



# 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 (CRaNHHR 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, inter-professional 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 underserved 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 underserved, 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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