Canada-U.S. Comparative Health Study

# Nurse Practitioners and Canadian Health Care:

## *Toward Quality and Cost Effectiveness*

*"For the proponents of the nurse practitioner, the main obstacle to widespread acceptance of the idea is unlikely to be rejection by clients, but rather unawareness of the nurse practitioner's role on the part of the public."* ***Dr. Walter Spitzer, New England Journal of Medicine, 1984***

*"The accumulating evidence is overwhelming: nurses are enhancing the quality of care by pro - moting health and lowering total system costs. What is absolutely clear is that nursing is a bar - gain, in or out of the hospital."* ***Claire M. Fagin, American Journal of Nursing, 1990***

*In public opinion polls, health care is the most impor - tant issue to Canadians. Canadians believe that their health care system is among the best in the world, but have concerns about the long term viability of the sys - tem in an age of rising health care costs. This paper focuses on the utilization of nurse practitioners to achieve potentially better care for less cost. The paper marshals evidence drawing on Canadian and American examples. Issues such as cost savings, quality, patient care and comfort are addressed. Moreover, the paper briefly explains the importance of the nursing culture for team cooperation and attentive - ness to the patient. Finally, the authors provide six recommendations for enhanced utilization of the nurse practitioner in the Canadian health care system.*

## NURSE PRACTITIONERS IN CANADA

The nurse practitioner concept was introduced in Canada in the 1960s due to a perceived physician shortage, a real physician maldistribution and a trend towards specialization. In the 1970s and early 1980s there was a push to expand the role of nurses and to reform the health care system to take advantage of what nurse practitioners offered. At the end of 1972, the Boudreau Committee was established by the federal government to define the role of the nurse practitioner and to develop guidelines for educational programs. The federal government, Canadian Nurses Association, Canadian Medical Association and many provincial health departments agreed on the potentially important role of nurse practitioners in areas such as obstetrics and orthopedics, in hospitals, in public health agencies, in underserved rural and northern outposts and in assisting physicians in primary care.[1] However, changes had to be made to the Canada Health Act to allow the provinces to make the necessary changes to their own legislation.

The Canada Health Act was amended in 1983 but the provinces were slow to act, in part due to an emerging surplus of general practitioner physicians. There were also problems surrounding the reimbursement of nurses. These problems stemmed from an unwillingness of the government to cover the costs of a nurse practicing medicine. This meant that a physician could not use nurse practitioners in his office or clinic unless he was willing to pay them from his own funds. This also meant that medical services pro-

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# DEFINITION OF NURSE PRACTITIONER

*Nurse practitioners are registered nurses who have extended their scope of practice. There are registered nurses (RNs) in every province and territory of Canada that practice advanced or extended nursing. These nurses fall into three groups. The first group is the most homogeneous; they are often referred to as Clinical Nurse Specialists (CNS). They represent the cutting edge of nursing. Most have a masters or doctorate in clinical nursing and most practice secondary or tertiary health care. There is no legal recognition of these nurses separate from that of other RNs. Provincial health acts do not have a separate category for the CNS and nursing associations do not license them as anything other than RNs. They are simply the most clinically advanced nurses.*

*The second group is a more ad hoc collection. They developed on an as-needed basis and fill gaps in the health care system. Like the CNSs, they are most often found in secondary and tertiary care positions. They are delegated non-nursing responsibilities by other health care practitioners. Most often these are medical responsibilities but they may be otherwise such as pharmacological. The responsibilities of these nurses vary from one situation to the next. Like the first group, the practices of these nurses are not distinguished legally; they exist through individual agreements and delegation. There are no set standards beyond those of a RN. One of the most distinguishing characteristics of these nurses is that their practice extends beyond nursing.*

*The final group of nurses practice more than nursing but unlike the previous groups, also practice primary health care. This is the group that has begun to gain formal recognition in Ontario, Alberta and Newfoundland. Standards, beyond those of a RN, have been established. These primary care nurses have the legal ability to order tests, diagnose illnesses and prescribe drugs. The intentions of the governments are that these nurses will fill primary health care roles in areas that are underserved by physicians, such as rural and northern jurisdictions. These nurses are referred to by a number of titles: RN Extended Class, Advanced Practice Nurse, Advanced Clinical Nurse, Public Health Nurse, Community Health Nurse and Primary Nurse Practitioners.*

## A NURSING CONTINUUM

*These three groups of nurses can be seen to fall along a continuum representing the degree to which the nurse practices nursing versus medicine. At one end of the continuum is the CNS (clinical nurse specialist). The CNS practices nursing to its fullest extent. At the other end of the continuum are many of the nurses that fall into the ad hoc group. These are the nurses that have been delegated to fill physician gaps. More than any other nurses these individuals practice medicine. Many others in the ad hoc group fall very near the CNS end of the continuum, mostly practicing nursing with a few medical tasks. The placement of the third group (those that are becoming legally recognised and are expected to practice primary care) depends on the location and exact role the nurses of the group are expected to fulfill. This report addresses those nurses that fall on the half of the continuum that includes CNSs who practice some degree of medicine and who do not simply fill in for physicians. They are nurses first but they have skills-sets that include some medical practice. For the purposes of this report it is this category of nurses that we refer to as Nurse Practitioners (NPs).*

*"Nurse practitioners are registered nurses who through special education or job experience, have expanded their scope of practice and are prepared to perform a wide range of advanced nursing functions, as well as functions which traditionally have been performed only by physicians. NPs engage in independent decision-making about the health needs of clients and provide direct patient care to individuals, families and other groups in primary, acute, and chronic health settings. Focusing on health rather than illness, they utilize the nursing process of assessment, planning, implementation and evaluation. They engage in problem solving, teaching and counseling with the client and their approach to care supports and promotes the maintenance of a healthy lifestyle. Nurse practitioners work in collaboration with other health professionals. They are committed to client advocacy."*
*(Adapted from definitions of the Nurse Practitioners' Association of Ontario)*

vided by nurse practitioners would not be covered by a client's health insurance. These factors led to a stall in the nurse practitioner movement. Consequently, all nurse practitioner university programs were cancelled by the mid 1980s.

Despite the temporary failure of the movement, nurse practitioners continued to work in rural areas and community health clinics. Some were trained before the programs were dropped; some were trained in the United States or United Kingdom and others acquired medical training through an education other than an official nurse practitioner program. Nurse Practitioners filled in gaps where specialist shortages existed such as obstetrics and in rural areas that were medically underserved. They were free to counsel and diagnose patients, but for anything further they had to have a physician's approval. In some cases nurse practitioners provided extended care services according to the protocols and procedures of a physician.

It has been estimated that about 250 nurse practitioners were working nationwide in 1992.[2] Other estimates suggest that there were over 200 nurse practitioners practicing in Ontario alone by the mid-nineties.[3] It was at this time that nurse practitioner programs such as the program at McMaster University were reintroduced. Both Ontario and Newfoundland have passed legislation creating regulations and standards for nurse practitioners. In a very limited sense, Alberta has followed suit. British Columbia is expected to introduce a model similar to that of Ontario and it appears Saskatchewan is likely to follow Alberta's model.[4] To date, Quebec has no regulations specifically governing nurse practitioners but is looking to expand the role of nurses. Neonatal nurse clinician pilot projects are underway at the Montreal Children's Hospital and l'Hopital Ste. Justine. These programs are rare in Canada, encompassing an extensive training component in addition to functions and protocols. In no instance do nurse practitioners receive a fee-for-service. In those provinces that the nurse practitioner is able to order tests, he/she is given a billing number to which to charge the tests. Nurse practitioners are often salaried employees of government-funded hospitals, schools or agencies.

## NURSE PRACTITIONERS IN THE USA

In contrast to the disjointed environment in Canada, nurse practitioners have been widely used in the United States since the first recognized nurse practitioner programme was developed at the University of Colorado in 1965. That same year, the first physician assistant program was established at Duke University in response to a physician shortage in the United States. Initially, these programs recruited ex-servicemen to act as assistants to doctors. A diversity of these extended and advanced nursing programs proliferated in the 1960s and 1970s due to the demands for nurses with specialised skills and a lack of consensus regarding roles. Later,

## ADDITIONAL DEFINITIONS

**Primary Care (also known as "first contact care")**
*The service provided at first contact between patient and health professional.*

**Secondary Care**
*Health care delivered by specialized human resources, usually after referral from primary care providers.*

**Tertiary Care**
*Complicated and unusual disorders needing further referral from the secondary care providers to a more specialized rank. The facilities and professional skills are often found only in University teaching hospitals.*

**Primary Health Care**
*Essential health care based on practical, scientific sound and socially acceptable methods and technology made universally accessible to individuals and their families in the community through their full participation and at a cost that the community and the country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination.*

*(All of the above definitions from Chandrakant P. Shah, Public Health and Preventive Medicine in Canada, Toronto: University of Toronto Press, 1994.)*

**Ambulatory Care**
*Health care services provided to patients on an ambulatory basis, rather than admission to a hospital or other health care facility (outpatient clinics). Provision of immediate medical service (no appointment necessary) offering outpatient care for the treatment of acute and chronic illness and injury. (From : Gerald Katz, Abby Mitchell, Elaine Markezin, Ambulatory Care and Regionalization in Multi-Institutional Health Systems, Maryland: Aspen Systems Corp. 1982.)*

**Protocol**
*Description of procedures, methods or limits that must be observed (From: Quebec Medical Act – Regulation Section 31 referring to "classes of persons other than physicians")*

the skill sets of the varying sub-categories of nursing converged although some nurse practitioners gained these skills through formal education while others gained them through practical experience.

Today, there are over a 100 000 nurse practitioners in the USA.[5] Two-thirds of these have advanced degrees and the majority work in specialty practice.[6] These nurse practitioners work in geriatric, neonatal, psychiatric, trauma, surgical, pediatric and primary care. Activities may include diagnosing patient problems, providing patient teaching, counseling, follow-up, collaboration with other health professionals, performing physical exams, taking medical histories, ordering diagnostic tests and prescribing treatments. Chronic health care problems and well-care needs are often the focus of their work.

While American nurse practitioners have been integrated into health care systems, nurses in Canada have not similarly extended their scope of practice. Attempts to do so have been constrained by the lack of a system for reimbursement and a lack of popular support. Moreover, there isn't the same shortage of general practitioners in Canada as there is in the United States. Thus, there have been fewer openings for nurse practitioners to practice primary health care. In addition, politicians and doctors have been reluctant to make the necessary legal and organizational changes to allow nurse practitioners to play an expanded role. The arguments against nurse practitioners include patient concerns that nurses might miss something a doctor would not or that nurse practitioners would be taking jobs from doctors. These arguments suggest a lack of understanding of the role of nurse practitioners and a resistance to considering the larger picture.

In the following, evidence is provided for four areas that support the utility of nurse practitioners. While we may be criticized for not providing a balanced debate, it is our contention that the debate has been one-sided for too long. This paper is not meant to provide an exhaustive list of recommendations or the definitive answer to the problems inherent in the Canadian health care system; it is intended to provoke policymakers and concerned citizens with the hopes it will further discussions with regards to health care reforms.

## COST SAVINGS

Nurse practitioners save health care systems money. Utilization of nurse practitioners can reduce costs in a variety of ways. Studies by Canadian economists and health policy analysts have shown that where nurse practitioners work in family practice in place of doctors, cost savings are substantial. The authors of one study noted, "...we estimate that 10 percent of all medical costs and 15.9 percent of ambulatory costs could have been saved in 1980 had nurse practitioner time been substituted for physician time in the provision of all services for which substitution had been demonstrated to be safe and feasible."[7] A later study confirmed this by examining the use of nurse practitioners in place of general practitioners in Ontario. Lomas and Stoddart examined a phase-in of nurse practitioners for 1981-2001, noting, "Adjusted for future age-sex compositions, the estimates indicate General Practitioner reductions in the 10 to 16 percent range by 1991 and 20 to 30 percent range by 2001."[8] Moreover, an American study found even more cost savings from similar utilization : "Results indicate that per episode costs with nurse practitioners as the initial provider are approximately 20 percent below the costs of episodes in which physicians are the initial provider."[9]

The primary difference in costs between physicians and nurse practitioners is in salaries but can also be accounted for by their ordering less tests, and by an enhanced ability to provide advice and information that can lead to prevention of future disease. These reasons are discussed at length in the sections on protocol and nursing culture that follow.

### *1. Complementing Doctors, Not Replacing Them*

To return to the issue of cost-effectiveness, it is important to acknowledge that doctors, particularly those in family practice, may be threatened by the use of nurse practitioners. Doctors might view nurses as less-skilled workers who will be used to replace them for less remuneration. This issue is even more complicated by the fact that Canada has an oversupply of doctors, and has had since the 1980s. The Barer-Stoddart report recognized this problem. In American health care, nurse practitioners have successfully replaced doctors in many aspects of primary care. In the interests of cost-savings, a similar utilization might be suggested in Canada. However, a better solution, or at least a more 'Canadian'one in the sense that it is a compromise, is to examine areas where nurse practitioners might be used to complement rather than undermine the role of physicians. Four such examples are discussed here.

### *2. Nurse Practitioners in Rural Health Care*

Nurse practitioners turn out to be so versatile that there are many other ways they can be used which help the system do a better job of making sick people healthy. First, they may be used in primary care in rural practice. While there is an oversupply of doctors in the urban areas, this is not the case in northern and rural Canada. These are areas where nurses

have been practicing family medicine for many years. NPs fill a need in rural and remote areas, although they have had to do so through delegation and not through licensing. Canadian doctors have never been in great supply in rural and small-town Canada, so there has been little resistance to this possibility.

### *3. Avoiding Emergency Room Visits Saves Health Care Dollars*

In addition to rural practice, chronic disease management, neonatal care and call centres are all divisions where nurse practitioners have been successfully operating in the United States, and in a very few places in Canada. The management of chronic diseases is a very effective way of saving costs for any health care system. Patients with diabetes and asthma, for example, can be costly to the system if they do not take care of themselves and/or if the system does not assist their self-care and augment it with tests and information. They might end up at a hospital emergency room, which is much more costly than a specialist visit. Even less costly are classes, educational materials and ongoing tests that can be provided by nurse practitioners. At first blush, this appears to be an extra cost for the system but the amount of money it saves by staving off emergency room visits means that it is a cost-reducing measure. In the sections to follow, we will explain why nurse practitioners may be more effective than doctors at education and performing these tests.

### *4. Neonatal Care by Nurse Practitioners Offer Savings*

Some nurse practitioners are adept at neonatal care. Neonatal nurse practitioners undertake care of newborns, especially those born prematurely. In a recent American study comparing medical house staff and nurse practitioners' care of infants, and using measures such as days on a ventilator, days on oxygen, mortality, morbidity and costs, scholars found that the care was equal but delivered at significantly less cost by the nurse practitioners. Savings per infant cared for by nurse practitioners was documented at $18,240.[10] The study was carried out at a neonatal intensive care unit in the United States. Perhaps as further evidence of the success of these programs, neonatal nurse clinician programs are being piloted in Quebec and Ontario.

### *5. Call Centres Operated by Nurse Practitioners Save Money*

Finally, call centres are a means of utilizing nurse practitioners, providing increased health care, and at the same time, saving money. Call centres in the United States tend to be used in pediatric care. Concerned parents can call a nurse-run hotline when their child exhibits symptoms or says he/she is not feeling well. The nurse practitioners then ask a series of questions leading to a potential diagnosis, or to the conclusion that a doctor should be visited. The nurse practitioners follow protocol ensuring the quality of the advice. Savings occur because the nurse practitioner can give out information over the phone, she/he can ensure that those who are likely to need medical help receive it early to avoid later complications, and that those who do not need it do not go to the doctor and create needless cost. These call centres are highly effective and very popular in the United States.

#### CANADIAN CALL CENTRE STAFFED BY NURSE PRACTITIONERS

*A Canadian example of a successful pediatric call centre is in operation at the Toronto Hospital for Sick Children. It is a 24 hour service known as the Medical Information Center (MIC). It began in March 1977 but is still not advertised.[12] In Alberta, the Calgary Regional Health Authority (CRHA) is considering implementing a call centre which would be manned 24 hours a day by registered nurses trained to answer public health concerns. The plan was to be presented to the board of the CRHA in September, 1998.[13]*

In this section we have explained that significant cost savings can occur by replacing doctors with nurse practitioners in areas where this is feasible. This information is based on studies conducted in the 1980s which appear to have prompted little change in Canada. This may be due to the oversupply and resistance of physicians. Nevertheless, nurse practitioners can still be utilized in call centres, chronic disease management and neonatal intensive care units without compromising physician status. In all of these sectors, research evidence shows that nurse practitioners save health care dollars.

## NURSING CULTURE

One explanation for the effectiveness of nurse practitioners is the culture of the nursing practice. This is an issue that is studied little in terms of the utilization of nurse practitioners but is important with regards to their contribution to health care. Aspects of the nursing culture include a client centred approach, continuous patient contact, patient empowerment, the practice of peer teaching and the capability to work highly effectively in teams.

### *1. The Nursing Model and Client Centred Care*

There is no one nursing model of care but there are certain attributes that are true of them all – particularly when they

| | BRITISH COLUMBIA | ALBERTA | SASKATCHEWAN | MANITOBA | ONTARIO | QUEB |
|---|---|---|---|---|---|---|
| ***Legal Recognition:*** *Laws and Licensing* | None<br><br>*Underway:* review of the scope of practice of all health practitioners<br><br>*Expected recommendation:* model similar to Ontario | *1996:* changes made to *Public Health Act* to recognise NPs as a new class of RN<br><br>The Alberta Association of Registered Nurses sets the standards for NPs | Government is developing policies and licensing bylaws for NPs<br><br>Government recognised NPs are called Advanced Clinical Nurses (ACNs) but this may change | ***None*** | *The Expanded Services for Patients Act*, 1997 amended the *Nursing Act* to expand the scope of practice of RNs (Extended Class)<br><br>Colleges of Nurses of Ontario registers the RN (EC) | None<br><br>The *Medical* (1981 – amer 1995) permits to perform so ical functions autonomously |
| ***Utilization:*** *Location and Type of Care* | Self described NPs found in urban centres, street clinics and in rural outposts | *Licensed NPs* are intended to service rural areas declared medically under served by the Minister of Health<br><br>*Unofficial NPs* have already been working in community health centres | ACNs:<br>-similar to Alberta, practicing primary health care<br><br>The Nursing Association would like to see this extend beyond primary health care | Unofficial NPs:<br>-work in clinics<br>-primarily in rural areas | *RN(EC):*<br>-intended mainly for primary health care<br><br>-could practice autonomously outside of primary health care except in hospitals – restricted by *Hospitals Act*<br><br>*Other RNs:*<br>-practice secondary and tertiary care through delegation | There are two projects for N Nurse Clinici which include and practice |
| ***Extended Functions:*** *Medical, Non-Nursing Functions* | Through physician protocols to:<br>-diagnose illness<br>-prescribe medication | *Licensed NPs* can autonomously:<br>-prescribe some drugs<br>-order diagnostic tests<br>-provide emergency care<br>-make referrals<br><br>*Unofficial NPs:*<br>-perform extended functions delegated through physician directives | ACNs:<br>-10 to 15 tasks(to be determined)<br><br>*Unofficial NPs:*<br>-perform extended functions delegated through physician directives | Through physician protocols:<br>-diagnosis<br>-prescribe treatments | *RN(EC)* can autonomously:<br>-make a diagnosis<br>-administer certain treatments and med ications<br>-order certain test<br><br>*Other RNs:*<br>-perform extended functions delegated through physician directives | Administer m<br><br>Diagnostic te tocol)<br><br>Give vaccinat remote super<br><br>Special trainir<br>-neonatal and atric care<br>-prescribe me tions under p ject in hospit |
| ***Reimbursement:*** *Methods by which Nurse Practitioners are Paid* | Salaried employees of the government<br><br>Same as all RNs | *Licensed NPs:*<br>-employees of the Regional Health Authority (salary or contract of service)<br><br>*Unofficial NPs:*<br>-salaried employees of clinics or physicians | ACNs are salaried employees of health districts | Unofficial NPs are salaried employees of health clinics | *RN(EC):*<br>-mostly salaried employees of the province<br><br>-have billing numbers for the payment of tests ordered | Salaried emp |

| | | | | | | |
|---|---|---|---|---|---|---|
| | ***None*** | None<br><br>Government has requested proposals for primary health care, extended role nurse demonstration projects | ***None*** | 1998: *Registered Nurses Act* amended to include regulations for NPs<br><br>Association of RNs created standards of practice and competencies | None yet<br><br>Working on a scope of practice for Advanced Practice Nurses | ***None*** |
| | Unofficial NPs (only a few):<br>-cardiac care<br>-emergency rooms rural hospitals | Unofficial NPs:<br>-tertiary care in hospitals<br>-government mental health institutions | -RNs practice traditional nursing only | Licensed NPs:<br>-largely in primary health care<br><br>-there are some unofficial NPs | Primary care in remote nursing stations<br><br>APNs work through protocols without physicians present | Primary care in remote nursing stations<br><br>APNs work through protocols |
| | Through physician protocols:<br>-history taking<br>-assessment<br>-pre and post surgery care<br>-prescribing drugs | Through physician protocols:<br>-admit patients<br>-complete history and physical<br>-order lab test<br>-prescribe drugs<br>-emergency care | ***N/A*** | *Licensed NPs:*<br>-order diagnostic tests<br>-make diagnoses<br>-prescribe drugs<br>-prescribe treatments<br>-make referrals<br><br>*Unofficial NPs* work under physician protocols | Through physician protocols:<br>-order x-rays<br>-diagnose/assess<br>-administer drugs | Through physician protocols:<br>-take histories<br>-make diagnosis<br>-order lab tests/x-rays<br>-prescribe medication |
| | Unofficial NPs are salaried employees of the government | Salaried employees of the hospital or other government institution | ***N/A*** | *Licensed NPs:*<br>-salaried employees of regional health boards<br><br>-prescriptions covered by health insurance in the same manner as physician prescriptions | APNs are salaried employees of the health boards | APNs are salaried employees of the health boards |

are compared and contrasted to the medical model. The medical model is disease oriented. It focuses on the function of the body. "The medical model posits a dichotomy between mind and body which is not congruent with the philosophy of nursing in its concerns with the whole person. Not only is nursing concerned with the structure and function of the body; it is also concerned with human experience, behavior, feelings, and the influence of social forces upon the body – manifestations of the man-environment interaction."[11] It is this holistic approach that allows nurses to identify problems and concerns that other health care professionals might miss. It is important to note that a discussion of models for a profession is not a discussion of the individuals practicing the profession. It is certainly true that the medical and nursing model does not strictly define physicians and nurses. All physicians incorporate some tasks and services into their practice that might be defined as nursing according to the above model just as all nurses incorporate aspects of the medical model in their practice. The models simply provide a useful theoretical basis upon which to contrast and compare the two professions.

Much of the literature on nurse practitioners highlights the fact that they are client centred: "For advance nurse practitioners, the client is the centre of their world. Their skills and abilities are offered in order to ease the client's situation."[14] In line with this practice, nurse practitioners have a holistic picture of health with a focus on prevention and health promotion "informed by a definition of health which extends beyond the absence of disease and advocates broad-based efforts to improve the social conditions which influence health."[15] The nursing model entails encouraging health while the medical model focuses on curing disease.

### *2. Encouraging Self-Care*

As part of this health promotion focus nurses empower clients, allowing individuals to take charge of their own health choices. Nurses also encourage self-care strategies. The context of nursing has been described as "the provision of care as a dynamic process which has the patient's health as the objective [and] is reflected in such aspects as individual self care ability, self esteem and self determination."[16] Encouraging and enabling individuals to understand and take care of their own health both improves the satisfaction of the client and improves the client's health. This results in healthier people and more effective treatment of illness. Moreover, nurses empower communities to support individuals to become responsible for their health. The work that nurses do in communities enables the community to act as a support to those within it.

### *3. Teamwork*

Teamwork is another aspect central to the nursing culture.[17] Nurses perform well in multidisciplinary health teams. "Public health nurses recognize the importance of working within multi-disciplinary teams in health agencies." Far more than physicians, nurses are trained to work with other health care providers. It is an assumption of their practice. Given the desirability of accessibility, comprehensiveness, continuity and personal interaction, and given that no one health care practitioner can provide all of these things, the multidisciplinary team is very much a model for health care reform. By combining the skills of nurse practitioners with other health practitioners, the health system can offer more. In talking with other nurses, nurse practitioners can better provide care to their own patients. As well, nurse practitioners are willing to take instruction, to follow and to help other nurses.

### *4. Nurses Teach Nurses*

In fact, one of the benefits of utilizing nurse practitioners is the culture of nurses teaching nurses.[18] Nurses often act as role models and mentors to others. In the case of being a role model, a nurse practitioner may be unaware of his/her role. She may simply lead by example. It has been noticed that nurses feel more comfortable to ask questions when nurse practitioners are present. As a mentor, the relationship is more formal but no less common. The concept of continuous learning from another nurse is part of the nursing culture, as is the tendency towards self-learning. It is normal practice for nurses to seek further education after they have obtained a degree or diploma.

### *5. Attentive to Clients*

One last aspect of the nursing approach that impacts quality of care is the practice of nursing to maintain a continuous presence with the client. This allows for greater knowledge of the client's particular needs and increases patient comfort. By following the client throughout the health care process the nurse is able to pick up the particulars of an individual far more than a physician who interacts with the client for a brief period along the way.

## ACCESSIBILITY AND PATIENT COMFORT

As demonstrated in this paper, nurse practitioners save the system money. Moreover, the unique nature of nurses gives them a preventive focus, an ability to work in teams, and enables them to focus on the patient. In this section, we will illustrate another capability: effective patient care. One

aspect of quality is that the customer feels not only confident in the health care providers but is open to the information they can provide. Nurse practitioners enhance quality in the system because patients like them. This might be more important in the American system where health maintenance organizations (HMOs) and Medical groups are trying to keep their patients, but it is also important for any system because patients who have confidence in their system will be willing to access it when they have a medical problem. Over time, unresolved medical problems cost the system money as people can get increasingly sick and require long-term care.

### *1. The Accessibility of Call Centres*

One of the reasons why the call centres described previously are so effective is that patients are willing to use them. They are more willing to call a nurse than to "interrupt" their doctor. The study regarding the MIC at the Toronto Hospital for Sick Children determined that, "...parents prefer to call the hotline for advice rather than going to an emergency department."[19] Moreover, "[M]any patients indicate that they are less embarrassed asking questions of an anonymous person rather than face to face with the family doctor or another family member."[19]

### *2. Spending Time with Their Patients*

Indeed, patients are highly satisfied with the care they receive from nurse practitioners. In Canada, the most prominent study regarding nurse practitioners, the Burlington Randomized Trial of the Nurse Practitioner, took place from 1971 to 1972. The authors of that study described the areas in which patients were particularly satisfied: "personal interest exhibited, reduction in the professional mystique of health care delivery, amount of information conveyed and cost of care."[20] Not only are patients highly satisfied with the care provided by nurse practitioners, a review comparing nurse practitioner performance to physician performance in the same domain concluded that nurse practitioners scored higher than physicians in "child-care discussions, preventive health, giving advice, therapeutic listening and support, thorough history-taking, interviewing skills and patients, and knowledge of their own treatment plan."[21] All of these demonstrate that nurses are willing to spend time with the patient discussing his/her health. Thus, it is not surprising that one of the reasons why patients like nurse practitioners is that they take time with them.

### *3. Reducing Patient Length of Stay*

Nurse practitioners can also be used for care of trauma patients in hospital settings. In one American example, “the introduction of nurse practitioners to the trauma team reduced patient length of stay, outpatient clinic waiting times and patient complaints. Documentation of quality of care increased. The housestaff spent substantially less time discharging patients and performing outpatient clinic examinations.”[22] This level of specialized care was provided in a way that contributed to patient comfort and, as a result, shortened patient lengths of stay and reduced patient recovery time.

### *4. Patient Satisfaction*

Moreover, studies of patient satisfaction with nurse practitioners are overwhelmingly positive. As Dr. Walter Spitzer explained, in a seminal article, "When patients or clients have had even limited experience with nurse practitioners, they have invariably been found through systematic surveillance to express universal and unequivocal satisfaction."[23] The patient-focus of nursing care may be one of the reasons why nurse practitioners are so popular with those they care for. It is well-documented that nurse practitioners have a "positive influence on health knowledge, compliance, health maintenance and return for follow-up,"[24] which are all patient-related outcomes.

## QUALITY

Finally, nurse practitioners use their training and derive maximum benefit from their nursing nature to provide high-quality care. Since nurses began expanding their scope of practice numerous studies have been done on the quality of care of these practitioners. The studies found the following:

### *1. Quality Communication*

Nurse practitioners have better interpersonal, communication and counseling skills than physicians. Better interpersonal skills mean more comfortable patients who ask more questions, resulting in greater patient understanding and satisfaction – an important part of the empowerment process discussed already. This, along with the fact that nurse practitioners tend to spend extra time with each patient, means the nurse practitioner acquires a more complete and comprehensive medical history which is shown to have an important impact on diagnoses and care. For example, nurse practitioners are less likely to prescribe drugs when a non-pharmacological treatment is preferable, even though overall prescription rates are equivalent to those of physicians.[25] Communication skills have also been shown to improve patient compliance, and the comprehensiveness and accessibility of health care. A patient that understands a treatment and its intended benefits is more likely to follow it properly. A complete medical history helps to ensure that the patient is

having all of his/her medical needs met. A comfortable patient is better able to take advantage of the services offered by the medical community.

### *2. Quality Networking*

Nurse practitioners also offer a greater connection to other social services than do physicians. "[P]ublic health nurses are routinely involved with the departments of social services, education, law enforcement and transportation, as well as community groups, family physicians, non-governmental organizations, acute-care and residential institutions."[26] The nurse practitioner is able to act as a client advocate throughout the system. Thus, nurse practitioners act as a gateway to the entire set of social services. Many of the problems clients come to health practitioners with extend beyond health. Nurse practitioners are able to identify what services are required, provide referrals and act as an advocate for the client.

### *3. The Quality of Protocols*

There have been a number of studies examining how physicians go about prescribing the treatments that they do. There are often many options for any one case and physicians tend to have their own favorite treatments. In diagnoses and prescription, nurses often use protocols. Protocols are guidelines for patient care established between a physician and a nurse practitioner. These protocols ensure that nothing is missed and that the quality of care is high. Along with ensuring that nurse practitioner care is not below that of a physician, protocols have been shown, in some instances, to improve quality of care. This may explain the fact that nurse practitioners order more laboratory tests than physicians but with lower costs per patient. It may be that protocols ensure the nurse practitioner orders the appropriate test.

### *4. Quality Outcomes*

Overall the outcomes of nurse practitioner care are very positive. Patients are satisfied with the care provided by nurse practitioners - often more satisfied than with physician care. The technical skills of nurse practitioners are equal to those of physicians. Nurse practitioner patient outcomes are equivalent or superior to physician patient outcomes. Nurse practitioner patients experience fewer hospitalizations. The utilization of nurse practitioners has also meant greater access to primary health care, particularly in underserved urban and rural areas.

## SUMMARY and RECOMMENDATIONS

Based on this review of nurse practitioners, there are four compelling reasons for integrating them into the Canadian health care system:
(1) cost savings;
(2) nursing culture;
(3) patient comfort and accessibility; and
(4) quality.

Nurse practitioners could save the Canadian health care system a substantial amount of money if they replaced doctors in areas in which it is safe to do so. However, it is likely that this would not be a popular move with many of Canada's doctors. Nevertheless, nurse practitioners can be used alongside doctors in neonatal care, geriatric care, family practice and pediatric care. They can also be of benefit to the system by working with doctors to provide follow-up calls and health education, and by working in call centres to respond to patient inquiries. The evidence weighs in favor of the nurse practitioner. Not only are nurse practitioners highly effective and liked by their patients, they save health care dollars. A move to increase the utilization of nurse practitioners would be positive for the health care system.

While this paper offers a "solution," it is clearly not the final word on the reforms needed in Canadian health care. The following are our recommendations to facilitate greater utilization of nurse practitioners in Canadian health care delivery. We include some necessary caveats.

### *1. Role of Nurse Practitioners*

One of the challenges is determining just what role nurse practitioners should and could play in the health care system. In the Canadian Nurses Association paper on the topic, "The Nurse Practitioner," an executive director of one provincial/territorial association presents this challenge: "If governments are going to introduce nurse practitioners, then they should identify where they can be useful and they should be part of the health care system, not a temporary fix to a supply problem."[27] Issued in the early nineties, this exhortation remains important. Nurse practitioners could be effectively used in many aspects of primary care including family practice.

It is recommended that nurse practitioners be used in primary care, neonatal care, geriatric care, psychiatric care and trauma care where they can save costs by working alongside physicians. Further, it is recommended that call centres be implemented where they do not exist. Finally, nurse practitioners can be an ongoing (as opposed to temporary) solution to the lack of physicians in rural practice.

### *2. Reimbursement*

A major barrier to increased utilization of nurse practitioners is reimbursement. If they work in family practice, they often have to be paid out of the physician's budget as they are not able to bill for services, as doctors are. This can also be a problem in rural practice. There are no fee-for service nurse practitioners presently, although a very few can bill for tests. Also, those who work in private practices bill their patients directly. If a fee-for-service payment scheme was established, it is possible that costs would rise. A fee-for-service system tends to encourage excessive testing in order to reap higher economic benefit.

As identified by many experts and academics in the United States and Canada, it is recommended that nurse practitioners be paid by salary, either through provincial or regional bodies.

### *3. Changes to Laws*

Presently, only Newfoundland and Ontario have standards and regulations for nurse practitioners, while Alberta has a more limited set. Other provinces are expected to follow, but adopt different models. Different models may allow for provincial variation. However, cost-savings and quality care are guiding principles for every province. It is possible to recognize nurse practitioners in a similar manner across the country.

The *Canada Health Act* has been amended to allow for the legal recognition of nurse practitioners. It is time for the provinces to move ahead.

### *4. Shortage of NPs*

Another major barrier to the utilization of nurse practitioners is their relative scarcity. This may be due to a lack of integration when they were first introduced, and the cancellation of nurse practitioner programs in universities. This shortage means there is little awareness of nurse practitioners and few individuals to voice the relevant issues. This barrier also means that when advanced practice nurses or nurses with advanced skills begin to practice more fully in rural areas and in specialties, there will need to be a division of labour among nurses. NPs should not be performing skills that can easily be performed by Assistant Registered Nurses, for example. The shortage of RNs trained to be nurse practitioners requires that their skill not be wasted on tasks that require minimal practice and experience. An expansion of educational programs for nurse practitioners would be a good start, especially programs focusing on primary care in rural Canada, where there is a definite need. In order to best utilize nurse practitioners, governments may also consider standardizing their roles so that they would not be required to perform tasks which can easily be performed by ARNs.

### *5. Disagreement Among Nurses*

Nurses on both sides of the border have not been able to agree on what role they should or would like to play. Some nurses are concerned that a shift to practitioner will mean that they will be more focused on the medical model of health care delivery rather than on the nursing model. These nurses argue that it is because they take extra time, follow protocol and are patient advocates that they are so successful.

This problem is one that the nursing community needs to resolve for itself. One possible solution is for some nurses to continue with a more limited scope of practice and those that want to extend their scope can do so as nurse practitioners while continuing to practice with the nursing model in mind.

### *6. Physician Acceptance*

A final barrier is physician acceptance. As explained in this paper, many physicians feel threatened by the introduction of nurse practitioners who, at least in primary care, appear to be able (and want) to do their jobs for less cost. In fact, there is a trend in specialization amongst doctors. That is, students in medical school tend to want to continue on and specialize rather than simply be general practitioners. In this sense, there is a role for nurse practitioners. Moreover, it is not our intention to replace doctors with nurse practitioners but to save the system money and improve care by utilizing nurse practitioners in areas where they would be effective. Another barrier to physician acceptance has been the inability to pay nurse practitioners except through doctors' funds. For example, in one demonstration project using nurse practitioners, the physicians'complaints centred around administrative and reimbursement problems. It has been shown that physicians are willing to delegate tasks given the right reimbursement system. Therefore, the salary payment scheme suggested in this paper may be one way to assist in physician acceptance.

It is recommended that NPs be paid by salaries and that physicians be provided with adequate information – and there is an abundance of it – to fully assess the benefits of nurse practitioners.

# END NOTES

***The following is an abbreviated list of endnotes as many other sources have influenced our thinking. Please contact the authors for a more comprehensive list of sources.***


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*2. Haines, Judith: 1993, pg. 20.*

*3. Remarks made by The Hon. Elizabeth Witmer, M.P.P. Minister of Health, regarding the Proclamation of the Expanded Nursing Services for Patients Act, 1997 at The Registered Nurses Association of Ontario.*

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*19. Wilkins, Valerie C., BA, RN, "Pediatric Hotline : Meeting Community Needs While Conserving Health care Dollars" JONA Vol 23 No 4, March 1993.*

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