

# Physician assistants in Canada

## Update on health policy initiatives

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### Abstract

**Objective** To analyze the health policies related to physician assistants (PAs) and to understand the factors influencing this medical work force movement.

**Quality of evidence** This work combines a review of the literature and qualitative information, and it serves as a historical bookmark. The approach was selected when attempts to obtain reports or literature using customary electronic bibliography (PubMed, CINAHL, Google Scholar, EBSCO, and MEDLINE) searches in English and French, from 1970 through 2010, identified only 14 documents (including gray literature) of relevance. Reports, provincial documents, and information from developers of the PA movement supplemented the literature base.

**Main message** The historical development of the role of PAs in Canada spans 2 decades. There are now more than 250 PAs, most working in family medicine and emergency medicine. Enabling legislation for PAs has been formalized in Manitoba, and 3 provinces have recognized PAs in various policy statements or initiatives. Three universities and 1 military training centre have enrolled more than 120 students in PA programs. Retired PAs of the Canadian Forces, returning ex-patriot Canadians who had trained as PAs in PA programs in the United States, and American immigrants are working as PAs in Canada. Demonstration projects are under way to better understand the usefulness of PAs in various medical settings.

**Conclusion** For a public health policy enactment of this size and effect, the literature on PAs in Canada is sparse and limited. In spite of this, PA employment is expanding, family medicine practices are using PAs, and there is enabling legislation planned. The result will likely be increased use of PAs. Documentation about PAs, review of their use, and outcomes research are needed to evaluate this new type of clinician in Canadian society.

### Résumé

**Objectif** Analyser les politiques de santé concernant les adjoints au médecin et comprendre les facteurs qui influent sur l'évolution de cette main-d'œuvre médicale.

**Qualité des preuves** Ce travail qui marque une étape historique allie une revue de littérature à de l'information qualitative. Cette approche a été choisie lorsque des essais pour obtenir des rapports ou de la littérature en anglais et en français à l'aide des bibliographie électroniques habituelles (PubMed, CINAHL, Google Scholar, EBSCO et Medline) entre 1970 et 2010 ont identifié seulement 14 documents pertinents (incluant de la littérature grise). On a utilisé des rapports, des documents provinciaux et de l'information provenant de personnes à l'origine du mouvement des AM pour compléter la revue de littérature.

**Principal message** Le développement historique du rôle des AM au Canada s'étend sur 2 décennies. Il y a maintenant plus de 250 AM, la plupart

**KEY POINTS** Physician assistants (PAs) are health care clinicians who are academically qualified to provide medical services to patients in a range of settings under the supervision of doctors. Little is known about Canada's PAs, and there is not much information about them in medical literature. The goal of this article is to explain how the PA developed in Canada and what factors have influenced this movement. Research on how PAs should be used in different medical settings is needed.

**POINTS DE REPÈRE** Les adjoints au médecin sont des cliniciens des soins de santé qui possèdent des qualifications de niveau universitaire pour prodiguer des services médicaux aux patients dans divers contextes et sous la supervision de médecins. On sait peu de choses sur les AM du Canada et il n'y a pas beaucoup d'information à leur sujet dans la littérature médicale. Le but de cet article est de montrer comment les AM se sont développés au Canada et quels facteurs ont influé sur ce mouvement. Des recherches seront nécessaires pour étudier comment utiliser les AM dans différents contextes médicaux.

This article has been peer reviewed.

Cet article a fait l'objet d'une révision par des pairs.

Can Fam Physician 2011;57:e83-8

travaillant en médecine familiale ou en médecine d'urgence. Au Manitoba, on a adopté des lois pour encadrer les AM, et 3 provinces ont reconnu leur existence dans différentes déclarations ou initiatives. Plus de 120 étudiants se sont inscrits à des programmes pour AM dans 3 universités et un centre d'entraînement militaire. Il y a des AM retraités des Forces canadiennes, des anciens citoyens canadiens de retour après avoir été formés comme AM aux États-Unis et des immigrants américains qui travaillent comme AM au Canada. Des projets pour faire mieux connaître l'utilité des AM sont en cours dans divers milieux médicaux.

**Conclusion** Pour l'adoption d'une politique de santé publique d'une telle importance et avec de tels effets, la littérature sur les AM au Canada est rare et limitée. Malgré cela, le recrutement d'AM est en croissance, les cliniques de médecine familiale utilisent des AM, et on planifie des lois pour leur permettre de travailler. Il en résultera probablement une augmentation de l'utilisation des AM. Il faudra davantage de documentation sur les AM, une vérification de leur utilisation et des études sur les résultats pour évaluer ce nouveau type de cliniciens dans la société canadienne.

Canada has included a new type of clinician in its repertoire of medical service providers: the physician assistant (PA). The goal of the PA role is to improve access to care and extend the capability of doctors in a number of specialties, such as family medicine and emergency medicine.<sup>1</sup> Because health care accounts for one of the largest areas of spending for both the federal and provincial governments, we approached this article from the perspective of policy analysis. Philosophical debates centre on questions of human rights, and topics include how to maximize the quality of health care and minimize costs. There is surprisingly little known or written about PAs in Canadian medical literature. There are no reports on how PAs developed or on the policies surrounding their development.

In Canada, the PA is a health care clinician who is academically qualified to provide medical services to patients in a range of settings and in a variety of roles. All PAs work under the supervision of doctors, and the scope of practice is determined by a series of observations and negotiated roles. Physician assistants can collect patients' histories, order appropriate diagnostic tests, reach assessments, and prescribe appropriate treatments.<sup>2,3</sup> As Canada develops its PA cadre, information on the historical role and background is needed to serve as a chronological reference to understand this policy development. The focus of our article is on how the PA developed in Canada and what factors are influencing the PA movement in the work force.

## Quality of evidence

A health policy analysis was undertaken using an investigative reporting technique. The qualitative strategy was selected when attempts to obtain reports or literature using customary electronic bibliography (PubMed, CINAHL, Google Scholar, EBSCO, and MEDLINE) searches in English and French, from 1970 through 2010, identified only 14 documents (including gray literature) of relevance. Additional information was collected through review of citations in published literature, the archives of the Canadian Association of Physician Assistants (CAPA), provincial ministry reports, and professional society documents. Individuals were interviewed for detailed information about the development, policy discussions, documents, and issues surrounding the use of PAs. Key informants include early developers of PAs, leaders, researchers, and policy makers. Information was verified, and no single individual source was used. This work combines a review of the literature, along with qualitative information, and serves as a historical bookmark. The work is purposefully Canadian focused and defers inclusion of the broad international literature on PAs (or nurse practitioners [NPs]) to other scholars.

## First generation

At the turn of the new century, Canada found itself addressing a serious medical work force shortage. With restricted access to care affecting more citizens, many people sought solutions. There were plans to expand medical schools; however, the doctor-to-citizen ratio had been declining, and efforts to expand the existing doctor corps were seen by some as too little too late.<sup>4,5</sup>

As was the case for many countries, the demand for health care had changed. An aging medical workforce (and an aging population), along with a shortage of medical school graduates, was putting stress on the health care system. A global recession was tightening revenue support for health delivery. Increasing demand for improved technology and access to care had changed the landscape. While a range of solutions was suggested, the use of PAs was seen as one of the more viable options.<sup>6</sup> Observers of the American model wondered if this role could be implemented in Canada.<sup>7</sup>

## Overview of physician assistants

Physician assistants are health professionals formally trained to support and extend the skills of doctors in various roles. The United States has had PAs since the mid-1960s, and, as of 2010, they have 150 PA education programs and more than 75 000 clinically active graduates.<sup>8</sup> Educated as family practice clinicians in a medical model, PAs work under the delegated authority of doctors and are licensed in 50 states. Physician assistants are authorized to conduct patient interviews; obtain patients' histories; perform physical examinations and

selected diagnostic and therapeutic interventions; order and interpret laboratory and imaging results; and provide consultations on preventive health care. They are employed in every specialty and subspecialty and in every form of the medical system—the federal government being the largest single employer.<sup>9</sup>

### Canadian Forces and the Canadian Association of Physician Assistants

The first Canadian institution to recognize the need for a more flexible health work force was the Canadian Forces (CF).<sup>10</sup> The military tends to develop innovative and specialized labour to meet its unique needs and has trained various forms of health care personnel over the years to meet the shifting demands of service needs. After observing the US development of PAs, the CF decided to restructure responsibilities of its senior medical assistants (MAS) to parallel those of PAs. The deployment of doctors in field stations and aboard ships was seen as an inefficient use of highly skilled personnel better used elsewhere. Furthermore, the exchange of personnel within Canadian and American military commands identified a model to upgrade MAS in their roles and responsibilities. In 1984, the education and occupational specialty was restructured to create a type of personnel more closely akin to PAs.<sup>11</sup>

As the formal structure and education of PAs in the CF developed, many graduates believed there was a need for a professional association that would promote their role, in both the military and civilian environments. While many PAs were in uniform, a larger number of PAs had retired to the civilian sector. Canada was benefiting from PAs' service in the CF but was also losing their skills and intellectual capital when they transitioned out of uniform. With no venue for a CF-trained PA to work in civilian roles, most started new non-medical careers upon retirement. Many retirees expressed frustration that their highly developed skills were not transferable to civilian roles. To promote their profession, senior PAs used their personal resources to charter CAPA (at that time it was called Canadian Academy of Physician Assistants). In 2000, the CF, in an upgrade and realignment activity titled Project Rx2000, was able to support the development of a civilian Canadian equivalent of its military PAs and provide funding and sponsorship of the newly created association. The primary reason for this decision was to ensure that military PAs could be certified to a civilian benchmark. Noncertified PAs could not be sustained owing to quality-of-care accountability. The strategy instituted was to create a civilian PA equivalency and then to measure performance against this standard.

In 2003, the Canadian Medical Association (CMA) Board of Directors approved an application from CAPA to include PAs as a designated health science profession

within the CMA accreditation process.<sup>12</sup> The CMA accredited the PA program delivered by the Canadian Forces Medical Services School in 2004. As part of the professional recognition requirements, CAPA authorized an independent body, the Physician Assistants Certification Council, to establish a national certification examination. The first national examination was held in 2005. In 2009, CAPA refined its national competency profile and PA scope of practice, using the CanMEDS structure based on the Royal College of Physicians and Surgeons of Canada framework of essential physician competencies, the 2006 PA occupational competency profile, the Ontario PA competency profile, and the College of Family Physicians of Canada's 4 principles of family medicine. The national competency profile defines the core competencies that generalist PAs should possess on graduation and is the accepted standard in Canada.<sup>12</sup>

### Education

The CMA Conjoint Accreditation Service accredits 16 health care professions and their 146 education programs.<sup>13</sup> In 2004, the service awarded the first PA accreditation certificate to the Canadian Forces Health Services Training Centre. The curriculum is recognized by the University of Nebraska Medical School in Omaha and awards a Bachelor of Health Sciences to CF PA graduates. Two civilian programs started in 2008 at the University of Manitoba in Winnipeg and McMaster University in Hamilton, Ont. In 2010, the Consortium of PA Education, comprising the University of Toronto in Ontario, the Michener Institute for Applied Health Sciences in Toronto, and the Northern Ontario School of Medicine in Sudbury, enrolled its first PA class.

### Provincial development

Beginning in the early 1990s, a number of discussions centring on PAs occurred in some provinces. Many of these discussions were led by individuals interested in expanding the capability of doctors in family medicine and surgery, or those who practise in rural areas.<sup>14</sup> Some doctors had been educated or had their postgraduate training in medical institutions staffed by PAs. Others had worked alongside PAs in the CF or with Americans. For them the idea was not new, and some believed Canada was missing an opportunity to develop a similar model.<sup>15</sup>

**Manitoba.** Manitoba recognized it had challenges with its health care work force. In 1999, the Manitoba government, at the urgings of the College of Physicians and Surgeons of Manitoba, passed the clinical assistant (CA) registration amendment.<sup>16</sup> This new and generic title permitted different experimental forms of clinical health care. Although the title of

CA was purposefully nonspecific, Manitoba's Minister of Health used the term *physician assistant* in her declaration of this innovative legislation for the citizens of Manitoba. Initially PAs were identified as certified CAs and regulated by the Registrar of the College of Physicians and Surgeons under the Manitoba Medical Act.<sup>16</sup> This regulation formalized administrative and medical responsibilities of the profession. In 2008, the University of Manitoba inaugurated the first civilian PA program in Canada. As of 2010 Manitoba had 14 PAs, 45 CAs, and 22 PA students, as well as new legislation that specifically mentioned PAs as licensed health professionals.

In Manitoba PAs have been used in diverse ways with good results. An innovative trial in orthopedics employed PAs to process arthroplasty patients; the surgical replacements of joints per annum has almost doubled without additional surgeons. Physician assistants are used throughout surgical care to maximize the surgeon's time, and patients report a high degree of satisfaction.<sup>17</sup>

**Ontario.** Ontario has had military PAs since 1992, primarily as they worked their way through the CF program and undertook clinical rotations in civilian hospitals and clinics. As the program changed its structure, more hospitals were contracted as training sites, providing more exposure to PAs. After receiving reports in 2006 on the growing shortage of doctors in the province, the Minister of Health for Ontario sought alternative solutions. A PA demonstration project started in 2007.<sup>18</sup>

The HealthForceOntario pilot project, launched in 2008, is an effort to improve access to care in the province. Embedded in this project is the largest evaluation of its kind ever undertaken to assess the capability of PAs. It is also one of the most comprehensively designed and implemented demonstration projects, with a wide set of constituents at the steering committee level. Stakeholders overseeing the project include professionals in medicine, nursing, and education; community health centres; health authorities; and professional organization support staff. At the same time, the placement of PAs in Ontario has undergone more scrutiny than any other new personnel ever introduced in Canada, including the introduction of nurse midwives and NPs.<sup>19</sup> The HealthForceOntario initiative has not been a decidedly PA-centric idea, but instead has increased the placement of NPs and prepared a trial conversion of some international medical graduates to PAs.<sup>20</sup>

This project includes community health centres, family practice teams, surgery services, endocrine and diabetes specialty clinics, rehabilitation centres, and emergency departments (EDs).<sup>18</sup> A research study on Ontario PAs and NPs in EDs documented improved patient flow.<sup>20</sup> As

of 2010, there were 67 PAs in civilian practice and 65 students enrolled in Ontario PA programs.

**New Brunswick.** New Brunswick, a large maritime province with a small population, is home to Canada's largest military base and also has a large concentration of PAs. None of them can legally work in a civilian role—they are a well-trained cadre of health care professionals just out of reach of the province's citizens. In 2008, the Ministry of Health formed a committee to learn more about PAs.<sup>21</sup> Upon recommendation of the committee, the Ministry of Health announced an employment initiative for PAs in EDs in late 2010.

**Alberta.** In 2009, the Minister of Health and Wellness requested that the College of Physicians and Surgeons of Alberta develop a regulation process that would allow PAs to formally practise. The College subsequently announced registration criteria to regulate PAs.<sup>22</sup> Pilot projects are in development for Alberta at this time.

**British Columbia.** In British Columbia, the Ministry of Health has been investigating the role of PAs since the early 1990s, and has also visited the PA program at the University of Washington in Seattle.<sup>23</sup> The Ministry of Health was particularly interested in improving health care access in rural areas. In 2005, a British Columbia Medical Association (BCMA) policy paper endorsing the use of PAs was produced.<sup>24</sup> British Columbia is also a training site for CF PA students, where they undergo advanced emergency training in the Victoria and Vancouver hospitals.

In a 2007 BCMA submission to the *BC Conversation on Health*, there was a call for fast-tracking the development of training programs for PAs. An increased interest in the PA profession emerged after a policy statement in support of the profession was released by the BCMA in November 2009.<sup>25</sup>

**Other provinces.** As of 2010, 4 additional provinces have undertaken a review or analysis of whether PAs should be part of the provincial medical authority and how they could be used. These reports have not yet been released.

## Main message

The historical development of PAs in Canada spans 2 decades (**Table 1**). There were more than 250 PAs in Canada as of 2010, and the number continues to grow (**Table 2**). Enabling legislation for PAs has been formalized in Manitoba, and 3 provinces have recognized PAs in various policy statements or initiatives. The role of the CF PA has also been transformed to fit the civilian context with a concentration on family medicine, providing a transfer of needed skills at a



**Table 1. Timeline of the development of physician assistants (PAs) in Canada**

YEAR	EVENT
1984	Canadian Forces expands the capability of the medical assistant, paving the way for the development of the PA model
1990	The idea of the PA was further promoted in a time of limited resources within the military structure
1992	Canadian Forces adopts the term <i>physician assistant</i> for senior medical technologist
1998	Strategic planning in the Department of National Defence Project Rx2000 recognizes that the role of the military PA needs to be standardized for integration into the civilian health care environment
1999	Manitoba Medical Act designates clinical assistants, including PAs, as certified clinical assistants
1999	Canadian Academy of Physician Assistants is chartered
2003	Canadian Medical Association recognizes the PA as a health care professional
2003	First formally recognized civilian PA begins work in Manitoba
2004	Canadian Forces Health Services Training Centre is granted accreditation of its PA program by the Canadian Medical Association Conjoint Accreditation Process
2005	Canadian Forces Health Services Training Centre begins training its first class of 16 as an accredited education institution
2007	HealthForceOntario project is implemented. Among its many goals is the staffing of emergency departments and clinics with PAs, as well as international medical graduates working as PAs
2008	University of Manitoba in Winnipeg begins training its first class of 12 PA students
2008	McMaster University in Hamilton, Ont begins training its first class of 23 PA students
2009	Canadian Association of Physician Assistants becomes incorporated by Industry Canada
2010	Consortium for PA education (the University of Toronto in Ontario, the Michener Institute for Applied Health Sciences in Toronto, and the Northern Ontario School of Medicine in Sudbury, Ont) begins training its first class of 22 students
2010	Alberta becomes the fourth province to recognize PAs

**Table 2. No. of physician assistants (PAs) in Canada as of 2010**

PHYSICIAN ASSISTANTS	NO.
Canadian Forces, active-duty positions (45 students)	143
Manitoba registered clinical assistants (14 are formally trained PAs. 22 students enrolled)	60
Ontario PAs (in demonstration projects) (20 additional positions posted. 65 students enrolled in 3 PA programs)	67
Nonregulated ex-military PAs working in provinces and territories, as well as industries under delegated physician orders	15

time of stretched civilian personnel. Some Canadians who have trained in American PA programs have migrated back to Canada, and more are waiting for improved legislation or for new opportunities to emerge. Educational development of PAs is growing, with 4 programs already training PAs and others in discussion stages. The formal process of accreditation has improved the status of PAs in Canada and paves the way for new and innovative ways to train and use

PAs. Canada also joins a global movement under way, and the second decade will see remarkable changes as more countries adopt this model of care to offset their population demands.<sup>26</sup>

The implementation of the PA in Canada has undergone policy development on the provincial level but there has been limited documentation. The effort started with doctors and patients asking for PA-like clinicians that they saw on television, read about in reports, or had experienced first-hand through the military.<sup>10</sup> Other influences of policy are top-down in nature, with provinces desperate to do something proactive. Both Manitoba and Ontario provide examples of health ministries responding to constituents and informed staff that could assist with the implementation of demonstration projects. Other provinces are likely to follow suit.

### Limitations

Only a few peer-reviewed research publications and 1 thesis have emerged during the 2 decades of using PAs.<sup>11,14,15,17</sup> The policies that enable PAs to function appear to be largely from a central provincial authority and with limited formal influence from those most likely to work with PAs—clinically active doctors. A lack of

better documentation and research are considerable shortcomings for an important undertaking such as creating a new type of clinician in such a large nation.

## Conclusion

Canada, with 32 million people spread across 9.9 million km<sup>2</sup>, is the second largest nation and one of the least densely populated countries in the world. It is a multicultural, multiethnic, and multiracial country that is struggling to deliver health services to its diverse people. Coupled with this is a lean doctor-to-patient ratio and an increasing demand for services. The country has embarked on an experiment in social change by developing an expanded role for nonphysician clinicians on the provincial level and looking to the CF PA as a national example. Yet it has done this with very little analysis or research.

Physician assistants are not a new development for Canada; they arose from seasoned military medical personnel that responded to international and domestic crises, such as floods, storms, and wars. While PAs began in the uniformed services, their profession is becoming established in provinces as educational institutions begin to produce graduates. More important, the development of PAs is due to the strong influence of both doctors and elected leaders. Research on how the PA could and should be used in different locales and medical settings is needed as the country goes forward in its experiment.

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### Contributors

**Mr Jones** and **Dr Hooker** contributed equally to the collection of data, the development of the manuscript, and the creation of the tables.

### Competing interests

None declared

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