



The Acute Care Nurse Practitioner Role in Canada

Kelley Kilpatrick, RN, PhD (co-lead author)

Postdoctoral Fellow, CHSRF/CIHR Chair Program in Advanced Practice Nursing (APN)
Professor, Department of Nursing, Université du Québec en Outaouais
St-Jérôme, QC

Patricia Harbman, NP-PHC, MN/ACNP Certificate, PhD(c), University of Toronto (co-lead author)

Graduate student in CHSRF/CIHR Chair Program in APN
Oakville, ON

Nancy Carter, RN, PhD

CHSRF Postdoctoral Fellow
Junior Faculty, CHSRF/CIHR Chair Program in APN, McMaster University
Hamilton, ON

Ruth Martin-Misener, NP, PhD

Associate Professor & Associate Director, Graduate Programs, School of Nursing,
Dalhousie University
Halifax, NS
Affiliate Faculty, CHSRF/CIHR Chair Program in APN

Denise Bryant-Lukosius, RN, PhD

Assistant Professor, School of Nursing & Department of Oncology, McMaster University
Senior Scientist, CHSRF/CIHR Chair Program in APN
Director, Canadian Centre of Excellence in Oncology Advanced Practice Nursing (OAPN) at
the Juravinski Cancer Centre
Hamilton, ON

Faith Donald, NP-PHC, PhD

Associate Professor, Daphne Cockwell School of Nursing, Ryerson University
Toronto, ON
Affiliate Faculty, CHSRF/CIHR Chair Program in APN

Sharon Kaasalainen, RN, PhD

Associate Professor, School of Nursing, McMaster University
Career Scientist, Ontario Ministry of Health and Long-Term Care
Affiliate Faculty, CHSRF/CIHR Chair Program in APN
Hamilton, ON

Ivy Bourgeault, PhD

CIHR/Health Canada Research Chair in Health Human Resource Policy
Scientific Director, Population Health Improvement Research Network and Ontario Health

Human Resources Research Network
Professor, Interdisciplinary School of Health Sciences, University of Ottawa
Ottawa, ON

Alba DiCenso, RN, PhD
CHSRF/CIHR Chair in APN
Director, Ontario Training Centre in Health Services & Policy Research
Professor, Nursing and Clinical Epidemiology & Biostatistics, McMaster University
Hamilton, ON

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; Turriss 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" (Bussi eres 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; Vlastic 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; Munding 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; Vlastic 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.

Acknowledgements

The synthesis from which this work was derived was made possible through joint funding by the Canadian Health Services Research Foundation and the Office of Nursing Policy of Health Canada. We thank the librarians who conducted searches of the electronic databases, Tom Flemming at McMaster University and

Angella Lambrou at McGill University. Chris Cotoi and Rick Parrish in the Health Information Research Unit (HIRU) at McMaster University created the electronic literature extraction tool for the project. We thank all those who took time from their busy schedules to participate in key informant interviews and focus groups. The following staff members provided excellent support: Heather Baxter, Renee Charbonneau-Smith, R. James McKinlay, Dianna Pasic, Julie Vohra, Rose Vonau and Brandi Wasyluk. Special thanks go to our advisory board, roundtable participants and Dr. Brian Hutchison for their thoughtful feedback and suggestions.

References

- Allard, M. and S. Durand. 2006. "L'infirmière praticienne spécialisée: un nouveau rôle de pratique infirmière avancée au Québec." *Perspective Infirmière: Revue Officielle de l'Ordre des Infirmières et Infirmiers du Québec* 3(5): 10–6.
- Allen, J.K., R.S. Blumenthal, S. Margolis, D.R. Young, E.R. Miller and K. Kelly. 2002. "Nurse Case Management of Hypercholesterolemia in Patients with Coronary Heart Disease: Results of a Randomized Clinical Trial." *American Heart Journal* 144(4): 678–86.
- Almost, J. and H.K. Laschinger. 2002. "Workplace Empowerment, Collaborative Work Relationships, and Job Strain in Nurse Practitioners." *Journal of the American Academy of Nurse Practitioners* 14(9): 408–20.
- Association of Registered Nurses of Prince Edward Island. 2007. *Standards of Practice for Nurse Practitioners*. Charlottetown, PEI: Association of Registered Nurses of Prince Edward Island. Retrieved November 15, 2010. <<http://www.arnpei.ca/images/documents/Standards%20of%20Practice%20for%20Nurse%20Practitioners.pdf>>.
- Beaulieu, M-D., M. Rioux, G. Rocher, L. Samson and L. Boucher. 2008. "Family Practice: Professional Identity in Transition. A Case Study of Family Medicine in Canada." *Social Science and Medicine* 67(7): 1153–63.
- Bryant-Lukosius, D., N. Carter, K. Kilpatrick, R. Martin-Misener, F. Donald, S. Kaasalainen, P. Harbman, I. Bourgeault, A. DiCenso. 2010. "The Clinical Nurse Specialist Role in Canada." *Canadian Journal of Nursing Leadership* 23(Special Issue December): 140–66.
- Bryant-Lukosius, D. and A. DiCenso. 2004. "A Framework for the Introduction and Evaluation of Advanced Practice Nursing Roles." *Journal of Advanced Nursing* 48(5): 530–40.
- Bryant-Lukosius, D., A. DiCenso, G. Browne and J. Pinelli. 2004. "Advanced Practice Nursing Roles: Development, Implementation, and Evaluation." *Journal of Advanced Nursing* 48(5): 519–29.
- Bryant-Lukosius, D., E. Green, M. Fitch, G. Macartney, L. Robb-Blenderman, S. McFarlane, K. Bosompra, A. DiCenso, S. Matthews and H. Milne. 2007. "A Survey of Oncology Advanced Practice Nurses in Ontario: Profile and Predictors of Job Satisfaction." *Canadian Journal of Nursing Leadership* 20(2): 50–68. Retrieved November 15, 2010. <<http://www.longwoods.com/content/18902>>.
- Bussières, J. and M. Parent. 2004. "Histoire de la Spécialisation en Santé au Québec – 1re Partie." *Pharmactuel* 37(1): 39–50.
- Canadian Health Services Research Foundation. 2006. *Teamwork in Healthcare: Promoting Effective Teamwork in Healthcare in Canada*. Ottawa, ON: Canadian Health Services Research Foundation. Retrieved December 31, 2010. <http://www.chsrf.ca/Migrated/PDF/ResearchReports/CommissionedResearch/teamwork-synthesis-report_e.pdf>.
- Canadian Institute for Health Information. 2008a. *Regulated Nurses: Trends, 2003 to 2007: Registered Nurses, Licensed Practical Nurses, Registered Psychiatric Nurses*. Ottawa, ON: Canadian Institute for Health Information. Retrieved November 15, 2010. <http://secure.cihi.ca/cihiweb/products/nursing_report_2003_to_2007_e.pdf>.

- Canadian Institute for Health Information. 2008b. *The Cost of Acute Care Hospital Stays by Medical Condition in Canada, 2004–2005*. Ottawa, ON: Canadian Institute for Health Information. Retrieved November 15, 2010. <http://secure.cihi.ca/cihiweb/products/nhex_acutecare07_e.pdf>.
- Canadian Institute for Health Information. 2010. *Regulated Nurses: Canadian Trends, 2004 to 2008- Updated February 2010*. Ottawa, ON: Canadian Institute for Health Information. Retrieved November 15, 2010. <http://secure.cihi.ca/cihiweb/products/regulated_nurses_2004_2008_en.pdf>.
- Canadian Institute for Health Information and Canadian Nurses Association. 2006. *The Regulation and Supply of Nurse Practitioners in Canada: 2006 Update*. Ottawa, ON: Canadian Institute for Health Information. Retrieved November 15, 2010. <http://secure.cihi.ca/cihiweb/products/The_Nurse_Practitioner_Workforce_in_Canada_2006_Update_final.pdf>.
- Canadian Nurses Association. 2006. *Report of 2005 Dialogue on Advanced Nursing Practice*. Ottawa, ON: CNA. Retrieved November 15, 2010. <http://www.cna-aiic.ca/CNA/documents/pdf/publications/Report_2005_ANP_Dialogue_e.pdf>.
- Canadian Nurses Association. 2008. *Advanced Nursing Practice: A National Framework*. Ottawa, ON: CNA. Retrieved November 15, 2010. <http://www.cna-aiic.ca/CNA/documents/pdf/publications/ANP_National_Framework_e.pdf>.
- Canadian Nurses Association. 2009a. *Position Statement: The Clinical Nurse Specialist*. Ottawa, ON: CNA. Retrieved November 15, 2010. <http://www.cna-aiic.ca/CNA/documents/pdf/publications/PS104_Clinical_Nurse_Specialist_e.pdf>.
- Canadian Nurses Association. 2009b. *Position Statement: The Nurse Practitioner*. Ottawa, ON: CNA. Retrieved November 15, 2010. <http://www.cna-nurses.ca/CNA/documents/pdf/publications/PS_Nurse_Practitioner_e.pdf>.
- Canam, C. 2005. "Illuminating the Clinical Nurse Specialist Role of Advanced Practice Nursing: A Qualitative Study." *Canadian Journal of Nursing Leadership* 18(4): 70–89. Retrieved November 15, 2010. <<http://www.longwoods.com/content/17836>>.
- Carter, N., R. Martin-Misener, K. Kilpatrick, S. Kaasalainen, F. Donald, D. Bryant-Lukosius, P. Harbman, I. Bourgeault and A. DiCenso. 2010. "The Role of Nursing Leadership in Integrating Clinical Nurse Specialists and Nurse Practitioners in Healthcare Delivery in Canada." *Canadian Journal of Nursing Leadership* 23(Special Issue December): 167–85.
- Chang, E., J. Daly, A. Hawkins, J. McGirr, K. Fielding, L. Hemmings, A. O'Donoghue and M. Dennis I. 1999. "An Evaluation of the Nurse Practitioner Role in a Major Rural Emergency Department." *Journal of Advanced Nursing* 30(1): 260–8.
- College and Association of Registered Nurses of Alberta. 2005. *Health Professions Act: Standards for Registered Nurses in the Performance of Restricted Activities*. Edmonton, AB: College and Association of Registered Nurses of Alberta. Retrieved November 15, 2010. <<http://www.nurses.ab.ca/Carna-Admin/Uploads/HPA%20-%20Restricted%20Activities.pdf>>.
- College and Association of Registered Nurses of Alberta. 2010. *Nurse Practitioner Examination Fact Sheet*. Edmonton, AB: College and Association of Registered Nurses of Alberta. Retrieved November 15, 2010. <[http://www.nurses.ab.ca/Carna-Admin/Uploads/NP%20Exam%20Fact%20Sheet%202010%20\(2\).pdf](http://www.nurses.ab.ca/Carna-Admin/Uploads/NP%20Exam%20Fact%20Sheet%202010%20(2).pdf)>.
- College of Nurses of Ontario. 2007. *Registered Nurse in the Extended Class: Scope of Practice Review. Submission to the Health Professions Regulatory Advisory Council*. Toronto, ON: College of Nurses of Ontario. Retrieved November 15, 2010. <<http://www.hprac.org/en/resources/hprac-nursing.CNOSubmissiontoHPRACAugust2007vFinal.pdf>>.
- College of Nurses of Ontario. 2009a. *Legislation and Regulation: RHPA: Scope of Practice, Controlled Acts Model*. Toronto, ON: College of Nurses of Ontario. Retrieved November 15, 2010. <http://www.cno.org/Global/docs/policy/41052_RHPAscope.pdf>.
- College of Nurses of Ontario. 2009b. *Practice Guidelines. Directives*. Toronto, ON: College of Nurses of Ontario. Retrieved November 15, 2010. <http://www.cno.org/Global/docs/prac/41019_MedicalDirectives.pdf>.
- College of Registered Nurses of British Columbia. 2008. *Health Professions Act, Nurses (Registered)*

- and Nurse Practitioner Regulation, CRNBC Bylaws. Vancouver, BC: College of Registered Nurses of British Columbia. Retrieved November 15, 2010. <<http://www.crnbc.ca/downloads/324.pdf>>.
- College of Registered Nurses of British Columbia. 2009. *Scope of Practice of Nurse Practitioners (Adult). Standards, Limits and Conditions*. Vancouver, BC: Retrieved November 15, 2010. <<http://www.crnbc.ca/downloads/430.pdf>>.
- Cooper, M.A., G.M. Lindsay, S. Kinn and I.J. Swann. 2002. "Evaluating Emergency Nurse Practitioner Services: A Randomized Controlled Trial." *Journal of Advanced Nursing* 40(6): 721–30.
- Cummings, G.G., K. Fraser and D.S. Tarlier. 2003. "Implementing Advanced Nurse Practitioner Roles in Acute Care: An Evaluation of Organizational Change." *Journal of Nursing Administration* 33(3): 139–45.
- Cummings, G. and M. McLennan. 2005. "Advanced Practice Nursing: Leadership to Effect Policy Change." *Journal of Nursing Administration* 35(2): 61–6.
- D'Amour, D., D. Morin, C. Dubois, M. Lavoie-Tremblay, C. Dallaire and G. Cyr. 2007. *Évaluation de l'implantation du programme d'intéressement au titre d'infirmière praticienne spécialisée*. Retrieved November 15, 2010. Montreal, PQ: Centre Ferasi. <http://www.ferasi.umontreal.ca/fra/07_info/Rapport%20MSSS%20%20IPS.pdf>.
- D'Amour, D., D. Tremblay and M. Proulx. 2009. "Déploiement de nouveaux rôles infirmiers au Québec et pouvoir médical." *Recherches Sociographiques* 50(2): 301–20.
- Davies, E. and S. Fox-Young. 2002. "Validating a Scope of Practice Decision-Making Framework." *International Journal of Nursing Studies* 39(1): 85–93.
- Dawes, H.A., T. Docherty, I. Traynor, D.H. Gilmore, A.G. Jardine and R. Knill-Jones. 2007. "Specialist Nurse Supported Discharge in Gynaecology: A Randomised Comparison and Economic Evaluation." *European Journal of Obstetrics & Gynecology and Reproductive Biology* 130(2): 262–70.
- Desrosiers, G. 2007. "La Loi 90: des retombés pour l'ensemble des infirmières." [editorial] *Perspectives Infirmières* 4(3): 6–8. Retrieved November 15, 2010. <<http://www.oiiq.org/uploads/periodiques/Perspective/vol4no3/editoF.pdf>>.
- Desrosiers, G. 2009. "Toutes les infirmières sont importantes, mais alors, pourquoi encore parler des infirmières praticiennes spécialisées?" [editorial] *Le Journal* 6(3): 2.
- DiCenso, A. 1998. "The Neonatal Nurse Practitioner." *Current Opinion in Pediatrics* 10(2): 151–5.
- DiCenso, A., D. Bryant-Lukosius, I. Bourgeault, R. Martin-Misener, F. Donald, J. Abelson, S. Kaasalainen, K. Kilpatrick, S. Kioke, N. Carter and P. Harbman. 2010a. *Clinical Nurse Specialists and Nurse Practitioners in Canada: A Decision Support Synthesis*. Ottawa, ON: Canadian Health Services Research Foundation. Retrieved December 31, 2010. <<http://www.chsrf.ca/SearchResultsNews/10-06-01/b9cb9576-6140-4954-aa57-2b81c1350936.aspx>>.
- DiCenso, A., R. Martin-Misener, B. Bryant-Lukosius, I. Bourgeault, K. Kilpatrick, F. Donald, S. Kaasalainen, P. Harbman, N. Carter, S. Kioke, J. Abelson, R.J. McKinlay, D. Pasic, B. Wasyluk, J. Vohra and R. Charbonneau-Smith. 2010b. "Advanced Practice Nursing in Canada: Overview of a Decision Support Synthesis." *Canadian Journal of Nursing Leadership* 23(Special Issue December): 15–34.
- Donald, F., D. Bryant-Lukosius, R. Martin-Misener, S. Kaasalainen, K. Kilpatrick, N. Carter, P. Harbman, I. Bourgeault and A. DiCenso. 2010a. "Clinical Nurse Specialists and Nurse Practitioners: Title Confusion and Lack of Role Clarity." *Canadian Journal of Nursing Leadership* 23(Special Issue December): 189–210.
- Donald, F., R. Martin-Misener, D. Bryant-Lukosius, K. Kilpatrick, S. Kaasalainen, N. Carter, P. Harbman, I. Bourgeault and A. DiCenso. 2010b. "The Primary Healthcare Nurse Practitioner Role in Canada." *Canadian Journal of Nursing Leadership* 23(Special Issue December): 88–113.
- Ettner, S.L., J. Kotlerman, A. Afifi, S. Vazirani, R.D. Hays, M. Shapiro and M. Cowan. 2006. "An Alternative Approach to Reducing the Costs of Patient Care? A Controlled Trial of the Multi-disciplinary Doctor–Nurse Practitioner (MDNP) Model." *Medical Decision Making* 26(1): 9–17.
- Fanta, K., B. Cook, R.A. Falcone Jr, C. Ricketts, L. Schweer, R.L. Brown and V.F. Garcia. 2006. "Pediatric Trauma Nurse Practitioners Provide Excellent Care with Superior Patient Satisfaction for Injured Children." *Journal of Pediatric Surgery* 41(1): 277–81.

Fédération des médecins résidents du Québec. 2003a. *Avis consultatif de la FMRQ déposé dans le cadre des activités du comité conjoint consultatif paritaire OIIQ-CMQ concernant l'infirmière praticienne en cardiologie – Volet chirurgie cardiaque*. Montreal, QC: Fédération des médecins résidents du Québec. Retrieved November 15, 2010. <http://www.fmrq.qc.ca/formation-medicale/document-sATelecharger_telecharger.cfm?noDocument=95>.

Fédération des médecins résidents du Québec. 2003b. *Avis consultatif de la FMRQ déposé dans le cadre des activités du comité conjoint consultatif paritaire OIIQ-CMQ concernant l'infirmière praticienne en néonatalogie*. Montreal, PQ: Fédération des médecins résidents du Québec. Retrieved November 15, 2010. <http://www.fmrq.qc.ca/formation-medicale/documentsATelecharger_telecharger.cfm?noDocument=93>.

Fédération des médecins résidents du Québec. 2003c. *Avis consultatif de la FMRQ déposé dans le cadre des activités du comité conjoint consultatif paritaire OIIQ-CMQ concernant l'infirmière praticienne en néphrologie*. Montreal, PQ: Fédération des médecins résidents du Québec. Retrieved November 15, 2010. <http://www.fmrq.qc.ca/formation-medicale/documentsATelecharger_telecharger.cfm?noDocument=94>.

Fédération des médecins résidents du Québec. 2004. *Avis consultatif de la FMRQ déposé dans le cadre des activités du comité conjoint consultatif paritaire OIIQ-CMQ concernant la création du rôle de l'infirmière praticienne spécialisée en cardiologie – Volet cardiologie médicale au Québec*. Montreal, QC: Fédération des médecins résidents du Québec. Retrieved November 15, 2010. <http://www.fmrq.qc.ca/formation-medicale/documentsATelecharger_telecharger.cfm?noDocument=97>.

Ganz, P.A., G.A. Greendale, L. Petersen, L. Zibecchi, B. Kahn and T.R. Belin. 2000. "Managing Menopausal Symptoms in Breast Cancer Survivors: Results of a Randomized Controlled Trial." *Journal of the National Cancer Institute* 92(13): 1054–64.

Gordon, D.W. 1974. "Health Maintenance Service: Ambulatory Patient Care in the General Medical Clinic." *Medical Care* 12(8): 648–58.

Gosselin, S. 2001. *Les infirmières praticiennes à l'urgence. Prise de position de l'Association des Médecins d'Urgence du Québec*. Retrieved December 31, 2010. <http://web.amuq.qc.ca/assets/memoires-et-positions/Les_Infirmieres_praticiennes_a_l_urgence_3.pdf?phpMyAdmin=i%2CheT%2CBhLk96mm75DwfLeUjab>.

Gouvernement du Québec. 2010. *Règlement sur les classes de spécialités de l'Ordre des infirmières et infirmiers du Québec pour l'exercice des activités visées à l'Article 36.1 de la Loi sur les Infirmières et les Infirmiers. Éditeur officiel du Québec*. Retrieved November 15, 2010. <<http://www2.publicationsduquebec.gouv.qc.ca/home.php#>>.

Government of Ontario. *Regulated Health Professions Act*. Chapter 18, Section 27, Restrictions. Retrieved November 15, 2010. Toronto, ON: <http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_91r18_e.htm#BK24>.

Government of Yukon. 2009. *Bill No. 73 Act to Amend the Registered Nurses Profession Act*. Retrieved November 15, 2010. <http://www.legassembly.gov.yk.ca/pdf/bill73_32..pdf>.

Griffiths, H. 2006. "Advanced Nursing Practice: Enter the Nurse Practitioner." *Nursing BC* 38(2): 12–6.

Harris, R., J. Wilson-Barnett and P. Griffiths. 2007. "Effectiveness of Nursing-Led Inpatient Care for Patients with Post-Acute Health Care Needs: Secondary Data Analysis from a Programme of Randomized Controlled Trials." *Journal of Evaluation in Clinical Practice* 13(2): 198–205.

Harwood, L., B. Wilson, A.P. Heidenheim and R.M. Lindsay. 2004. "The Advanced Practice Nurse–Nephrologist Care Model: Effect on Patient Outcomes and Hemodialysis Unit Team Satisfaction." *Hemodialysis International* 8(3): 273–82.

Hass, J. 2006. "Nurse Practitioners Now Able to Work across Canada." *Canadian Medical Association Journal* 174(7): 911–2.

Health Professions Regulatory Advisory Council. 2007a. *Scope of Practice for Registered Nurses in the Extended Class (Nurse Practitioners): A Jurisdictional Review*. Toronto, ON: Health Professions Regulatory Advisory Council. Retrieved November 15, 2010. <<http://www.hprac.org/en/projects/resources/hprac-nursing-jurisdictionalreview.november2007.final.pdf>>.

- Health Professions Regulatory Advisory Council. 2007b. *Scope of Practice for Registered Nurses in the Extended Class (Nurse Practitioners): A Jurisdictional Review Appendix A*. Toronto, ON: Health Professions Regulatory Advisory Council. Retrieved November 15, 2010. <<http://www.hprac.org/en/projects/resources/hprac-APPENDIXA-newcoverandindex.nov0507.pdf>>.
- Hill, J., H.A. Bird, R. Harmer, V. Wright and C. Lawton. 1994. "An Evaluation of the Effectiveness, Safety and Acceptability of a Nurse Practitioner in a Rheumatology Outpatient Clinic." *British Journal of Rheumatology* 33(3): 283–8.
- Hogan, S. and S. Hogan. 2002. *How Will Ageing of the Population Affect Health Care and Costs in the Foreseeable Future?* Discussion Paper No. 25 presented to the Commission on the Future of Health Care of Canada. Retrieved November 15, 2010. <http://epe.lac-bac.gc.ca/100/200/301/pco-bcp/commissions-ef/future_health_care-ef/discussion_paper-e/no25/25_e.pdf>.
- Howie-Esquivel, J. and D.K. Fontaine. 2006. "The Evolving Role of the Acute Care Nurse Practitioner in Critical Care." *Current Opinion in Critical Care* 12(6): 609–13.
- Hravnak, M., R. Kleinpell, K. Magdic and J. Guttendorf. 2009. "The Acute Care Nurse Practitioner." In A.B. Hamric, J.A. Spross and C.M. Hanson, eds., *Advanced Practice Nursing: An Integrated Approach* pp. 403–36. St. Louis, MO: Saunders.
- Hudson, B., B. Hardy, M. Henwood and G. Wistow. 1997. "Working across Professional Boundaries: Primary Health Care and Social Care." *Public Money and Management* 17(4): 25–30.
- Humbert, J., F. Legault, S. Dahrouge, B. Halabisky, G. Boyce, W. Hogg and S. Amos. 2007. "Integration of Nurse Practitioners into a Family Health Network." *The Canadian Nurse* 103(9): 30–4.
- Hunsberger, M., A. Mitchell, S. Blatz, B. Paes, J. Pinelli, D. Southwell, S. French and R. Soluk. 1992. "Definition of an Advanced Nursing Practice Role in the NICU: The Clinical Nurse Specialist/ Neonatal Practitioner." *Clinical Nurse Specialist* 6(2): 91–6.
- Hurlock-Chorostecki, C., M. van Soeren and S. Goodwin. 2008. "The Acute Care Nurse Practitioner in Ontario: A Workforce Study." *Canadian Journal of Nursing Leadership* 21(4): 100–16. Retrieved November 15, 2010. <<http://www.longwoods.com/content/20291>>.
- Irvine, D., S. Sidani, H. Porter, L. O'Brien-Pallas, B. Simpson, L. McGillis Hall, J. Fraydon, A. DiCenso, D. Redelmeir and L. Nagel. 2000. "Organizational Factors Influencing Nurse Practitioners' Role Implementation in Acute Care Settings." *Canadian Journal of Nursing Leadership* 13(3): 28–35. Retrieved November 15, 2010. <<http://www.longwoods.com/content/16304>>.
- Jensen, L. and K. Scherr. 2004. "Impact of the Nurse Practitioner Role in Cardiothoracic Surgery." *Dynamics* 15(3): 14–19.
- Jones, L. and D. Way. 2004. *Practice Component: Literature Review Report. Delivering Primary Health Care to Canadians: Nurse Practitioners and Physicians in Collaboration*. Ottawa, ON: Canadian Nurses Association & Canadian Nurse Practitioner Initiative. Retrieved November 15, 2010. <http://206.191.29.104/documents/pdf/Models_of_Collaboration_Literature_Review_e.pdf>.
- Kahn, K.B. and E.F. McDonough. 1997. "An Empirical Study of the Relationships among Co-location, Integration, Performance, and Satisfaction." *Journal of Product Innovation Management* 14(3): 161–78.
- Keizer, M., J. Ridley, W. Vlasic, P. Doyle-Pettypiece, D. Bisnaire, F. Krawiec and C. McKay-Roberts. 2000. "Medical Directives in Advanced Practice Nursing." *The Canadian Nurse* 96(1): 22–6.
- Kilpatrick, K. 2008. "Praxis and the Role Development of the Acute Care Nurse Practitioner." *Nursing Inquiry* 15(2): 116–26.
- Knaus, V.L., S. Felten, S. Burton, P. Fobes and K. Davis. 1997. "The Use of Nurse Practitioners in the Acute Care Setting." *Journal of Nursing Administration* 27(2): 20–7.
- Knott, A., E. Dieperink, M.L. Willenbring, S. Heit, J.N. Durfee, M. Wingert, J.R. Johnson, P. Thuras and S.B. Ho. 2006. "Integrated Psychiatric/Medical Care in a Chronic Hepatitis C Clinic: Effect on Antiviral Treatment Evaluation and Outcomes." *American Journal of Gastroenterology* 101: 2254–62.
- Krichbaum, K. 2007. "GAPN Postacute Care Coordination Improves Hip Fracture Outcomes." *Western Journal of Nursing Research* 29(5): 523–44.

- MacDonald, M., R. Schreiber, H. Davidson, B. Pauly, L. Moss, J. Pinelli, S. Regan, J. Crickmore and C. Hammond. 2005. "Moving towards Harmony: Exemplars of Advanced Nursing Practice for British Columbia." *Canadian Journal of Nursing Leadership*. Retrieved November 15, 2010. <<http://www.longwoods.com/content/19030>>.
- Madgic, K. and M.Q. Rosenweig. 1997. "Integrating the Acute Care Nurse Practitioner in Clinical Practice: Strategies for Success." *Dimensions of Critical Care Nursing* 16(4): 208–14.
- Martin-Misener, R., D. Bryant-Lukosius, P. Harbman, F. Donald, S. Kaasalainen, N. Carter, K. Kilpatrick and A. DiCenso. 2010. "Education of Advanced Practice Nurses in Canada." *Canadian Journal of Nursing Leadership* 23(Special Issue December): 61–84.
- McNamara, S., V. Giguère, L. St-Louis and J. Boileau. 2009. "Development and Implementation of the Specialized Nurse Practitioner Role: Use of the PEPPA Framework to Achieve Success." *Nursing and Health Sciences* 11(3): 318–25.
- Mitchell, A., J. Watts, R. Whyte, S. Blatz, G.R. Norman, G.H. Guyatt, D. Southwell, M. Hunsberger and B. Paes. 1991. "Evaluation of Graduating Neonatal Nurse Practitioners." *Pediatrics* 88(4): 789–94.
- Mitchell, A., J. Watts, R. Whyte, S. Blatz, G. Norman, D. Southwell, M. Hunsberger, B. Paes and J. Pinelli. 1995. "Evaluation of an Educational Program to Prepare Neonatal Nurse Practitioners." *Journal of Nursing Education* 34(6): 286–9.
- Mitchell-DiCenso, A., G. Guyatt, M. Marrin, R. Goeree, A. Willan, D. Southwell, S. Hewson, B. Paes, P. Rosenbaum, M. Hunsberger and A. Baumann. 1996a. "A Controlled Trial of Nurse Practitioners in Neonatal Intensive Care." *Pediatrics* 98(6): 1143–8.
- Mitchell-DiCenso, A., J. Pinelli and D. Southwell. 1996b. "Introduction and Evaluation of an Advanced Nursing Practice Role in Neonatal Intensive Care." In K. Kelly, ed., *Outcomes of Effective Management Practice* pp. 171–86. Thousand Oaks, CA: Sage Publications.
- Morneault, L. 2002. "La pratique avancée en néonatalogie." *Infirmière du Québec* 10(2): 51–5.
- Munding, M.O., R.L. Kane, E.R. Lenz, A.M. Totten, W.Y. Tsai, P.D. Cleary, W.T. Friedewald, A.L. Sia and M.L. Shelanski. 2000. "Primary Care Outcomes in Patients Treated by Nurse Practitioners or Physicians: A Randomized Trial." *JAMA: The Journal of the American Medical Association* 283(1): 59–68.
- Nhan, J. and S. Zuidema. 2007. "Nurse Practitioners in the Northern Alberta Renal Program." *Canadian Association of Nephrology Nurses and Technologists Journal* 17(2): 48–50.
- Nurse Practitioners' Association of Ontario. 2007. *Critical Legislative and Regulatory Steps to Improve Access to Care for Patients and Facilitate Integration of Nurse Practitioners in Ontario*. Toronto, ON: Nurse Practitioners' Association of Ontario. Retrieved November 15, 2010. <<http://www.npao.org/uploads/members/HPRAC%20Submission%20Referral%20Extended%20Class%20Nurse%20final.pdf>>.
- O'Cathain, A. 2009. "Reporting Mixed Methods Projects." In S. Andrew and E.J. Halcomb, eds, *Mixed Methods Research for Nursing and the Health Sciences* pp. 135–58. Oxford: Wiley-Blackwell.
- Oelke, N.D., D. White, J. Besner, D. Doran, L.M. Hall and P. Giovanetti. 2008. "Nursing Workforce Utilization: An Examination of Facilitators and Barriers on Scope of Practice." *Canadian Journal of Nursing Leadership* 21(1): 58–71. Retrieved November 15, 2010. <<http://www.longwoods.com/content/19691>>.
- Ontario Ministry of Health and Long-Term Care. 2009a. Bill 179. *An Act to Amend Various Acts Related to Regulated Health Professions and Certain Other Acts*. Retrieved November 15, 2010. <http://www.ontla.on.ca/bills/bills-files/39_Parliament/Session1/b179ra.pdf>.
- Ontario Ministry of Health and Long-Term Care. 2009b. Health Bulletins: Minister Considering Seeking Approval of Certain Regulation Proposals to Improve Access to Care for Ontarians. Retrieved November 15, 2010. <http://www.health.gov.on.ca/en/news/bulletin/2009/regulation_accesstocare.aspx>.
- Ordre des infirmières et infirmiers du Québec. 2009. *Les infirmières praticiennes spécialisées: un rôle à propulser, une intégration à accélérer. Bilan et perspectives de pérennité*. Montreal, QC: Ordre des infirmières et infirmiers du Québec. Retrieved November 15, 2010. <http://www.oiiq.org/uploads/publications/memoires/IPS_Memoire.pdf>.

Ordre des infirmières et infirmiers du Québec and Collège des médecins du Québec. 2006a. *Étendue des activités médicales exercées par l'infirmière praticienne spécialisée en cardiologie*. Montreal, QC: Ordre des infirmières et infirmiers du Québec and Collège des médecins du Québec. Retrieved November 15, 2010. <http://www.oiiq.org/uploads/publications/autres_publications/IPS_Cardiologie.pdf>.

Ordre des infirmières et infirmiers du Québec and Collège des Médecins du Québec. 2006b. *Étendue des activités médicales exercées par l'infirmière praticienne spécialisée en néonatalogie*. Montreal, QC: Ordre des infirmières et infirmiers du Québec and Collège des médecins du Québec. Retrieved November 15, 2010. <<http://www.cmq.org/MedecinsMembres/ActivitesPartageables/~media/091D457EFDBC4B0FB16FB01E2E832CB7.ashx>>.

Ordre des infirmières et infirmiers du Québec and Collège des médecins du Québec. 2006c. *Étendue des activités médicales exercées par l'infirmière praticienne spécialisée en néphrologie*. Montreal, QC: Ordre des infirmières et infirmiers du Québec and Collège des médecins du Québec. Retrieved November 15, 2010. <<http://www.cmq.org/MedecinsMembres/ActivitesPartageables/~media/5FBC547C21324E6EA4CEE2DC1D6D0860.ashx>>.

Ordre des infirmières et infirmiers du Québec and Collège des médecins du Québec. 2006d. *Lignes directrices sur les modalités de la pratique de l'infirmière praticienne spécialisée*. Montreal, QC: Ordre des infirmières et infirmiers du Québec and Collège des Médecins du Québec. Retrieved November 15, 2010. <http://www.oiiq.org/uploads/publications/autres_publications/IPS_Generale.pdf>.

Ordre des pharmaciens du Québec. 2007. *Guide de rédaction et d'approbation des règles d'utilisation des médicaments en établissement de santé*. Montreal, QC. Retrieved November 15, 2010. <http://www.opq.org/fr/media/docs/guides-normes/guide_opq_-_version_finale__16_mai_.pdf>.

Paes, B., A. Mitchell, M. Hunsberger, S. Blatz, J. Watts, P. Dent, J. Sinclair and D. Southwell. 1989. "Medical Staffing in Ontario Neonatal Intensive Care Units." *Canadian Medical Association Journal* 140(11): 1321–6.

Patterson, C., J. Pinelli and B. Markham. 1999. "Nurse Practitioners in Canadian Health Care: We're Not out of the Woods Yet!" In C. Patterson, ed., *Visions and Voices: The Nurse Practitioner Today* (2nd ed.) pp. 1–22. Troy, ON: Newgrange Press.

Pioro, M.H., C.S. Landefeld, P.F. Brennan, B. Daly, R.H. Fortinsky, U. Kim and G.E. Rosenthal. 2001. "Outcomes-Based Trial of an Inpatient Nurse Practitioner Service for General Medical Patients." *Journal of Evaluation in Clinical Practice* 7(1): 21–33.

Powers, M.J., A. Jalowiec and P.A. Reichelt. 1984. "Nurse Practitioner and Physician Care Compared for Nonurgent Emergency Room Patients." *The Nurse Practitioner* 9(2): 39, 42, 44–5 passim.

Pringle, D. 2007. "Nurse Practitioner Role: Nursing Needs It." [editorial] *Canadian Journal of Nursing Leadership* 20(2): 1–5. Retrieved November 15, 2010. <<http://www.longwoods.com/content/18895>>.

Rawl, S.M., K.L. Easton, S. Kwiatkowski, D. Zemen and B. Burczyk. 1998. "Effectiveness of a Nurse-Managed Follow-up Program for Rehabilitation Patients after Discharge." *Rehabilitation Nursing* 23(4): 204–9.

Reay, T., K. Golden-Biddle and K. Germann. 2003. "Challenges and Leadership Strategies for Managers of Nurse Practitioners." *Journal of Nursing Management* 11(6): 396–403.

Reay, T., K. Golden-Biddle and K. Germann. 2006. "Legitimizing a New Role: Small Wins and Microprocesses of Change." *Academy of Management Journal* 49(5): 977–98.

Reddy, M.C., P. Dourish and W. Pratt. 2001. "Coordinating Heterogeneous Work: Information and Representation in Medical Care." In *Proceedings of European Conference on Computer-Supported Cooperative Work* pp. 239–58. September 16–21, 2001. Bonn, Germany.

Réseau québécois de la cardiologie tertiaire. 2003. *Rapport du Comité de l'infirmière spécialisée en cardiologie tertiaire adopté par le Comité directeur du RQCT. Assise de la demande de création de la spécialité pour le rôle de l'infirmière praticienne spécialisée en cardiologie*. Retrieved November 15, 2010. <<http://www.rqct.qc.ca/download.php?f=c3f64c3a91c28e07b721db82b9013e7f>>.

Richmond, T. S. and D. Becker. 2005. "Creating an Advanced Practice Nurse-Friendly Culture: A Marathon, Not a Sprint." *AACN Clinical Issues* 16(1): 58–66.

- Roots, A. and M. MacDonald. 2008, September 17–20. *3 Years down the Road: Exploring the Implementation of the NP role in British Columbia, Canada*. Poster presented at the 5th International Council of Nursing, International Nurse Practitioner/Advanced Practice Nursing (INP/APN) Conference in Toronto.
- Roschkov, S., D. Rebeyka, A. Comeau, J. Mah, K. Scherr, M. Smigorowsky and J. Stoop. 2007. "Cardiovascular Nurse Practitioner Practice: Results of a Canada-wide Survey." *Canadian Journal of Cardiovascular Nursing* 17(3): 27–31.
- Rosenthal, L. and J. Guerrasio. 2009. "Acute Care Nurse Practitioner as Hospitalist: Role Description." *AACN Advanced Clinical Care* 20(2): 133–6.
- Royal College of Nursing. 2008. *Advanced Nurse Practitioners – An RCN Guide to the Advanced Nurse Practitioner Role, Competencies and Programme Accreditation*. London: Royal College of Nursing. Retrieved November 15, 2010. <http://www.rcn.org.uk/__data/assets/pdf_file/0003/146478/003207.pdf>.
- Rutherford, G. and Rutherford Consulting Group Inc. 2005. *Education Component: Literature Review Report*. Ottawa, ON: *Canadian Nurses Association and Canadian Nurse Practitioner Initiative*. Retrieved November 15, 2009. <http://www.cna-nurses.ca/CNA/documents/pdf/publications/cnpi/tech-report/section5/03_Education_AppendixB.pdf>
- Sakr, M., J. Angus, J. Perrin, C. Nixon, J. Nicholl and J. Wardrope. 1999. "Care of Minor Injuries by Emergency Nurse Practitioners or Junior Doctors: A Randomised Controlled Trial." *Lancet* 354(9187): 1321–6.
- Sarkissian, S. and R. Wennberg. 1999. "Effects of the Acute Care Nurse Practitioner Role on Epilepsy Monitoring Outcomes." *Outcomes Management for Nursing Practice* 3(4): 161–6.
- Schober, M. and F. Affara. 2006. *Advanced Nursing Practice*. Oxford: Blackwell Publishing.
- Schreiber, R., M. MacDonald, B. Pauly, H. Davidson, J. Crickmore, L. Moss, J. Pinelli and S. Regan. 2005a. "Singing from the Same Songbook: The Future of Advanced Nursing Practice in British Columbia." *Canadian Journal of Nursing Leadership* 18(2). Retrieved November 15, 2010. <<http://www.longwoods.com/content/19027>>.
- Schreiber, R., M. MacDonald, B. Pauly, H. Davidson, J. Crickmore, L. Moss, J. Pinelli, S. Regan and C. Hammond. 2005b. "Singing in Different Keys: Enactment of Advanced Nursing Practice in British Columbia." *Canadian Journal of Nursing Leadership* 18(2). Retrieved November 15, 2010. <<http://www.longwoods.com/content/19026>>.
- Shapiro, D. and N. Rosenberg. 2002. "Acute Care Nurse Practitioner Collaborative Practice Negotiation." *AACN Advanced Practice in Critical Care* 13(3): 470–8.
- Shebesta, K.F., B. Cook, C. Rickets, L. Schweer, R.L. Brown, V.F. Garcia and R.A. Falcone. 2006. "Pediatric Trauma Nurse Practitioners Increase Bedside Nurses' Satisfaction with Pediatric Trauma Patient Care." *Journal of Trauma Nursing* 13(2): 66–9.
- Sidani, S. 2008. "Effects of Patient-Centered Care on Patient Outcomes: An Evaluation." *Research and Theory for Nursing Practice: An International Journal* 22(1): 24–37.
- Sidani, S., D. Doran, H. Porter, S. LeFort, L.L. O'Brien-Pallas, C. Zahn, H. Laschinger and S. Sarkissian. 2006a. "Processes of Care: Comparison between Nurse Practitioners and Physician Residents in Acute Care." *Canadian Journal of Nursing Leadership* 19(1): 69–85. Retrieved November 15, 2010. <<http://www.longwoods.com/content/18050>>.
- Sidani, S., D. Doran, H. Porter, S. LeFort, L.L. O'Brien-Pallas, C. Zahn and S. Sarkissian. 2006b. "Outcomes of Nurse Practitioners in Acute Care: An Exploration." *Internet Journal of Advanced Nursing Practice* 8(1). Retrieved November 15, 2010. <http://www.ispub.com/journal/the_internet_journal_of_advanced_nursing_practice/volume_8_number_1_2/article/outcomes_of_nurse_practitioners_in_acute_care_an_exploration.html>.
- Sidani, S. and D. Irvine. 1999. "A Conceptual Framework for Evaluating the Nurse Practitioner Role in Acute Care Settings." *Journal of Advanced Nursing* 30(1): 58–66.
- Sidani, S., D. Irvine, H. Porter, L. O'Brien-Pallas, B. Simpson, L. McGillis Hall, L. Nagel, J. Graydon, A. DiCenso and D. Redelmeir. 2000. "Practice Patterns of Acute Care Nurse Practitioners." *Canadian*

Journal of Nursing Leadership 13(3): 6–12. Retrieved November 15, 2010. <<http://www.longwoods.com/content/16301>>.

Simpson, B. 1997. “An Educational Partnership to Develop Acute Care Nurse Practitioners.” *Canadian Journal of Nursing Administration* 10(1): 69–84.

Stables, R.H., J. Booth, J. Welstand, A. Wright, O.J. Ormerod and W.R. Hodgson. 2004. “A Randomised Controlled Trial to Compare a Nurse Practitioner to Medical Staff in the Preparation of Patients for Diagnostic Cardiac Catheterisation: The Study of Nursing Intervention in Practice (SNIP).” *European Journal of Cardiovascular Nursing* 3(1): 53–9.

Thompson, T.L. and M. Dykeman. 2007. “Nurse Practitioners in Canadian Heart Failure Clinics: Evidence to Support Their Presence on Healthcare Teams.” *Canadian Journal of Nursing Leadership* 20(2): 80–93. Retrieved November 15, 2010. <<http://www.longwoods.com/content/18904>>.

Turris, S., S. Knoll, B. Hayhoe, T. Freeman, M. Wilson, F. Forster and M. Hornack. 2005. “Nurse Practitioners in British Columbia.” *The Canadian Nurse* 101(3): 20–4.

van Soeren, M. H. and V. Micevski. 2001. “Success Indicators and Barriers to Acute Nurse Practitioner Role Implementation in Four Ontario Hospitals.” *AACN Clinical Issues* 12(3): 424–37.

Vlasic, V., C. McKay, D. Bisnaire, P. Doyle-Pettypiece, M. Keizer, F. Krawiec and J. Ridley. 1998. “Bridging the Gap: Medical Directives for Acute Care Nurse Practitioners.” *Canadian Journal of Nursing Administration* 11(3): 9–24.

Wall, S. 2006. “Living with Grey: Role Understandings Between Clinical Nurse Educators and Advanced Practice Nurses.” *Canadian Journal of Nursing Leadership* 19(4): 57–71. Retrieved November 15, 2010. <<http://www.longwoods.com/content/18602>>.

Wearing, J., J. Black and K. Kline. 2010. “A Model of Nurse Practitioner Regulation: Principles Underpinning a Three-Registration Category Approach.” *Canadian Journal of Nursing Leadership* 22(4): 40–49. Retrieved November 15, 2010. <<http://www.longwoods.com/content/21596>>.

Williams, D. and S. Sidani. 2001. “An Analysis of the Nurse Practitioner Role in Palliative Care.” *Canadian Journal of Nursing Leadership* 14(4): 13–9. Retrieved November 15, 2010. <<http://www.longwoods.com/content/19131>>.

Yukon Registered Nurses Association. 2009. *Legislation Opens Door for Nurse Practitioners*. [press release] Whitehorse, YK: Yukon Registered Nurses Association. Retrieved November 15, 2010. <<http://www.yrna.ca/assets/NPLegrelease.pdf>>.