Current Status of Physician Assistant and Nurse Practitioner Roles in Ontario: A Descriptive Paper

Final Draft

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The Canadian Association of Physician Assistants (CAPA) is a national professional association that provides advocacy, standards of practice, certification, and professional development opportunities for its membership across Canada and globally. CAPA works in partnership with the Canadian Medical Association, Provincial Medical Associations, the Royal College of Physician and Surgeons of Canada and many other national organizations to ensure quality standards and cooperation in achieving optimal health care.

The Council of Academic Hospitals of Ontario (CAHO) represents the 25 research and teaching hospitals within the province, functioning as a forum for strategic initiatives to further health care within the province.

The Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto ranks among the premier nursing programs in the world, and partners with teaching hospitals, community agencies and clinics to provide nursing education and research.

The Nurse Practitioners’ Association of Ontario (NPAO) represents the professional interests of all Nurse Practitioners (NPs) in Ontario. NPAO is an expert group of the Registered Nurses’ Association of Ontario. NPAO's mission is to achieve full integration of NPs to ensure accessible, high quality health care for Ontarians.
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1.0 Purpose and Introduction

In 2006, the Ontario government implemented HealthForceOntario (HFO) as a strategy to address the shortage of health care professionals in Ontario and improve access to care. Among the innovative approaches to care that have emerged due to legislative, regulatory and policy initiatives are new and expanded roles for a variety of health care providers. Under the auspices of the HFO strategy, the role of Physician Assistant (PA) has been introduced and there has been an expansion of the Nurse Practitioner (NP) role in Ontario.

Elements of the HFO strategy include the development of a PA Implementation Steering Committee (PAISC) to guide the implementation of PA pilot projects in the province. There is currently a two-year PA demonstration projects taking place in hospitals, community health centres, and in settings where PAs are employed by a physician or group of physicians. PAs have been introduced to more than 20 hospitals and are working as part of interprofessional teams in areas that include general internal medicine, emergency, orthopaedics and orthopaedic surgery, general surgery, complex continuing care and rehabilitation. PAs have also been introduced to five primary care Community Health Centres long-term care patient management settings where they are employed directly by a physician or group of physicians.

The government continues to support the integration of NPs in existing and new models of primary health care, i.e. NP-led clinics, community health centres and family health teams. Other actions include regulatory changes that recognize NP authority in various government programs (e.g. Ministry of Transportation) and referrals to the Health Professions Regulatory Advisory Council (HPRAC) for expansion of NP scope of practice. Recent regulatory changes also allow for NP specialization in primary health care, paediatrics, adult, and anaesthesia, with the latter still in development. Most recently, the Government of Ontario has committed to implementing 25 nurse practitioner-led clinics by October 2012.

The HFO strategy stipulates that there is a place for both roles in a variety of settings within Ontario’s health care system. Just as health care provider roles shift over time to incorporate new knowledge, technology, and scientific advances into their practice, so too does the health system to ensure patients have access to care providers and teams who can meet their evolving needs. PAs and NPs can promote access to care, improve timeliness of treatment, and augment patient services for Ontarians. In health care systems the roles have repeatedly been proven to be cost-effective, productive and safe, offering high levels of quality of care.1,2,3,4,5

Given these new and expanded roles, it is critical that decision makers understand PA and NP roles and scopes of practice in a variety of settings. To allow for the smooth transition of new members to the interprofessional team, it is important that organizational leaders apply a decision-making process that strikes a balance between consumer need and the perspectives of both clinical and administrative stakeholders. Clinical care needs and available resources should be considered in a collaborative way. Roles that best meet the needs of the patients and the organization can then be identified and applied.

This paper responds to a demand from provincial hospitals for a comprehensive and factual description of the PA and NP roles in Ontario. It outlines the key considerations with respect to the history, scope of practice, education, and governance related to the PA and NP roles, with an emphasis on hospital settings.
This paper was developed in partnership with the Nurse Practitioners’ Association of Ontario (NPAO), the Canadian Association of Physician Assistants (CAPA), Lawrence S. Bloomberg Faculty of Nursing at the University of Toronto, and the Council of Academic Hospitals of Ontario (CAHO). A brief description of these organizations is available at the beginning of this paper.

1.1 Roles

In terms of basic hospital-based medical care, the clinical performance of both NPs and PAs has been studied and compared to that of physicians. Many U.S. studies indicate that both NPs and PAs provide comparable medical care. Patient satisfaction, quality of care, and cost effectiveness also score well above acceptable levels for both roles. When compared with traditional physician-only models of care, studies have shown that the use of NPs and PAs has led to improved patient satisfaction and quality of care and confirms that NPs and PAs provide safe and effective care. Both roles have been proven to be cost effective in a number of different practice and compensation environments.

A notable strength shared by NPs and PAs is their ability to evolve to meet care needs in a changing health care environment. This applies at the broader profession level, as well as in individual interactions at the team level.

While NPs and PAs approach health care from different educational and professional paradigms, their skills and competencies in the medical management component of the role overlap, something that is increasingly viewed as a desirable and important aspect of interprofessional practice. The duplication of some knowledge and skills, as well as profession-specific knowledge and skills, is considered beneficial for both teams and patients, adding flexibility to the health care delivery model to which they are being applied. This overlap allows for greater capacity to build a comprehensive plan of care with patients and contributes to improved team understanding of an overall plan of care. There is increased potential to provide consistent and uninterrupted implementation of the care plan, with patients and families no longer having to rely on the availability and knowledge of one profession.

Because NPs and PAs each have a unique practice area based on education and professional practice, it is important to understand the scope and limitations of these roles, as well as patient population and health care team needs, before making a decision as to which might best be integrated into an existing team.

A key point to understand in relation to roles is that the Regulated Health Professions Act sets out a number of "controlled acts" which may only be performed by certain regulated health professionals. Of the 13 controlled acts, physicians are entitled to perform 12 and may, in appropriate circumstances, delegate the performance of those acts to other individuals who may or may not be members of a regulated health profession. This delegation can take place either through direct physician orders or through medical directives approved at the employer level.

Organization-specific medical directives must be developed and implemented for each specific activity to be delegated, and each physician with whom the practitioner works must agree and sign off as a prerequisite for using any medical directive. Specific guidelines exist in Ontario for this purpose, endorsed by the College of Nurses of Ontario (CNO), and the College of Physician
and Surgeons of Ontario (CPSO). Health profession regulatory bodies have also collaborated through the Federation of Regulatory Colleges of Ontario to create frameworks that facilitate and clarify processes to enable collaboration where controlled acts are concerned. Understanding of this evolving system of controlled acts is important to keep in mind when considering the scope of practice and governance of the NP and PA roles, as is discussed within this paper.

A summary of the PA and NP role is described in Appendix 1.
2.0 Physician Assistant (PA)

The role of PAs is legally based on physician delegation of medical tasks to a qualified associate. PAs “extend the hand of the supervising physician”, and work under the supervision of a registered physician, practicing in accordance with the College of Physicians and Surgeons of Ontario’s policy on delegation. PAs in Ontario are currently unregulated health care providers, although they practice with physician supervision and oversight within both verbal and written protocols. In other jurisdictions, the medical practices of PAs are regulated under the College of Physicians and Surgeons or by the State Boards of Medicine.

Physician Assistants (PAs) are academically prepared in the medical model. They are able to practice medicine in any clinical setting, extending the physician’s services. Within a formalized Physician-Physician Assistant relationship the PA functions with autonomy with clinical oversight, but never independently.

PAs function as the physician representative, extending and enabling the coordination of the medical treatment plan with that of the other members of the health care team. PAs are generalists (general practitioner) in the approach to patient-centred care and specialists in the practice of team medicine. It is important to note that PAs supplement, not supplant, the work of physicians. PAs can relieve physicians of certain tasks, allowing the physicians to concentrate on areas only they are qualified for.

PAs possess a defined body of knowledge, clinical skills, procedural skills and professional attitudes in support of effective patient-centered care. They apply these competencies to collect and interpret information, make appropriate clinical decisions, and carry out diagnostic and therapeutic interventions. They practice medicine within the boundaries of their discipline, personal expertise, the health care setting, the delegator relationship with their supervising physician, and the patient’s preferences and context. The care they provide is characterized by up-to-date, ethical, and resource-efficient clinical practice as well as effective communication in partnership with patients, other health care providers and the community.

2.1 History

HealthForceOntario introduced the PA role in Ontario in 2007 to improve access to medical care and services. Dedicated resources have been used to fund two new university educational programs (McMaster University and University of Toronto), provide financial compensation for physician preceptors and supervisors, cover salary and benefits for PAs, market the role, and to implement and evaluate the PA initiative.

While the PA is a new profession in Ontario, its history spans 40 years as an integrated role in both Canada and the United States. PAs evolved from U.S. military medics whose additional medical education allowed them to work in the civilian world as PAs. Sequentially, the American Military Services began to train their own PA corps with the U.S. Air Force starting a program in 1972. In Canada, for years, the only PAs to be found were in the Canadian Forces. Enlisted personnel took additional training to qualify as PAs. To this day, their contributions on navy ships, in field operations, and in base clinics are invaluable; however, until recently, they were unable to practice in the civilian world. Federally, and then provincially in
Manitoba and more recently in Ontario, physicians and health officials realized that the knowledge base and skills of the PA could enhance patient care, increase access to services, and help improve physician efficiency.

Several studies over the past 40 years have focused on the quality of care, cost effectiveness and efficiency of PA practice. A recent study investigating the efficiency and quality of care provided by PAs at a 747-bed urban academic medical centre in the North Eastern United States with over 44,000 annual inpatient admissions, found no differences between the PAs and various resident or physician comparison groups in the outcomes of unadjusted hospital readmissions within 72 hours, 14 days, and 30 days of discharge, inpatient transfers to intensive care, or inpatient mortality.11

An evaluation of a health management primary care clinic that utilized PAs found that after case-mix adjustment for complexity of primary medical conditions, patients for whom PAs provided a substantive portion of care eventually used about 16% fewer office-based visits per year than patients cared for by physicians only. This difference in the use of office-based visits was not offset by increased resource use in other settings, such as increased local Emergency Department visits, and did not result in any decrease in patient satisfaction.12 The PA in a Family Medicine practice setting was found to have a same-task substitution ratio of 0.86 compared with the supervising physician. The PA was economically beneficial for the practice, with a compensation-to-production ratio of 0.36.13

The economic value of PAs has also been documented in the Canadian context. Winnipeg Regional Health Authority’s Concordia Hospital Orthopedic Hip and Knee Program found that costs for PA involvement on their surgical team were comparable to using family physicians in the Operating Theatre; however the additional benefit of ward and clinic coverage with the specialization of the surgical PA allowed an average saving of each Surgeon’s time of four weeks per year. The double rooms allowed for with the addition of PAs to the staff in 2006 increased primary joint volumes by 316 procedures per year, representing an increase of 42% in primary joint volumes directly attributable to the double room model utilizing PAs.14

2.2 Education

PA education programs are 24 to 27 months in duration and use materials defined from the National Competency Profile developed by the Canadian Association of Physician Assistants and supported and approved by the Canadian Medical Association (CMA).

There is a Master of Physician Assistant Studies Program in Manitoba, and as of 2009, 145 accredited PA Education Programs (PAEP) in the United States.

PAEPs are offered in two different institutions in Ontario, with a third in development. The Canadian Forces Medical Service School offered the first PA Program in Borden, Ontario and was the first Canadian PA education program to be accredited by the CMA. This program, offered in 24 consecutive months, is formally a Certificate program, but a recent affiliation with the University of Nebraska means the school will award a baccalaureate degree to its graduates as of July 2009.

In the fall of 2008, McMaster University enrolled its first class of PA students. Their baccalaureate program covers 24 months of education in eight semesters over two calendar
years, and is based on the COMPASS curriculum of McMaster’s Michael G. DeGroote School of Medicine. The Consortium for Physician Assistant Education offers a collaborative education program with the Northern Ontario Medical School, the Michener Institute of Allied Health, and the University of Toronto for a second degree baccalaureate program. This program’s first cohort starts January 2010.

The first year of a PA education program is didactic offering an intense curriculum that includes basic medical sciences such as informatics, biochemistry, physiology, anatomy, psychiatry, pharmacology, and population based medicine courses addressing adult, paediatric, and women’s health covering the life span of the patient population. These core subjects combined with surgical skill sessions, diagnostic medicine, emergency care, and ethics provide generalist knowledge in medicine. The clinical portion, covered in 12 to 14 months, includes rotations in the core areas of family and internal medicine, surgery, emergency and psychiatry. Electives allow rotations in paediatrics, obstetrics, trauma, orthopaedics or sports medicine, community health, and anaesthesia. Although different programs have different options, the core rotations of a program remain consistent with the goal of producing a medical generalist qualified PA.

PAs come from a poly-variant background which may include nursing, other health professional education, or life sciences. The candidates selected for training in the Canadian Forces Program have served in a variety of medical roles and have been qualified primary care paramedics or licensed practical nurses for an average of 12-15 years. Participants in civilian PAEPs include registered nurses, paramedics, genetic councillors, biomechanical engineers, physiotherapists, medical physiologists, and international medical graduates. Most students have previous education, medical, and life experience with an undergraduate degree or a health care diploma with experience in patient care.

Following graduation from a CMA-Conjoint accredited program in Canada, or from an Accreditation Review Commission approved program in the United States, PAs are eligible to challenge the National Certification examination. In Canada this is administrated by the Physician Assistant Certification Council (PACC). Generalist PAs obtain specialty education via firsthand experience with their physician mentor and supervisor. This process allows the physician the ability to shape and influence the PA in their practice style and specialty.

Each Canadian and American PAEP shares a core foundation of material, and then builds upon that foundation to meet regional or organizational goals. For example, Canadian Forces personnel receive more extensive education in trauma or remote health services; whereas the University of Manitoba program has additional courses in research and education.

2.3 Scope of Practice

PA scope of practice as outlined in Canada by CAPA is as a generalist clinician; however, the scope mirrors that of the physician supervisor and is defined by the Physician-Physician Assistant relationship. This relationship should be viewed as negotiated autonomy within a formal relationship of mentorship, leadership, and supervision. There is a national Scope of Practice for the Generalist PA with a standard accepted by the CMA to assure and direct the educational qualifications standards.

The general medical education of PAs provides them with the flexibility to move between various clinical settings and specialties including clinics, medical centres, and hospitals. The
medical philosophy of the PA supports a physician-directed and supervised medical practice. Supervision need not be onsite, and often grows to become administrative and supportive in nature. PAs can function with varying degrees of responsibility in all areas of medicine and surgery, and in all practice environments including remote, rural, and urban settings. The description of practice which outlines and authorizes the scope of practice, mirrors the physician practice and comfort level.

PAs have been shown to have proficiency in the performance of medical diagnostic and therapeutic procedures that require a high degree of technical proficiency.\textsuperscript{16} The PA role continues to expand as technology advances and physicians realize greater practice efficacy when utilizing skilled assistants. For example, at one time only doctors performed sigmoidoscopies. Now the role of the PA as sigmoidoscopist using advanced fibre optic scopes is well established.\textsuperscript{16} Similarly, PAs routinely perform liver biopsies with supervision from a gastroenterologist. They also detoxify patients, make routine visits in nursing homes, work on-call in neonatal units, perform wellness physicals, assist in cardiothoracic surgery, and staff emergency departments and oncology centres, all at high levels of performance and patient acceptance.\textsuperscript{17}

PAs are considered an extension of the physician because of their education, their philosophy and their commitment to physician directed and patient centered care. In a practice environment, PAs allow the physician or surgeon to concentrate on the complex medical or surgical issues while having confidence that their PA is dealing efficiently and effectively with the medical concerns that present.

The PA skill set is extensive and comprehensive, including the ability to provide surgical or procedural assistance, medical evaluation and treatment, and critical interventions as required. They are qualified and maintain their competency through the completion of a formal education in the medical model, national certification, and mandatory continuing medical education. In Canada, PAs who have completed the formal Canadian Medical Association Accredited Education Program are eligible to write a National Certification Exam earning the CC-PA designation. The abilities of a PA are further developed and enhanced by the nature of the professional Physician-Physician Assistant relationship.

\section*{2.4 Governance}

PAs practice under the supervision of licensed physicians by way of acts delegated through medical directives by their supervising physician as outlined through policies of individual hospitals/workplaces. A future goal of the Canadian Association of Physician Assistants (CAPA) is to achieve regulated health care professional status in Ontario. In their opinion, regulation would allow PAs to perform some controlled acts without requiring repetitive delegation by a physician. The time required for supervision and authorization of practice will decrease as the process becomes better predefined and the relationship strengthens with time. Manitoba’s College of Physicians and Surgeons requires the formal submission and approval of a Practice description which outlines the nature of supervision and the scope of practice. Regulations of PAs in Ontario, including the scope of practice, prescriptive authority, and funding models, are being investigated and are under consideration by the CPSO and other stakeholders.
The Ontario Ministry of Health and Long-Term Care (MOHLTC) requires PAs practicing in Ontario to be certified by either the U.S.-based National Commission on Certification of Physician Assistants (NCCPA), or the Canadian-based Physician Assistant Certification Council (PACC). To be eligible for national certification, each agency requires that applicants must graduate from an accredited program and pass a national standardized examination.
3.0 Nurse Practitioner (NP)

NPs are regulated health care professionals whose role is based on an expanded scope of nursing practice combined with the ability to engage in the medical management of patients independently in primary health care, long term care and ambulatory settings and based on physician delegation of medical tasks in a hospital setting. For over 40 years, Nurse Practitioners (NPs) have worked in a variety of primary health care settings in the United States and Canada. More recently, NP practice has evolved into all facets of the health care system, as well as into other jurisdictions. Initially the role was driven by a shortage of physicians, especially in remote and rural communities in northern Ontario, and with difficult to serve populations such as the mentally ill, youth and new immigrants. However, recent research validates the additional value that NPs bring to patient care and team-based practices. Attributes, such as improved access, knowledge for self-management, ongoing patient and family support, holistic care and symptom management, and attention to the “meaning” associated with specific lived health care related experiences for individuals and families with enhanced co-ordination services are what has made the NP role desirable in Ontario hospitals. The role is responsive with patient care needs in the 21st century.

NPs have also made significant contributions to the health care system through their direct patient care responsibilities with patients living with acute, chronic and common health problems. Many NPs have worked in partnership with their physician colleagues in the assessment, diagnosis, and management of primary care and complex (acute) health problems. NPs capably address patient concerns that have traditionally been managed by physicians. They also demonstrate the value of integrating medical and nursing care to address the biological, psychosocial and spiritual needs of diverse populations.

3.1 History

In 1998, changes to the Nursing Act allowed the NP role to emerge as a regulated profession. With the regulated authority to perform additional controlled acts to those already authorized to nursing, and with changes to other legislation and regulations (e.g. Regulation 965 of the Public Hospitals Act and various legislation pertaining to long-term care homes), NPs were able to practice independently within primary health care, long-term care and hospital outpatient/ambulatory care settings. The role has existed in hospital practices in the U.S. for over 30 years and in primary health care since 1967.

The shortage of physicians and the growing recognition of the value that NPs contribute beyond that of traditional medical care provided by physicians has resulted in an increase in both the number and types of practice settings for NPs in Ontario. The MOHLTC provides funding to support integration for over 900 primary health care NPs, including salary and overhead costs, in a variety of primary care settings. There are currently 1,478 NPs registered with the College of Nurses of Ontario (CNO); 1,102 NPs-primary health care, 271 NPs-adult and 110 NPs-paediatrics (including neonatal NPs).

Integration of the NP role in hospital settings has a history spanning two decades in Ontario, and findings from this experience suggest that the role has broader implications for patient care and health systems other than that of extending physician practice. With a focus on the
experience of health, illness or injury, NP practice addresses biologic, psychological, social and spiritual dimensions of care in the context of the lived experience of their health care needs, incorporating their values and beliefs in treatment plans that are developed with active patient involvement.

The number of NPs in hospitals has increased significantly in the past two decades as knowledge and awareness of improvements in patient care directly related to this role have increased. Originally implemented in academic and tertiary hospitals, the role has since been introduced in community hospitals.

NPs practicing within a hospital environment in Ontario include an estimated 174 primary health care NPs and virtually all of the existing 291 adult and paediatrics NPs. As well, there are approximately 200 nurses who work in hospital settings who have been educated as acute care NPs since 1995, many of whom are in the process of registering as adult or paediatric NPs with the CNO.29,31

The growing interest and investment in this role in the hospital sector has been based entirely on internal recognition of the value these practitioners bring and has been realized without additional government funding for salary, operating or education costs. Hospitals electing to implement this role have done so from global operating budgets recognizing that using NPs leads to cost savings, enhanced patient care services, and improved team collaboration, professional development of nurses and other team members, and extension of health human resources. NPs provide leadership to assist interprofessional teams to build relationships that lead to “therapeutic microcultures” and assist teams to learn about roles and integration of evidence into practice to improve the patient experience as well as clinical outcomes. With a focus on the patient experience guided by knowledge of patient values, beliefs, preference, and context, NPs help teams build effective team practices that improve team functioning.3,4,5

3.2 Education

NPs practicing in Ontario have been educated at the university level through programs of study that result in certificates in one of the four NP specialties. Ontario NPs are registered nurses who take additional education to enhance their knowledge, skills and competencies as primary health care, adult or paediatric specialists. Applicants must have a baccalaureate degree in nursing, a minimum of two years of nursing practice, and meet other additional entrance criteria. NP education programs in Ontario began in the 1970s. Over time, they have evolved to meet the needs of Ontario’s population and in response to health care policy, the changing needs of the health care sector, and as a result of employer and student feedback. Ontario has been a national leader in the implementation of NP roles and as such the educational programming has been benchmarked with programs offered in the United States. Consistently, the Canadian curriculum has met accreditation expectations and educational standards that guide American NP education.

The current adult, paediatric, and primary health care programs in Ontario began in the mid 1990s. In January 2009, the first cohort of NP students seeking education in anaesthesia care was enrolled in a post-NP program.

Upon completion of an NP education program approved by CNO, students are eligible to write a qualifying exam for the RN (Extended Class) (with the exception of the first cohort of students
completing courses in anaesthesia care as that specialty exam is not yet established at the CNO). For NP education completed outside Ontario, the CNO has a process to determine eligibility based on the Canadian Nurse Practitioner Core Competency Framework, which is the agreed upon framework for all regulatory bodies as the standard for regulating NP practice in Canadian jurisdictions.

NP educational programs in Ontario have been approved at the university level and by the Ontario Council of Graduate Studies. This ensures academic rigor and a high standard of education. All NP education programs include courses in advanced health assessment, clinical decision-making, advanced physiology and pharmacology, and clinical courses that provide a content-specific curriculum with a minimum of 700 hours of supervised practical learning in the clinical setting.

Adult and paediatric NP education programs focus on preparing clinicians to work with specialized complex populations in acute hospital settings, including both inpatient and ambulatory areas, long-term care settings, and in the community. Students must be a registered nurse and have a minimum of two years of clinical practice to enter an NP program. The NP program is situated within the graduate curriculum of the University of Toronto and is two years in length. Students completing all required courses graduate with a Masters in Nursing with a Nurse Practitioner Adult or Paediatric certificate. McMaster University offers a post-Masters diploma program in Advanced Neonatal Nursing which qualifies graduates to obtain the NP-Paediatrics registration. Graduates have developed their capacity as specialists working with designated populations. NPs educated through these programs can be introduced in a variety of settings matching the NP’s experience, education, and clinical focus to the needs of the population being served, as well as the team providing care.

The primary health care NP curriculum was originally designed as a certificate program delivered across ten and now nine collaborating universities, following a baccalaureate in nursing and a minimum of two years full time experience as a registered nurse. Both face-to-face and e-learning technologies have been employed in its delivery. Masters level programs have been implemented at most universities in addition to the certificate program. In all programs, curriculum is focused on the diagnosis and management of acute and chronic illness seen in the community setting, across all ages of patients and levels of community development.

### 3.3 Scope of Practice

NPs provide health care services based on their independent scope of practice as a RN(Extended Class -EC) including comprehensive clinical assessment, diagnosis, and treatment interventions to a variety of patient populations. Their scope of practice moves beyond one-to-one medical management and into family and community care, providing leadership in systems changes that enhance health care delivery. The major focus of NPs is on the assessment, diagnosis, treatment and monitoring of acute and chronic conditions, screening, and providing anticipatory guidance, wellness care and illness prevention strategies for clients. NPs also integrate non-pharmacologic interventions into treatment plans. NPs also provide patient health education, and counselling to encourage active patient participation in treatment plan development as well as adherence to plans of care. They facilitate systems improvements and contribute to appropriate utilization of health services within and beyond hospital care. 

\[1,3,4,6,23\]
In Ontario, NPs work across all settings including hospitals, long-term care and the community. Some examples cited in the literature include critical care, critical care outreach, trauma, neonatal intensive care, general internal medicine, geriatrics and geriatric outreach, palliative care, wound and symptom management, pain management, orthopaedics, cardiology, cardiovascular intensive care, rheumatology, endocrinology, oncology, women’s health, and mental health.\(^{27,29}\)

NPs are flexible, adaptable and expert which makes them an excellent asset in a collaborative or autonomous setting. They can fill a niche that is often described as a gap in existing systems of care. Some work and develop expertise in the care of specific patient groups within a subspecialty like paediatric home ventilation or adult heart failure, while others work and develop expertise across medical specialties seeing patient populations with specific problems such as in a seniors falls clinic, pain management, or wound management.

NPs are collaborators who work as members of teams that include any combination of regulated and non-regulated health providers. They augment medical care, enhance team involvement in developing, implementing and evaluating plans of care, and provide an advanced practice nursing focus to patient care. On nursing teams they advance the practice of nursing, developing educational programming for professionals. NPs provide clinical management of patients experiencing acute and chronic illnesses. They also contribute to patient education, working in partnership with patients to develop self-management programs for chronic illness from assisting patients to live with and adapt to their illness to providing a safety net, and creating outreach programs to prevent needless hospital admissions and/or emergency room visits. NPs may also collaborate and conduct research and engage in program evaluations to contribute to evidence-based practice.

The benefits of hiring NPs have been widely recognized by health care employers and are now beginning to surface in the literature. Among the notable examples, NPs have developed heart failure clinics that have resulted in hospital diversions of up to 50%, patient support programs for cardiac surgery, and family support initiatives for paediatric patients with ongoing health care needs.\(^6,21\) NPs are frequent collaborators in team research projects raising important clinical, administrative and policy questions. Some NPs are also leading research projects that investigate the outcomes of NP practice and other important patient care needs. Research completed by one NP in Ontario found that, following angiography, patients who received care with constant observation and who were positioned lying flat for six hours could be discharged home safely rather than staying overnight. The NP’s initiative to research a clinical question resulted in generating evidence that changed practice and resource savings. This is a clear example of how NP practice is making an impact on costs and staffing as well as patient comfort.\(^{32}\)

### 3.4 Governance

NPs are regulated by the CNO. They are Registered Nurses who, after completing an approved NP educational program and a minimum of two years of safe nursing practice in addition to other criteria, must then pass the Extended Class RN(EC), registration examination for primary health care, paediatrics, or adult areas of specialization. An exam for the anaesthesia specialty has yet to be developed.
Under Ontario’s Regulated Health Professions Act, NPs registered with CNO have the authority to perform additional controlled acts: communicating a diagnosis, prescribing and monitoring pharmacologic agents, and ordering and interpreting diagnostic tests. The current authority that NPs have to perform controlled acts varies within the context of their practice setting. The use of medical directives has been widely adopted across many settings that employ NPs to enable existing and expanded scope of practice. NPs currently have the authority to treat patients within their legislated and regulated scope of practice in hospital emergency departments and other hospital outpatient areas. They frequently use medical directives to enhance their practice. NPs practicing in inpatient hospital settings use extensive medical directives, enabling comprehensive and holistic care for a variety of patient populations in collaboration with physician colleagues and interprofessional team members. Working with physicians in a collaborative practice model, NPs help enable timely access to needed care, and engage patients and families in the care planning and care evaluation processes.

Following the submission of several reports from the Health Professions Regulatory Advisory Committee (HPRAC) to the Ontario Minister of Health and Long-Term Care, the government recently tabled Bill 179, the Regulated Health Professions Amendment Act. The Bill proposes a number of changes to expand NP scope of practice and remove legislative and regulatory barriers in the Nursing Act and other legislation. Additional controlled acts (e.g. casting, dispensing, applying forms of energy) are also proposed. Lists for prescribing, ordering laboratory and diagnostics test are removed. Regulatory changes are anticipated in 2010, including a change to Regulation 965 under the Public Hospitals Act that will enable NPs to admit, treat and discharge patients. These changes are expected to result in the removal of the vast majority of medical directives for NPs, particularly in the hospital setting.
4.0 Utilization of the PA and NP Roles

Growing opportunities exist for new and expanded health care provider roles within the Ontario health care system as demonstrated by PAs and NPs. Both roles have shown that they are well suited to function effectively in team practice, complementing the physician role through overlapping clinical skill sets related to the diagnosis and treatment of specific patient populations.

We have learned that the use of NPs and PAs in hospitals adds value in terms of quality, consistency, and efficiency of care within an interprofessional team. We have also learned that these roles are both highly adaptable in terms of scope of practice within a health care setting. The key to successfully implementing these roles in the Ontario health care system is the involvement of hospital decision makers in matching the provider with the needs of the patient, family, care team, and the organization.

Although these are the legislative and practice frameworks that exist in today's hospital environment within Ontario, it is important to note that within a very short time frame, significant changes in legislation, regulation, and scope of practice may radically alter the considerations presented in this paper. As noted earlier, legislation has been tabled in Ontario to expand NP scope of practice following extensive review of the role by HPRAC. Legislative and regulatory changes in other jurisdictions are also indicators of potential for change. For example, Manitoba adopted legislation whereby PAs will be governed by the College of Physicians and Surgeons, and the government of Newfoundland and Labrador introduced regulatory changes to remove barriers to NP practice.

Stakeholder groups comprised of clinical and administrative personnel, including both NPs and PAs, are optimal in facilitating decision making regarding the implementation of NPs and PAs in hospital settings. A thorough knowledge of patient population needs, micro and macro system issues and needs, current strengths and gaps in care, and current team functioning combined with a vision for team based patient centric practices should help guide decision making when determining the need for adding new roles to existing teams. An interprofessional team approach to decision making will limit the risk of identifying specific role needs based on previous methods of care delivery, individual exposure, experience with various roles or the availability of funding support. Appendix 2 provides an outline for decision making that is designed to assist in this process.

Collaborative decision making emphasizes that roles no longer work unilaterally in hospitals, and that the involvement of clinicians as well as administrators is important to ensure resources are utilized effectively. If we do not start here - understanding the clinical needs, exploring new ways to manage complex problems and creating different partnerships with the citizens of Ontario - we will only continue to replace old systems with new parts rather than redesign the system to improve access, care provision, team collaboration and provider satisfaction.

Introducing a new health care practitioner to an established team, or to a new health service, is an opportunity to enhance patient care, access, and safety, and to improve system efficiencies. By carefully considering patient and program needs, exploring opportunities for innovations in shifting the scope of practice of key providers, and then reviewing the potential for new and
different roles within teams, we allow for tangible creative solutions to meet patient care demands.
Appendix 1: Role Attributes of PAs and NPs

A. Education Programs in Ontario

*Nurse Practitioner: Primary Health Care PHCNP Certificate*
The program is offered by a consortium of nine Ontario Universities and covers the following material:
- Pathophysiology
- Advanced Health Assessment & Diagnosis I & II
- Therapeutics in Primary Health Care I & II
- Roles & Responsibilities
- Integrative Practicum

In 2008, as part of the transition to a Masters Degree program, additional courses are offered:
- Research Methods and Application
- Change Management
- Health Care Policy

*Nurse Practitioner: Adult/Paediatrics - ACNP Certificate or Diploma*
Two-year Masters program, offered at the University of Toronto, covering the following material:
- Pathophysiologic Concepts & Therapeutics
- Advanced Health Assessment & Clinical Reasoning
- Advanced Nursing Practice in Caring for Clients and Families I & II
- Research Methods and Application
- Program Planning
- Knowledge Transfer

*Nurse Practitioner: Paediatrics*
McMaster University offers a post-Masters diploma program in Advanced Neonatal Nursing which qualifies graduates to obtain the NP-Paediatrics registration.

*Approved Nurse Practitioner Education in Other Jurisdictions*
The College of Nurses of Ontario has approved education programs that meet the requirements for Extended Class (see http://www.cno.org/for/mec/np_regs.html). CNO reviews education programs from the U.S. and other jurisdictions for candidates wishing to register in Ontario.

*Physician Assistant - Physician Assistant Certificate or Baccalaureate Degree*
The program is offered by two institutions in Ontario (with discussions underway for a third); both curricula are based on the Canadian Forces model, which was developed from the CAPA Scope of Practice and Occupational Competency Profile.
- McMaster University: 24 months of consecutive education (comprised of eight semesters) (baccalaureate degree)
• Canadian Forces Medical Service School: 24 continuous months (Physician Assistant Certificate – in the process of obtaining baccalaureate credentials, anticipated by July 09)

Both programs are broken down into 3 phases:
• Phase 1 – Didactic: one-year in duration, education in anatomy and physiology, basic medical sciences, biochemistry, pharmacology, conditions and physical exams, medical skills and procedures, and population-based medicine (Paediatric, Adult, Women’s Health)
• Phase 2 - Clinical Phase: 47 weeks (approx 2000 hours of clinical rotations)
• Phase 3 - Confirmatory Phase: competencies learned in the first two phases are tested in an OSCE style examination over a three-day period

The University of Manitoba offers a Masters in Physician Assistant Studies which in addition to the above provides courses in Research and Informatics, Ethics, Instructional and Educational development, and requires a Capstone research project for graduation.

PA training is modeled on physician education. Didactic instruction typically includes basic medical sciences such as anatomy, the pathophysiology of disease across all major systems, and pharmacology. There is an emphasis on history taking, detailed physical exam, differential diagnosis and treatment planning for conditions commonly seen in primary and emergent care. Clinical instruction includes rotations in Family Practice, Internal Medicine, General Surgery, Psychiatry, Paediatrics, OB-GYN, Trauma and Emergency Medicine.

There is also a pilot project in Ontario for graduates of international medical schools (IMGs) who are qualified to apply for medical residencies within Canada. These IMGs can receive additional education under a 4-month program that includes both didactic and clinical components, and is provided through the Physician Assistant Implementation Steering Committee (PAISC), a joint initiative of the Ontario Ministry of Health and Long-Term Care, the Ontario Hospital Association, and the Ontario Medical Association. Once successfully completed, along with the completion of a one-year supervised clinical term, IMGs may write the PA Certification exam.

Note: Other education programs are available in the U.S. and Canada. In order for PA graduates to be eligible to write the National Certification Exam, the program must be accredited in Canada by the CMA Conjoint accreditation process or in the U.S. by programs accredited by ARC-PA.

B. Prerequisites for Ontario Education Programs

Nurse Practitioner: Primary Health Care
• Baccalaureate program in nursing
• Current registration with College of Nurses of Ontario as a RN
• Minimum overall nursing average of 70% in their baccalaureate or BScN program in nursing
• Equivalent of at least two years of RN experience in the last five years
**Nurse Practitioner: Adult/Paediatrics**
- Baccalaureate program in nursing
- Two years recent clinical nursing experience
- Current registration with College of Nurses of Ontario as a RN
- A Master’s degree in nursing must be obtained either in concert with the NP program or in advance
- For University of Toronto Post-Master’s ACNP Diploma Program entry, candidate requires a Master’s degree in nursing or its equivalent

**Physician Assistant: Physician Assistant Certificate (Canadian Forces program)**
- Baccalaureate in an allied health program, with appropriate basic science credits
- Graded entry based on prior learning will be available for candidates with advanced standing or experience such as other allied health professionals, or paramedics

**Physician Assistant: Baccalaureate Degree (McMaster University)**
- The equivalent of two years of undergraduate courses at an accredited university

**C. Clinical Experience as part of Education Program**

*Note:* NP student clinical experience is in addition to clinical hours completed in undergraduate programs and professional experience gained that NP students have upon entry to the program.

**Nurse Practitioner: Primary Health Care**
- 700 hours of precepted clinical experience in various health care settings

**Nurse Practitioner: Adult/Paediatrics**
- 700 hours of clinical experience in various supervised environments.

**Physician Assistant**
- 47 week (approximately 2000 hours) clinical rotation, which is completed in areas such as emergency medicine, paediatrics, internal medicine, orthopaedics, sports medicine, general surgery, urology, anaesthesia, trauma, and family practice among others

**D. Ontario Regulation**

**Nurse Practitioner: Primary Health Care, Adult or Paediatrics**
- Regulated by the College of Nurses of Ontario
- Protected title is Registered Nurse in the Extended Class RN(EC) or Nurse Practitioner and their specialty class (e.g. NP-Adult)
**Physician Assistant**
- Not currently regulated in Ontario. In other jurisdictions, PAs are regulated by the provincial College of Physicians and Surgeons

**E. Clinical Practice**

**Nurse Practitioner: Primary Health Care**
- All ages of patients and families with acute episodic and stable chronic conditions
- Able to communicate a diagnosis, write prescriptions and order specific laboratory tests for outpatients (including emergency patients)
- Works within evolving interprofessional team practices often addressing unmet needs of vulnerable patient populations through innovative models of care
- Develops community and patient education programs, prevention measures and creates linkages within the community
- Provides wellness care with a focus on preventative health screening incorporating interventions that address not only individual health care needs but also the social determinants of health
- Enhances evidence-based practices through education and the development of evidence-based protocols and order sets
- Able to develop plans to meet complex social issues for families and patients

**Nurse Practitioner: Adult/Paediatrics**
- Specialized adult or paediatric population, including knowledge of complex management of infants, children, adolescents, adults and older adults
- Provides comprehensive patient care across all settings for primary, acute and chronic health needs of populations
- Works in collaboration with all health care providers as per scope of practice and collaborative practice agreements
- Requires medical directives for hospital work; independent practice in outpatient/ambulatory settings as per regulatory scope of practice
- Communicates a diagnosis, writes prescriptions and orders specific laboratory tests for outpatients (including emergency patients)
- Communicates a diagnosis, uses medical directives to initiate specific investigations including X-ray and Lab as well as treatments for in-patient clinical care
- Typically works within an interprofessional team and is known to facilitate communication among practitioners
- Develops education programs for patients and families as well as for staff around specific health conditions
- Works with nurses to advance the practice of nursing related to meeting the needs of specialty patient populations
- Provides interprofessional team leadership to meet population health needs in the context of the practice setting
Enhances evidence-based practices through education, the development of evidence-based protocols and order sets and collaborative research projects

**Physician Assistant**

- Manages adult, geriatric, or paediatric population, including knowledge of complex management of the primarily health care concerns in the acute or chronic care setting
- Functions under the oversight of a Physician utilizing the PA scope of practice, which can be expanded or restricted depending on the Physician’s practice
- Able to use medical directives to write prescriptions initiate specific investigations including X-ray and Lab, interpret findings and manage outpatients (including emergency patients)
- Can work as part of the interprofessional team but also can function semi-independently depending on supervising physicians oversight and delegation
- Enhances evidence-based practices through education and the development of evidence-based protocols and order sets
- Provides interprofessional team leadership to meet population health needs in the context of the practice setting
- Manages all ages of patients with acute episodic and chronic conditions under delegated acts by supervising Physician
Appendix 2: What to Consider when adding a PA or NP to Your Team

1. Identify clinical setting or patient population.
2. Identify interprofessional, collaborative decision-making team.
3. Determine need for new model of care.
4. Identify the major issues related to this patient population:
   - Acute non-life threatening care
   - Acute life threatening illness
   - Initial diagnosis and treatment for chronic disease
   - Management of acute complex disease
   - Management of chronic complex disease
   - Management and coordination of multiple complex health and social needs
5. Identify goals and outcomes of the new model.
6. Identify issues related to:
   - Patient access
   - Timely movement through the system
   - Continuity
   - Communication with the patient and family
7. Identify systems issues around:
   - Development of professional staff
   - Team development
   - Enhanced communication among departments
   - Increased team communication
   - Implementation of protocols and best practices
   - Change management
8. Identify role(s) that best meet the needs as identified
9. Set up processes, policies and procedures to enable the role.
10. Develop and evaluate outcomes.
References


