effectively guide a communication and marketing strategy for these two roles (Bero et al. 1998; Dobbins et al. 2004; Fraser Health n.d.; Graham et al. 2006; Kennaugh n.d.). Nursing associations can play a lead role in bringing together a Canada-wide advisory panel of knowledge transfer and marketing specialists, as well as members of the public, NPs, CNSs, key decision-makers and healthcare team members to examine available information regarding CNS and NP roles. This would include an assessment of likely barriers and facilitators to role implementation (Graham et al. 2006; Grol and Grimshaw 2003). Such an advisory panel could then build a clear and fully developed marketing plan, clarify similarities and differences between the roles, and ensure focused and consistent use of information in messages regarding the benefits of CNSs

and NPs. Messages need to be tailored and packaged in different formats to target specific audiences with clear, concise and jargon-free language.

Lack of role clarity may pose a threat to other healthcare providers; for example, a number of NP responsibilities overlap with functions traditionally associated with the physician role, such as prescribing medications and ordering laboratory and diagnostic tests. Flexibility and knowledge regarding collaboration are assets when negotiating new roles in the team (Barrett et al. 2007; Donald et al. 2009). As NP and physician roles are not the only roles that overlap, there is a general need to clarify functions and roles within a team based on patient and healthcare system needs and goals, while acknowledging individual skills and interests. The CNS and NP roles overlap in activities associated with advanced nursing practice competencies such as research, leadership, patient and staff education, care planning and community development. The overlap in functions between the CNS and nurse clinician or educator is also an area for discussion and clarification within the team, as both roles are typically involved in staff education, implementing change and providing leadership. Team members and the CNS and/or NP need to openly discuss the areas of role overlap and the benefits and points of confusion or concern regarding this overlap. As patient, provider and organizational needs change, team member roles may need to be renegotiated in order to clarify individual responsibilities and to avoid loss or duplication of specific components of patient care. Role overlap is not new to the healthcare team, nor is the need for clear communication and role delineation.

Orientation for the healthcare team and the NP or CNS should flow from the planning process, with clear communication of the goals and fit. Written descriptions of the scope of practice, expectations and boundaries of the new role are helpful for team members. Time is needed for the CNS or NP to establish a relationship with the physicians and other healthcare team members and to understand practice styles and routines. Regularly scheduled team meetings to discuss existing and emerging patient needs and to negotiate the roles of team members in meeting the needs can enhance role clarity and team functioning for all team members.

## Conclusion

Title confusion and lack of role clarity pose major barriers when introducing CNS and NP roles. Specific recommendations from interview participants and the literature include the development of a vision statement that clearly articulates the role of CNSs and NPs across settings; the use of a systematic

planning process to guide role development and implementation; the development of a strategic communication plan about NP and CNS roles for healthcare teams and the public; attention to inter-professional team dynamics when introducing these new roles; and the inclusion of components that address interprofessionalism in all health professional education program curricula. Consistent use of CNS and NP titles and clarity regarding roles will facilitate the full utilization of advanced practice nurses in the Canadian healthcare system.

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# Factors Enabling Advanced Practice Nursing Role Integration in Canada

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## Abstract

Although advanced practice nurses (APNs) have existed in Canada for over 40 years and there is abundant evidence of their safety and effectiveness, their full integration into our healthcare system has not been fully realized. For this paper, we drew on pertinent sections of a scoping review of the Canadian literature from 1990 onward and interviews or focus groups with 81 key informants conducted for a decision support synthesis on advanced practice nursing to identify the factors that enable role development and implementation across the three types of APNs: clinical nurse specialists, primary healthcare nurse practitioners and acute care nurse practitioners. For development of advanced practice nursing roles, many of the enabling factors occur at the federal/provincial/territorial (F/P/T) level. They include utilization of a pan-Canadian approach, provision of high-quality education, and development of appropriate legislative and regulatory mechanisms. Systematic planning to guide role development is needed at both the F/P/T and organizational levels. For implementation of advanced practice nursing roles, some of the enabling factors require action at the F/P/T level. They include recruitment and retention, role funding, intra-professional relations between clinical nurse specialists and nurse practitioners, public awareness, national leadership support and role evaluation. Factors requiring action at the level of the organization include role clarity, healthcare setting support, implementation of all role components and continuing education. Finally, inter-professional relations require action at both the F/P/T and organizational levels. A multidisciplinary roundtable formulated policy and practice recommendations based on the synthesis findings, and these are summarized in this paper.

## Introduction

Advanced practice nurses (APNs), including both nurse practitioners (NPs) and clinical nurse specialists (CNSs), have been part of the Canadian healthcare landscape for over 40 years. Despite this long history and a substantial body of research evidence demonstrating their safety and effectiveness (Fulton and Baldwin 2004; Horrocks et al. 2002), their full integration into our healthcare system has not yet been realized. As a result, a number of studies have been conducted in Canada to identify the facilitators and barriers to advanced practice nursing role integration (e.g., DiCenso et al. 2003; Goss-Gilroy Inc. Management Consultants 2001; Gould et al. 2007; van Soeren and Micevski 2001). By full integration into the healthcare system, we mean that the advanced practice nursing role is utilized to its full potential across the continuum of healthcare. However, full integration cannot occur unless the role is well developed and implemented. The purpose of this paper, therefore, is to identify the factors that enable role development and implementation across three types of APNs: CNSs; primary healthcare NPs, also known as family or all-ages NPs; and acute care NPs, also known as specialty or specialist NPs, or adult, pediatric and neonatal NPs.

## Methods

This paper is based on a scoping review of the literature and in-depth interviews completed for a decision support synthesis conducted to develop a better understanding of advanced practice nursing roles, their current use, and the individual, organizational and health system factors that influence their effective integration in the Canadian healthcare system (DiCenso et al. 2010b). An earlier paper in this issue provides a detailed description of the synthesis methods (DiCenso et al. 2010c). Briefly, the scoping review of the literature entailed a comprehensive appraisal of published and grey literature ever written on Canadian advanced practice nursing roles as well as international literature reviews from 2003 to 2008 (468 papers in total) (DiCenso et al. 2010c). The in-depth interviews and focus groups involved a total of 81 national and international key informants including primary healthcare and acute care NPs, CNSs, physicians, other health providers, educators, healthcare administrators, nurse regulators and policy makers. All were asked about facilitators and barriers to the integration of NP and CNS roles within the healthcare system. A multidisciplinary roundtable convened by the Canadian Health Services Research Foundation (CHSRF) in the spring of 2009 formulated evidence-informed policy and practice recommendations based on the synthesis findings. For this paper, we synthesized data from the literature (from 1990 forward) and interviews to identify federal/provincial/territorial (F/P/T)- and organizational-level enablers to role development and implementation across the three types of APNs. Recognizing that NP titles are in transition, we will refer to NPs as primary healthcare NPs (PHCNPs) and acute care NPs (ACNPs).

Because of space restrictions and the large number of enablers for role development and implementation, this paper will provide a broad overview. Most of the enablers are described in detail in topic-specific papers included in this issue, and all are described in our final report on the CHSRF website (DiCenso et al. 2010b).

## Results

Recognizing that the full integration of APNs is dependent on both successful role development and implementation, enablers for each will be identified below. Tables 1 and 2 summarize the enablers for role development and role implementation respectively, and identify whether the enabler needs to occur at the F/P/T level and/or at the level of the organization, as well as to which type of APN the enabler applies.

### Role Development

Many of the enablers that would enhance advanced practice nursing role development need to occur at the F/P/T level including: utilization of a pan-Canadian approach, provision of high quality education, and development of appropriate legislative and regulatory mechanisms (Table 1). Systematic planning to guide role development is needed at both the F/P/T and organizational levels.

**Table 1.** Factors enabling role development by level of intervention and type of advanced practice nursing

| Factor | Level | PHCNP | ACNP | CNS |
|---|---|---|---|---|
| Pan-Canadian approach | F/P/T | X | X | X |
| Education | F/P/T | | | |
| Standardized requirements | | X | X | X |
| Match between education and practice | | X | X | X |
| Adequate resources | | X | X | X |
| Interprofessional education | | X | X | X |
| Legislation and regulation | F/P/T | X | X | N/A |
| Planning | F/P/T and organization | | | |
| Needs assessment and understanding of role | | X | X | X |
| Stakeholder involvement | | X | X | X |

PHCNP = primary healthcare nurse practitioner; ACNP = acute care nurse practitioner; CNS = clinical nurse specialist; F/P/T = federal/provincial/territorial.

**Utilization of a Pan-Canadian Approach**

A lack of coordination across Canada was identified by the Canadian Nurse Practitioner Initiative (CNPI) (2005b) and in the Canadian Nurses Association (CNA) Advanced Nursing Practice framework (2008) regarding (1) NP recruitment strategies, (2) a national interprofessional health human resource (HHR) strategy, (3) national NP education standards, and (4) a national NP legislative or regulatory framework that would ensure consistent titles, scope and roles. While the CNPI recommendations pertain to NPs, CNS interview participants stressed the need for similar coordination for CNSs across Canada. Healthcare administrators, CNSs, PHCNPs and ACNPs noted the variability among education programs and called for standardization and national certification to allow for greater mobility of APNs across the country.

The CHSRF roundtable recommended a pan-Canadian approach to standardize advanced practice nursing educational and regulatory standards, requirements and processes in order to facilitate provider mobility in response to population healthcare needs and improve recruitment and retention of APNs.

**Provision of High-Quality Education**

In addition to standardized educational requirements across Canada, enablers that ensure high-quality education for APNs include a match between education and practice, adequate resources, and interprofessional education. These have all been discussed in detail by Martin-Misener et al. (2010) and will be only briefly summarized here.

***Standardized educational requirements***

Consistent with the definitions of advanced practice nursing of the CNA (2008) and the International Council of Nurses (ICN) (2008), APNs should be prepared at the master's level. While this is the case for all ACNPs and CNSs across Canada, there is variability in the educational requirements for PHCNPs, with three provinces (Ontario, Newfoundland and Labrador, and Saskatchewan) preparing them at the baccalaureate and post-baccalaureate certificate level (Donald et al. 2010b). Standardizing educational requirements for PHCNPs across Canada would ensure adherence to international expectations of APNs and facilitate their involvement in all components of the advanced practice nursing role (advanced clinical practice, research, education, leadership and consultation and collaboration).

***Match between education and practice***

Educator interview participants pointed out a mismatch between general education and specialized practice for all types of APNs. Limited access to specialty education in Canada means that NPs and CNSs may work in clinical areas in which they initially lack specialized knowledge and skills. In addition, due to the

limited availability of NP programs in some parts of the country, NPs educated for primary healthcare are employed in, and expected to have the skill set needed to practice in, a specialized ACNP role.

While the curricula of NP programs are specially designed to prepare NPs, there is limited access to CNS-specific graduate education in Canada. Consequently, most CNSs in Canada complete generic master's degree programs (Bryant-Lukosius et al. 2010). ACNP and healthcare administrator interview participants commented that the limited access to CNS-specific graduate education programs combined with the lack of a CNS credentialing mechanism means that any nurses with master's degrees in nursing can call themselves CNSs. APN interview participants noted that CNS-specific programs would provide knowledge and skills to support role enactment such as system knowledge, program evaluation, project management, research inquiry and clinical specialization.

This issue applies to a lesser degree to ACNPs and PHCNPs. Most provinces offer generic graduate ACNP programs (CNA 2008), where the knowledge and skills specific to the desired specialty are obtained through learning opportunities such as clinical placements and preceptorships (Rutherford 2005). The exceptions are neonatology, which remains a specialized program offered across Canada (Rutherford 2005), and ACNP training in Quebec, where ACNPs are authorized to practise only in the area in which they are trained (Allard and Durand 2006; Ordre des infirmières et infirmiers du Québec and Collège des Médecins du Québec 2006). The PHCNP programs are generic, which is consistent with the generalist focus of the role. They do not provide extensive training in specialty areas; for example, NPs who work in long-term care settings receive relatively little education specific to gerontology in their NP training. APN interview participants in our synthesis suggested that the length of current NP programs is adequate, but increasing the intensity of the practice component via a residency or internship program would better prepare them for practice expectations after graduation.

***Adequate resources***

High-quality educational programs are dependent on adequate resources, including funding to develop and pay adequate numbers of faculty, preceptors and mentors (CNPI 2006b; Schreiber et al. 2003, 2005a; van Soeren et al. 2007) and clinical placement sites that can support competing needs of students from various disciplines. As resources become increasingly scarce, interview participants identified enablers such as sharing of academic resources across universities and across health disciplines within universities.

***Inter-professional education***

Interprofessional education was suggested by healthcare administrators, educators

and PHCNPs as a strategy to facilitate effective teamwork and is supported in the literature (Jones and Way 2004; van Soeren et al. 2007) and by the CNA (2008). The roundtable recommended that curricula across all undergraduate and post-graduate health professional training programs include components that address inter-professionalism in order to familiarize all health professionals with the roles, responsibilities, and scopes of practice of their collaborators.

**Development of Appropriate Legislative and Regulatory Mechanisms**

Because CNS practice does not extend beyond the scope of the registered nurse (RN), regulation is not required for this role. In the absence of regulation or any other credentialing mechanism for CNSs in Canada, nurses can self-identify as CNSs even if they do not have the required education and expertise in a clinical specialty. For this reason, many interview participants, especially CNSs, advocated for title protection to strengthen role recognition and ensure that those in the role have the appropriate education and experience. Regulator and educator interview participants were also concerned about the absence of a standard credentialing mechanism because of the difficulty it creates in accurately tracking the number of CNSs in Canada.

With respect to NPs, legislation and regulation are key enablers that allow them to autonomously practise to their full scope. Many papers in our scoping review reported legislative and regulatory restrictions on PHCNP scope of practice (Donald et al. 2010b) and on ACNP scope of practice (Kilpatrick et al. 2010). While barriers vary across jurisdictions, the most common include (1) prescribing restrictions, especially the use of drug lists and formularies legislated at the provincial/territorial level and the prescribing of narcotics and controlled substances legislated at the federal level, (2) referrals to specialists, whereby remuneration policies provide for a higher rate for the specialist if the patient was referred by a physician (Gould et al. 2007; Nurse Practitioners' Association of Ontario (NPAO) 2008a), (3) legal, formal practice agreements that limit NP practice (Fahey-Walsh 2004), (4) lack of admission and discharge privileges for ACNPs (Sidani and Irvine 1999) and (5) reliance of ACNPs on medical directives that are onerous to develop and could lead to potentially ineffective care options, untimely access to appropriate care, blurred accountability for care and ACNP dissatisfaction (Hurlock-Chorostecki et al. 2008).

In the interviews, administrators asked that legislative and regulatory changes be made so that NPs can work to their full scope of practice. Regulators noted that various regulatory bodies need to network and work together on this issue. Healthcare team members asked that legislated changes in the advanced practice nursing role be shared with their team members in writing so that everyone is kept fully informed. Administrators and physicians noted the cumbersome

process around medical directives and their potential for limiting individualized patient-centred care.

To ensure consistency across Canada for PHCNPs, Thille and Rowan (2008) and the CNPI (2006b) advocated a pan-Canadian approach to development and implementation of legislative and regulatory frameworks. For ACNPs, having a similar certification process for both acute and primary healthcare NPs was regarded as a pathway to greater recognition and public acceptance (Centre for Rural and Northern Health Research (CRaNHR n.d).

**Systematic Planning to Guide Role Development**

Key enablers to NP and CNS role development are the use of a systematic process to assess patient and community needs and early stakeholder involvement. These are described more fully by Carter et al. (2010) and will be summarized briefly here.

***Needs assessment and understanding of role***

Administrator interview participants described how healthcare restructuring can be crisis-driven, leading to the ad hoc introduction of new health provider roles. These reactive decisions in the absence of clearly defined goals, sometimes associated with healthcare dollars that need to be spent quickly or with hasty responses to health human resource shortages, lead to role confusion and poor team functioning. Not surprisingly, evaluations of these new roles frequently have disappointing results because the evaluation is not linked to the original goals for role introduction (which may never have been identified) and is often premature. The unfortunate fallout is that promising roles are discontinued, not because they were ineffective, but because of the failure to use a systematic approach to lay the foundation for role development, implementation and evaluation.

At the F/P/T and organizational levels, introduction of advanced practice nursing roles should be based on a systematic assessment of patient and/or community needs and a clear understanding of the roles (Bryant-Lukosius et al. 2004; Bryant-Lukosius and DiCenso 2004; Dunn and Nicklin 1995; Mitchell et al. 1995; Patterson et al. 1999). Interview participants reported that identification of a service need or practice gap that an advanced practice nursing role could fill was a significant factor in determining the success of role integration, including the identification of the best type of APN to fill the position. Participants identified various resources to facilitate advanced practice nursing role development and implementation, including a guide to NP role implementation (Advanced Practice Nursing Steering Committee, Winnipeg Regional Health Authority 2005); a guide to CNS role implementation (Avery et al. 2006); the PEPPA framework for the development, implementation and evaluation of advanced practice nursing roles (Bryant-Lukosius and DiCenso 2004); and an NP implementation and evaluation toolkit (CNPI 2006a).

Consistent with the need for systematic planning at the F/P/T level, the CHSRF roundtable recommended that health human resources planning by federal, provincial and territorial ministries of health should consider the contribution and implementation of advanced practice nursing roles based on a strategic and coordinated effort to address population healthcare needs.

***Stakeholder involvement***

Stakeholders include patients and families, advocacy groups, volunteer agencies, healthcare organizations, the healthcare team, healthcare providers, professional associations, support staff, administrators, educators and government agencies involved in health policy and funding (Bryant-Lukosius and DiCenso 2004). Stakeholder participation at the onset of advanced practice nursing role development is critical for ensuring commitment to and providing support for planned change, even though it may lengthen the process (Cummings and McLennan 2005). Healthcare administrators noted that lack of stakeholder involvement contributed to lack of role clarity.

## Role Implementation

Once an advanced practice nursing role has been developed, numerous factors influence its successful implementation (Table 2). At the F/P/T level, these include recruitment and retention, role funding, intraprofessional relations between CNSs and NPs, public awareness, national leadership support and role evaluation. At the organizational level, factors include role clarity, healthcare setting support, implementation of all role components and continuing education. Finally, interprofessional relations require action at both the F/P/T and organizational levels. Challenges posed by some of these factors prompted the CHSRF roundtable to recommend that a pan-Canadian multidisciplinary task force involving key stakeholder groups be established to facilitate the implementation of advanced practice nursing roles.

**Table 2.** Factors enabling role implementation by level of intervention and type of advanced practice nurse

| Factor | Level | PHCNP | ACNP | CNS |
|---|---|---|---|---|
| Recruitment and retention | F/P/T | X | X | X |
| Funding | F/P/T | | | |
| APN role | | X | X | X |
| Remuneration | | X | X | X |
| Intra-professional relations between CNSs and NPs | F/P/T | X | X | X |

Table 2 Continued.

| | | | | |
|---|---|---|---|---|
| Public awareness | F/P/T | X | X | X |
| National leadership support | F/P/T | | | |
| Invisibility of CNS role | | N/A | N/A | X |
| Titling | | X | X | X |
| Evaluation of role | F/P/T | X | X | X |
| Role clarity | Organization | X | X | X |
| Healthcare setting support | Organization | | | |
| Leadership support | | X | X | X |
| Networking | | X | X | X |
| Implementation of role components | Organization | X | X | X |
| Continuing education | Organization | X | X | X |
| Inter-professional relations | F/P/T and organization | | | |
| Working relationship with physicians | | X | X | X |
| Inter-professional collaboration | | X | X | X |
| Team acceptance | | X | X | X |

PHCNP = primary healthcare nurse practitioner; ACNP = acute care nurse practitioner; CNS = clinical nurse specialist; F/P/T = federal/provincial/territorial.

**Recruitment and Retention**

Recruitment and retention challenges were most often identified by regulators with reference to PHCNPs. They spoke about the overall shortage of nursing human resources creating difficulty in identifying appropriate candidates for NP positions. They also noted that widely varying salaries for NPs and unhealthy work environments contributed to their moving to other regions, resulting in difficulty meeting the community's needs. Regulators voiced concern about the Agreement for Internal Trade (AIT), which facilitates mobility of licensed practitioners across provinces/territories, in that it may accentuate retention issues by providing opportunities for NPs to move to higher salary regions. Gaps in the availability of NPs were noted for long-term care and home care sectors. Thrasher and Purc-Stephenson (2007) identified challenges in recruiting NPs into emergency departments because NPs were generally unaware of or uninterested in positions in this setting. While recruitment issues were predominantly at the F/P/T level, administrators and some physicians at the level of the organization reported recruitment challenges given the high demand and low supply of NPs.

CNSs recommended succession planning to mitigate pending CNS retirements, and ACNPs suggested visiting undergraduate nursing classes and encouraging them to pursue education to become APNs. The importance of well-defined recruitment and integration plans, including retention strategies, was emphasized (CNPI 2005a), especially for rural underserviced sites and outpost practice (Osmond et al. 2004; Pong and Russell 2003). One reason for the CHSRF roundtable's recommendation to develop a pan-Canadian approach to education and regulatory standards was to improve recruitment and retention of these roles.

**Funding**

Funding issues relate to the funds required to create, support and sustain advanced practice nursing positions and those related to direct salary support for APNs and physicians who collaborate with APNs. Specific dimensions of funding issues as they relate to PHCNPs and ACNPs have been described in detail by Donald et al. (2010b) and Kilpatrick et al. (2010) respectively.

***Advanced practice nursing role funding***

For the most part, funding for CNS and ACNP positions comes from global hospital budgets. Funding for PHCNP positions typically comes more directly from the provincial/territorial governments. A number of related issues were identified in the literature and/or interviews, including an inadequate number of funded positions (e.g., Davies and Eng 1995; DiCenso et al. 2003; Schreiber et al. 2005a), absence of a stable funding mechanism (CNPI 2005a), inadequate funding of overhead costs, and the cumbersome process required of communities and health boards to apply for a funded NP position.

In interviews, regulators identified that initial funding to create NP roles was sometimes available only on a project or start-up basis and that long-term funding did not always follow. The CHSRF roundtable recommended that advanced practice nursing positions and funding support be protected following implementation and demonstration initiatives to ensure stability and sustainability for these roles (and the potential for longer-term evaluation) once they have been incorporated into the healthcare delivery organization/structure.

With respect to CNS roles, regulators raised concerns that it had become more difficult to justify funding for non-direct patient care roles given funding constraints, while administrators called for a large investment in the CNS role. Regulators identified that political support and funding allocations to regional health authorities provided targeted funding opportunities for NPs, but the lack of government funding for CNS positions was a barrier. Administrators spoke of inconsistent funding and having to look for funding for advanced practice nursing roles from their base or global budget. This reallocation of funding from other

roles was not seen as a sustainable approach. The issue is described in more detail by Kilpatrick et al. (2010) and by Carter et al. (2010).

APNs emphasized the current economic downturn as a significant barrier. Administrators noted that the economic situation has direct bearing on available funding and other supports for introducing new positions for APNs and for keeping existing positions. Some of the physicians noted that with funding cutbacks there was less incentive to hire NPs.

***Remuneration***

In a study of PHCNPs in Ontario, most supported being paid a salary from the Ministry of Health and Long-Term Care through a transfer payment to an organization employer (DiCenso et al. 2003). Less than 5% wanted to bill the patients for services rendered. Studies in both Ontario and Quebec reported cases where PHCNPs and ACNPs earn only slightly more than RNs and in some instances less (D'Amour et al. 2007; DiCenso and Matthews 2007). In the interviews, ACNPs identified a wage disparity among APNs and recommended changing funding models to ensure wage parity among APNs and with allied health professionals. Administrators indicated that APN salaries were not attractive, considering the role responsibilities. PHCNPs suggested that advanced practice nursing salary scales be developed to ensure NP remuneration was commensurate with their advanced skills and scope of practice. At the same time, a government interview participant noted that NP demands for higher salaries were problematic and unjustified and recommended a consistent funding formula for NPs across different settings. This would address a regulator's concern that low salaries for NPs in some regions have created turnover and movement of NPs from one region to another.

Administrators emphasized the need for adequate compensation models for physicians. Physicians in some jurisdictions noted that they were not able to bill for consulting with NPs and this created a disincentive for working with them. The literature (e.g., Jones and Way 2004) and many interview participants identified fee-for-service reimbursement as a barrier to NP integration because shifting care tasks to NPs sometimes resulted in loss of physician income.

Educators noted that providing incentives to physicians to hire NPs resulted in the positioning of NPs as employees instead of as colleagues. A government interview participant identified that payment of primary care incentives to physicians for preventive care that is often provided by NPs had unintended negative consequences. These consequences are outlined in a policy brief by the NPAO (2008b) and are described by Donald et al. (2010b). They include the rendering of the NP's work as invisible and the incompatibility with the inter-professional approach to care. Another government interview participant noted that remuneration mecha-

nisms need more work to ensure fair compensation across professions working within teams. This participant also suggested integrated remuneration negotiations where multiple provider groups negotiate compensation together (e.g., what is the model of primary care we want to achieve and how do we negotiate remuneration to achieve this goal and to ensure fair compensation for all parties?).

**Intra-professional Relations between CNSs and NPs**

In the interviews, administrators and APNs were enthusiastic about the potential for collaboration between CNSs and NPs in clinical practice, quality improvement activities, research and education initiatives. In British Columbia, three CNSs and an NP function in complementary and potentially overlapping roles to care for cardiac patients. The NP focuses primarily on direct patient care, while the CNSs work on program development and quality initiatives (Griffiths 2006).

Although many interview participants viewed co-location of CNSs and NPs as a facilitator to practice, others noted that this accentuated role confusion resulting from overlapping clinical responsibilities and perceived redundancy in roles. Regulators and CNSs voiced concern about the vulnerability of the CNS role, some of which was attributed to the recent significant attention given to PHCNPs through the CNPI. Administrators noted that targeted funding for NP roles, compounded by the legislative attention to the NP role, had diverted attention from CNS roles. ACNPs reported that hospital budget cuts secondary to the current economic downturn were resulting in the loss of CNS roles.

An educator interview participant was concerned that within nursing, NPs are sometimes seen as "mini-doctors," while CNSs are viewed as "real nurses," creating a strain between them. CNSs reported greater NP than CNS representation at policy- and decision-making tables. Government interview participants did not seem very knowledgeable about CNSs. One noted that work is needed to address the significant impact that CNSs can have in the system and that the role is not embedded in the system in the way the NP role is.

APN interview participants suggested potential strategies such as focusing on how APNs can collaborate with each other; establishing local, regional and national communities of APN practice; pooling resources to collectively move the advanced practice nursing profession forward; and hosting shared forums.

**Public Awareness**

Inadequate public awareness of advanced practice nursing roles has been widely identified as a barrier to role integration (e.g., DiCenso et al. 2003; Gould et al. 2007; Irvine et al. 2000; Schreiber et al. 2005a; Thille and Rowan 2008). Research conducted primarily on PHCNPs has shown that once informed about the

role, the public is supportive (e.g., CNA 2008; Davies and Eng 1995; Hurlock-Chorostecki et al. 2008; Schreiber et al. 2003). This is important, as public opinion is often a key catalyst for change in public policy and program delivery.

All the APN groups as well as regulators, administrators, educators and government interview participants noted the lack of public awareness of the role. Regulators identified that it was difficult for the public to know which services were provided by which type of nurse, for example, a family practice nurse and an NP in a primary care setting. ACNPs felt there was greater public visibility and awareness of the NP role than of the CNS role.

Government interview participants suggested a strategic communication plan including public awareness campaigns. APNs recommended that professional nursing leadership bodies take responsibility for a far-reaching communication campaign. One administrator in a regional health authority noted that by making the work of the role visible, public support grew and facilitated role implementation. Media releases were suggested. The CHSRF roundtable recommended that a communication strategy be developed (via collaboration with government, employers, educators, regulatory colleges and professional associations) to educate the public about the roles, responsibilities and positive contributions of advanced practice nursing.

**National Leadership Support**

APNs voiced the need for increased advanced practice nursing representation at national leadership tables. National leadership played an important role in profiling the NP role through the CNPI and is needed to address a number of issues such as the growing invisibility of the CNS role and the confusion caused by the many advanced practice nursing titles.

***Invisibility of the CNS role***

The expansion of NP roles corresponds with provincial and national primary healthcare reform policies, funding of NP education programs and roles, and national investments in role supports such as the CNPI (2006b). Interview participants including administrators, regulators and government policy makers noted that similar provincial or national investment in support of CNS roles is lacking. Bryant-Lukosius et al. (2010) describe the issue of CNS role invisibility in detail.

The CHSRF roundtable recommended that the CNA lead the creation of vision statements that clearly articulate the value-added role of APNs. Administrators emphasized the need to increase awareness and better align CNS roles with important policy issues in which they could have significant impact such as patient safety, quality of care and advancement of nursing practice. CNSs identi-

fied the need for networking and national support. Concerned about the future of the CNS role in Canada, the CHSRF roundtable noted that the role requires further study and recommended that it be the focus of future academic work.

### *Titling*

Donald et al. (2010a) have described the issue of title confusion in detail. Briefly, interview participants consistently identified the confusion caused by the various advanced practice nursing titles, accentuated by co-location of CNSs and NPs and the emergence of non–advanced practice nursing roles such as clinical nurse educators. Using a common title for both CNS and NP roles, such as APN, was seen as unhelpful, increasing role blurring and misunderstanding.

### Evaluation of the Role

The abundant and consistently positive evidence about the effectiveness of APNs is an enabler to role implementation. We included in an appendix to our report a listing of randomized controlled trials that evaluated the effectiveness of APNs with respect to patient, provider and/or health system outcomes (DiCenso et al. 2010b). We identified 78 trials (28 of PHCNPs, 18 of ACNPs and 32 of CNSs), of which 41 were conducted in the United States (US), 25 in the United Kingdom (UK), six in Canada and six in other countries. With remarkable consistency among the trials, APNs improved outcomes or were found to be equivalent to their comparison groups.

Our review of participant interviews and Canadian literature revealed numerous directions for future research. They include (1) a focus on newly implemented models such as the NP-led clinics and CNS–NP collaboration, (2) evaluation of system-level contributions of the CNS, (3) collection of baseline data prior to advanced practice nursing role introduction to facilitate proper comparisons, identification of relevant performance indicators, and evaluation of the impact of nursing care and non-clinical aspects of advanced practice nursing roles rather than focusing solely on physician replacement activities (Bryant-Lukosius et al. 2004), (4) shifting the research focus from productivity outcomes (e.g., volume of patients seen) to patient-based quality of care indicators (Evans et al. 2010), (5) development of a systematic way to track NP impact on service, given that medical records, especially in primary care settings, are often not designed to capture what NPs do (Goss-Gilroy Inc. Management Consultants 2001), (6) development of research programs to better study access and cost-effectiveness of NPs in the Canadian context (Thille and Rowan 2008) and (7) development of NP-sensitive outcomes to better understand NP contributions (Sangster-Gormley 2007).

The CHSRF roundtable identified two research-related recommendations. First, further research should be conducted to quantify the impact of advanced practice

nursing roles on healthcare costs, taking into consideration education, effectiveness and length of career. Second, focus on the effectiveness of advanced practice nursing roles should shift away from replacement models and illustrate the "value added" of these roles.

**Role Clarity**

Lack of clarity about the advanced practice nursing role was identified in the literature and by interview participants as a significant and common barrier to optimal role implementation (Bryant-Lukosius et al. 2004; DiCenso et al. 2003; Dunn and Nicklin 1995; Schreiber et al. 2005a, 2005b). Donald et al. (2010a) address this topic in detail in a separate paper in this issue. Recommendations to address role clarity issues include development of a clear description of the role based on defined patient and healthcare system needs and stakeholder involvement (Bryant-Lukosius et al. 2004; Dunn and Nicklin 1995), clear articulation of scope of practice (CNPI 2005a), involvement of APNs in defining their role (DiCenso et al. 2003) and organizational support for APN full scope of practice (Lachance 2005). CHSRF roundtable participants were concerned about the need to address implementation barriers deriving from lack of role clarity. They recommended that the CNA lead the creation of vision statements to clearly articulate the value-added role of CNSs and NPs across settings.

**Healthcare Setting Support**

***Leadership support***

Lack of organizational, nursing and physician support has been frequently reported as a barrier to role implementation for all types of advanced practice nursing roles (Davies and Eng 1995; Hurlock-Chorostecki et al. 2008; Ingram and Crooks 1991; Reay et al. 2003) and was reinforced by many interview participants. Carter et al. (2010) describe the issue of leadership support for these roles in detail. Leadership that enables the full implementation of the advanced practice nursing role enacts policies that support and legitimize the role and provides strong management support (Goss-Gilroy Inc. Management Consultants 2001; Hamilton et al. 1990; Reay et al. 2003). A government interview participant commented on the value of multi-stakeholder NP integration committees at the regional level.

***Networking***

A number of networking support systems were suggested in the literature and by interview participants, including (1) co-location of APNs to prevent isolation (Hamilton et al. 1990; Humbert et al. 2007), (2) mentorship – especially for those in their first role as an APN (Lachance 2005; Reay et al. 2003; van Soeren et al. 2007), (3) enhanced professional development opportunities (CNA 2008), (4) establishment of NP or NP/CNS joint committees or special interest groups to assist with ongoing planning needs and sharing of common issues and (5) a

community of practice to foster professional development.

**Implementation of Role Components**

Components of the APN's role include direct patient care, research, education, consultation and leadership activities (CNA 2008). Time allocated for each activity varies among APNs, but a balance between clinical and non-clinical activities facilitates innovative nursing practice (Bryant-Lukosius et al. 2004). Insufficient administrative support and competing time demands associated with heavy clinical demands are frequently reported barriers to participating in non-clinical activities (Bryant-Lukosius et al. 2004; Hurlock-Chorostecki et al. 2008; Pauly et al. 2004). Carter et al. (2010) describe in detail the importance of administrative support in enabling implementation of all role components. The struggle to protect time for non-clinical functions such as research and education was particularly relevant to ACNPs, who reported that combined with a heavy patient care load these additional functions created an unrealistic workload and confusion with the CNS role in the organization. Kilpatrick et al. (2010) discuss this issue in more detail.

**Continuing Education**

Both interview participants and the literature supported a robust plan for continuing education for APNs, especially those in rural and northern communities (Schreiber et al. 2005a, 2005b). Martin-Misener et al. (2010) describe this in more detail. PHCNPs in Ontario identified numerous challenges to obtaining continuing education, including (1) difficulty taking time off work, (2) financial barriers, (3) the need to travel to a learning venue, (4) family responsibilities, (5) lack of information regarding course availability, (6) geographical barriers, (7) fatigue or academic burnout and (8) poor experiences with previous courses (CRaNHR 2006). Schreiber et al. (2003, 2005a, 2005b) noted the need to develop faculty to provide continuing education for APNs.

**Inter-professional Relations**

***Working relationship with physicians***

The working relationship between physicians and CNSs is generally viewed as complementary and without conflict, most likely because of the lack of overlap between their roles. In the case of ACNPs, physicians have usually initiated the introduction of the role because of growing physician shortages and increasing gaps in care delivery, and are generally very supportive of it. Tensions generally relate to ACNPs taking time away from direct patient care to participate in non-clinical activities and medical residents' concerns about losing control of patient care decisions and having to compete with ACNPs for opportunities to perform medical activities (D'Amour et al. 2007). According to jurisdictional and institutional regulations, the extension of activities beyond the RN scope of practice is achieved for ACNPs through delegation of tasks, using protocols, medical directives

and drug lists (Hurlock-Chorostecki et al. 2008). Both physicians and ACNPs find this situation suboptimal. Kilpatrick et al. (2010) describe these issues in detail. At the level of organized medicine, there is little concern voiced about the ACNP role.

With respect to PHCNPs, physician interview participants indicated that positive, respectful and trusting relationships along with good communication and willingness to deal with conflict all contributed to PHCNP role implementation. Nevertheless, a large number of papers described physician resistance (e.g., Cusson 2004; DiCenso et al. 2003; Hass 2006; Ontario Medical Association and Registered Nurses' Association of Ontario 2003; Pong and Russell 2003). Principal reasons for this resistance related to liability concerns (e.g., Bailey et al. 2006; Martin-Misener et al. 2004; Way et al. 2001), scope of practice issues (DiCenso et al. 2003), lack of role clarity (DiCenso et al. 2003), funding arrangements (Jones and Way 2004) and concern about NP independent practice (Gosselin 2001; Laguë 2008). These are described in detail by Donald et al. (2010b).

At the level of organized medicine and nursing, professional associations are responsible for protecting their members' interests (Baerlocher and Detsky 2009). As a result, medical associations have opposed initiatives to facilitate full enactment of the PHCNP scope of practice (e.g., open prescribing privileges) or improve patient access to care in communities with physician shortages through models such as NP-led clinics (DiCenso et al. 2010a). A government interview participant called for both the nursing and medical profession leadership to shift the culture from a competitive to a collaborative stance.

***Inter-professional collaboration***

An extensive body of literature describes involvement of APNs in inter-professional collaboration (e.g., CNA 2008; Jones and Way 2004; MacDonald et al. 2005b). A CHSRF decision support synthesis on inter-professional collaboration and primary healthcare summarizes high-quality evidence demonstrating positive outcomes for patients, providers and the healthcare system and identifies a variety of processes and tools to support the planning, implementation and evaluation of effective, inter-professional collaborative partnerships (Barrett et al. 2007). There was a consensus among interview participants about the importance of inter-professional collaboration. CNSs saw it as essential to achieving the breadth of their scope of practice, and APNs and physicians saw it as facilitating NP practice. Government interview participants acknowledged the need to develop a specific skill set to work collaboratively and they, along with regulators, suggested team facilitators. Administrators, educators and PHCNPs also identified the importance of inter-professional education. There was a perception among government interview participants that where NPs have been introduced as part of new primary healthcare teams, implementation seems to have gone smoothly.

Tensions can develop around who leads the team. Physicians are accustomed to being the team leads. As Hutchison notes,

> the move toward collaborative and team-based approaches to care requires a culture shift that will be especially challenging for physicians who are accustomed to being the undisputed team leader. In an interdisciplinary environment, involvement of other professional and administrative staff in policy and management decisions is no longer discretionary (2008: 13–14).

***Team acceptance***

Lack of healthcare team awareness of APN roles has been identified frequently as a barrier to role integration (e.g., Davies and Eng 1995; DiCenso et al. 2003; Hass 2006; Hurlock-Chorostecki et al. 2008; Jones and Way 2004; MacDonald et al. 2005a; Wall 2006). There was consensus among regulators, administrators, government policy makers and APNs that other professionals, including nurses, were not aware of the scope of the APN's practice. Administrators noted that the NP role was understood more easily once people had worked with the NP; however, they did not believe this was the same for CNSs. Among the six government interview participants, this awareness issue was the most commonly identified barrier to successful APN integration. They believed that health authority managers lacked understanding of the differences between NPs and CNSs and that the roles were understood only by physicians who worked closely with them and by administrators who employed them.

The healthcare team's understanding of the APN role has been widely identified as a facilitator to role integration (e.g., Davies and Eng 1995; DiCenso et al. 2003; Humbert et al. 2007; Hurlock-Chorostecki et al. 2008; Nova Scotia Department of Health 2004; Ontario Medical Association and Registered Nurses' Association of Ontario 2003). The importance of increasing professional awareness about the APN's education, certification, scope of practice, roles and, where relevant, liability coverage has been emphasized (e.g., CNA 2008; Cummings et al. 2003; Nova Scotia Department of Health 2004; Ontario Medical Association and Registered Nurses' Association of Ontario 2003; MacDonald et al. 2005a; Schreiber et al. 2005a). Government interview participants indicated that a strategic communication plan about advanced practice nursing roles is essential to achieving full integration, acceptability and support. There was consensus among interview participants on the need for strategic communication to educate all stakeholders in order to achieve a broad-based awareness and understanding of the role. The CHSRF roundtable agreed, recommending development of a communication strategy to educate nurses, other healthcare professionals and healthcare employers about the roles, responsibilities, and positive contributions of advanced practice nursing roles.

Regulators, government policy makers, administrators and ACNPs also recommended enlisting nurse leaders and physicians as champions to promote the roles.

## Discussion

This decision support synthesis provided the opportunity to identify the barriers and enablers to integration of all three types of APNs in Canada and permitted identification of both common and unique factors across APN type. While we focused on Canadian literature and key informants, there is remarkable consistency between our findings and those reported by Lloyd Jones (2005) in a systematic review of 14 qualitative studies, mostly from the UK, reporting barriers or facilitators to role development and implementation of APNs in acute care hospital settings. With respect to role development, similar issues include (1) absence of educational standardization for roles, (2) lack of relevant courses, education-related resources and mentors, (3) perceived ambivalence of professional regulatory bodies and (4) lack of clear role definition, boundaries and expectations causing role ambiguity. A knowledge base in the relevant specialty was identified as a facilitator. With respect to role implementation, similar issues include lack of full-time funding for the role, inadequate salaries relative to responsibilities, lack of managerial support, lack of networks, isolation, heavy clinical workload preventing engagement in non-clinical role activities, physician resistance and lack of effective inter-professional relationships.

Consistent with the international interest in advanced practice nursing roles, the Organisation for Economic Co-operation and Development (OECD) gathered data in 2009 from 12 countries (Australia, Belgium, Canada, Cyprus, Czech Republic, Finland, France, Ireland, Japan, Poland, the UK and the US). Its purpose was to (1) identify factors motivating the development of advanced practice nursing roles, (2) describe the state of development of these roles in the participating countries, (3) review the results from evaluations of the impact of advanced practice nursing on healthcare access, quality and costs and (4) examine the factors that have hindered or facilitated the development of these roles (Delamaire and Lafortune 2010). With respect to the factors influencing role development, they identify four, all consistent with the findings of our synthesis: (1) the professional interests of doctors and nurses and their influence on reform processes, (2) the organization of care and funding mechanisms, (3) the impact of legislation and regulation of health professional activities on the development of new roles and (4) the capacity of the education and training system to provide nurses with higher skills.

With respect to professional interests, most professions are having to adapt as boundaries between professional jurisdictions are continually renegotiated and all struggle for clear identities (Beaulieu et al. 2008). This engenders understandable fears related to loss of autonomy and control, and leads to resistance. Baerlocher and Detsky (2009) describe turf battles between and within professions when they compete to perform the same task. They explain that reliance on self-governing professional bodies to determine appropriate work boundaries is problematic. They may have no reason to cooperate with one another, and solving workforce problems this way requires successful negotiation that keeps the public's rather than the profession's interest in mind. Hutchison (in press) has suggested that the government establish a mechanism to bring together both physician and non-physician primary healthcare providers to advise on primary healthcare policy development and implementation. He states that

> rather than dealing with policy makers through separate, private bilateral discussions, stakeholders would be obliged to hear each other's perspectives and would be under pressure to serve the public good by constructively addressing areas of conflicting interest (Hutchison in press).

Advanced practice nursing roles in Canada are becoming more fully integrated in the healthcare system. For example, in December 2009 the Yukon Territory was the last of the provinces and territories to pass legislation regulating NPs. The Canadian healthcare system is facing significant challenges, many of which require the optimal use of all members of the healthcare team. We face public calls for increased and more equitable access to care and reduced wait times as well as increased demands for service related to the aging population, chronic illnesses (e.g., cancer, arthritis, diabetes and heart disease) and mental health problems. There is also a societal shift toward wellness care and the provision of support to patients for self-management. Canada is a vast country with many underserviced, rural and remote populations. At the same time, we face physician and nursing shortages and a continued maldistribution of practitioners, especially in northern Canada (Canadian Institute for Health Information 2006; College of Family Physicians of Canada 2004; Kulig et al. 2003).

These developments increase the complexity of coordinating care delivery and ensuring that each member of the healthcare team is being deployed in an efficient and effective manner to maximize patient health. This requires a

strong awareness of the roles of each member of the team. It calls for a coordinated health human resources strategy that ensures the appropriate mix of providers for the specific setting and community/patient needs, and this has implications for forecasting education needs.

While there is still much to do to address the remaining barriers to the full integration of APNs, there exists a receptive dynamic climate. For example, in April 2009 when we completed the decision support synthesis, PHCNPs in Ontario were restricted to prescribing from drug lists. However, in December 2009, Bill 179 – the Regulated Health Professions Statute Law Amendment Act – received royal assent. It gives Ontario NPs open prescribing privileges and eliminates laboratory and radiology lists by 2011 (Ontario Ministry of Health and Long-Term Care 2009). Furthermore, the Ontario government is currently reviewing hospital inpatient admission and discharge privileges for NPs (Ontario Ministry of Health and Long-Term Care 2010).

The CHSRF roundtable recommendations include (1) clearly defined roles and reduced confusion related to the many titles used for APNs, (2) role development and introduction guided by a systematic process to assess patient/community needs, including early stakeholder involvement, (3) consideration of the contribution and implementation of advanced practice nursing roles in federal and provincial/territorial health human resources planning, (4) strategies to improve awareness about the role among health professional colleagues and the public, (5) stable funding mechanisms for the role, (6) standardized regulation, (7) standardized graduate education, (8) inter-professional education and (9) research to inform the "value added" of these roles and to inform the CNS role in Canada.

Creativity will be required to address some of the more challenging issues. For example, given the size of Canada, its relatively small number of APNs, and the large number of specialty areas, how can specialized practice be taught in the context of generalized educational programs? What CNS credentialing mechanism can be introduced to ensure that those in the role have the appropriate education and experience? How can we implement a successful pan-Canadian approach to standardize education and regulation for APNs, given that healthcare is the mandate of individual provinces and territories?

This decision support synthesis has provided an opportunity to consolidate the literature and obtain the input of key informants to identify factors that have enabled advanced practice nursing role development and implementa-

tion and those that continue to impede full integration of APNs. Based on these data, the multidisciplinary CHSRF roundtable formulated a number of recommendations. We now look to nursing leaders in Canada to facilitate the implementation of these recommendations and ultimately the full integration of APNs in the Canadian healthcare system.

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# Utilization of Nurse Practitioners to Increase Patient Access to Primary Healthcare in Canada – Thinking Outside the Box

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## Abstract

In the past decade, all Canadian provinces and territories have launched various team-based primary healthcare initiatives designed to improve access and continuity of care. Nurse practitioners (NPs) are increasingly becoming integral members of primary healthcare teams across the country. This paper draws on the results of a scoping review of the literature and qualitative key informant interviews conducted for a decision support synthesis about advanced practice nursing in Canada. We describe and analyze two novel approaches to NP integration designed to address the gap in patient access to primary healthcare: (1) the integration of NPs in traditional fee-for-service practices in British Columbia, and (2) the creation of NP-led clinics in Ontario. Although fee-for-service remuneration has been a barrier to collaborative practice, the integration of government-salaried NPs into fee-for-service practices in British Columbia has enabled the creation of inter-professional teams, and based on early evaluation findings, has increased patient access to care and patient and provider satisfaction. NP-led clinics are designed to provide inter-professional care in communities with high numbers of patients who do not have a regular primary healthcare provider. Given the shortage of physicians in communities where these clinics are being introduced, the ratio of physicians to NPs is lower than in other primary healthcare delivery models, and physicians function in more of a consulting role. Initial evaluation of the first of 26 NP-led clinics indicates increased access to care and high levels of patient and provider satisfaction. Implementing a creative mosaic of collaborative primary healthcare models that are responsive to patient needs challenges traditional assumptions about professional roles and responsibilities. To address this challenge, we endorse a recommendation that governments establish a mechanism to bring together both physician and non-physician primary healthcare providers to advise on primary healthcare policy development and implementation.

## Introduction

Patient access to primary healthcare is a significant issue in Canada. In the 2007 Commonwealth Fund International Health Policy Survey conducted in seven countries (Australia, Canada, Germany, the Netherlands, New Zealand, the United Kingdom [UK] and the United States [US]) (Schoen et al. 2007), 84% of Canadian adults reported that they had a regular doctor at the time of the survey, second lowest of all the countries (the US was the lowest, at 80%, and the Netherlands highest, at 100%). Canadian adults were the least likely to report same-day access and most likely to report long waits (six days or more) to see a doctor when sick, and along with Americans and Australians, were the most likely to report difficulty getting after-hours care. Canadian adults were the most likely to have gone to a hospital emergency department (ED) in the past two years, to have made multiple visits, and to say they went to the ED for care their doctor could have provided if available. These high rates are contributing to long ED wait times, with 46% of Canadians (the highest of all the countries) reporting waiting two hours or more in the ED to be seen (Schoen et al. 2007).

In the 2008 Commonwealth Fund International Health Policy Survey of eight countries (Australia, Canada, France, Germany, the Netherlands, New Zealand, the UK and the US), data were collected from adults with chronic conditions (Schoen et al. 2009). Patients from Canada and the US were the least likely to report same- or next-day access, and Canadian adults were the most likely to have waited six days or more, or to never have obtained an appointment to see a doctor the last time they were sick. Again, Canadians were most likely to go to the ED for a condition that could have been treated by their regular doctor if available.

Consistent with the emphasis on teams to manage chronic conditions, the survey examined the use of expanded roles for nurses to counsel and to provide and coordinate care. Canadian adults, along with Australians and Germans, were least likely to report having a nurse or nurse practitioner (NP) regularly involved in managing their condition, in comparison to UK adults who were the most likely to report nurse involvement (22% of Canadian versus 48% of UK adults). The low use of nurses/NPs in chronic disease management in Canada is particularly of concern given that, unlike most Organisation for Economic Co-operation and Development (OECD) countries, physician density in Canada remained unchanged between 1990 and 2005 (2.1 practising physicians per 1,000 population) whereas the OECD average increased from 2.2 to 2.9 (Dumont et al. 2008).

In 2004, the first ministers (the prime minister and premiers) of Canada agreed that timely access to primary healthcare was a high priority for all jurisdictions and set the objective that 50% of Canadians would have 24/7 access to multidisciplinary teams by 2011 (First Ministers' Meeting on the Future of Health Care

2004). There is a growing body of evidence about the effectiveness of inter-professional teams in delivering primary healthcare. In a decision support synthesis on this topic, Barrett and colleagues (2007) found that inter-professional collaboration models enable delivery of a broader range of services, more efficient resource utilization, better access to services, shorter wait times, better coordination of care, more comprehensive care and better health outcomes for patients, compared to a uni-professional model of primary healthcare delivery.

In the past decade, all Canadian provinces and territories have launched various team-based primary healthcare initiatives designed to improve access and continuity of care (Beaulieu et al. 2008). NPs are increasingly seen as integral members of primary healthcare teams across the country. While they have worked for many years in long-established primary healthcare organizations such as community health centres (CHCs), the quest to increase patient access to care has recently stimulated novel approaches to NP deployment. In this paper, we use data gathered from published and grey literature and key informant interviews to describe and analyze two novel approaches to NP integration: (1) the introduction of NPs into traditional fee-for-service practices in British Columbia, and (2) the creation of NP-led clinics in Ontario. We have selected these two as unique illustrations of primary healthcare collaborative models that involve NPs and are specifically designed to address the gap in patient access to care.

## Methods

This paper draws on the results of a scoping review of the literature and qualitative key informant interviews conducted for a decision support synthesis commissioned by the Canadian Health Services Research Foundation and the Office of Nursing Policy in Health Canada. The overall objective of this synthesis was to develop a better understanding of advanced practice nursing roles (which in Canada include NPs and clinical nurse specialists), their current use, and the individual, organizational and health system factors that influence their effective development and integration in the Canadian healthcare system (DiCenso et al. 2010a).

The methods undertaken for this synthesis are described in detail in an earlier paper in this issue (DiCenso et al. 2010b), but in brief, they included a comprehensive examination of all published and grey literature on advanced practice nursing roles in Canada to the end of 2008 and recent reviews of the international literature (2003 to 2008). Interviews and focus groups were also conducted with 81 national and international key informants, including NPs, clinical nurse specialists, physicians, other health providers, educators, health administrators, nursing regulators and policy makers. For this final paper in this special issue reporting on various aspects of the synthesis, we took a slightly different approach. On the basis of questions asked of interview participants about current pressures facing the

healthcare system and examples of successes in the implementation of advanced practice nursing roles, we identified two recently developed collaborative models that utilize primary healthcare NPs (PHCNPs) to increase patient access to care.

Since these are new models of care, there is very little published literature describing them, and only preliminary evaluations have been completed to date. To learn more about these models, subsequent to the completion of the synthesis we conducted Internet searches (e.g., Ontario government website about NP-led clinics and Interior Health regional health authority website about NPs in fee-for-service practice) and follow-up telephone and e-mail conversations with seven participants associated with these models to ensure more complete and accurate descriptions and analysis. These participants included NP and physician clinicians working in these care models and individuals charged with model implementation. They provided background and descriptive information and commented on the presentation of the models in this paper. We present a descriptive analysis of the development, evolution and early experiences of these two models of care. To the extent possible given the models' brief existence, we summarize facilitators and challenges in establishing and sustaining these models and outline their strengths and limitations. While we describe preliminary evaluations, the intent of this paper is not to evaluate the models, given their recent introduction.

## Results

### Integration of NPs in Fee-for-Service Primary Healthcare Practices

When NPs were first introduced into urban settings in Ontario in the early 1970s, they were paid by physicians who earned their income through fee-for-service (FFS). Although NPs were shown to safely manage patient problems, maintain patient satisfaction and increase patient access to care (Chambers and West 1978; Spitzer et al. 1973a, 1974b), integration of this role failed, primarily because of this funding arrangement for NP services.

Under publicly funded FFS, the physician bills the state authority (e.g., the provincial government's universal health insurance plan) for each service provided (Beaulieu et al. 2008). The physician may decide to delegate activities to others; however, he or she must be present at some point in the assessment to qualify for payment. When Spitzer et al. (1973b, 1974a) found that the income of six private practices employing NPs declined slightly during a two-year period, it was attributed in part to health insurance billing restrictions for unsupervised services rendered by the NP (Spitzer et al. 1974a). In a study of the financial impact of NP employment on the practices of six FFS family physicians in Newfoundland, Chambers (1979) similarly found that "losses occurred in the fee-for-service method of physician payment environment that discourages delegation of tasks" (Chambers 1979: 347). Since FFS physicians were unable to bill directly for

services provided by NPs and had to pay the NPs out-of-pocket, hiring NPs was financially disadvantageous (van der Horst 1992), posing a significant barrier to NP role implementation (Advisory Committee on Health Human Resources and The Centre for Nursing Studies in collaboration with The Institute for the Advancement of Public Policy, Inc. 2001; de Witt and Ploeg 2005; DiCenso et al. 2003; Goss Gilroy Inc. Management Consultants 2001; Gould et al. 2007; Jones and Way 2004; MacDonald et al. 2005; Schreiber et al. 2005).

Key to integrating an NP into an FFS practice is that the volume of patients seen by the physician does not decrease, as this results in income loss for the physician. NP integration into an FFS practice is best achieved when the practice is full and there are "unattached" patients (i.e., those without a primary healthcare provider) in the community who can now be added to the practice. As one of our nursing regulator participants describes,

> Well, it acts as a barrier because the physician's income is based on volume, so he's not going to want to have a nurse practitioner take away some of his business, if we call it that, because that's income that he would have.

A physician we interviewed also aptly notes,

> If you want doctors to not support [NPs], then you say that funding for NPs is going to take away dollars for doctors and, of course, that's human nature – people are not going to support it.

More recent NP integration strategies have involved payment of the NP's salary by the government to work in primary healthcare practices where physicians are paid through mechanisms other than FFS, such as salary or capitation (a fixed payment made at regular intervals by the government for each enrolled patient, regardless of services provided). While many primary healthcare physicians have moved into these alternate payment plans, the 2007 National Physician Survey revealed that half (48.3%) still derive at least 90% of their income from FFS payment (College of Family Physicians of Canada et al. 2007). Some physicians who continue in FFS practices have indicated an interest in working with NPs. For example, of 355 FFS physicians in Ontario who responded to a survey in late 2002, 42.3% indicated they would be interested in working with NPs (DiCenso et al. 2003).

In 2000, when the Ontario government announced funding for 106 NP positions in underserved communities, a small number of these were introduced into FFS practices. The government paid the NP's salary and some overhead costs, while the physician continued to be paid through FFS. In a survey of Ontario NPs in late 2002, 10.7% of 234 NP respondents indicated they were working in a FFS

physician practice. Site visits were made to four of these practices. In one practice, the NP worked with one physician and provided education and chronic disease management to patients with one specific medical condition, while in the other practices, the NPs worked as generalists, seeing 12 to 15 clients a day. When asked about the benefits of working with an NP, FFS physicians were more likely to indicate that NPs increased the number of patients seen than were physicians in other types of primary healthcare funding arrangements (DiCenso et al. 2003).

Given the number of physicians still remunerated through FFS and the need to improve patient access to care in the short run, other provinces have begun to integrate NPs into FFS practices. For example, in Alberta, NPs are part of Primary Care Networks in which the physicians may be paid by FFS. In British Columbia (BC), at least four regional health authorities (RHAs) have introduced salaried NPs ($n = 12$) into FFS physician practices. The experience of Interior Health RHA is illustrative in this regard.

**General Description of This Model**

In July 2007, Interior Health RHA introduced the Nurse Practitioner/Family Physician Primary Health Care Model, in which salaried NPs work in FFS physician group practices. To date, four NPs have been hired, with two working in group practices in Trail, one in Castlegar and the fourth in Kelowna. Three of the NPs are functioning in generalist roles in the practices, and one does rapid response home visits to the frail elderly through the Seniors-at-Risk Initiative.

The NPs are employees of the RHA hired in collaboration with the FFS physicians. They function under the terms and conditions of the RHA, which pays their salary and benefits. Physicians complete a proposal providing the rationale for incorporating an NP in their practice. If the proposal is approved, funds are provided annually by the RHA to the practice to cover NP overhead costs such as medical office assistant support, space, supplies and equipment. If the NP consults with the physician about a patient with complex care needs, there is provision for the physician to bill once annually per complex care patient for consultation, without seeing the patient. If a patient who is not identified as a complex care patient presents with an acute illness which leads the NP to consult with the physician, the physician will see the patient and bill for that service. No additional funds are provided to the physician by the RHA for time spent consulting with the NP.

When patients request appointments, the medical office assistant, who is knowledgeable about the NP's scope of practice, offers suitable patients an appointment with the NP. Patients are assigned to the NP; however, patients may be seen by either the physician or NP depending on their presenting problem at the time of each visit. In the case of the Seniors-at-Risk Initiative, seniors are referred to the

NP by community physicians, home care, patients and/or family, and the three physicians whose clinic the NP is affiliated with.

The NP facilitates changes in the delivery of care, addresses patient self-management goals, links with other health resources in the community, provides comprehensive primary healthcare focusing on health promotion and illness prevention, coordinates activities by providing ongoing case management to those requiring complex care, refers to specialists as required, and provides unique learning and health promotion opportunities for nursing students. One of the physicians working in this model described the working relationship with the NP:

> The NP is paid for by the RHA. We have 1,800 patients. She increased my capacity by about 600 patients. She is actually the most responsible provider for over 400 patients. I see about 30–35 patients in the office per day. The NP sees about 15. Three to five of the patients that she sees, she has me see with her. It usually takes less than five minutes, and I bill a routine office visit. She does all the work in those cases ... prescribing, ordering tests, arranging follow-up and consultations. We often discuss patients throughout the day (no charge) and [it is] very gratifying to have two heads on the case. Shared responsibility. I often ask the NP to consult on patients that I see during the day, and I arrange follow-up with her for our complex patients as she has longer appointments and more expertise in congestive heart failure, diabetes and women's health. The NP is an equal. She accepts responsibility for the administration of the office as well. It is a fabulous, complementary and symbiotic relationship…. Our patients are better cared for with less hospital admissions and ER visits and improved, often same day or next day access…. The NP is helping with hospital rounds and co-rounds, and we are both very involved in teaching. I am enjoying practice now more than ever! We need to break down myths with our MD colleagues. The arguments regarding stealing patients, needing too much supervision, not having enough time, etc., are old. It is just not true. I make more income and the job is easier and more fun.

An NP in an FFS practice added the NP perspective:

> There are many days that I do not ask the physician to review a patient case with me. This seems to change given the acuity of my day. Many days are filled with follow-up or chronic care planning, while others will fill quickly with more acute or urgent requests. The policy in the office is that you are offered the first available appointment. If the issues presenting are beyond the scope of the NP, I can still do a history and physical exam, and start any diagnostic required. Then, in less than five minutes the physician

> can confirm and/or suggest other possible treatments. This is all done in the original appointment, thus eliminating the need to come back to see the physician at a separate time. The follow-up may be with the NP or the physician, depending on the presenting problem. The key is the patient has been part of our collaboration and they see us working as a team in their best interest where no one person has the "right" answer. Instead, we are looking for the best solution to the problem. Further, this model has allowed us to move beyond episodic care to more preventive care. It has also provided many opportunities to educate our patients and others about the value of collaborative practice.

Interior Health RHA has completed the first of a three-phase evaluation of this model of care (Hogue et al. 2008). This first phase evaluation was completed at 12 months post-implementation and utilized qualitative data collected through focus groups and individual interviews of health providers and patients. Similar to the quotes noted above, healthcare professionals involved in this model of care reported an increase in job satisfaction, mutual trust and respect between practitioners, open positive communication between the NP and physician, and a heavier focus on patient-centred care. Patients felt they had improved access to healthcare services, more time with a practitioner in one appointment and more comprehensive healthcare, and they felt they were a part of their healthcare team (Hogue et al. 2008).

**Facilitators to Establishing and Sustaining This Model**

NP role implementation was facilitated by the leadership of the RHA, which set out a clear process for role introduction and evaluation, and through the following activities: establishing supportive policies, infrastructure and practice environments; promoting team functioning and mutual respect for the knowledge and practice of team members; maintaining open and regular formal and informal communication; and clarifying roles on an ongoing basis (Pawlovich et al. 2009).

**Challenges to Establishing and Sustaining This Model**

The evaluation described above revealed challenges to successful integration of NPs into an FFS physician group clinic (Hogue et al. 2008). One persistent challenge related to the prevailing historical roles within the health system is that the physician is situated at the top of the hierarchy. However, study participants indicated this is slowly changing. Physicians worried that collaboration would increase their workload or expose their knowledge gaps. They were concerned that, while the scope of practice of the NP was similar to theirs, NPs had less formal training. Finally, patients felt that if they continued using NP services, they would lose "their spot" with the physician.

In their evaluation, Hogue et al. (2008) identified a need for more formal infor-

mation and education for healthcare professionals and the public about the NP role. Suggestions to strengthen the implementation strategy included (1) creating a shared physician lead (rather than identifying a lead physician to champion the NP role) to allow all the physicians at the clinic to feel more invested and to fully collaborate with the NP, and (2) involving all members of the clinic at the outset to discuss role clarification and to develop a mission statement and concrete goals for the clinic. Strategies to enhance communication among the team included initial orientation about the NP role with all clinic members, ongoing education related to collaborative practice and regular staff meetings. Finally, an additional strategy to gain NP acceptance among the medical community was to involve physicians in supporting an NP student in their clinic (Hogue et al. 2008).

**Strengths of This Model**

Very little research has been conducted on this model of care, and more is warranted in order to fully explore its merits and limitations. Experience to date in BC indicates that (1) although FFS remuneration has been identified as a barrier to collaborative practice (Barrett et al. 2007), the addition of a government-salaried NP into an FFS practice enables the creation of inter-professional teams, (2) NP integration into these practices has increased patient access to care, which is often available on the same day, possibly reducing visits to the emergency department for primary healthcare needs, (3) team members offer complementary skills in caring for patients, for example, in chronic disease management and (4) based on the first phase evaluation in the Interior Health RHA, patients feel better informed about their health and feel a part of the decision-making process related to their care, and providers have increased job satisfaction.

**Limitations of This Model**

Potential limitations of this model include (1) concern over physician's loss of income if the NP instead of the physician is seeing the patients. This assumes a finite number of patients and patient demands, which is not necessarily the case; this is best illustrated by NP integration in communities where there are many unattached patients, some of whom can now be taken on by the practice; (2) concern over physician's loss of income if spending time providing consultation to the NP rather than seeing patients. This can be addressed with a set amount of money paid to the physician by the government on a monthly basis for consulting with the NP (e.g., Ontario) or with a fee code for complex chronic disease management consultation whereby the physician receives a set annual fee per complex patient to cover consultation time with the NP (e.g., BC); and (3) concern about additional cost to the funder if both the NP and physician see the patient during the same visit. This tends to happen for a small proportion of patients who are receiving complementary rather than a duplication of care in much the same way as occurs when a family physician and specialist see the same patient.

## NP-Led Clinics

The Ontario Ministry of Health and Long-Term Care (MoHLTC) is funding 26 NP-led clinics. The clinics are described as a new model of care in which NPs work in collaboration with physicians and other members of an interprofessional team to provide comprehensive, accessible, coordinated family healthcare service to a defined population in areas where there are high numbers of patients who do not have a regular primary healthcare provider (Ontario MoHLTC 2010a). In addition to the provision of direct healthcare services, NP-led clinics focus on chronic disease management and disease prevention activities. A distinction of NP-led clinics when compared to other primary healthcare delivery models in Ontario such as CHCs and family health teams (FHTs) is that the ratio of physicians to NPs is lower and physicians function in more of a consulting than a primary provider role.

### General Description of This Model

The specific activities of the NP-led clinic are to (1) provide comprehensive family healthcare services through an inter-professional team of NPs, registered nurses (RNs), family physicians and a range of other healthcare providers (e.g., dietitians, mental health workers, social workers, pharmacists and health educators), (2) provide system navigation and care coordination by linking patients to other parts of the healthcare system (e.g., acute care, long-term care, public health, mental health, addictions, and community programs and services), (3) emphasize health promotion, illness prevention, and early detection and diagnosis, (4) facilitate the development of comprehensive community-based chronic disease management and self-care programs, (5) provide patient-centred care in which the patient makes informed decisions about her or his self-care needs (6) link with other healthcare organizations at the community level to address community needs and (7) use information technology linking patient records across healthcare settings and providing timely access to test results (Ontario MoHLTC 2010a). Key indicators for assessing the need for NP-led clinics in local areas include the proportion of unattached patients, the prevalence of one or more of nine chronic diseases including diabetes, the number of full-time-equivalent family physicians in a Local Health Integrated Network (LHIN) per 10,000 population and the number of existing FHTs and CHCs.

Interview participants involved in developing and introducing NP-led clinics described a vision of providing primary healthcare to unattached patients in areas with physician shortages and NP availability where NPs would work to their full scope of practice to meet community needs. The NP-led clinics are, by design, located in settings with physician shortages and are staffed by more NPs than physicians in order to make the best use of available health human resources to increase patient access to primary healthcare among those without a regular family physician. To optimize the use of limited physician availability,

the physician's role is primarily consultative, providing advice to NPs regarding patient care within the NP scope of practice and seeing only patients whose needs and care extend beyond the NP scope of practice.

In November 2006, the first NP-led clinic, in Sudbury, Ontario, was approved and became operational in August 2007. Between February 2009 and August 2010, 25 more NP-led clinics were approved, with all expected to be operational by 2012 (Ontario MoHLTC 2010b).

In Sudbury, 30,000 residents did not have a regular family physician at the time of application for the clinic. The clinic has six NPs, two part-time collaborating physicians, an RN, a pharmacist, an administrator and clerical staff. A full-time social worker and dietician will soon join the interprofessional team (Heale and Butcher 2010). The clinic operates fully out of two locations (Sudbury and Lively) and partially in Chapleau, where well-women care is provided one out of every six weeks. It is expected that each full-time-equivalent NP will build a roster of 800 patients. All patients are registered to the clinic and see their NP for the majority of their healthcare needs. Because patients are registered with the clinic and not rostered to an individual NP, however, they remain patients of the clinic regardless of staffing changes. Physicians are part of the team and available on-site a total of five half days per week to consult about more complex care issues. They receive monthly collaboration fees and can bill FFS for direct patient encounters in cases that go beyond the scope of NP practice.

The clinic has an NP-led governance model with a not-for-profit board, 51% of which must be made up of NPs and 49% from the community. No board members can be employees of the clinic. The board ensures that the clinic policies enable the NP to work to full scope of practice and promote an inter-professional model of care. The clinic director, who is an ex officio member, reports to the board. This director role is purposefully filled by an NP who is responsible for creating the supports to enable the full implementation of the NP role (e.g., clinical policy for care of patients with diabetes) (Heale and Butcher 2010).

A patient satisfaction survey conducted in 2008 by the clinic board indicated high levels of patient satisfaction, with open-ended responses highlighting thoroughness, quality of NP care, adequate time spent with patients and a caring attitude. Two areas for improvement were identified: increased accessibility through expanded hours into the evening and increased physician on-site availability to better facilitate care when the NP must consult with the physician (Sudbury District Nurse Practitioner Clinics Board of Directors 2008). One of the physicians linked with the NP-led clinic states: "I think that patients are getting excellent care. It's like having two primary caregivers at one number. You can't beat that."

(Peters 2008: 69). An evaluation of this first NP-led clinic was commissioned by the MoHLTC, and although completed in 2009, the report has not yet been released.

**Facilitators to Establishing and Sustaining This Model**

The establishment of the first NP-led clinic was facilitated by the following factors: a large number of unattached patients in the community, a shortage of physicians, availability of NPs to work to full scope of practice in delivering primary healthcare, a substantial amount of local media coverage that increased community awareness about the NP role, a good working relationship with consulting physicians who provide advice to NPs on patient care when needed and see patients with care needs beyond the NP scope of practice, high patient satisfaction, and an NP-led governance structure to support the vision and mission of the clinic. Because previous experience had indicated that working for administrative leads who did not fully understand the NP role led to underutilization of their skill set, it was important to the NPs that the clinic director role be filled by an NP.

**Challenges to Establishing and Sustaining This Model**

When the NP-led clinic opened its doors in August 2007, the majority of patients seeking care were those with highly complex needs that had not been addressed for some time due to the physician shortage. Assessment and treatment decisions for patients with these multi-faceted care needs entailed lengthy visits with the NP and frequent physician involvement. This complexity of patient care needs associated with longer patient visits meant that the number of patients seen during the first year of operation was not as high as expected.

Another challenge has been opposition by organized medicine. The NP-led clinic arose out of direct lobbying of the government by the Registered Nurses' Association of Ontario and a group of local NPs in Sudbury. It is the only organizational model that has been introduced in the last decade that has not been a product of negotiations between the Ontario Medical Association (OMA) and the Ministry of Health and Long-Term Care (Hutchison in press). The OMA has objected to the government's intention to expand NP-led clinics because they view the NPs as functioning independently rather than in a collaborative care model (Strasberg 2009). Laguë (2008) notes that "NP-run clinics are opening without physicians. This is the first step on a slippery slope at the bottom of which NPs become, essentially, substitutes for family physicians" (Laguë 2008: 1668). These concerns fail to acknowledge that the clinics are based on a collaborative model that includes physicians and other members of the healthcare team. The misperception may be partially attributable to the title "NP-led," which may connote independent NP practice rather than an inter-professional collaborative model. An interview participant states,

> I think, though, with the name nurse practitioner–led clinic, there have been some misunderstandings that that is nurse practitioner solo practice, which it is not. The vision for that is to evolve into a fully inter-professional model, the difference being that it is led by nurse practitioners. And so those goals of being able to offer interprofessional care through a nurse practitioner–led model have not yet been realized.

**Strengths of This Model**

The NP-led clinic is a new model of care introduced in Ontario in 2007, and as with the integration of NPs into FFS primary healthcare practices, very little research has been conducted to date to fully explore its merits and limitations. Early experience with the first fully operational clinic indicates that (1) in settings with physician shortages and where patients do not have a regular family physician, NPs working to their full scope of practice can increase patient access to care and reduce the number of unattached patients (as of July 1, 2010, the Sudbury clinic had enrolled 3,100 patients, with more new patients enrolling weekly), (2) efficient utilization of scarce physician resources can be facilitated by using physician time to provide consultative services to NPs regarding patient care within the NP scope of practice and to see only those patients whose needs and care extend beyond the NP scope of practice, (3) the model of care enables an inter-professional team approach that includes NPs, physicians, an RN, pharmacist, social worker and dietician, (4) a governing board that includes NPs and community members, none of whom are employed by the clinic, supports the vision and mission of the clinic, (5) patients are registered with the clinic rather than with an individual NP and therefore remain patients of the clinic regardless of staffing changes and (6) based on preliminary evaluation data, patients and providers are satisfied with the clinic services.

**Limitations of This Model**

Limitations of this model relate to clinic and physician funding. With respect to the first fully operational clinic, (1) there is currently no government funding to increase accessibility through expanded hours into the evening as requested by patients in the patient satisfaction survey, or to provide 24/7 on-call service, (2) the limited amount of consultation funds to compensate physician time when not directly seeing patients constrains their ability to function fully as team members because, for example, they do not receive compensation for time-consuming tasks such as developing medical directives or attending team meetings, and (3) because the patients seen by the physicians have very complex needs, the physicians can see only four patients every hour (with each booked for 15 minutes), which limits their FFS billings.

## Discussion

Canada lags behind other Commonwealth countries in providing timely access to high-quality primary healthcare (Schoen et al. 2007, 2009). Innovative models are required to address this problem. In this paper, we have described two examples of novel approaches to NP deployment designed to increase patient access to care, the first being integration of NPs into FFS practices and the second, the NP-led clinic. Our aim was to provide a descriptive analysis of their development and early experiences to date. We recognize that there is very little research about these models of care and that our analysis is based predominantly on information derived from Internet searches and conversations with only seven participants associated with these models. However, this paper provides foundational knowledge that might provide the context for future research.

Preliminary data indicate that both models are increasing patient access; for example, an FFS physician in BC notes that the addition of the NP has increased the practice capacity from 1,200 to 1,800 patients. As of July 1, 2010, the NP-led clinic in Sudbury had enrolled 3,100 patients, with more new patients enrolled every week. While they continue to aim for a target of 4,500 patients, enrolment has been slower than expected for three reasons: (1) the first patients who presented to the clinic were those with highly complex care needs that had not been addressed for some time due to the physician shortage; these patients required more time on the part of the NPs and more physician involvement, thereby reducing the speed at which new patients could be enrolled; (2) lack of sufficient funding for physician remuneration to increase their availability for NP consultations; and (3) space restrictions – the clinicians share examination rooms, limiting the number of patients who can be seen at any one time.

There is movement under way to evaluate these models of care. Initial informal assessments of patient and provider satisfaction are promising. Consistently positive evaluation results for these models could increase support for a "creative mosaic" of primary healthcare models tailored to meet the needs of their regions or populations. Still, there is a need for further research to identify their impact on patient access, the right mix of professionals for the patients they serve, how much and how well professionals truly collaborate with one another, interventions that are effective in improving team collaboration, and the costs and benefits of team-based care. While team-based care may be more expensive, the increased emphasis on health promotion and chronic disease management that teams provide may

result in reduced health resource utilization such as costly hospitalizations over the long term (Health Council of Canada 2009).

In both models, the NPs have strong support from their collaborating physicians. Patient surveys conducted in both models indicate high levels of satisfaction with care. A challenge common to both models is the need to increase patient and provider awareness of the NP role.

Integration of the NP into FFS practices is consistent with a more traditional model in which the physician initiates the request to add an NP to his or her team and for the most part, leads the team. The NP-led clinic is a unique model that challenges traditional ways of delivering primary healthcare, and these differences have resulted in opposition from organized medicine. This opposition, while not yet studied empirically, could be due to a number of reasons. One could be the NP–physician ratio. Unlike most NP–physician collaborative models, with the exception of outpost settings in northern Canada, the NP-led clinic staffing consists of more NPs than physicians (six full-time NPs and two part-time physicians). Physicians play more of a consultative role, seeing only the patients with complex problems.

Another reason for this opposition may relate to leadership. Unlike most NP–physician collaborative models, NPs lead the team, form the clinic as a non-profit organization, create a board and receive government funding (Peters 2008). While the NP-led clinic is inter-professional, it does challenge this traditional hierarchical relationship (albeit replacing it with another hierarchy). This may contribute to physician resistance at the organizational level (Evans et al. 1999). The Family and General Practice section of the OMA, for example, has challenged the provincial government plans to fund NP-led clinics, stating that "only doctors should be the ones leading teams of other healthcare professionals, not nurse practitioners" (The Canadian Press 2009). However, Hutchison notes:

> The move toward collaborative and team-based approaches to care requires a culture shift that will be especially challenging for physicians who are accustomed to being the undisputed team leader. In an interprofessional environment, involvement of other professional and administrative staff in policy and management decisions is no longer discretionary (2008: 13–14).

A third reason for the opposition may relate to the misperception that NPs are working independently, and this may result from the ill-conceived term "NP-led" to describe the clinic. "NP-led" was not intended to connote independent practice, but rather a model of inter-professional primary healthcare delivery in which NPs play a major role in its governance and senior management. NPs provide the majority of care to previously unattached registered clients and consult with other healthcare team members as necessary (Heale and Butcher 2010). Tensions increase when words such as "autonomous" and "independent" are used to describe NP practice. As autonomous practitioners, NPs are registered to practise in an expanded/extended role, and they are liable for their own practice. NPs who function independently are those who set up their own practice and work as "solo" practitioners. While this model exists in the United States, it is rare in Canada.

Health human resource issues, funding constraints, patient access challenges, increased emphasis on chronic disease management, primary healthcare reform, and an aging population have prompted significant transformations to the healthcare division of labour. Most professions are having to adapt as boundaries between professional jurisdictions are continually renegotiated. Physicians may feel threatened by NPs; NPs in turn may feel threatened by physician assistants (PAs); RNs may feel threatened by registered practical nurses (RPNs), and all struggle for clear identities (Beaulieu et al. 2008). This engenders understandable fears related to loss of autonomy and control and leads to resistance. Interestingly, however, at the front-line in primary healthcare most physicians, NPs, healthcare team members and patients report high levels of satisfaction with team-based care (Barrett et al. 2007).

Baerlocher and Detsky (2009) describe turf battles between and within professions when competing to perform the same task. They explain that reliance on self-governing professional bodies to determine appropriate work boundaries is problematic as these bodies may have no reason to cooperate with one another. The authors further note that solving workforce problems requires successful negotiation that keeps the public's rather than the profession's interest in mind. As a result of this tension between professions, we lack a common vision that allows all practitioners to work to their full scope of practice in primary healthcare delivery. Hutchison has suggested that the government establish a mechanism to bring together both physician and non-physician primary healthcare providers to advise on primary healthcare policy development and implementation. He states that

"rather than dealing with policy makers through separate, private bilateral discussions, stakeholders would be obliged to hear each other's perspectives and would be under pressure to serve the public good by constructively addressing areas of conflicting interest" (In press).

In her paper about the future of the NP role, Pogue (2007) notes that NPs can serve as a "disruptive innovation," as described by Uhlig (2006), by being catalysts for healthcare transformation. The models of care described in this paper have provided an impetus for engaging healthcare providers in discussions about how to best utilize all members of the inter-professional team to increase patient access to high-quality primary healthcare.

Historically, NPs have been introduced at times when patient access to care is limited, beginning in the late 1960s in northern Canada, followed by the early 1970s in primary healthcare settings in urban Canada, and continuing with the development of the acute care NP role in specialty areas such as neonatology, cardiology and neurology. An abundant amount of high-quality research has consistently demonstrated NPs' effectiveness and safety (Horrocks et al. 2002). The models described in this paper are promising practices that if implemented more broadly could address patient needs through improved access to care.

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