

Understanding the role of nurse practitioners in Canada

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The practice of medicine and nursing continues to evolve as a result of changes in knowledge, technology and health care needs. New areas of specialization have developed and, in particular, the roles and duties of registered nurses have been expanded. This expansion has enabled nurses with advanced education and skills to function as independent and interdependent clinicians who practise in partnership with physicians and other health care professionals.

La pratique de la médecine et des soins infirmiers continue de se transformer à mesure de l'évolution du savoir, de la technologie et des besoins en soins de santé. De nouvelles spécialités ont fait leur apparition et les rôles et responsabilités des infirmières autorisées, en particulier, ont pris de l'ampleur. Cette expansion a permis aux infirmières qui ont fait des études avancées et possèdent des compétences spécialisées de fonctionner comme cliniciennes autonomes et interdépendantes qui pratiquent en partenariat avec les médecins et autres professionnels de la santé.

In these times of complex health care issues, economic challenges, escalating health care costs and limited access to physicians, alternative models of health care delivery, such as nurse practitioners (NPs), have the potential to improve access to comprehensive and appropriate care services. They are an important consideration for health policy decision-makers.[1,2] Despite this, NPs remain an underused resource within the health care system.[1]

In Canada there is discordance with respect to titles, educational requirements, legislation, and clinical and legal responsibilities among regions. This discordance limits the portability of certification and even the implementation of NPs in many settings.

The purpose of this article is to provide the reader with an explanation of the titles, educational requirements, legislation and clinical and legal responsibilities of NPs, as well as barriers to the effective integration of these nurses. The recommendations for integration of NPs into a strategic health care plan will be discussed.

Historical perspective

In 1967, the first education program for NPs working in northern nursing stations was started at Dalhousie University in Halifax, NS. The 1972 Boudreau Report[3] made the implementation of the expanded role of the registered nurse (RN) a high priority in Canada's health care system. A joint statement on the role of the NP was released in 1973 by the Canadian Nurses Association and the Canadian Medical Association,[4,5] but during the 1980s, NP education programs across Canada were obsolete. This is believed to be due to a perceived physician oversupply, lack of remuneration mechanisms, lack of legislation, lack of public awareness, lack of support from both medicine and nursing, and, of course, lack of funding.[6] Despite this unfavourable situation, approximately 250 NPs continued to work in Ontario through the

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1980s and early 1990s, primarily in community health centres and in northern nursing stations. In spite of the failure of the first initiatives, the NP role continues to be promoted by government health care commissions and task forces as a valuable resource for the delivery of health care, especially in the areas of disease and injury prevention, health promotion and community-based care. Details of the history of NPs can be found at the Nurse Practitioners' Association of Ontario Web site (www.npao.org/history.aspx).

Definition

"Nurse practitioner" is a frequently used title to identify advance practice nurses (APNs), but it has no universal definition. The NP role has existed in Canada and the US since the 1960s. In its infancy, the term "nurse practitioner" referred to RNs working in ambulatory or outpatient settings such as public health, clinics and physician offices. The role has since evolved, and NPs are now typically recognized as having acquired additional knowledge, skills and expertise in an area of specialty (e.g,. neonatology, critical care, diabetes). Advanced nursing practice synthesizes nursing and medical knowledge, with a commitment to client-centred care.[7] In their expanded roles, NPs may perform tasks that have traditionally been considered the domain of physicians.[8]

Although it has been in common use in Canada since the 1970s, the NP title is not protected in relevant Canadian Acts and, therefore, means different things to different people. The umbrella term "advance practice nurse" is frequently used to refer to this group and accounts for both the variety of specialized nursing roles and the additional educational preparation that each role requires.[8] In the medical literature these RNs are often collectively referred to as "nurse practitioners," and the term "nurse practitioner" is the recognized Medical Subject Heading (i.e., MeSH) by the National Library of Medicine. Title protection, as well as regulation of NPs, is the responsibility of the provincial and territorial nursing regulatory bodies. However, in most provinces there is no restriction on the use of the title. Therefore, an NP may be one who has completed a formal graduate program and has years of clinical experience or one who has a diploma in nursing and who has learned on the job.[6]

Titles used by NPs in Canada include:[9]

- Primary Health Care Nurse Practitioner (PHC NP)
- Registered Nurse–Extended Class (RN[EC])
- Acute Care Nurse Practitioner (ACNP)
- Clinical Nurse Specialist/Nurse Practitioner (CNS/NP)
- Nurse Practitioner–Specialist (NP-S)
- Specialty Acute Care Nurse Practitioner (SACNP).

Education

Currently only 12 of the 66 nursing programs in Canada offer NP education and certification, the majority of which are baccalaureate or post-diploma programs focusing on primary care (PHC NP). However, this has resulted in NPs with different titles, scopes of function, and levels of educational preparation and certification. In 1994 the Council of Ontario University Programs in Nursing, a consortium of 10 nursing faculties in the province, developed a new PHC NP Program, and the first class graduated in 1996. An emergence of ACNP programs developed for intensive care settings began in 1986 at McMaster University with the training of NPs in neonatology. Other acute care NP specialty training programs have since been developed, including those at the universities of Alberta and of Toronto. Lobbying is currently underway by professional nursing associations, regulatory bodies and interest groups across the country to standardize all NP programs at the graduate degree level.

Roles

The role of the PHC NP involves a community-based scope of practice, often in association with a family physician, where advanced decision-making skills in assessment, diagnosis and care management are used. The PHC NP provides health care services with a focus on health promotion, prevention, rehabilitation and support care and within the legislated scope of nursing practice, which include the 3 Controlled Acts entitled to all RNs in Ontario (Table 1).[10] Depending on provincial legislation, the PHC NP is able to provide independent care beyond this scope of general nursing practice.

The role of the ACNP involves managing patients across all health settings, including the management of the acutely and critically ill or those with an exacerbation of chronic health problems.[8] This role includes providing direct patient care management by performing in-depth physical assessments, interpreting results of laboratory and diagnostic tests, ordering pharmacotherapeutics and

performing invasive procedures such as insertion of arterial or central venous catheters.[11] Specialty areas of ACNP practice in the US were initially focused on hospital-based care such as critical care, pediatrics, subspecialties of internal medicine and surgery, emergency medicine, and many others.[12] These specialty areas have since expanded to clinics and other unique settings such as home care, long-term care, sports medicine, and tropical medicine.[12]

Both categories of NPs function under a collaborative model of practice involving all members of a health care team. In the absence of provincial legislation and regulations, the NPs must work within existing nursing legislation and under protocols or medical directives defined by the NP and the employer. This model may or may not be outlined in a collaborative practice agreement, which is a legal document defining the NPs' scope of practice and responsibilities, practice protocols and reporting structure. The collaborative practice agreement is binding among all parties: the NP, the collaborating physician(s), the institution (employer), and/or departmental head(s), and is not transferable from one employer or NP to another.

Legislation and regulatory issues

Only 3 Canadian provinces (Ontario, Alberta, and Newfoundland and Labrador) have passed legislation supporting the APN role. Alberta and Ontario have legislation supporting PHC NPs, and in 1994 the College of Nurses of Ontario approved the new class of RNs — the Extended Class RN(EC).[13,14] Graduates from an Ontario PHC NP program may write the Ontario provincial certification exam for the RN(EC) designation, which is protected under this provincial legislation. In 2001, Newfoundland and Labrador became the only province in the country to have passed legislation supporting ACNPs and adopt the title Nurse Practitioner–Specialist (NP-S).[15]

There are 3 controlled acts[10] authorized to RNs in the Nursing Act in Ontario (1991) (Table 1). The RN(EC) has the authority to perform 3 additional controlled acts: 1) communicating a diagnosis of a disease or disorder, 2) ordering diagnostic ultrasound, and 3) prescribing a limited range of drugs. As well, changes to other acts authorize the RN(EC) to order specific x-rays (chest, rib, arm, wrist, hand, leg, ankle, foot), mammography and ultrasonography (abdomen, pelvis, breast), and the RN(EC) can order a specific range of 101 laboratory tests provided in the Laboratory and Specimen Collection Centre Act. However, the RN(EC) does not have the authority to interpret these investigations; that remains the responsibility of a physician.[16]

The RN(EC) is also authorized to prescribe a specific range of drugs provided in a statutory amendment to the Nursing Act, 1991, made under the Expanded Nursing Services of Patients Act, 1997. Any drugs and/or laboratory tests not on the list must be ordered by the collaborating physician but may also be ordered by the nurse through a medical directive.[16] Currently, many PHC NPs perform diagnostic and prescribing activities under the authority of a physician, often by means of a medical directive. Registration in the Extended Class permits the PHC NP to assume sole accountability for these activities. Therefore, it is important for these NPs to identify themselves by following their signatures with the initials "RN(EC)."

In addition to the above activities, NPs can consult other health care professionals, including physicians. This consultation or referral can occur at any point in the assessment of the patient or when planning, implementing or evaluating the patient's care, whenever the patient's condition requires care beyond the scope of practice of the RN(EC). The degree to which the physician becomes involved may vary. Consultation may result in the physician providing an opinion and recommendation; an opinion, recommendation and concurrent intervention; or assuming primary responsibility for the care of the client (transfer of care).

Medicolegal issues

All health care professionals, including NPs, are accountable for their practice and face liability risks

Table 1. Controlled acts entitled to all registered nurses in Ontario

1. Performing a prescribed procedure below the dermis or mucous membrane;
2. Administering a substance by inhalation or injection; and
3. Putting an instrument, hand or finger
   - beyond the external ear canal,
   - beyond the point in the nasal passages where they normally narrow,
   - beyond the larynx,
   - beyond the opening of the urethra,
   - beyond the labia majoria,
   - beyond the anal verge, or
   - into an artificial opening into the body.

related to their health care role. This accountability does not preclude physicians from being enjoined as defendants in a lawsuit, but typically only those found responsible for the adverse outcomes are held liable.[17] Ideally, all NPs should have personal liability protection for malpractice claims. Liability protection for Canadian nurses is provided by the Canadian Nurses Protective Society (CNPS), similar to the Canadian Medical Protective Association for Canadian physicians. The CNPS is a non-profit organization that offers legal liability protection (related to nursing practice) to eligible RNs. As members of a professional association or college that is a participating member of CNPS, NPs are automatically eligible for personal occurrence-based professional liability protection; that is, protection for whenever the claim is made, as long as the NP was insured at the time of the occurrence. CNPS assistance is available up to $2 million for each occurrence to a maximum of $3 million per year for civil lawsuits, successfully defended criminal charges and alleged breach of statute arising from the provision of a professional nursing service. Whether an NP requires more liability protection than the $2 million offered by CNPS is dependent on the legal risk factors inherent in the role. Additional insurance, often in the amount of $5 million, is available and is usually claim-based. Additional "tail coverage" insurance, which provides protection for claims made during an additional "tail" period, is available for purchase. Inadequate NP malpractice insurance coverage may have an impact on associated physicians in cases of common care, such that, "*the individual with insurance coverage may become financially liable for all*."[17]

CNPS statistics reveal that NPs were involved in 1.6% of the lawsuits and 2.1% of all occurrences reported to CNPS between 1997 and 2001.[18] The 10-year claims history from the American National Practitioner Data Bank indicates that malpractice payments for nurses have been rare (1.7% of all payments) and NPs were responsible for only 4.7 % of all nurse payments.[18]

Although some physicians and their associations have voiced concerns that working with NPs might increase their risk of liability, other physicians suggest an added value of having NPs on the team in that NPs mitigate risk because of very good communication skills and their therapeutic relationships with patients and families. Therefore, although it is important to maximize liability protection, it is more important to develop a comprehensive risk-management strategy for collaborative practice models.

Evidence

The first randomized controlled trial (RCT) comparing NPs to physicians was conducted in 1969 in a primary care setting.[19] Using patient mortality, disability and dissatisfaction as outcomes, the results demonstrated that NPs could provide primary health care as well as physicians. Canadian primary care NP RCTs were the next to be reported.[20–22] In addition to establishing the methodology for similar health outcome-based trials, these studies brought to the forefront the concept of NPs performing many of the primary care tasks of Canadian family physicians. They also quantitatively demonstrated an equivalence in patient health outcomes between the 2 groups.

Although these trials showed that NPs could function alone in 67% of all patient visits and were cost effective in this setting, the single fee-for-service physician payment model was not conducive to universal adoption of NPs in all primary care practices.[21] Recently, several multi-centred, RCTs comparing NPs to physicians in primary care settings have been published.[19,23–25] The comparisons have involved resource use and validated measures of patient satisfaction and health status.

A recent systematic review of 11 trials and 23 observational studies examined a) patient and provider satisfaction, b) safety and effectiveness, c) process of care, and d) costs.[26] The authors identified few recent RCTs, and the observational studies were of poor quality. Operational definitions were vague or inconsistent across the literature, and valid and reliable measurement tools were rarely used. Despite these limitations, similarities in findings were evident in the studies reviewed, and the ability to replicate studies and demonstrate consistent findings may allow for generalizability.[27] The authors found that care delivered by NPs in various primary care settings resulted in higher patient satisfaction and quality of care compared with physician care, with no difference in health outcomes. No differences were found in prescribing patterns, consultations or referrals. Compared with physicians' patients, NPs' patients demonstrated equivalent or greater 1) compliance with health promotion treatment recommendations, and 2) knowledge of their health status and treatment plan. NPs spent more time per visit with their patients than did physicians, but the average number of visits per patient was the same. Although the NPs ordered more lab tests than did physicians, the average lab cost per NP patient was less.[28] In summary, the cumulative

published research shows that, in all outcomes measured, NPs performed as well or better than physicians. Although NPs frequently spent more time with patients, it was found that they also provided patients with more information.[24] These combined factors may be responsible for the higher patient satisfaction scores that NPs received.[24] This accumulative evidence does not demonstrate that NPs can replace physicians, but rather that, under specific conditions, they are able to perform a limited number of tasks usually carried out by physicians.

Facilitators and barriers

A comprehensive review of the facilitators and barriers to the integration of NPs into the Canadian health care system based on a review of published studies can be found in the *Report on the Integration of Primary Health Care Nurse Practitioners into the Province of Ontario*.[29] Facilitators identified in this review are categorized as follows: policies and legislation; funding; practice models; education; evaluation and measurement; and other. The barriers identified are similarly categorized and include: attitudinal; legislative; funding; title; skill limitation; liability; and practice model limitations. Although it is beyond the scope of this review to describe each of these in detail, issues identified in common categories include the need to legitimize the role with standardizations for practice and the need to expand the prescriptive authority and scope of practice. Funding issues include provision of resources to establish NP practices and the need for appropriate remuneration models for physicians working with NPs.

Summary

The public, health care professionals and decision-makers must be convinced that the introduction and expansion of alternative models of health care delivery is necessary for quantitative and qualitative improvements to the system. Since NPs are capable of providing a wide variety of health services, expanding nursing roles in a time of economic restraint, limited physician access and escalating health care costs is a viable solution to meeting gaps within the health care system.[30] To this end, family physicians might be considered the best positioned group to lobby this cause, given their collective, prominent role in health care provision and their demonstrated leadership and innovation in the implementation of NPs into the health care system at the primary care level.

Currently, one of the greatest barriers to introducing the NP role in a national health care strategic plan is the lack of a concerted and cooperative effort by all legislative and regulatory bodies to create universally accepted systems of accreditation and licensure similar to those for Canadian physicians.

Although a national standardization of NPs is one step in the process of implementing NP roles into a national health strategic plan, another is the demonstration of conclusive evidence. Finding this evidence involves a comprehensive research program that uses a variety of research methodologies to assess the complex and multifaceted components of health care delivery. The first phase should involve needs-assessment studies for each of the proposed areas of NP practice, to determine the most appropriate roles for NPs in Canadian health care.[31] These would then be followed by clinical trials assessing patient outcome, patient and coworker satisfaction, and cost-effectiveness as it has been demonstrated with primary care studies. Currently, the majority of published clinical trials demonstrating the clinical effectiveness of NPs has been conducted at the primary care level. These studies and their results will serve as the design templates and research benchmarks respectively, necessary for the development of such a comprehensive research program.

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