

**Non-Physician Clinicians: Implications for  
Physician Workforce Policies**

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**Abstract**

The healthcare environment in Canada is buffeted by many changes and demands. In the midst of the system changes, the financial constraints, the health human resource shortfalls and the increasing consumer expectations, there is a need to examine more closely the role of non-physician clinicians.

In this paper non-physician clinicians discussed are midwives, advanced practice nurses (clinical nurse specialists and acute care nurse practitioners) and primary care nurse practitioners. The paper examines the context in which these groups are developing and expanding. Estimates of numbers of practitioners are included, educational requirements are described, working conditions and payment methods are highlighted.

There are significant provincial differences relating to the employment of midwives, advanced practice nurses and primary care nurse practitioners. In some provinces non-physician clinicians work in legislated environments. In other situations they work in an expanded role that is locally driven.

The relationship of non-physician clinicians to physicians is very variable. There are examples of strong collaborative relationships, but also many examples in which the relationships need to be developed and enhanced. This article is a step forward looking at the medical workforce in broader terms, including physicians and non-physician clinicians.

## **Overview**

## **Non-physician clinicians**

There has been a significant rise in the development and employment of non-physician clinicians in Canada in recent decades. In terms of the analysis in this paper I will be focussing on three non-physician clinician groups who are currently in the health workforce in Canada. They are midwives, primary care nurse practitioners, and advanced practice nurses (advanced practice nurses include clinical nurse specialists and acute care nurse practitioners). The terminology used to describe advanced practice nurses is mired in some confusion in Canada and I will expand on this later. The use of these non-physician clinicians in Canada is fairly recent and extremely uneven. In certain circumstances there are provinces who employ very few non-physician clinicians while others are moving forward fairly rapidly to expand their numbers. The role and relationship of non-physician clinicians to each other and to physicians in Canada is still unclear and uneven. In certain circumstances their activities are regulated. In other areas their activities are delegated. In other areas they are working in somewhat of a vacuum. Canada's geography and its Health Human Resource policies are important considerations when examining the development of non-physician clinicians. Our federal system with the healthcare responsibility primarily lying with the provinces has led to an uneven development of policies in many areas including this one.

In my view the development and enhancement of non-physician clinicians should be based on some sound principles. The most important is to enhance patient care: to provide the right set of

skills at the right time, in the right place. We want improved health outcomes, a more efficient system, increased cost effectiveness and a satisfied workforce.

Many challenges exist as the non-physician clinician community expands. There are overlapping services, difficulties in defining roles and responsibilities, limited understanding of how to collaborate, medical legal issues, and system changes that will be needed to ensure that we continue to provide top quality care.

Added to this are changes in the health sector already upon us in Canada: for example, there has been downsizing of hospitals, mergers of hospitals, regionalisation, reduction in nursing staff in some provinces, reduction in medical residents in training, increasing complexity of patient problems, and fragmentation of healthcare. Most importantly there has been pressure to reduce costs in the healthcare sector and look for cheaper but equally effective alternatives to provide care. In this context, health human resource planning has become even more important, and we urgently need more effective planning models to help us move forward.

In exploring how non-physician clinicians impact on physician workforce policies, it will be helpful to provide a very brief description of the current environment in Canada. Canada with a population of 31,400,000 has the majority of its population living relatively close to the United States border. Scattered throughout the Northern part of our vast country are many small communities, some excessively remote. In Canada 22.2% of the population lives in towns of less than 10,000 people, or in smaller communities [Society of Rural Physician, (SRPC) 2003].

All should have equitable access to healthcare and for all physician and non-physician groups this has been a challenge for many years.

Regarding physicians, in 2001 the Canadian Institute for Health Information (CIHI) reported that there were over 57,500 physicians in Canada in clinical and non-clinical positions. This was a 5.3% increase over the previous 5 years. Specialists increased by 7.4% and family physicians by 3.2% (CIHI, 2002). The inequitable distribution of all physicians across Canada has been well noted. 10.1% of doctors in Canada provide care to the 22.2% of persons living in communities of 10,000 or less. This includes 5,000 family doctors and just over 500 specialists (SRPC,2003).

As some healthcare workers expand their skills, push their scopes of practice, and bring new skills to healthcare, physicians have been forced to examine their roles and adapt. This has brought forward the challenge of change, which for anybody, and notably for physicians, is a tremendous challenge. The Canadian Medical Association has published a policy paper on scopes of practice which outline principles for determining scope (focus, flexibility, collaboration and cooperation, coordination, patient choice) and criteria for determining scopes of practice (accountability, education, competency and practice standards, quality assurance and improvement, risk assessment, evidence-based practices, setting and culture, legal liability and insurance). (CMA 2002). Changing scopes of practice will demand innovative models of care delivery. Collaborative practice issues have surfaced and need to be addressed by all players in the system. Optimum collaboration is possible if key elements of the relationships are examined: responsibility/accountability, coordination, communication, cooperation, assertiveness,

autonomy, mutual trust and respect (Way et al, 2002). Are the relationships we are developing truly collaborative, or is there an attempt to substitute one clinician for another, is one clinician supplementing another, or is there displacement of one by the other? These challenges need to be tackled as we move forward.

### **Midwifery**

Midwifery has been recognized in many European nations and the United States for many years and is a generally accepted health profession. In Canada we have been relatively slow off the mark and cautious in recognizing midwifery and creating a regulated environment for it. Despite some of the literature which has shown that midwives practice with a lower use of technology and less interventions, as well as a lower risk of caesarean section and perineal injury (Fraser et al, 2002), midwives have not been embraced readily and easily in all parts of Canada.

Maternity care in Canada is facing a huge number of challenges. There is a lack of equitable access for patients across the country and medical provider numbers (family doctors and obstetricians) are dropping. Recent studies from the JANUS Family Physician Workforce Survey (College of Family Physicians of Canada) show that in 1997 19% of family doctors were delivering babies and this has dropped to 17% in 2001. The same data demonstrates a tremendous geographic variability in the provision of obstetrical services. Some urban areas have less than 5% of family doctors providing obstetrical care and many rural areas have a majority of family doctors providing obstetrical care. The Canadian Medical Association reports

a current practicing obstetric and gynecologist population of 1614.

The employment of midwives through a regulated environment in a number of provinces in Canada demonstrates a willingness to offer an alternative to physician maternity care, to respond to pressure from women wanting alternatives, and to provide a more cost effective form of maternity care, though this has not yet been fully shown. Though midwifery is not yet fully integrated into our healthcare system across Canada, the definition of what a midwife does is being expanded in some areas. Some midwives have a broad definition which includes well women gynaecology and reproductive counselling in addition to maternity care.

It is extremely difficult to document accurate numbers of active practicing midwives in Canada. Only 5 provinces are currently regulated for midwives. They are: Ontario, Manitoba, British Columbia, Alberta and Quebec. Data from the Canadian Institute for Health Informations (CIHI) and confirmed by personal communication from the Canadian Association of Midwives (K. Campbell, 2003) indicate that there are just over 400 midwives identified in the regulated provinces. It is hard to quantify numbers of midwives practicing in an unregulated environment, for obvious reasons.

Currently there are training programs for midwifery in 3 provinces. In Ontario there are approximately 35 midwives per year graduating from 3 schools. In Quebec a program of 16 per year will have its first graduates in 2003. At the University of British Columbia there are 10 seats per year for midwives and the first graduates will be in 2003. The programs are of variable

design. Some programs are direct entry from high school and 4 years in duration. However, most candidates have university degrees even to the Masters level. The programs tend to be preceptor based and require extensive apprenticeships. They are therefore significantly limited by the number of midwives practicing who can offer this experience.

There is a variability in skills taught. In British Columbia and Quebec for example midwives have intubation skills such as those taught in a Neonatal Resuscitation Program (NRP) course. Practice environments vary. In Quebec, midwives have been established in an identified number of birthing centres. They do not practice in hospitals nor can they practice in the home. The linkage to physicians is not well developed. Midwives in Quebec tend to be underemployed as there has not been adequate funding to employ them at the birthing centres. In the other provinces where midwives are regulated there is better integration with transfer and consultation arrangements in place between midwives and physicians. In Ontario and Quebec two midwives are required at every birth. In British Columbia two midwives are required at home births.

Payment of midwives is a significant problem. In Alberta where midwives are regulated, there is no funding available and they practice in a fee for service environment charging approximately \$2,500 (Canadian!) for a complete course of care. As a result there are small numbers that are already dwindling in Alberta. In British Columbia midwives are independent, charging fee for service for a course of care, again at approximately \$2,500 a case. In addition there are requirements for liability insurance, professional fees and licences which total at least \$7,000.00. In Manitoba and Quebec midwives are salaried with some benefits. Salaries are in the \$65,000

range, plus benefits and liability coverage. In Ontario midwives most often practice in groups that have an agreement with the government. The group pays a salary that ranges from \$55,000 to \$75,000 per year. Overhead is covered by the Ministry and a practice manager. There is some assistance for liability. Midwives are expected to attend 40 births per year and where salaried, are not paid to attend more deliveries. In some jurisdictions a 2<sup>nd</sup> midwife is required at a birth. In these cases midwives attend at 40 more deliveries as the second attendee.

Currently approximately 6% of deliveries in British Columbia are done by midwives, 7% in Ontario, a very small number in Alberta and Manitoba. In Quebec there are fairly high volumes at the birthing centres, but only seven centers exist to date. The clientele served by midwives across Canada seems to vary (K. Campbell, 2003). In British Columbia and Ontario the clientele tends to be a more sophisticated and well educated group of women. In Manitoba and Quebec they tend to come from the underserved population and hard to serve population where as in British Columbia clients have to pay for the service which selects out those who can pay.

The relationship with the physician community has been a challenge for all midwives in all jurisdictions in Canada. In Quebec midwives are not fully integrated into the system. There have been only a few physician friends and the environment has not been fertile. In British Columbia there have been improving relationships with family doctors and obstetricians. In Manitoba a lot of the midwives were case room nurses and have been brought in through a grandmothereing clause and have reasonable relationships with physicians. In Ontario there are a number of supportive physicians, by far not yet a universal phenomenon.

I believe there is an increasing shortage of midwives around the world. Issues of other career choices for women, demands on personal life and poor pay are some of the issues that need resolving not only in Canada but abroad as well, if midwifery is to flourish.

### **Advanced practice nurses**

In tackling this area the first challenge is to get a handle on terminology and titles.

Unfortunately the number of titles utilized for advanced practice nurses has led to confusion and misunderstanding and probably impacted on the ability of the nursing profession to more clearly move forward in Canada with assuming a larger role in healthcare delivery. To quote from the Canadian Nurses Association (CNA, 2002) "Advanced Nursing Practice (ANP) is an umbrella term. It describes an advanced level of nursing skill practice that maximizes the use of in depth nursing knowledge and skill in meeting the health needs of clients (individuals, families, groups, populations or entire communities)". Under this umbrella can be considered the primary care nurse practitioner, the acute care nurse practitioner, the clinical nurse specialist and the advanced practice nurse (which can at times refer to any of the preceding persons!). The title of acute nurse practitioner or for that matter of clinical nurse specialist is not protected. There is no legislated environment under which these titled persons work. Unfortunately there is also no provincial or national data base which catalogues how many of these nurses are practicing. The Canadian Association of Advanced Practice Nurses (CAAPN) has approximately 500 members, mainly acute care advanced practice nurses (APNs) that are called either clinical nurse

specialists or nurse practitioners (R. Kohr, 2003). Compounding the issue of a lack of universally accepted titling, there has been difficulty with universally accepted standards of education and practice for this group of nurses. An advanced practice nurse is someone who has an advanced level of nursing practice, by virtue of increased education and/or experience. The Canadian Nurses Association in their National Framework document on Advanced Nursing Practice (CNA, 2002) makes the assumptions that "ANP is nursing. It occurs within the full scope of nursing practice, a scope of practice that is dynamic and has flexible boundaries. It is the application of advanced nursing knowledge that determines whether nursing practice is advanced, not the addition of functions from other professions". The nurse's scope of practice can be determined by education and regulation. Scopes sometimes take on the terms "extended" or "expanded". These scopes can be regulated through registration in a special class or by delegation of medical acts. It has been reported that there were over 200 APNs practicing under medical directives (Vlasic et al, 1998). From the Canadian Nurses Association perspective, the educational preparation does make a difference. There is an expectation for Masters level preparation for some APNs (acute care nurse practitioners and clinical nurse specialists). Others, such as the primary care nurse practitioner can pursue non-masters education though Masters education, is expected in certain jurisdictions as well. It is a challenge improving the basic educational level for the registered nurse, let alone increasing it to a Masters for some nurses.

Having added to the confusion, in this section I will focus on the acute care nurse practitioner. The acute care nurse practitioner appears to have developed mainly from increasing needs for

health human resources in Academic Health Science Centres. With the reduction in numbers of residents, the increasing complexity of care, the fragmentation of care, there has emerged the development of the acute care nurse practitioner.

In most jurisdictions the development of acute care nurse practitioner programs has been institutionally driven. The acute care nurse practitioner tends to focus on a particular population, in the hospital. Commonly there is an expectation that an acute care nurse practitioner or an APN functions in three areas: clinical care, education and research. A Masters level training at a minimum is required, though as pointed out previously, it is a difficult target to achieve. Training has been in existing Masters programs at certain institutions. Elsewhere there are attempts to create standalone programs. Programs have been developed with a distance education component and with flexibility, as many of the nurses pursuing higher degrees are already in the workforce.

By and large acute care nurse practitioners are salaried positions, institutionally driven. The income is variable and usually not significantly more than paid to a very seasoned registered nurse.

The acute care nurse practitioner is seen as part of a solution to some current issues, particularly focussed in the tertiary care centres. The development of a collaborative relationship is the key to nurturing this position to be effectively utilized. A close and collegial relationship with the physicians is critical to ensuring this relationship works well.

Let me finish this section with a more personal view. At the Ottawa Hospital, a large tertiary care hospital in Canada where I practice there are a number of advanced practice nurses. Their major responsibilities include consultation, leadership and administration, clinical practice, research and education (W. Nicklin, 2003). There is an expectation that education includes Masters preparation. Leadership skills are required. In one case an advanced practice nurse is the manager of our Women=s Breast Health Centre and provides patient care, education, and does research such as in the development of an evaluation of a breast cancer risk information booklet to be used as an adjunct to counselling women with increased risk of developing breast cancer. Other advanced practice nurses at my hospital serve the diabetic population and the geriatrics population.

Challenges exist for this group of nurses. They include a clearer definition of their function, agreement on educational preparation, and professional and regulatory support for an expanded scope of practice (R. Kohr, 1998).

### **Primary Care Nurse Practitioners**

Primary care nurse practitioners have been present for about 30 years in the Canadian healthcare environment. There are now approximately 600 to 650 certified primary care nurse practitioners in Canada. A primary health care nurse practitioner training program was established at McMaster University in Ontario in 1972. It focussed on training nurse practitioners who would service the remote and rural areas. Simultaneously, in the 70s the Medical Services Branch of

the federal government and Dalhousie University provided additional training to nurses somewhat similar to that of the nurse practitioner program. The program in Dalhousie closed in 1999, the program at McMaster in 1983. Following the initial attempts to launch primary care nurse practitioner training programs and integrate the graduates into the health workforce the 1980s, there was a hiatus and renewed interest in the nurse practitioner role began in the 1990s. As reform began sweeping the primary healthcare sector in Canada, an increasing need for collaborative teams of health professionals to deliver care in the most effective and efficient way was identified. A core member of the collaborative team, as viewed by some governments and a number of participants, is the primary nurse practitioner. The nurse practitioner can be the first contact provider and usually works through the life span.

In Ontario the nurse practitioner educational programs were reopened in 1995 with legislated amendments defining scope of practice and certification processes put in place in 1998. In 1995 Alberta had changed its Public Hospitals Act to allow for employment of nurse practitioners in underserved areas. In 1997 Newfoundland created legislation to authorize nurse practitioners. Legislation was proclaimed in Nova Scotia in January 2000. Legislated environments are being created in the other provinces across Canada. The title "nurse practitioner" is not protected in legislation in all provinces. In the some provinces their title is "Registered nurse extended class" (RM(EC)) or "Registered nurse extended practice" (RN(EP))

Training requirements for nurse practitioners vary. For example in Ontario the primary care nurse practitioner program is a baccalaureate level certification program which is offered at 10

universities. In Nova Scotia a university based nurse practitioner program exists. Graduate level studies are offered in other provinces while more individualized programs for nurses to become nurse practitioners are being developed for other provinces. The legislated environments provide nurse practitioners with independent authority to perform in an extended role, without the need for medical delegation. The role definition for a primary care nurse practitioner includes one of diagnosis, prescribing, laboratory investigation within confines, disease prevention and promotion. There are significant differences in what they are allowed to do depending on the provincial legislation. The circumstances under which nurse practitioners can make and communicate diagnoses are included in the provincial legislation. In three provinces, lists of drugs that can be prescribed and diagnostic tests that can be ordered as well as the circumstances under which the nurse practitioner can perform these functions have been developed. In Alberta rural authorities have defined the laboratory tests, diagnoses, drug lists that a particular nurse practitioner can function with. In Ontario the drug list and laboratory requisitions are in the regulations and adjustments to these lists lead to an adjustment in the role. In Newfoundland a long list of diagnoses has been laid out, which help determine the scope of practice. All jurisdictions require the nurse practitioner to work in association with family doctors. In Nova Scotia the nurse practitioner has to have a collaborative relationship with a physician in order to practice.

The nurse practitioner in Canada is described as an autonomous practitioner with an accountability relating to a scope of practice but with mandated collaboration with physician colleagues. This is in contrast to the United States where primary care nurse practitioners can

have independent practices.

Nurse practitioners earn between \$60,000 and \$80,000 per year. Benefits are usually on top of this. There are bonuses for nurse practitioners working in Northern and remote communities. Up to now primary care nurse practitioners have been employed in community health centers, in rural and remote areas, or in hard to service populations. It appears that a legislated environment makes a major difference in the ability of primary care nurse practitioners to function effectively and to be integrated into a healthcare team. The political will for the development of the primary care nurse practitioner has primarily come from governments in Canada. The cooperation with the medical community has been variable. There is a substantial overlap in the scope of practice between a primary care nurse practitioner and a family doctor in Canada. This overlapping of scope of practice has challenged both communities. There is some tension between the expectation that a nurse practitioner will focus on prevention and promotion, versus focusing on acute care interventions. In Canada there have not been significant studies as to the productivity of the nurse practitioner though elsewhere in the world studies have addressed this issue. Challenges ahead include definitions of scope that all can live with, a national certification process and examination, adequate funding, and professional cooperation, and stronger consumer push (L. Jones, 2003).

### **Summary**

There are tremendous challenges for the development of non-physician clinicians (i.e. midwives,

acute care nurse practitioner, primary care nurse practitioners) in Canada. The midwives roles are well established; there is an interest on the part of many midwives to expand their role. The role of the acute care nurse practitioner is usually locally based without national standards. The primary care nurse practitioner is challenged to integrate her overlapping scope of practice with that of the family physician. In my opinion, the public policy perspective on the development of these non-physician clinicians is decidedly mixed. On the one hand some governments argue strongly for the expansion of non-physician clinicians, but do not create the educational environments, provide the regulated changes, or adequately fund the needed changes and graduates.

There is the ongoing challenge of integrating these clinicians with the medical community. Many physicians are prepared to work with non-physician colleagues, though are anxious regarding issues of scope of practice, accountability and medical legal liability.

Just as some of the data relating to physicians is not well captured and uneven, data relating to most non-physician clinicians is in an even poorer state. There are no registers that reflect accurate numbers of midwives, primary care nurse practitioners and acute care nurse practitioners. In some instances there are no standardized use of terms. Educational programs are variable. Remuneration models are varied. Many of these realities reflect those for many professions in Canada. The challenge will be to provide a national framework to moving forward the development of these non-physician clinicians.

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