

Running head: ENHANCED NURSING ROLES WITH THE POTENTIAL TO  
IMPROVE HEALTH CARE IN CANADA

Enhanced Nursing Roles with the Potential to Improve Health Care in Canada

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## **EXECUTIVE SUMMARY**

This report identifies four new and emerging nursing roles and links these four roles to current and future health needs of the Canadian population. This report was produced for the Office of Nursing Policy (ONP), Health Canada.

The four roles discussed in this report are: nurse practitioner, nurse endoscopist, nurse practitioner in anesthesia care, and RN (Registered Nurse) First Call. All of these roles are either expanded or advanced nursing practice roles and have been recently introduced into the Canadian health care system. Expanded roles are roles that extend beyond the usual or regulated scope of registered nursing practice, while advanced nursing practice roles are those which require an advanced level of clinical practice. In Canada, these roles require graduate level education and a broad depth of nursing knowledge. Through researching each of these four roles, it was found that each could contribute to a specific area of the health care system.

This report has two main deliverables, a Literature Review and Recommendations regarding potential future actions for ONP. To complete the Literature Review, peer-reviewed journal articles, reports produced by organizations, such as the Canadian Nurses Association, as well as internal documents, and media articles were researched. The review also includes an international scan, which identifies nursing roles present in the United States and the United Kingdom that are similar to the four roles available in Canada. To complete the Recommendations, I analyzed the Literature Review and supporting literature, as well as the mission, mandate and key activities of ONP.

The nurse practitioner role is an advanced nursing practice role, with nurse practitioners regulated in every province and territory except the Yukon. As of 2008, there were 1,669 nurse practitioners working in Canada. Nurse practitioners are registered nurses (RNs) with a significant amount of experience, as well as additional education and competencies. Nurse practitioners have the ability to order and interpret diagnostic tests, prescribe certain medications, diagnose and treat common illnesses, and refer patients to physicians. Nurse practitioners currently practice in the United States and the United Kingdom. The nurse practitioner role has been proven effective, notably through American and British studies. Nurse practitioners can increase the points of access to the health care system and could be useful specifically for health promotion and chronic condition management.

The nurse endoscopist role is an expanded role that is currently only available in Ontario. As of 2007 there were 13 nurse endoscopists practicing in Ontario as part of a study to test the feasibility of using RNs for flexible sigmoidoscopy. Nurse endoscopists are RNs who are able to perform certain procedures that are within the traditional scope of practice of a gastroenterologist. While endoscopy can involve many areas of the body, this nursing role focuses mainly on the gastrointestinal tract. Nurse endoscopists currently practice in the United States and the United Kingdom. The role has been proven effective, notably through Australian, British and Canadian studies. Nurse endoscopists can help Canadians access gastroenterological services. In Ontario, and Canada, nurse

endoscopists can help with access to colorectal screening procedures such as flexible sigmoidoscopy.

The nurse practitioner in anesthesia care role is an advanced practice role that has been developed for use in Ontario. As of 2009, there were four nurse practitioners enrolled in the first nurse practitioner in anesthesia care program. Nurse practitioners in anesthesia care take part in the provision of anesthesia in an anesthesia care team setting. Nurses within this role have the ability to care for patients under anesthesia in the areas of pre-operative, peri-operative, post-operative, and ambulatory care. Anesthesia services are currently available from nurses in the United States and non-physicians in the United Kingdom. Due to the unique nature of anesthesia care, this role has not been definitively proven effective at this time and more research needs to be conducted before conclusions can be drawn. Nurse practitioners in anesthesia care can help Canadians access needed procedures in a more timely manner.

The RN First Call role is an expanded role that is available in rural British Columbia. As of 2005 there were 230 nurses working in the RN First Call role. Nurses in this expanded role are trained to diagnose and treat patients with simple and minor health problems who come to the emergency department. This role is not the same as the nurse practitioner role. A role similar to that of RN First Call is currently available in the United Kingdom. There does not appear to be an equivalent role in the United States. There is a lack of research regarding the effectiveness of the RN First Call role. The RN First Call role may help alleviate congestion in rural emergency rooms.

In addition to the Literature Review, there is a section discussing two challenges that can impact the introduction of new nursing roles into the Canadian health care system. The first challenge is how the new nursing roles are viewed by other health professionals. The second challenge is the possibility of a perceived loss of the traditional nursing role in responding to health needs.

The roles discussed in this report are intended to increase the efficiency and accessibility of Canada's public health care system.

Based on the findings of the Literature Review, four Recommendations were made.

1. Share the results of this paper, information regarding the four nursing roles discussed, with stakeholders.
2. Continue to encourage the idea of inter-professional collaboration and the creation of collaborative teams.
3. Investigate, if feasible, ways to inform the public regarding emerging nursing roles within the health system.
4. Continue to scan the environment for more emerging nursing roles to inform policy development. As well, in the coming years, more research will need to be conducted on the usefulness, effectiveness, and support for these four nursing roles and others.

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## **INTRODUCTION**

The Canadian health care system is currently facing a challenge in delivering timely health care to Canadians. Health care, long a topic of media attention, has received even more focus within the past few years. In particular, the Canadian media has been focusing on the lack of access to health care services for many segments of the Canadian population. For example, many Canadians wait an unacceptable amount of time for routine surgeries and many Canadians across the country are without a family physician (The Canadian Press, 2007; Gulli & Lunau, 2008). Recently, the Canadian health care system has also faced renewed attacks from politicians and commentators south of the border, as the United States grapples with its own health care dilemmas (CTV.ca News Staff, 2009).

With the Canadian health care system facing significant issues regarding access to care, length of waits, increased demands for access coupled with systemic financial constraints, and a growing shortage of health care professionals, such as physicians and nurses, new roles will need to be examined and implemented to alleviate the strain currently faced by the system.

This project was undertaken to provide the client, ONP, with a report describing the current status of emerging nursing roles within the Canadian health care system. A background paper on this topic will allow ONP to be ahead of developments in this area and should help support future decisions regarding policy direction in the area of nursing.

The key deliverables of this report are a Literature Review, detailing four nursing roles found in Canada, and Recommendations regarding possible future steps for ONP. The four roles chosen for the report, nurse practitioner, nurse endoscopist, nurse practitioner in anesthesia care, and RN First Call, are all emerging roles for nurses.

This report is organized into five main sections: Background, Methodology, Literature Review, Discussion, and Conclusion and Recommendations. The Background section outlines the role and history of ONP, and provides background on the Canadian health care system, nursing, and nursing regulation. The Methodology section describes the methods used, and discusses their strengths and weaknesses. The Literature Review is the main deliverable of the report; it contains a section for each of the four roles researched: nurse practitioner (NP), nurse endoscopist, nurse practitioner in anesthesia care (NP-A), and RN First Call. The Discussion addresses practical issues related to introducing new practitioner roles in the health care system. The Conclusion and Recommendations summarizes the findings of the Literature Review and makes recommendations concerning the four emerging nurse roles examined in the report.

## **BACKGROUND**

This section of the report contains information on the client, ONP, as well as background information on nursing in Canada.

### **The Office of Nursing Policy**

ONP is a division within the Strategic Policy Branch at Health Canada. Created in 1999, ONP acts as a bridge between nursing organizations and their perspective and the federal government and its perspective and policy development. ONP is committed to “optimizing the contributions of nurses in improving the health of Canadians” (Health Canada, 2009).

### **The current health care system in Canada**

The health care system in Canada is currently under strain; a situation which is expected to worsen in the coming years unless more is done to remedy the situation. In the past few years, the provincial and federal governments have been focusing their attention on wait times, in a bid to increase access to the health care system (Canadian Institute for Health Information [CIHI], 2009a, p. 20). The issue of wait times is linked to the number of health care providers in Canada and the organization of services.

The health care system has been facing a health care professional shortage, which has been exacerbated by growing demands on the system from an aging population (CIHI, 2009a, p. 40). According to the Canadian Nurses Association (CNA), if the current trend in nursing is not changed, Canada will experience a shortage in nursing of around 31 percent by 2016 (Villeneuve & MacDonald, 2006, p. 78). While this shortage has been building for many years, it has recently been compounded by the fact that much of both the medical and nursing workforce are comprised of baby-boomers who are now reaching retirement age (Schofield & Beard, 2005). The void left by these retiring workers will be very difficult to fill.

The current and expected shortage of nurses in Canada is due to a complex web of issues, including previous government policies, recruitment and retention, retirement, and an aging population with an increasing complexity of health needs (Carlin, 2008; CIHI, 2008b; Chan, 2002). These problems will require a new way of thinking about health care delivery to ensure that care continues to be available to those who need it.

### **Nursing in Canada**

In 2008, there were 341,431 regulated nurses in Canada, working in all aspects of the health care system, from rural and remote areas, to major city centre hospitals (CIHI, 2010, p. 2).

Table 1

*Regulated Nursing Workforce in Canada by Type, 2008*

	Number	Percentage of Total
Registered Nurse (RN)	261,889	76.7
Licensed Practical Nurse (LPN)	74,380	21.8
Registered Psychiatric Nurse (RPN)	5,162	1.5
Total	341,431	100

Source: CIHI, 2010, p. 3.

*Note:* Licensed Practical Nurses are known as Registered Practical Nurses (RPN) in Ontario. Registered Psychiatric Nurses are only registered to practice in the four western provinces.

**Nursing regulation in Canada**

In Canada, each of the provinces and territories are responsible for creating legislation and regulations that frames the practice of nursing within their respective province or territory. While the provinces and territories have autonomy within their jurisdictions for the regulation of nurses, provinces and territories consult and collaborate with each other regarding the current issues surrounding nursing in Canada. There has long been discussion regarding NPs, for example, being allowed to prescribe narcotics in Canada. This is just the tip of the issue, however. There are many other nursing occupations whose current and potential roles in the health care system could be explored further. With the growing health care crisis in Canada there is a strong need to utilize nurses to their full potential and increase access to the health care system.

**What is a regulated nurse?**

A regulated nurse is a nurse whose profession is governed through a regulatory body, which sets professional standards, code of ethics, and examinations to ensure safety and uniformity within the profession (Canadian Nurses Association [CNA], 2007b, p. 1). In Canada, all practicing nurses are self-regulated, which means that “the profession governs itself through a regulatory body and with the involvement of its professionals” (CNA, 2007b, p. 1). The three different types of nurses practicing within Canada; Licensed Practical Nurses, Registered Psychiatric Nurses, and Registered Nurses; are

generally regulated by separate professional organizations, specific for each type of nurse (CNA, 2007b, p. 1). Nursing within Canada is also governed by legislation found in the provincial and territorial statutes (CNA, 2007b, p.1-2). This legislation describes which activities are within the nursing scope of practice (CNA, 2007b, p. 3). In some cases, the legislation applies to all health professions working within the province or territory (CNA, 2007b, p. 2). In Canada, the “use of titles such as nurse, registered nurse, RN, and nurse practitioner, [are] protected by legislation,” and only persons registered with a nursing regulatory body are permitted to use one of the titles (CNA, 2007b, p. 1).

### **What is a registered nurse?**

Registered Nurses (RN) are defined by the Canadian Nurses Association (CNA) as “self-regulated health-care professionals who work autonomously and in collaboration with others. RNs enable individuals, families, groups, communities and populations to achieve their optimal level of health. RNs coordinate health care, deliver direct services and support clients in their self-care decisions and actions in situations of health, illness, injury and disability in all stages of life. RNs contribute to the health-care system through their work in direct practice, education, administration, research and policy in a wide array of settings” (CNA, 2007a, p. 6).

In Canada, registered nurses are either diploma or baccalaureate prepared. Newfoundland and Labrador, New Brunswick, Nova Scotia, Prince Edward Island, Ontario, Saskatchewan, Alberta, and British Columbia now require a baccalaureate degree as entry to practice (CNA, 2010a; College and Association of Registered Nurses of Alberta, 2009). The education that RNs receive at the baccalaureate level is “broadly based and includes a breadth of knowledge and skills from nursing and related disciplines that enables RNs to meet complex client health needs in practice environments that are constantly evolving” (CNA, 2007a, p. 18).

### **What is a registered nurse’s scope of practice?**

The registered nurse scope of practice “refers to the activities that RNs are educated and authorized to perform as set out in legislation and complemented by standards, guidelines and policy positions of provincial and territorial nursing regulatory bodies” (CNA, 2007a, p. 13). The scope of practice describes all of the activities that the registered nurse profession is capable of performing (CNA, 2010). Each regulatory body defines the scope of practice for its members. Some roles and responsibilities fall within the scope of practice of more than one health professional group, which “enhances the mutual understanding of roles and facilitates the development of quality interdisciplinary collaborative teams” (CNA, 2007a, p. 13).

The scope of practice of individual registered nurses is decided by the setting in which they practice (CNA, 2010b). When a nursing scope of practice is broad and flexible, it allows nurses to expand their roles and learn new skills, while “at the same time

[providing] a reasonable degree of direction on the boundaries of the discipline” (CNA, 1993, p. 6).

### **Expanded role vs. advanced role**

As mentioned above, this paper outlines and discusses the status of four registered nursing roles in Canada. Two of the roles discussed are expanded nursing roles, nurse endoscopist and RN First Call, and two of the roles are advanced nursing roles, nurse practitioner and nurse practitioner in anesthesia care. The terms expanded role and advanced nursing role are often used both within Canada and internationally, but there is confusion and disagreement regarding the meaning of the terms (MacDonald, Schreiber, & Davis, 2005, p. 3). The confusion and disagreement regarding these terms results primarily from a difference in scope of practice between registered nurses in different countries, and even within different provinces and territories of Canada. Problems related to the scope of practice should be cleared up once all the Canadian provinces and territories standardize their registered nurse and nurse practitioner educational programs and working environment (MacDonald, Schreiber, & Davis, 2005, p. 4 & 5). This would ensure that all nurses are working under the same designation regardless of their geographical location.

#### *Expanded role*

Expanded role refers to a “nursing practice that extends beyond the usual or regulated scope of registered nursing practice” (MacDonald, Schreiber, & Davis, 2005, p.4). According to MacDonald, Schreiber, and Davis, some of the roles that are known as expanded or extended are better characterized by the term specialized (MacDonald, Schreiber, & Davis, 2005, p. 4). The terms expanded and extended are sometimes used when describing advanced nursing practice, specifically the nurse practitioner (MacDonald, Schreiber, & Davis, 2005, p. 4).

#### *Advanced nursing practice<sup>1</sup>*

The Canadian Nurses Association defines advanced nursing practice (ANP) as, “an umbrella term describing an advanced level of clinical nursing practice that maximizes the use of graduate educational preparation, in-depth nursing knowledge and expertise in meeting the health needs of individuals, families, groups, communities and populations. It involves analyzing and synthesizing knowledge; understanding, interpreting and

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<sup>1</sup> This term advanced nursing practice should not be confused with advanced practice nursing. While these two terms are similar and are often used interchangeably, they are distinct terms (MacDonald, Schreiber, & Davis, 2005, p. 3). The CNA *Advanced Nursing Practice National Framework* states that, “individuals in advanced nursing practice roles are referred to... as advanced practice nurses” (CNA, 2008a, p. 6). According to Styles and Lewis, “advanced practice nursing (APN) includes but is not synonymous with nor limited to advanced nursing practice (ANP) just as the nursing profession is not limited to direct practice (as cited in MacDonald, Schreiber, & Davis, 2005, p. 3).

applying nursing theory and research; and developing and advancing nursing knowledge and the profession as a whole” (CNA, 2007c, p. 1). As of 2002, the CNA has deemed that a graduate degree in nursing is the minimum education level required for an advanced nursing practice role (CNA, 2008a, p. 2). There are currently two advanced nursing practice roles in Canada, the nurse practitioner and the clinical nurse specialist (CNA, 2008a, p. 6). Some nurses in Canada are practicing in a combined CNS/NP role, which brings together certain aspects of both advanced practice roles (Bourgeault et al., 2008, p. 34, 35).

## **METHODOLOGY**

This report, created for ONP, will undertake a qualitative analysis of emerging nursing roles in the context of the Canadian health care system. The report has two main deliverables, a Literature Review and Recommendations. The Literature Review can be found in the Findings section of this report. The Literature Review describes the current position of four emerging and potential nursing roles within the Canadian health care system.

The Literature Review describes the four different nursing roles, as well as legislation governing the roles. The review includes an international scan, which identifies nursing roles present in the United States and the United Kingdom that are similar to the four roles available in Canada. The international scan will identify how the United States and the United Kingdom are utilizing their nursing resource, and also which roles they have developed and the level of development. The United States and the United Kingdom were chosen because they are both English-speaking countries of comparable development. Only these two countries were chosen due to space constrictions. Other possible countries to research included Australia and New Zealand.

To complete the Literature Review, I reviewed peer-reviewed journal articles, reports produced by organizations, such as the Canadian Nurses Association, as well as internal documents, and media articles. I also reviewed relevant legislation, and the scope of practice for the four roles.

The Recommendations section provides suggestions to the client, ONP, on possible next steps regarding the four nursing roles discussed in the Literature Review. To complete the Recommendations, I analyzed the Literature Review and supporting literature, as well as the mission, mandate and key activities of ONP.

The strengths of the approach used for the deliverables include: the availability of a large and varied amount of qualitative sources, and that it fulfils the needs of the client by providing information on a variety of nursing roles in the Canadian health system.

The weaknesses of the approach used for the deliverables include: a lack of extensive source material on certain roles due to their recent or limited implementation within the Canadian health care system. Another weakness of the approach is a lack of current and up-to-date data on emerging nursing roles, due to the time lag between the collection of data by various organizations and its availability to the public.

## **FINDINGS: LITERATURE REVIEW**

This section contains one of the main deliverables of the report. It describes the four new and emerging nursing roles identified earlier, nurse practitioner, nurse endoscopist, nurse practitioner in anesthesia care, and RN First Call. For each of the roles, there are six sub-sections:

- What is the role - describes the skills and competencies of the role
- Which countries currently use the role - describes whether the role is available in the United States and the United Kingdom
- Has the role been proven effective - describes various studies that have been carried out on the role and the consensus on its effectiveness and safety
- Would this role be an advanced nursing practice role - discusses whether the role is considered an advanced practice role and whether it requires changes to be made to legislation
- Why would this role be useful in Canada - discusses why the introduction of the role in the Canadian health care system could be beneficial
- Support and opposition - discusses which organizations and provincial governments have given or withheld their support for the role

Each of the sub-sections will help in exploring each of the four roles. The final sub-section is particularly important, as it has been suggested by various researchers (Brodsky & Van Dijk, 2008; Clarke & Mass, 1998) that in order for nursing role expansion to successfully take place, there must be communication, agreement, and collaboration between the different health professions.

### **Nurse Practitioner**

Nurse practitioners (NP) were first introduced into the Canadian health care system over forty-five years ago (Thille & Rowan, 2008, p. 1). The NP role was recognized by policy-makers in the 1970's as a profession that could be used to provide care to remote locations (CNA, 2008b, p. 6). In the 1980's however the majority of NP initiatives in the country had disappeared, due to many factors including "a perceived oversupply of physicians in urban areas,... the absence of provincial/territorial legislation and regulation, little public awareness of the role, and weak support from policy makers and other health professionals" (DiCenso & Bryant-Lukosius, 2010, p. 2). Since that time, the role has been developed and implemented in Canada, with every province and territory, except the Yukon,<sup>2</sup> legislating the profession and utilizing nurse practitioners to some extent (CIHI, 2008b, p. 44, CIHI, 2008b, p. 46). Today, the role continues to evolve to fill needs within the health care system and, in the process draw attention and controversy (Hodges, 2009). As of 2008, there were 1,669 nurse practitioners working throughout Canada, with the most practicing in Ontario and Alberta (CIHI, 2010, p. 38).

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<sup>2</sup> As of December 2009, legislation is in place in the Yukon for Nurse Practitioners. Regulations are expected, but are not currently in place (Yukon Registered Nurses Association, 2009).

*What is a nurse practitioner?*

NPs are RNs with a significant amount of experience, as well as additional education and competencies (Bourgeault et al., 2008, p. 5). NPs have the education and skills necessary to order and interpret diagnostic tests, prescribe certain medications, and diagnose and treat common illnesses (CNA, n.d., p. 1). NPs also have the ability to refer patients to physicians (CNA, n.d., p. 3). NPs are able to practice in many different settings, including hospitals, community clinics and health care centers, medical practices, nursing homes and in a home care setting (CNA, n.d., p.1). There are two types of NPs in Canada, primary health care NPs and acute care NPs (DiCenso & Bryant-Lukosius, 2010, p. 1). This report focuses on primary health care NPs. While NP programs throughout the country provide the skills necessary to undertake all of the activities noted above, the ability of NPs to practice to their full scope of practice is dependent on the legislation in their province or territory (CNA, n.d., p. 1).

The NP role should not be confused with the clinical nurse specialist (CNS) role. The CNS and the NP are both advanced practice nursing roles that developed in Canada to fill needs within the health care system.

The Canadian Nurses Association describes the CNS as “a registered nurse who holds a master’s or doctoral degree in nursing and has expertise in a clinical nursing specialty” (CNA, 2009b, p. 1). The CNS uses their advanced education and expertise in a chosen clinical nursing specialty to provide and improve client care, and to support nurses by providing clinical teaching and mentoring (CNA, 2009b, p. 1). The CNS focuses on providing nursing care and guidance for specialized client populations and providing leadership and advice to nurses “managing complex-care” (Bourgeault et al., 2008, p. 10). In general, CNSs spend their time focused more on research, education, and organizational leadership roles, while NPs spend the majority of their time focused on direct clinical care and patient education (Bourgeault et al., 2008, p. 8). While CNSs are allowed to perform the same controlled activities as registered nurses, NPs have expanded authority and legislation, which allows them to perform activities such as ordering drugs and diagnosing patients (Bourgeault et al., 2008, p. 13; CNA, n.d., p. 1).

Within the practice environment, the CNS and NP role responsibilities can overlap, and it can be difficult to identify differences between the two roles (Bourgeault et al., 2008, p. 6). Some nurses also choose to practice in a combined CNS/NP role, which involves providing the education and mentoring role to nurses, while also providing direct patient care (Bourgeault et al., 2008, p. 6).

*Which countries currently use the role?*

The NP role has been adopted by many countries, including the United States, Australia, the United Kingdom, and New Zealand (Thille & Rowan, 2008, p.1).

United States

In the U.S., NPs currently practice in all fifty states (American Academy of Nurse Practitioners [AANP], 2007). In addition, NPs are able to prescribe medications in all fifty states and controlled substances in all but three states (AANP, 2009). In the U.S. the NP role is considered an advanced practice role, with the majority of NPs holding either a masters or doctoral degree and a significant amount of clinical training (AANP, 2007). The first NP education program was initiated at the University of Colorado in 1965 (AANP, 2007). Since that time the number of NPs practicing in the United States has grown, from 44,200 in 1995, to 125,000 in 2009 (American College of Physicians [ACP], 2009, p. 4; AANP, 2007). NPs represent the largest nonphysician group of primary care providers in the U.S., with close to 600 million patients visiting a NP every year (ACP, p. 4; AANP, 2007).

#### United Kingdom

The NP role was formally introduced into the U.K. health care system in 1992 (Royal College of Nursing [RCN], 2008, p. 2). In the U.K., the term “advanced nurse practitioner” has begun to replace the term “nurse practitioner”; these two terms refer to the same advanced nursing role (RCN, 2008, p. 2). As of 2008, the titles nurse practitioner and advanced nurse practitioner are not protected by any legislation, which means that nurses without the proper education level can use the title without holding the qualifications required of a nurse practitioner (RCN, 2008, p. 4-5). Work is being undertaken to remedy this situation (RCN, 2008, p. 5). Within the current system, NPs are able to prescribe medications when authorized (RCN, 2008, p. 13). Those wishing to prescribe medication must be qualified as Nurse Independent Prescribers (Department of Health, 2009).

#### *Has the role been proven effective?*

Patient safety and the quality of NP provided care are consistently brought up when discussing whether to increase access to NPs both in Canada, and abroad (Hodges, 2009; Mullinix & Bucholtz, 2009, p. 93). Much research has been undertaken comparing the quality of care provided by NPs and general practice physicians, and patient perceptions of each. Multiple studies have shown that the quality of care provided by NPs is equivalent to that provided by physicians (Horrocks, Anderson, & Salisbury, 2002; Munding et al., 2000). Some studies have also noted that patients are more satisfied with the consultations provided by NPs, than consultations provided by physicians (Horrocks, Anderson, & Salisbury, 2002, p. 821). Horrocks, Anderson and Salisbury (2002) believe that this difference may have been due to training and consultation skill differences between NPs and physicians, or the extra time that the NPs were able to spend with their patients in consultations, which the physicians were not able to (p. 822). Munding, Kane, Lenz et al. (2000) note in their study that while NPs have been evaluated for twenty-five years in the U.S. for their effectiveness at providing care, until their study there were no evaluations of NPs and physicians in comparable practices on a larger scale (p. 68).

#### *Would this role be an advanced nursing practice role? Does it require changes to regulation?*

The NP role is an advanced nursing practice role, recognized as such by the CNA (CNA, 2008b, p. 6). As of 2002, this role requires at minimum a graduate degree in nursing (CNA, 2008b, p. 3). The CNA has made available three examinations to test the level of competence and skills of potential NPs (CNA, 2009a). These exams are the CNA Canadian Nurse Practitioner Examination: Family/All Ages; the American Nurses Credentialing Center (ANCC) Pediatric Nurse Practitioner Exam; and the ANCC Adult Nurse Practitioner Exam (CNA, 2009a). According to CNA, these three examinations “are currently administered by most nursing regulatory authorities” in Canada (CNA, 2009a).

Legislation for NPs has existed in all the provinces and territories in Canada except the Yukon, since 2006 (CIHI, 2008b, p. 44). Legislation is necessary for NPs because the NP role has additional responsibilities not practiced within the RN role (CNA, 2008b, p. 20).

*Why would this role be useful in Canada?*

The foremost reason for utilizing NPs in the Canadian health care system would be the resulting increase in points of public access to the system. Throughout the world, NPs have improved “patient and community access to health services” (CNA, 2002, p. 1). When NPs were introduced into the Canadian health care system forty-five years ago, the role was introduced partly as a result of physician shortages (Thille & Rowan, 2008, p. 1). The NP role is again a focus of attention because of the lack of primary care physicians (Boyle, 2010). By the end of 2011/2012, the Ontario government will have opened twenty-five NP-led clinics, with a focus on under-served communities (Government of Ontario, 2009; Boyle, 2010).

Due to their background as RNs, NPs are effective at health promotion and chronic condition management. It has been shown that NPs are able to effectively help patients with chronic conditions such as diabetes, obesity, and hypertension (Canadian Health Services Research Foundation, 2002, p. 2). Diabetes is a common chronic condition in Canada, which is slowly increasing in prevalence (CIHI, 2009b, p. 1). Without adequate treatment, diabetes can lead to serious problems such as kidney damage, blindness, and amputation (CIHI, 2009b, p. 7).

A 2009 report by the Canadian Institute of Health Information (CIHI) entitled *Diabetes Care Gaps and Disparities in Canada* examined “the extent to which people with diabetes received recommended care to prevent complications” (CIHI, 2009b, p. 1). Of the four recommended tests measured in the study, HbA1c test, urine protein test, dilated eye exam, and foot exam, only 32% of the Canadian adult population received all four of the exams (CIHI, 2009b, p. 8). The study noted that it is important for diabetics and their health care professionals to conduct annual foot exams to lower the risk of lesions and subsequent amputations. Foot exams are recommended more frequently for those diabetics in the high risk category (CIHI, 2009b, p. 15). Despite the importance of foot exams, only 51% of diabetics had their feet checked (CIHI, 2009b, p. 13).

The Canadian Diabetes Association notes that family physicians are usually the first and at times the principal medical contact for a person with diabetes (Canadian Diabetes Association, 2008, p. s20). However, it is estimated that 4.1 million Canadians over the age of twelve do not have a family physician (The Primary Care Wait Time Partnership, 2009, p. 11). The *Diabetes Care Gaps and Disparities in Canada* report noted that those diabetics that had a regular medical doctor were more likely to receive the various tests required (CIHI, 2009b, p. 10, 11, 13). Alan Katz, the research director of the Department of Family Medicine at the University of Manitoba notes that the four tests studied in the report do not need to be administered by a doctor (Picard, 2009).

In the coming years, the prevalence of diabetes in Canada is expected to rise, due in part to obesity, sedentary lifestyles, unhealthy diets, and the average age of the population (CIHI, 2009b, p. 4). Ohinmaa, Jacobs, Simpson, & Johnson (2004) estimate that by 2010 there will be approximately 2 million people living with diabetes in Canada, and that by 2016, this number will rise to 2.4 million (p. 119). Diabetes care and management presents an important area for NPs to impact the health care system. Having NPs available in communities to provide health care, emphasizing the importance of health promotion and health prevention, allows physicians to see more serious cases (Poliakov, 2009).

### *Support and opposition*

While NPs have been practicing in Canada for over forty-five years, their role has still not been completely accepted or integrated into the health care system (Thille & Rowan, 2008).

The question of what is the appropriate role for a NP in the health care system has come to a head in Ontario, where the government has begun to open health care clinics led by NPs (Government of Ontario, 2009). In 2007, the Ontario government opened a NP led clinic in Sudbury (Hodges, 2009). According to the Registered Nurses Association of Ontario (RNAO), since then, the NP-led clinic has been able to serve 2,000 patients who otherwise would not have consistent access to a primary health care provider, and would instead rely on walk-in clinics or emergency rooms for care (Hodges, 2009).

In addition to support from the Ontario government, the introduction of enhanced levels of care by NPs has support from the CEO of the Ontario Hospital Association (Closson, 2009). While the Ontario government and Ontario Hospital Association support the use of NPs within the Ontario health care system, the same is not true of the Ontario Medical Association (OMA). The OMA states that “not only [do NP led clinics] serve a small group of patients, but we have not seen any solid evidence proving its ability to provide high, quality, cost-effective care” (Ontario Medical Association [OMA], 2008). One year later, the OMA released another statement regarding the introduction of additional NP-led clinics by the government. The OMA states that NP-led clinics are “unproven and untested” and that the “level and quality of care that a doctor can provide should not be substituted for expediency” (OMA, 2009). The OMA only supports the use of NPs in a collaborative care model, which includes different health professionals working together in the same clinic (OMA, 2009).

In Canada, the prevailing public belief has traditionally been that NPs were a type of health professional to be used only when a doctor could not be found (Canadian Health Services Research Foundation [CHSRF], 2002). New research has shown, however, that the majority of Canadians would accept being seen by a NP instead of their family doctor (Tobin, 2009; CHSRF, 2010). In addition, 72% of survey respondents believed that the role of NP should be expanded (Tobin, 2009).

Limited information was identified regarding the support, or lack thereof, for nurse practitioners in other provinces and territories.

### **Nurse Endoscopist**

Nurse endoscopists were first introduced in the U.S. over thirty years ago (Spencer & Ready, 1977). Since then, the role has also become an important feature of the U.K. health care system (Pathmakanthan, Murray, Smith, Heeley, & Donnelly, 2001, p. 710). In 2005, a Cancer Care Ontario task force on large bowel endoscopic services delivered a report that encouraged the use of nurses in performing flexible sigmoidoscopies (Grinspun, 2006). As of 2007, thirteen nurse endoscopists have been practicing in Ontario as part of a Ontario based study to test the feasibility of using RNs for flexible sigmoidoscopy (HealthForceOntario, 2007; Ogilvie, 2010).

#### *What is a nurse endoscopist?*

Nurse endoscopists are RNs who are able to perform certain procedures that are within the traditional scope of practice of a gastroenterologist (Wait Time Alliance, 2007, p. 14). While endoscopy can involve many areas of the body, this nursing role focuses mainly on the gastrointestinal tract (MacDonald, Schreiber, & Davis, 2005, p. 8). Endoscopy is a medical procedure that uses a tube-like instrument called an endoscope to look at the inside of the body (American Cancer Society, 2007). Nurse endoscopists primarily perform sigmoidoscopies, but are able to perform colonoscopies with additional training (MacDonald, Schreiber, & Davis, 2005, p. 8). Flexible sigmoidoscopy is a procedure that focuses on the rectum and the colon from only “the anal verge to the splenic flexure using a flexible fiberoptic or video gastrointestinal scope” (Canadian Society of Gastroenterology Nurses and Associates, 2000). Flexible sigmoidoscopies are ideal for nurses to perform because they are safer to perform than colonoscopies, with a perforation rate of 1 per 10,000, compared to colonoscopy with a perforation rate of 1 per 1,000 (Rabeneck & Paszat, 2003, p. 206). As well, flexible sigmoidoscopy does not require conscious sedation or patient monitoring (Rabeneck & Paszat, 2003, p. 206).

Nurse endoscopists should not be confused with endoscopy assistants or endoscopy nurses, who assist the physician during endoscopy procedures (Maruthachalam, Stoker, Nicholson, & Horgan, 2006, p. 558; Working Party of the British Society of Gastroenterology, 2005, p. 5).

*Which countries currently use the role?*

United States

Nurse endoscopists have been practicing in the U.S. since the 1970's (Spencer & Ready, 1977). Their utilization at the Mayo Clinic was the first published description of endoscopy performed by a nurse (Gardiner, 2009, p. 208). At the Mayo Clinic, nurses were seen to be the logical choice for endoscopic role expansion because they were "formally trained in anatomy and pathology and [had] experience in the psychologic aspects of caring for patients" (Spencer & Ready, 1977, p. 95). Nurse endoscopists have traditionally been able to perform flexible sigmoidoscopies (Ahnén & Lieberman, 2009, p. 697). With a growing need for diagnosing and preventing colon cancer, there is now a debate on whether nurses should be allowed to perform colonoscopies as well (Ahnén & Lieberman, 2009).

United Kingdom

Nurse endoscopists practice widely in the U.K. (Pathmakanthan et al., 2001, p. 710), and have become "an indispensable part of the endoscopy team" (Maruthachalam, Stoker, Nicholson, & Horgan, 2006, p. 557). The role first evolved over a decade ago and has since become widespread (MacDonald, Schreiber, & Davis, 2005, p. 8). As of 2005, there were over 200 nurse endoscopists working in the U.K. (Working Party of the British Society of Gastroenterology, 2005, p. 3). The use of nurse endoscopists in the U.K. has helped reduce wait times for procedures, and provides a high level of care and safety to patients (Pathmakanthan et al., 2001, p. 710). The National Health Service, the U.K.'s publically funded health service (National Health Service, 2009), supports the development of nurse endoscopy (MacDonald, Schreiber, & Davis, 2005, p. 8). In the U.K., nurse endoscopists do perform colonoscopies, a procedure which is rarely performed by nurse endoscopists in other countries, and is not performed by the nurse endoscopists practicing in Ontario (Koornstra, Corporaal, Giezen-Beintema, de Vries, & van Dullemen, 2009, p. 689).

*Has the role been proven effective?*

It has been proven in multiple studies that the use of nurse endoscopists to perform screening procedures for colorectal cancer is a safe and feasible method of delivering care to a community (Shapero et al., 2007; Williams et al., 2009). Some studies have found that nurses performing endoscopic procedures have been more thorough than physicians when performing the procedure and had more satisfied patients (Williams et al., 2009; Morcom, Dunn, & Luxford, 2005).

*Would this role be an advanced nursing practice role? Does it require changes to regulation?*

The nurse endoscopist role would not be an advanced nursing practice role (MacDonald, Schreiber, & Davis, 2005, p. 9). Nurses working as nurse endoscopists would be performing "an expanded role within a specialized area of practice" (MacDonald, Schreiber, & Davis, 2005, p. 9). In Ontario, it was determined that performing flexible

sigmoidoscopies with biopsy was within the existing RN scope of practice (Dobrow et al., 2007, p. 303). In Ontario, the role requires an onsite physician as support for the nurse endoscopist (Dobrow et al. 2007, p. 303). As of April 2010, there is no certification available for nurse endoscopists (Canadian Nurses Association, 2010c).

*Why would this role be useful in Canada?*

The role of nurse endoscopists would be useful in Canada because Canadians currently face significant barriers to accessing timely and important gastroenterological services. Canada currently has around 550 gastroenterologists, of those, one-third are expected to retire within the next ten years (Sullivan & Wharry, 2007). In addition, there are not enough new physicians specializing in gastroenterology to replace those who are set to retire (Sullivan & Wharry, 2007).

Colorectal cancer is a significant health issue and is the second leading cause of cancer related death in the Western world (Koornstra, Corporaal, Giezen-Beintema, de Vries, & van Dullemen, 2009, p. 688). Every year in Canada, thousands of people die from colorectal cancer, despite it being curable if detected early (Canadian Cancer Society, 2009b). It is estimated that in 2009, 22,000 Canadian men and women will be diagnosed with colorectal cancer (Canadian Cancer Society's Steering Committee, 2009, p. 12). In Canada, colorectal cancer is the second leading cause of cancer mortality in men and women combined (Canadian Cancer Society's Steering Committee, 2009, p. 11). There is evidence that the high death rate from colorectal cancers can be significantly reduced in the Canadian population if regular screening takes place (Canadian Cancer Society, 2009a). Although many provinces have launched colorectal cancer screening programs to emphasize the importance of early screening, it is estimated that wait times for these and other gastrointestinal procedures will increase (Wait Time Alliance, 2007, p. 15). According to the president of the Canadian Association of Gastroenterology, the majority of Canadians with a high likelihood of colon cancer currently have to wait more than four months to see a gastroenterologist (Picard, 2007).

As previously discussed, nurse endoscopists are capable of delivering safe and effective colorectal screening procedures. The use of nurse endoscopists would provide increased access to screening procedures and would also free up gastroenterologists' time to focus on other digestive health issues, and also on the early treatment of colorectal cancers. Currently, the standard colorectal cancer screening test used in Canada is the Fecal Occult Blood Test (FOBT), with follow-up using a colonoscopy if necessary (Canadian Cancer Society, 2010; Ontario Ministry of Health, 2010; BC Cancer Agency, 2009; Cancer Care Nova Scotia, 2010).

A recently published study in the *Lancet* has concluded that conducting flexible sigmoidoscopies can reduce death rates from bowel cancer by 25% (Murphy, 2010). Flexible sigmoidoscopy allows the health practitioner to find and remove polyps from the lower bowel, where two thirds of colorectal cancer occurs (Murphy, 2010). A flexible sigmoidoscopy is easier to perform than a colonoscopy because the patient does not require sedation and the procedure is shorter, as it does not examine the entire colon

(Murphy, 2010). Flexible sigmoidoscopies can be performed by nurses (Murphy, 2010; Ogilvie, 2010).

In addition to increasing access to life saving colorectal cancer screening procedures, nurse endoscopists could be effective at ensuring that patients proceed with the optional screening procedures. The Canadian Cancer Society recommends that all men and women over the age of fifty begin being tested for colorectal cancer (Canadian Cancer Society, 2009a). Despite this recommendation and evidence that colorectal cancer is curable if caught early, many people do not take part in colorectal screening, with only 20% of the average risk population currently being screened (Goldsmith & Chiaro, 2008, p. 3; LeClaire, 2008, p. 4). Studies which have focused on patient's experiences with colorectal screening have highlighted patient feelings of fear and anxiety surrounding the procedure (Morcom, Dunn, & Luxford, 2005, p. 34). It has also been documented that patients who have higher levels of preprocedure fear and anxiety are more likely to have difficulty with the procedure (Morcom, Dunn, & Luxford, 2005, p. 34). In one nurse-led colorectal screening study, patients found the nurses to be "professional, capable, and caring" (Morcom, Dunn, & Luxford, 2005, p. 39). The nurse-led service was personalized, and the nurses spent time reassuring and educating the patient about the procedure (Morcom, Dunn, & Luxford, 2005, p. 38). A study performed in the U.S. comparing the effectiveness and patient satisfaction with flexible sigmoidoscopy performed by nurse endoscopists, general surgeons and gastroenterology fellows found that patients were consistently more satisfied with the nurse endoscopist (Schoenfeld et al., 1999, p. 160). These findings, however, were not statistically significant (Schoenfeld et al., 1999, p. 160).

### *Support and opposition*

There is support for the role of nurse endoscopist in Canada. The Canadian Association of Gastroenterology (CAG) supports the use of nurse endoscopists as part of a multi-faceted approach to help alleviate the shortage of gastroenterologists (Canadian Association of Gastroenterology, n.d.). The CAG is the "national professional organization for gastroenterologists, related health care professionals, and researchers with a mandate focused on education and research related to digestive health and disease (Canadian Association of Gastroenterology, n.d.). The OMA supports the role of RN performed flexible sigmoidoscopy (OMA, 2007). HealthForceOntario, the Ontario government's health care professional recruitment and retention strategy, supports the role of nurse performed flexible sigmoidoscopy (Ontario Ministry of Health and Long-Term Care, 2006; HealthForceOntario, 2009).

In order to ensure that nurse endoscopists provide a safe and high level of care, Maruthachalam, Stoker, Nicholson, & Horgan (2006) mention that nurse performed procedures can be video taped and stored. This practice allows "a consultant to review the procedure on video or through an internet link if the nurse endoscopist is in doubt and offer advice" (Maruthachalam, Stoker, Nicholson, & Horgan, 2006, p. 560).

### **Nurse Practitioner in Anesthesia Care**

The nurse anesthetist role is one of the oldest recognized specialties in advanced nursing practice (MacDonald, Schreiber, & Davis, 2005, p. 16). Nurses provide anesthesia services in 142 countries of varying levels of development (MacDonald, Schreiber, & Davis, 2005, p. 16).

In 2007, a Nurse Practitioner in Anesthesia Care (NP-A) role was developed in Ontario to be part of Anesthesia Care Teams (Ontario Ministry of Health and Long-Term Care, 2007). As of 2009, there were four nurse practitioners enrolled in the program (University of Toronto, 2009). Currently, training for the NP-A role is only available at the University of Toronto (Thorne, 2010). The NP-A program expects to accept around ten students per year (Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, 2010). NP-As are currently only able to practice within Ontario (Thorne, 2010).

#### *What is a nurse practitioner in anesthesia care?*

In Ontario, NP-As will be able to “take part in the provision of anesthesia care” in the anesthesia care team setting (Ontario Ministry of Health and Long-Term Care, 2007). NP-As will have knowledge and skills that allow them to care for patients under anesthesia in the areas of “pre-operative, peri-operative, post-operative, and ambulatory care” (University of Toronto, 2008). The NP-A role allows the practitioner to work as a lead, or as a member of an acute pain team, and work in “diagnostic areas where patients require sedation/anesthesia with airway management” (Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, 2010, p. 1). While NP-As are able to provide intra-operative care, they are not able to be the “sole provider of anesthesia” to the patient (Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, 2010, p. 1). The NP-As will work under the supervision of anesthesiologists (Brown, 2007, p. 7). The Certified Registered Nurse Anesthesia (CRNA) role that exists in the U.S. is not available in Canada.

In the U.S. nurse administered anesthesia has a long history and the role is very developed. The NP-A role created in Ontario is not as expansive and independent as the CRNA role (Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, 2010, p. 1).

It is within the CRNA’s scope of practice to perform a pre-anesthetic assessment plan and evaluation; develop and implement the anesthetic plan; administer the anesthetics, including general, regional, local and sedation; facilitate the emergency from the anesthesia and recovery; and discharge the patient from post-anesthesia care (American Association of Nurse Anesthetists, 2007, p. 1-2). While the tasks performed by the CRNA are very similar to that of the medical anesthesiologist role, the nurse anesthetist brings their nursing background into the role to make it unique from the medical role (MacDonald, Schreiber, & Davis, 2005, p. 21).

The NP-A role is not to be confused with the anesthesia assistant. An anesthesia assistant is a health professional, sometimes a nurse, who “participates in the care of the stable surgical patient during general, regional, or conscious sedation anesthesia through medical directives under the supervision of and immediate availability of the anesthesiologist” (The Michener Institute, n.d.).

*Which countries currently use the role?*

As of 2005, nurses were providing anesthesia services in 142 countries around the world (MacDonald, Schreiber, & Davis, 2005, p. 16).

#### United States

In the U.S., anesthesia has never been exclusively administered by physicians, with nurses having provided anesthesia services for over 125 years (College of Nurses of Ontario, 2006, p. 3; Kopp, 2002, p. 377). In the U.S. CRNAs provide up to 60 percent of all anesthesia care, and are responsible for 70 to 80 percent of anesthesia care in rural areas (College of Nurses of Ontario, 2006, p. 3). CRNAs are able to practice fully and autonomously, in many States without the direct supervision of a physician (MacDonald, Schreiber, & Davis, 2005, p. 20; Cooper, Henderson, & Dietrich, 1998, p. 797).

#### United Kingdom

In the U.K., anesthesia has traditionally been administered by physicians only (Kane & Smith, 2004, p. 793). In 1997, the Audit Commission recommended that the National Health Services (NHS) introduce non-physician anesthetists into the British health care system (McCulloch, 2004, p. 205). In 2003, six test sites were set up with a new health care provider referred to as Anesthesia Practitioners (AP), later renamed Physician’s Assistants (Anesthesia) [PA(A)](Wilkinson, 2007, p. 165). To qualify for training as a PA(A), applicants must be either registered health professionals, which includes nurses, or university graduates with a background in biomedical science or biological science (Association of Physicians’ Assistants (Anaesthesia), 2008). PA(A)s are qualified to administer anesthesia under the supervision of an anesthesiologist (Royal College of Anaesthetists, & Association of Physicians’ Assistants (Anaesthesia), 2009). The anesthesiologist is required to be present during the start of the anesthetic and at the end of the anesthetic when the operation is finished (Royal College of Anaesthetists, & Association of Physicians’ Assistants (Anaesthesia), 2009).

*Has the role been proven effective?*

Studies examining the safety and effectiveness of nurse administered anesthesia in comparison to anesthesia administered by anesthesiologists have encountered unique difficulties. It is difficult to define the impact of anesthesia care on adverse events, including death (Smith, Kane, & Milne, 2004, p. 544). This is because anesthesia care is often not provided in isolation and is often provided to enable a surgical procedure (Smith, Kane, & Milne, 2004, p. 544). In some cases, it is unclear whether anesthesia was responsible for an adverse event, the surgical procedure, or underlying multiple health concerns which brought about the surgical procedure in the first place (Pine, Holt, & Lou,

2003, p. 113-114). The highly political battle between the American Society of Anesthesiologists (ASA) and the American Association of Nurse Anesthetists (AANA) makes many of the studies proving or refuting the safety and effectiveness of anesthesia provided by nurses suspect (Kane & Smith, 2004, p. 799).

*Would this role be an advanced nursing practice role? Does it require changes to regulation?*

Due to the complexity of care and the level of knowledge required to safely undertake the delivery of anesthesia services, this role would require a level of education beyond that required for an entry to practice RN. In Canada, anesthesiologists complete at least thirteen years of training, including undergraduate premedical, medical school, and five years of specialized residency, before they can be certified to practice as an anesthesiologist (Canadian Anesthesiologists' Society, 2008). In the U.S., the CRNA is an advanced practice nursing role (College of Nurses of Ontario, 2006, p. 3). In Ontario, the NP-A role is an advanced nursing role, which requires graduate level education and a post graduate Diploma in Anesthesia Care (University of Toronto, 2009). There is currently no separate licensure for the NP-A role. Nurses wishing to practice as NP-As must have the required education and be licensed as NPs (Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, 2010).

*Why would this role be useful in Canada?*

The introduction of NP-As will have a significant impact on the Ontario health care system. The NP-A role will be able to address serious problems in the current system related to wait times and rural health care.

The role of the anesthesiologist is an important one that affects many areas of health care. The anesthesiologist's role has evolved from being in the operating department, to include "intensive and high dependency care, acute and chronic pain relief therapy, obstetric analgesia, resuscitation and accident and emergency medicine" (The Association of Anaesthetists of Great Britain and Ireland, 1996, p. 1). It is estimated that anesthesiologists are involved in the care of two-thirds of patients admitted to the hospital (Wait Time Alliance, 2007, p. 15). Despite the necessity of the anesthesiologist role, according to Engen et al. (2005), there is an inadequate supply on anesthesiologists in Canada, especially in Ontario and Quebec, which will worsen in the future (p. 21). This problem is exacerbated by the fact that not all anesthesiologists are entering clinical practice, where they are greatly needed (Engen et al., 2005, p. 22). Without an adequate number of health professionals to deliver anesthesia, waitlists for surgeries would grow, and could even be cancelled, and diagnostic tests would be delayed (Engen et al., 2005, p. 23).

The proposed use of NP-As in Anesthesia Care Teams will increase public access to anesthesia services. In the U.K., the use of PA(A)s during surgical procedures allows the supervising anesthesiologist to oversee the care of two patients, instead of just one (Royal College of Anaesthetists, & Association of Physicians' Assistants (Anaesthesia), 2009).

The Wait Time Alliance states that the wait time reduction agenda that has been proposed for surgeries “cannot proceed unless there is an adequate supply and effective utilization of a range of resources including anesthesiologists” (Wait Time Alliance, 2007, p. 16). The use of NP-As provides the necessary support anesthesiologists need to provide anesthesia care to more patients.

As the population ages and medical science continues to find ways to increase life expectancy, the need for the skills of anesthesiologists is expected to increase in Canada. Due to innovations in surgery and patient care, “more complex surgical cases are now done on an older and higher-risk patient population with significant medical comorbidities” (Wait Time Alliance, 2007, p. 16). However, this “increasing surgical load imposes severe strains on the ability of anesthesiologists to meet their clinical and academic obligations” (Wait Time Alliance, 2007, p. 16). NP-As would be able to take some of the more routine cases off of anesthesiologist’s workload. Anesthesiologists would then be free to focus their attention on more complex cases.

The role of NP-A would be particularly useful in rural settings. In the U.S. “over 90 per cent of active practicing anesthesiologists live in metropolitan counties, while twice as many CRNAs as medical anesthesiologists live in non-metropolitan counties” (MacDonald, Schreiber, & Davis, 2005, p. 19). The use of this nursing resource would allow anesthesiologists and the Anesthesia Care Teams to provide care to more patients in an already stretched area of the health care system.

### *Support and opposition*

The Canadian Anesthesiologist’s Society (CAS) supports the anesthesia assistant role, noting that the 1-to-1 relationship between anesthesiologists and anesthetized patient would remain (Wait Time Alliance, 2007, p. 16). The CAS supports the NP-A role as part of the Ontario Anesthesia Care Teams, noting that the introduction of NP-As does not “create independent, US-style nurse anesthetists” as anesthesiologists will lead the Anesthesia Care Teams (Brown, 2007, p. 7).

The College of Family Physicians of Canada (the College) does not support the use of nurses for anesthesia care. This is mainly because the College supports General and Family Practice Anesthetists, General Practitioners who have completed a year of additional full-time training in anesthesia (Ontario Anesthesiologists, n.d.). The College points out that “General and Family Practice Anesthetists in Canada have a long history of providing anesthetic services safely to patients in small and mid-sized health care centres” (Collaborative Advisory Group for General and Family Practice Anesthesia in Canada, n.d., p. 2). The College also points out that should more anesthesia providers be required for rural areas, General and Family Practice Anesthetists should be looked to first to fill the need (Collaborative Advisory Group for General and Family Practice Anesthesia in Canada, n.d., p. 1). It should be noted that there is no guarantee that any profession given a role with the goal of filling a rural need will actually stay in the community or continue to fulfill the need long term. A study of the graduates of a Family Practitioner Anesthesia program found that on average, Family Practitioners practice

anesthesia care for only five years (Society of Rural Physicians of Canada, 2001, p. 10). A subsequent follow up of the graduates one year later found that 57.6% were no longer practicing anesthesia in their community (Society of Rural Physicians of Canada, 2001, p. 10).

### **RN First Call**

RN First Call is a RN role that developed in British Columbia as a solution to overcrowded emergency rooms (MacDonald, Schreiber, & Davis, 2005, p. 11). In 2005, there were approximately 230 RNs working in the RN First Call role across twelve rural communities (MacDonald, Schreiber, & Davis, 2005, p. 11). In May 2009, the University of Northern British Columbia announced that it would expand its Rural Nursing certificate program to include additional courses in First Call (University of Northern British Columbia, 2009). The RN First Call role is currently only available in British Columbia.

As of 2005, nurses working in emergency rooms in New Brunswick have been able to “assess, treat and discharge patients who do not require immediate services by a physician” in a manner similar to British Columbia’s RN First Call role (New Brunswick Ministry of Health, 2005). These ER nurses are also able to “fast track” patients who require X-rays or laboratory tests (New Brunswick Ministry of Health, 2005).

#### *What is an RN First Call?*

RN First Call is a role staffed by expanded-role nurses “working under medically-delegated protocols” (MacDonald, Schreiber, & Davis, 2005, p. 11). The role originated as a pilot program implemented in 1996 in British Columbia’s Ashcroft and District General Hospital (MacDonald, Schreiber, & Davis, 2005, p. 11). After the initial year of the program, it was expanded in 1998 to 15 additional northern and rural hospitals (CNA, 2000). The nurses in this role are trained to “assess, diagnose, and treat patients with simple health problems who come into emergency rooms” (MacDonald, Schreiber, & Davis, 2005, p. 11). RNs certified as RN First Call are able to diagnose and treat the following conditions, eye conditions: conjunctivitis, minor corneal abrasion; ear-nose-throat conditions: acute otitis media, dental abscess, pharyngitis, pharyngotonsillitis; and urinary tract conditions: cystitis (College of Registered Nurses of British Columbia [CRNBC], 2010b). RNs practicing within the role are able to administer and dispense Schedule I medications without an order to treat minor acute illnesses (CRNBC, 2010a, p.1). Nurses working in the RN First Call role are also trained to assess patients with more complex health problems. If the nurse deems the health problem an emergency, they are able to quickly contact the physician on call (British Columbia Ministry of Health Services, 2000, p. 53).

This role is not to be confused with RN First Assist (RNFA). A RNFA is “an experienced perioperative nurse who has acquired additional knowledge and judgment, along with advanced technical skills, to function as an assistant to the surgeon throughout the client’s

surgical experience” (CRNBC, 2009, p. 11). The RN First Call role should also not be confused with emergency room nursing. Nurses working in the ER do not have the education and certification necessary to provide the same level of care as nurses practicing in the RN First Call role (CNA, 2009c).

*Which countries currently use the role?*

#### United States

The RN First Call role discussed above is not available in the U.S., however there is a role called RN First Call in California. In California RN First Call is a program that allows an employee injured on the job to call a service to report the injuries and to receive medical advice from a nurse if needed (San Pablo Police Department, 2008; Pittsburg City Manager’s Office, 2005). The RN First Call role available in California has no relation to the RN First Call role available in British Columbia and discussed in this report.

In the U.S., the majority of RNs practicing in emergency departments have the certified emergency nurse (CEN) credential (Counselman et al., p. 696). According to Counselman et al. (2009) the CEN is a “validation of an emergency nurse’s expertise and demonstrates a commitment to emergency nursing” (p. 696). CEN certification is not a requirement for emergency nurses (Counselman et al., p. 696). Based on the CEN certification exam contents, the CEN certification is equivalent to emergency room nursing in Canada, and is not equivalent to the RN First Call role (Board of Certification for Emergency Nursing, 2010). There does not appear to be an RN equivalent to the RN First Call role in the U.S.

#### United Kingdom

The RN First Call role is not available in the U.K. However, the Emergency Care Practitioners (ECP) role is similar to that of the RN First Call role. ECPs are health professionals from nursing and paramedic backgrounds who practice as “prehospital practitioners” (Cooke, 2006, p. 387). The ECP role was introduced into the U.K. health system in 2004 (Modernisation Agency Department of Health, 2004, p. 11). ECPs are able to assess and treat urgent but not life-threatening conditions at the scene of an emergency rather than automatically transporting the patient to the hospital emergency department (NHS). ECPs currently practice in two main areas, primary care, and as the response to low-priority emergency calls (Cooke, 2006, p. 387). ECPs can be found in “GP surgeries, minor injuries units and hospital emergency departments” (NHS, 2006).

*Has the role been proven effective?*

I was unable to find information related to the effectiveness of the RN First Call role or a comparison of the effectiveness and safety of the RN First Call role as compared to emergency room physicians or family physicians. Despite the lack of information found, I believe that the potential benefits of the RN First Call role outweigh the possible cons of the role. The nurses practicing in the RN First Call role are able to assist in rural areas, which often have a lack of physician services. The RN First Call role allows nurses to

provide skills that are within their scope of practice (CNA, 2000). In addition, the conditions that nurses practicing in this role are diagnosing and treating are non-invasive, minor health issues (CRNBC, 2010b).

*Would this role be an advanced nursing practice role? Does it require changes to regulation?*

The RN First Call role would not be an advanced nursing practice role (MacDonald, Schreiber, & Davis, 2005, p. 12). When the RN First Call role was first established, nurses in British Columbia were able to practice the role without formal certification (CRNBC, n.d.). As of October 31, 2009, however, RN First Call has become a certified practice (CRNBC, n.d.). Certified practices refer to “activities that registered nurses cannot carry out until they have been certified through successful completion of an educational program approved under ... Bylaws” (CRNBC, 2008, p. 1).

*Why would this role be useful in Canada?*

The RN First Call role would be useful in Canada for three main reasons. The role would help alleviate congestion in emergency departments, it would assist rural and remote areas with issues of doctor recruitment and retention, and would assist with nurse recruitment and retention.

As stated above, the RN First Call program was developed in British Columbia to help resolve emergency room congestion. According to CIHI, each year Canadians visit hospital emergency departments over 14 million times (CIHI, 2005, p. vii). In addition, 1 in 8 Canadians over 15 were treated for their last injury or had their most recent contact with a doctor in an emergency department (CIHI, 2005, p. vii). According to CIHI, 57% of emergency room visits in 2003-2004 were “for less urgency conditions (for example, chronic back pain or minor allergic reactions) or non-urgent conditions (for example, sore throat, menses, or isolated diarrhea)” (CIHI, 2005, p. vii). Aspects of the data provided from this study has been questioned by emergency departments in some provinces and territories, regarding its relevance to their particular setting (Williamson, 2005). However, the RN First Call program would still be useful in emergency rooms because it would offer increased access to health care (CNA, 2000, p. 1). The original pilot program in Ashcroft and District General Hospital was able to provide “useful, acceptable and appropriate service” to between 5 and 15% of presenting emergency room patients (CNA, 2000, p. 1).

The RN First Call program can provide relief to emergency rooms that are continually facing physician recruitment and retention issues (CNA, 2000, p. 1). In 2006, more than 6 million Canadians, or 1 in 5, lived in rural areas, while less than 10% of all physicians and only 15.7% of general practitioners and family physicians lived in rural areas (CIHI, 2008a, p. 16). Additionally, in 2006, Manitoba was the only province with more general practitioners and family physicians in rural areas than urban areas (CIHI, 2008, p. 16). These data describe rural and remote physician staffing issues that can significantly affect the quality of patient care. According to CNA, implementing the RN First Call program

in rural and remote communities can reduce the “number of emergency visits in which physicians are required to attend” and “may assist with issues of physician recruitment and retention” (CNA, 2000). With physician resources in many rural and northern communities already stretched, the introduction of the RN First Call program would allow physicians to concentrate their efforts on the most serious patients in the emergency department. The RN First Call program also provides communities with more access points to the health care system (CNA, 2000, p. 1).

In addition to easing emergency room congestion and providing relief to communities plagued by physician recruitment and retention issues, the RN First Call program could be an important way to recruit and retain nurses. CNA states that while practicing under the RN First Call role, nurses “enjoy practicing to their full scope and benefit from necessary continuing education” (CNA, 2000, p.1). According to a report given to the British Columbia Minister of Health, the introduction of the RN First Call program would “add a different and unique dimension to nursing practice that is effective in retention strategies” (British Columbia Ministry of Health Services, 2000, p. 53). This report also states that “programs such as this allow earlier discharge of patients which, in turn, can decrease the amount of additional nursing resources that would otherwise be required” (British Columbia Ministry of Health Services, 2000, p. 53).

### *Support and opposition*

When the RN First Call role was first developed and implemented in British Columbia, the development of the program and training of the nurses involved both the College of Registered Nurses of British Columbia (CRNBC) and the British Columbia Nurses’ Union (BCNU), who co-sponsored the program, but also included the College of Pharmacists of British Columbia and the College of Physicians and Surgeons of British Columbia (British Columbia Ministry of Health Services, 2000, p. 53).

When the RN First Call program was implemented, it was noted that there was a problem at some of the sites with physicians accepting the new expanded nursing protocols (MacDonald, Schreiber, & Davis, 2005, p. 11). In these situations, the RN First Call nurses were “being prevented from doing certain activities that were part of the protocols, and for which they had been trained” (MacDonald, Schreiber, & Davis, 2005, p. 11). Brodsky and Van Dijk (2008) write that despite nurses’ ability and willingness to expand their roles to fill perceived needs in the system, “physicians employed by community medical services will find it difficult to accept expansion of the nurses’ scope of practice into what they consider their exclusive domain” (p. 193).

## **DISCUSSION**

The introduction of new roles into the health care system carries with it unique challenges. The first challenge is how the new roles are viewed by other health professionals. The second challenge is the possibility of a perceived loss of the traditional nursing role in responding to health needs.

For new roles to be successfully integrated into the health care system, they need to be accepted by health care practitioners. A lack of support for new roles could be due to many factors, including an absence of information on the roles, or a favoring of one role over another.

Some of the roles discussed in this report, such as the nurse practitioner in anesthesia care, have been actively campaigned against by professional physicians organizations in other countries, most notably the United States. The College of Family Physicians of Canada (the College) has opposed the nurse practitioner in anesthesia care role. This is due to the fact that the College supports the use of their own members providing anesthesia care, in the form of General and Family Practice Anesthetists.

While some roles face scrutiny from existing health professionals, some are easily accepted into the system. In 1998, a hospital in Australia decided to establish a nurse-led colorectal cancer screening clinic (Morcom, Dunn, & Luxford, 2005, p. 35). The gastroenterologists and colorectal surgeons associated with the hospital were very supportive of the new clinic. Instead of seeing the new nursing role as an encroachment on their area of expertise, they saw the nurses as “filling a gap and adding value to the existing service” (Morcom, Dunn, & Luxford, 2005, p. 38).

The protectionism created by the introduction of new roles does not just apply to physicians. In Ontario, physician assistants (PA) have been introduced into the health care system by the government. While the introduction of PAs has been accepted and promoted by the Canadian Medical Association and the Ontario Medical Association, the role has met with opposition from the Registered Nurses’ Association of Ontario (RNAO) (The Guardian, 2010). The RNAO is of the position that PAs lack education, training and experience, are unregulated, fragment patient care, increase costs to the health care system, and confuse the general public (Registered Nurses’ Association of Ontario, 2010). Instead of introducing PAs into the health care system, the RNAO believes the government should be focusing attention on nurse practitioners and allowing registered nurses to practice to their full scope (Registered Nurses’ Association of Ontario, 2010).

The second challenge associated with the introduction of new nursing roles is the possibility of a loss of the traditional nursing role. In each of the roles discussed in this report, nurses are taking on responsibilities that have traditionally been labeled in the health care system as physician services.

As nurses expand to their full scope of practice, some believe that nurses are taking on roles that could be performed by other health professionals, and not necessarily nurses (MacAlister & Chiam, 1995). There is the possibility that by increasing the activities performed by nurses, there could be the loss of a distinct nursing role.

Despite these views, many nurses do not believe that their profession is being compromised by the creation of new opportunities. A survey of member nurse practitioners by the Royal College of Nursing (RCN) Nurse Practitioner Association in the U.K., conducted in 2006, found that 98% of respondents reported that nursing skills were important in their job, and only 8% of respondents viewed themselves and their role as a nurse practitioner as a 'mini-doctor' (Ball, 2006, p. 5). In writing for the *Globe and Mail*, Andre Picard points out that nurse practitioners should not be viewed as mini-doctors but rather as maxi-nurses (Picard, 2010). Nurses bring a unique skill set to health care that cannot be replicated by any other health profession. Rather than losing the traditional nursing role, it may be that these roles are in-fact an enhancement of the traditional nursing role.

Despite the challenges in bringing new roles into the Canadian health care system, the benefits far outweigh the costs. The roles discussed in this report, nurse practitioner, nurse endoscopists, nurse practitioner in anesthesia care, and RN First Call, all provide the public with a stronger health care system better able to take care of their health needs. These roles can provide more efficiency in roles, opportunities for job growth, and most importantly, more access points to respond to care.

The health care sector needs to be able to evolve to be able to provide the best care for Canadians. The four roles discussed here, and others being explored, assist with this necessary evolution.

## CONCLUSION AND RECOMMENDATIONS

This report outlines and discusses four emerging nursing roles that are in various stages of implementation within Canada. These roles have faced and continue to face challenges when applied to the health system for many different reasons. Implementing these roles into the Canadian landscape will take many years of hard work to ensure that the scope of practice is appropriate and that legislation, education and certification are available. Many of these four roles have faced resistance and opposition from various health professions regarding scope of practice, and uncertainty from patients, due to the fact that many of these roles are relatively unknown to the general public.

All of the four roles are distinct from similar roles available in the United States and the United Kingdom, as they have been developed and tailored for the unique needs of the Canadian health care system.

The nurse practitioner (NP), nurse endoscopist, nurse practitioner in anesthesia care (NP-A), and RN First Call roles all have the ability to provide Canadian patients with more access points to the health care system when utilized to their full potential.

In addition, these roles provide nurses with the ability to practice to their full scope of practice, allow for career growth, and provide the possibility of more autonomy. These roles also provide doctors with increased flexibility in their practices, as they are able to focus their attention on the most serious and complex cases. All four of these roles increase the ability of health professionals to work in a more collaborative fashion, which can respond better to needs and provide enhanced health care for Canadians.

The purpose of this report was to inform ONP of the current status of emerging nursing roles within the Canadian health care system. The key deliverables of this report are a Literature Review of four nursing roles found in Canada and Recommendations based on the findings. The four roles chosen for the report, nurse practitioner (NP), nurse endoscopist, nurse practitioner in anesthesia care (NP-A), and RN First Call, are all emerging roles for nurses.

This report has produced a succinct but thorough description of four emerging nursing roles noted above, as well as an outline and description of related nursing roles available in the United States and the United Kingdom. This report was able to show the effectiveness of the four roles, as well as the Canadian support and opposition for the roles.

This report will be a useful background paper on emerging nursing roles in Canada, and will allow ONP to be ahead of developments in this area and should help support future decisions regarding policy direction in the area of nursing.

In addition to the four roles discussed in this report, there are other roles out there that are currently emerging. Also, the scope of practice of some current professional roles is

evolving given the increasing needs of populations for the health system. In the future these roles may take on an increasingly important role in the health care system. These roles however, as well as the four roles discussed in this report, and any emerging roles that develop in the future, depend heavily on the health needs of Canadians and support from the public, the government, and health professional organizations. The Canadian health care system continues to face significant issues regarding access to care, length of waits, financial constraints, and a growing shortage of health care professionals, such as physicians and nurses. As the health needs of Canadians continues to evolve, new roles, including nursing roles, may emerge to respond to these needs.

### **Recommendations**

Based on the findings of the Literature Review, four Recommendations can be made on possible future actions for ONP.

1. Share the results of this paper, information regarding the four nursing roles discussed, with stakeholders. The usefulness of these roles applies to all of the provinces and territories, and has the potential to create efficiency in the health care system on a national level. ONP holds a unique position as a government entity able to view nursing issues from a nation-wide perspective. For instance, the RN First Call role, currently available in British Columbia, could be expanded to other provinces and territories with significant rural populations, such as Ontario. As mentioned in the RN First Call section, emergency nurses in New Brunswick have been given expanded roles similar to that of RN First Call, in order to create greater efficiency within their emergency rooms.
2. Continue to encourage the idea of inter-professional collaboration and the creation of collaborative teams. All of the roles discussed here help to enable collaborative teams, with a focus on the doctor-nurse relationship. In recent years, more emphasis has been placed on inter-professional collaboration, with health professionals working together to improve the health of the patient, rather than working in professional silos (Fidelman, 2010). An expansion of the roles discussed provides nurses with a more direct link to patient health, and could have a significant impact on recruitment and retention of nurses, a key area for ONP (Health Canada, 2009).
3. Investigate, if feasible, ways to inform the public regarding emerging nursing roles within the health system. Emerging health care roles require public understanding and acceptance. Some of these roles, notably nurse practitioners and nurse practitioners in anesthesia care, have come under fire in the media, as a result of opposition by various health professional bodies. ONP has the potential to look at options, such as putting a summary of the four roles on their website, to inform the public on the existence and benefits of these nursing roles and why they have been introduced into the health care system.

4. Continue to scan the environment for more emerging nursing roles to inform policy development. As well, in the coming years, more research will need to be conducted on the usefulness, effectiveness, and support for these four nursing roles and others. This research will contribute significantly to the information presented in this report. The nurse practitioner in anesthesia care is a very recent addition to the health system of Ontario, and more information can be expected in the future. More information can also be expected regarding the nurse endoscopist role. As well, as the Yukon gets ready to introduce nurse practitioners into their health system, more data will soon be available from the Canadian Institute for Health Information on the number of nurse practitioners practicing in the territory.

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