PHYSICIAN ASSISTANTS

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Physician Assistants

Introduction

Physician Assistants (PAs) provide a broad range of medical services to support patient-centred health care. Often working autonomously under a supervising physician, they possess a defined body of knowledge and the clinical and procedural skills to collaborate effectively with physicians. PAs complement existing services and help improve patient access to health care: interviewing patients to record their histories; conducting physical examinations; performing select diagnostic and therapeutic interventions or procedures; counselling patients on preventive health care; and performing any task within their expertise that the supervising physician may delegate. (Ashton, Aiken & Duffie, 2007; Jung 2011).

History of the Profession

Physician assistants were first trained and employed by the Canadian Forces in the 1950s as "6B Medical Assistants". Their broad range of practise was ideal for the military context (Jung, 2011). In the mid-1980s they earned their new designation as Physician Assistants (Jung, 2011), and formally entered the public Canadian health care system in Manitoba in 1999. Since then, PAs have expanded into other provinces including Ontario, Alberta and New Brunswick. PAs have been established in the United States since the mid-1960s, when physicians and educators recognized the need for improved access to health care.

TABLE 1: Timeline of the development of PAs in Canada (Jones & Hooker, 2011)

Year	Event
1984	Canadian Forces expands the capability of the medical assistant, paving the way for the development of the PA model
1990	Due to limited resources within the military, the idea of the PA is given further credence
1999	The *Manitoba Medical Act* regulates clinical assistants, including PAs, as Certified Clinical Assistants
1999	The Canadian Academy of Physician Assistants (now the Canadian Association of Physician Assistants) is chartered
2003	The CMA recognizes PAs as healthcare professionals
2003	The first formally recognized civilian PA starts working in Manitoba (Cardiac Sciences and then Plastic Surgery in 2004)
2007	The HealthForceOntario project is implemented; among its goals is staffing emergency departments and clinics with PAs and international medical graduates working as PAs
2009	PAs are introduced in New Brunswick
2009	The National Competency Profile & PA Scope of Practise are revised based on CanMEDS
2010	Alberta becomes the fourth province to recognize PAs
2010	HealthForceOntario launches the inaugural career start grant program to support employers interested in Ontario PA program graduates
2012	The Health Professions Regulatory Advisory Council (HPRAC) submits its report to the Minister of Health and Long-term Care on whether the PA profession in Ontario should be regulated under the *Regulated Health Professions Act*
2013	The PA demonstration project begins in Alberta
2017	Ontario Minister of Health and Long-term Care approaches the CPSO regarding regulatory oversight of PAs
2020	The Ontario Minister of Health verbally commits to moving forward legislation and regulating PAs under the CPSO. Alberta announces that PAs are a regulated Health Care Profession under Section 21 of the Health Professions Act. Regulation was affirmed by Order in Council on October 30, 2020.

N.B. Refer to Table 2 for a timeline of PA education in Canada.

In addition to working within the Canadian public health care system, PAs today are also employed by private industry, providing health care to workers in remote regions. Across the country, the PA profession is supported and developed to increase patient access to medical services and to reduce wait times.

National representation for PAs

In 1999, the Canadian Academy of PAs was established as a national professional organization to advocate for Physician Assistants. Supported by the Canadian Forces, the Academy was meant to become self-sufficient and eventually include civilian PAs (Canadian Association of Physician Assistants, 2014). It went on to change its name to the Canadian Association of Physician Assistants (CAPA) to clarify its role as a professional association rather than an educational foundation.[i]

In 2003, CAPA received recognition from the Canadian Medical Association (CMA) for PAs to be considered a designated health science profession within the CMA conjoint accreditation process (Canadian Medical Association, Canadian Association of Physician Assistants, 2012). The following year, the CMA also accredited the Canadian Forces Medical Services School PA program. As part of the program's professional recognition requirements, CAPA authorized the Physician Assistants Certification Council of Canada—an independent body—to establish a national certification examination. Twenty candidates successfully completed the first national examination in 2005 (Jones, Seo, Chauhan & Buske, 2011; Jung, 2011).

Physician Assistant Education in Canada

Canadian Forces PA program

The Canadian Forces launched Canada's first PA education program through its Medical Services School (now the Canadian Forces Health Services Training Centre) in 1984. The program now includes 48 weeks of didactic learning, followed by a second year of 13 supervised clinical rotations across Canada.

TABLE 2: Evolution of physician assistant education in Canada

Year	Event
2004	The Canadian Forces Health Services Training Centre's PA program is accredited by the CMA Conjoint Accreditation Process
2004	The Canadian Forces Health Services Training Centre first class of 16 graduates
2005	First National Certification Exam
2008	University of Manitoba launches the Masters in Physician Assistant Studies
2008	McMaster University launches the Physician Assistant Education Program
2009	The National Competency Profile & PA Scope of Practise is revised based on CanMEDS
2009	The Canadian Forces Medical Services School graduates its first PAs with bachelor's degrees through the University of Nebraska's School of Allied Health Professions
2010	The Consortium for PA Education (the University of Toronto, the Michener Institute for Applied Health Sciences (now the Michener Institute of Education at UHN), and the Northern Ontario School of Medicine) trains its first class
2010	McMaster University and the University of Manitoba graduate their first classes
2011	University of Toronto's Consortium of PA Education graduates its first class
2015	CAPA Scope of Practise & National Competency Profile was updated to CanMEDS-PA (2015 edition) to reflect changes in CanMEDS 2015
2016	Canadian Medical Association announces the disbandment of its health professional education accreditation services. The search for a new accrediting body begins
2017	The Physician Assistant Certification Council of Canada (PACCC) offers accreditation oversight until a formal agreement is in place with a new accrediting body
2018	University of Manitoba launches the "Journal of Canada's Physician Assistants" with ongoing quarterly publications
2020	Education programs and CAPA enter into discussions with Accreditation Canada, EQual™, as the accreditation body for Canadian PA education programs
2021	McMaster University and the University of Toronto accept the first Canadian Armed Forces PA trainees into their respective programs

Students are selected from Medical Technicians working within the Canadian Forces Medical Service who have a Medical Technician Qualification Level 6A, have achieved the rank of Sergeant, and have completed their Primary Leadership Qualification. Entrants typically have 12–15 years of military service, and must have completed several paramedical courses and a significant number of clinical training hours. CAF PA graduates are eligible to take the national certification exam, and those who pass are promoted to the rank of warrant officer (Mertens & Descoteaux, 2017). As part of an occupational restructure in April 2017, eligible CAF PAs were transitioned from a non-commissioned member occupation to an officer occupation.

The Canadian Forces has collaborated with the University of Nebraska's School of Allied Health Professions since 2009 to allow military PAs to obtain baccalaureate degrees. At that time, Canadian universities did not offer PA training programs and were not interested in recognizing prior military service to confer a baccalaureate, whereas the University of Nebraska already provided a similar degree program to the U.S. Air Force. In 2020, the Canadian Armed Forces Health Services released a follow-up public works solicitation seeking academic placements for CAF PA students at accredited Canadian universities with PA education programs, and discussions are ongoing. In 2021, the Canadian Armed Forces dissolved their military PA training program and instead supported the training of CAF PA trainees at McMaster University and the University of Toronto. This collaboration allows for parallel training of civilian and CAF PA students. CAF applicants must meet the minimum admission requirements to be eligible to apply. Their training is funded by the Department of National Defense. Year 1 training is identical for both CAF and civilian PA trainees. Per University agreements with the Department of National Defence, there are some differences in Year 2 clinical rotation requirements that are tailored to CAF requirements (i.e., trauma, urology, etc.) that differ from core civilian rotations.

Civilian PA programs

There are currently three civilian PA education programs in Canada: the McMaster University Physician Assistant Education Program, offered in Ontario; the Consortium of Physician Assistant Education, also in Ontario; and the University of Manitoba's Master of Physician Assistant Studies in Manitoba. Program development is also underway in Alberta, but no formal program has been established.

TABLE 3: Summary of Canadian physician assistant education programs

Program Details	McMaster University, Hamilton, ON	University of Toronto, Toronto, ON	University of Manitoba, Winnipeg, MB	Canadian Forces Health Services Training Centre,Borden, ON
Program Type	Civilian	Civilian	Civilian	Military
Program Title	McMaster University PA Education Program	The Consortium of PA Education (University of Toronto's Faculty of Medicine, Michener Institute of Education at the University Health Network (UHN), and the Northern Ontario School of Medicine)	University of Manitoba Master of PA Studies	The Canadian Forces Physician Assistant Program
Degree Conferred	Bachelor of Health Sciences, Physician Assistant	Bachelor of Science, Physician Assistant	Master of Physician Assistant Studies	Bachelor of Science, Physician Assistant*
CMA/CAPA Accreditation	1st accredited in 2010. Last accredited in 2016. Undergoing accreditation in 2022	1st accredited in 2012. Most recent accreditation (6 year status) in 2017 Will undergo next accreditation cycle in 2023	1st accredited in 2010. Last accredited in 2016. Undergoing accreditation in 2022	1st accredited in 2004. Most recent accreditation (6 year status) in 2016 No further accreditation cycles as program has disbanded. CAF trainees started training at McMaster and Toronto in September 2021

*Degree conferred by the University of Nebraska's School of Allied Health Professions PA Program.

Ontario

The Ontario programs offer an intensive, two-year undergraduate degree (Physician Assistant), and require a minimum of two years of undergraduate study prior to admission into the program.

The *McMaster Physician Assistant Education Program* is modelled on the university's medical school curriculum. The first year consists of problem-based learning tutorials, clinical skills, communication skills and early clinical experiences; the second is a 48-week clerkship (i.e., series of clinical placements and virtual tutorials) that includes core rotations in emergency medicine, internal medicine, family medicine, paediatrics, psychiatry, geriatrics, general surgery and electives. The program currently accepts 24 students per academic year, and 274 students (as of November 2021) have graduated since it launched.

The *Consortium of Physician Assistant Education* program is offered by University of Toronto, the Michener Institute of Education at the University Health Network (UHN), and the Northern Ontario School of Medicine. The program consists of a pre-clinical year involving in-person 'residential' blocks, longitudinal placements and online academic courses, and a second year of clinical placements in various medical rotations as well as ongoing health promotion, evidence-based medicine and ethics courses. The University of Toronto Consortium has graduated 261 students (as of November 2021).

Manitoba

The University of Manitoba's Master of Physician Assistant Studies is currently the only graduate-level PA program in Canada. It currently accepts 15 students per year (prior to 2017, it accepted 12 students per year), each of whom is required to hold a four-year bachelor's degree, meet the university's requirements for graduate studies, and satisfy specific prerequisites in human anatomy, human physiology and biochemistry. The first year of the program consists of didactic academic training followed by 13 months of clinical rotations covering family medicine, internal medicine, surgery, orthopaedics/sports medicine, paediatrics, psychiatry, community health, emergency medicine, obstetrics/gynaecology, clinical anaesthesia and electives. Graduates, 151 as of November 2021, are required to complete a research project (Capstone) in addition to the CanMEDS-PA curriculum.

All four Canadian PA schools educate PA students in the medical model, which mirrors undergraduate medical student training. Students face a steep learning curve and must complete their training within a two year period, typically comprised of a clinical science year and a clerkship year (clinical rotations). Although entry requirements differ between the four programs, Canadian PA graduates have a fairly homogenous skill set and knowledge base that can be adapted to any clinical setting. In addition, each program is held to a high standard through a cyclical accreditation process for students to qualify for graduation, and eligibility to challenge the National Certification Exam.

Accreditation

The Canadian Medical Association first accredited the CAF PA program in 2004, and was responsible for overseeing Canadian PA program accreditation until it withdrew from health professional accreditation services in February 2018. CAPA and a PA accreditation working group continue to engage in discussions to align with Accreditation Canada. Each PA program received 6-year accreditation status during respective 2016/2017 site visits, and accreditation oversight was provided by the Physician Assistant Certification Council of Canada (PACCC) in the interim while a new accreditation body was formalized. In 2021, the PA education programs, in collaboration with CAPA and PACCC, signed onto a new accreditation body, EQual™, under Accreditation Canada. The University of Manitoba and McMaster University undergo their respective accreditation reviews in 2022, and the Consortium of PA Education (University of Toronto) will undergo it's review in 2023. Accreditaiton Canada provides accreditaiton services for professional, entry to practise, health education programs over a six stage, 6-year accreditation cycle (reference below).

Physician assistant certification

The Physician Assistant Certification Council of Canada (PACCC) is responsible for administering the Canadian PA entry to practise certification exam—and do so independently of any educational facility to ensure that certified PAs meet national standards (based on the national competency profile, CanMEDS-PA) for the profession. Candidates must graduate from a Canadian accredited PA program, and be a member of the CAPA. US trained PAs may also challenge the Canadian exam if they have graduated from a US Accreditation Review Commission (ARC-PA) accredited program, and are certified by the National Commission on Certification of Physician Assistants (NCCPA). The National Certification Exam is currently offered

once a year and consists of 250 multiple-choice questions. To maintain CCPA status, PAs must annually renew their CAPA membership and report 40 credits of annual continuing professional development (CPD) activities, for a total of 400 credits over a 5-year cycle. CCPAs are registered as Mainport ePortfolio users with the Royal College of Physicians and Surgeons of Canada (PACCC CPD Policy website). In 2021, the certification exam changed from an in-person, hand-written exam to a computer based, virtually proctored exam in response to the COVID-19 pandemic restrictions. The exam will continue to be computer based and consideration is being given to offering the exam more than once a year to improve access.

Core competencies required of PAs

In 2015, CAPA refined its national competency profile and PA scope of practise (titled CanMEDS-PA, 2015) to better detail what PAs are trained to do and the services they may provide. The PA national competency profile is based on several sources:

- The 2006 PA occupational competency profile (OCP), which was the product of an internal review of a 2001 OCP provided to the CMA by the Canadian Forces Health Services School
- The Ontario PA Competency Profile
- The College of Family Physicians of Canada's four principles of family medicine
- The 2005 CanMEDS framework (CanMeds, 2005)
- The 2009 PA National Competency Profile
- The 2015 CanMEDS framework (CanMeds, 2015)
- The 2021 Canadian PA Competency Framework (EPA-PA)

CanMEDS-PA (2015) is currently the accepted standard in Canada, updated from the previous 2009 National Competency Profile. It defines core competencies generalist PAs should possess when they graduate (Jones et al., 2011). The competency profile describes expectations for each of the roles defined in CanMEDS, including the following:

- Medical expert – PAs are expected to integrate the thematic roles addressed by CanMEDS, including applying medical knowledge and clinical skills, and having a professional attitude when providing patient-centred care.
- Communicator – PAs must have excellent communication skills, which are essential to establish rapport and trust, formulate provisional diagnoses, deliver information, and facilitate a shared plan of care.
- Collaborator – PAs must work with the supervising physician to optimize patient care and contribute to the interprofessional health-care team.
- Leader – PAs are actively engaged in developing sustainable practises, enhancing effectiveness and making collaborative systematic choices when allocating health-care resources. *Previously titled Manager.*
- Health Advocates – PAs advance the health and wellbeing of individual patients, communities and populations.
- Scholars – PAs are committed to a lifetime of reflective learning and of the application and translation of medical knowledge.
- Professional – PAs are dedicated to the health and care of others as guided by ethics and a commitment to clinical competence within their scope of practise.

The Ontario PA Competency Profile describes the competencies PAs in Ontario are expected to have and maintain, regardless of specialty or setting (Mikhael, Ozon & Rhule, 2007).

The CanMEDS framework created by the Royal College of Physicians and Surgeons of Canada defines PA competencies and provides a comprehensive profile useful to educators, physicians, researchers, other health care professionals, public officials and the public (CAPA, 2009). The CanMEDS 2015 framework is the 3rd edition of the CanMEDS Physician Competency Framework.

Emergence of competency based medical education and entrustable professional activities

Given the parallels between PA and undergraduate medical education and nature of the PA role, the CanMEDS-PA framework also outlines PA competencies under the roles of Medical Expert, Communicator, Collaborator, Leader, Health Advocate, Scholar and Professional. In order to align with the medical education movement towards EPAs

and competency based medical education, PA specific EPAs were developed based on a systematic review of EPAs from PA educators in the US and Netherlands, the Association of Faculties of Medicine of Canada, and the American Academy of Medical Colleges. The newly proposed Canadian PA-EPAs identify tasks within the CanMEDS-PA framework to delineate the activities required for PAs entering practise. For example, one EPA-PA criterion requires a PA to collaborate as a member of an interprofessional team, including giving or receiving a patient handover to transition care responsibility (Jones & Burrows, 2018). In 2021, PA program educators met with CAPA to propose a transition from the 2015 Competency Profile to EPAs. The Canadian PA EPAs were officially adopted in 2021. The Canadian PA EPAs builds on the previous CanMEDS PA competency profile to contextually capture the specific competencies required of PA program graduates as they transition to practise (ref below).

TABLE 4: Canadian entrustable professional activities physician assistant competency framework (NCP-2021)

EPA	Physician assistant competency
1	Practises patient-focused, safe, ethical, professional, and culturally competent medical care across the healthcare continuum.
2	Obtains histories and performs physical examinations, demonstrating clinical judgment appropriate to the clinical situation.
3	Formulates clinical questions and gathers required clinical evidence to advance patient care and communicates those results to the patient and medical team.
4	Formulates and prioritizes comprehensive differential diagnoses.
5	Develops and implements patient-centered, evidence-based treatment plans within the formalized physician, clinical team and caregiver relationship
6	Accurately documents the clinical encounter incorporating the patient's goals, caregiver goals, decision-making, and reports into the clinical record.
7	Collaborates as a member of an inter-professional team in all aspects of patient care including transition of care responsibility.
8	Recognizes a patient requiring immediate care, providing the appropriate management and seeking help as needed.
9	Plans and performs procedures and therapies for the assessment and the medical management appropriate for general practise.
10	Engages and educates patients on procedures, disease management, health promotion, wellness, and preventive medicine.
11	Recognizes and advocates for the patient concerning cultural, community, and social needs in support of positive mental and physical wellness
12	Integrates continuing professional and patient quality improvement, life-long learning, and scholarship.

Scope of Practise

PAs in Canada are trained as generalists, and their scope of practise is determined by the specialty knowledge and experience they gain through partnership with their supervising physician. A Practise Description or Medical Directive agreed to by the physician and PA may also help define each PA's scope of practise.

Pros and cons of a broad scope of practise

It is beneficial for PAs to have a broad and flexible scope of practise that allows them to collaborate effectively with their supervising physician(s) to extend patient care in family health teams, private clinics, long-term care facilities, hospitals and other health care settings. This position, however, has been criticized by groups that oppose PAs and claim safety can't be guaranteed within such a broad scope of practise (Registered Nurses' Association of Ontario, 2010). Others argue that from its inception the PA profession has emphasized a medical generalist approach, allowing horizontal mobility and adaptability rather than focused specialty training (Physician Assistant History Society, 2013). Regardless of the debate, PAs function as physician extenders and therefore work under their supervising physicians' scope of practise. This allows for a flexible and adaptable healthcare role that can be used to fill gaps in a variety of health care settings.

Today's scope of practise

Canadian PAs work within a variety of medical fields—family medicine, internal medicine, emergency medicine, dermatology, nephrology, orthopedic surgery, neurology, infectious diseases, and geriatrics, for example—and are trained to take patient histories, conduct physical examinations, order and interpret tests, diagnose and treat illnesses, and counsel on preventive health care. They may also develop other additional specialized skills while working with a supervising physician. In addition, increased interest in clinical research and quality assurance/quality improvement projects have highlighted the role of PAs in supporting other health administrative roles that complement their existing clinical roles.

Professional Regulation

Canada's provincial governments and provincial medical colleges determine which health practises are regulated or unregulated. Currently, only Manitoba, New Brunswick and Alberta regulate PAs.

Manitoba

Manitoba first introduced PAs as Clinical Assistants through the *Medical Act* in 1999. In 2009, the province amended the *Clinical Assistants and Physician Assistants Regulation* under the *Medical Act, 1999* to permit practise under the title of Physician Assistant. Physicians can "authorize" physician assistants to perform certain duties based on the supervised individual's level of training, competencies and experience.

New Brunswick

In New Brunswick, the College of Physicians and Surgeons of New Brunswick (CPSNB) amended the New Brunswick *Medical Act, 1981* in 2009 to include PAs.

Alberta

In Alberta, PAs are currently registered with the College of Physicians and Surgeons of Alberta (CPSA). The *Health Professions Act* was altered (Horne, 2014) to include both "Physician Assistant" and "PA" under the list of regulated members of the CPSA. The Act further outlines what PAs can do in their practise under physician supervision, which includes assessing patients to providing restricted activities authorized by regulation (Province of Alberta, Health Professions Act). Regulation was affirmed by Order in Council, October 2020. PAs are now a regulated Health Care Profession under Section 21 of the Health Professions Act.

Ontario

In 2012, CAPA applied to the Health Professions Regulatory Advisory Council for self-regulation status; however, the Council recommended that Ontario PAs not be regulated at this time and instead advised that a compulsory registry be designed and administered by the College of Physicians and Surgeons of Ontario (CPSO) (HPRAC, 2012). Unfortunately a registry was not created despite the recommendation, which continues to complicate the PA landscape in Ontario. The Minister of Health and Long Term Care (MOHLTC) established a PA Integration Working Group (PAIWG) in early 2017 to support the MOHLTC and Health Workforce Planning Advisory table to develop and implement initiatives to improve the integration of PAs into Ontario's health workforce. In September 2017, the Minister of Health requested that the CPSO work with the ministry to develop an approach to provide appropriate regulatory oversight for PAs. In October 2020, the Minister of Health verbally committed to CAPA members that Ontario PAs would be regulated under the CPSO and legislative changes were pending (no specific time line was provided). CAPA has endorsed this move towards regulatory oversight, but additional consideration must be given to how regulation would look under the CPSO and who will bear the cost. As of spring 2022, ongoing discussions between the MOHLTC and the CPSO have stalled any progression torwards health professional regulation in the province.

Nova Scotia

In 2019/2020, Nova Scotia launched a 3-year pilot project to support the use of physician assistants in Orthopedic surgery. The Nova Scotia Health Authority received support from the College of Physicians and Surgeons of Nova Scotia (CPSNS) and the Department of Health and Wellness to launch the program as part of a larger strategy to address wait times and patient access to care. Legislation was introduced in 2020 to formalize the introduction of PAs to the province, but formal regulation of the profession and legislative approval is still pending.

Other Canadian provinces currently do not have formal regulation or registration programs for physician assistants at present.

Protected and Controlled Acts for Physician Assistants

PAs in Manitoba may perform reserved acts by way of the 'Delegation of a Reserved Act' provisions under the *Regulated Health Professions Act, 2009*. These reserved acts may only be performed in accordance with regulations—made by the council of the delegating member's college—respecting the delegation of that reserved act made by the council of the delegating member's college. Similarly, Ontario and Alberta permit an unregulated PA to perform controlled/restricted acts by delegation or supervision, respectively (HPRAC, 2011).

The following table summarizes the best available evidence as of November 2022 on provincial regulation.

TABLE 5: Summary of provincial variability in PA registeration and legislation as of 2022

Province/Territory	Registration	Regulation
British Columbia*	N/A	N/A
Alberta	College of Physicians and Surgeons of Alberta	PAs listed under Schedule 21 of the *Health Professions Act*. Regulatory framework formally approved under the CPSA in 2020.
Manitoba	College of Physicians and Surgeons of Manitoba	Regulated since 1999 as Clinical Assistants. PA title adopted in 2009
Ontario	Recommended voluntary registry through College of Physicians and Surgeons of Ontario, not yet enacted	Application for regulation denied by Health Professions Regulatory Advisory Council in 2012. Minister of Health requests that the CPSO address PA regulation (2017/2018). Regulation is stalled pending ongoing discussions between the Ministry of Health and the CPSO.
New Brunswick	College of Physicians and Surgeons of New Brunswick	Regulated under section 32.1 of the *Medical Act*

All other provinces/territiories have either not introduced the PA role, or have not moved forward with legislation/registration/regulation.
* Province commissioned a report on the potential of Nurse Practitioners and PAs in BC (Wong & Farrally, 2010); no publicly available policy has been released

Demographic Profile

As of 2020, there were 765 PAs currently working across Canada, primarily in Ontario and Manitoba, but PAs are gradually being introduced in other provinces (Figure 1). The per population rate is highest in Manitoba (8.9 per population in 2020), followed by Nova Scotia and Ontario (3.5 and 3.4 respectively).

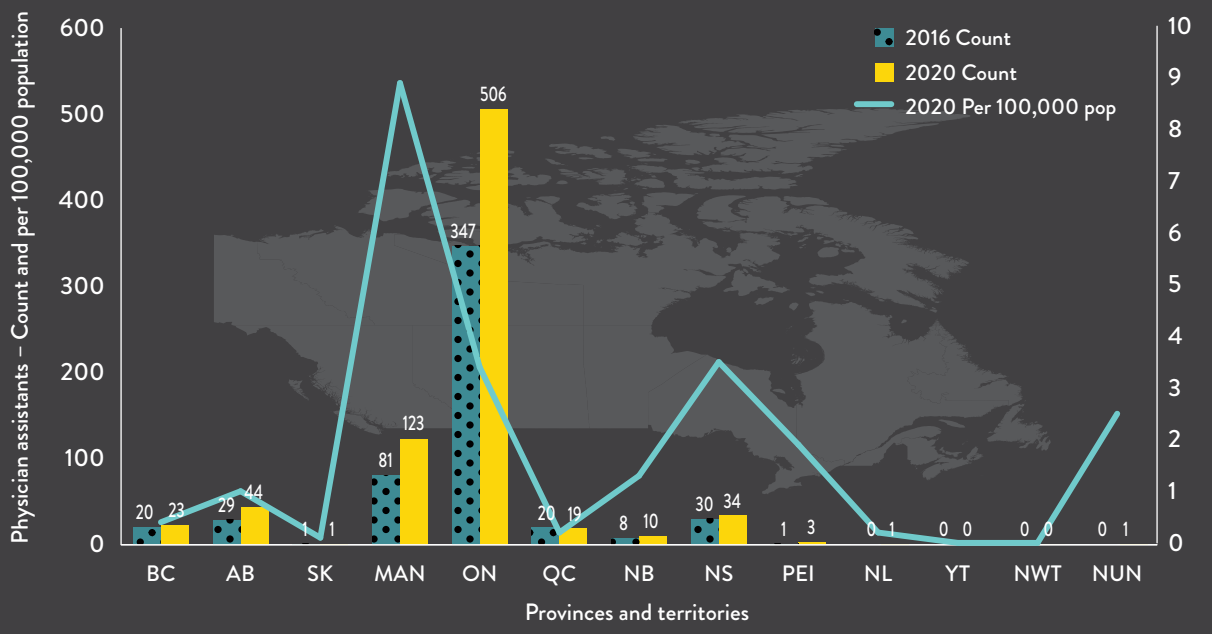
Currently, there are approximately 148 students enrolled in Canadian PA programs, a number that is expected to grow as the profession advances and more academic institutions offer Physician Assistant Education programs.

Various pilot projects have been launched successfully in Alberta and Nova Scotia, but uptake continues to be variable. Evaluation of the impact of PAs on access, wait times, quality of care, patient satisfaction and provider satisfaction is ongoing (Canadian Association of Physician Assistants, 2014).

Profiles of PAs in Canada

A recent CAPA National Survey in 2019 showed that PAs are working in a variety of settings, with most PAs employed in family practise (25%), hospital based medicine (18%), emergency medicine or urgent care (14%), hospital based surgical settings (14%), community based medical specialty (11%), the Canadian Armed Forces (11%), and smaller scattered employment in community clinics, group practises, solo practises, industry and PA education programs (CAPA Census, 2019).

Figure 1: Physician assistants—count and per population rates in Canadian provinces and territories, 2016 and 2020



Source: Canadian Institute for Health Information, 2022, Health Workforce Database.

This is a slight shift from 2012 where most PAs were employed in military settings (46%), community hospitals (35%), academic centers (13%), community clinics (8.5%), industry (4.5%), private offices (2%) and longterm care centers (1%) (Jones, 2012). Salaries vary by province, ranging from $75,000 to $130,000 per year depending on experience and practise setting. As reported in the 2019 CAPA Census, the age distribution of 565 PA respondents is as follows: 21–30 (36%); 31–40 (32%); 41–50 (16%); 51–60 (14%); and over 60+ (3%) (CAPA, 2019 census). The gender distribution is currently a 60/40 split of females to males respectively.

Funding and Coverage of Health Professional Services

Demonstration projects funding model

Sources of funding for PAs vary across the country and continue to be in a state of flux. Some provinces, such as Ontario and Alberta, conducted pilot funding and demonstration projects through, respectively, the Ministry of Health and Long-Term Care (Ontario) and Alberta Health (Alberta). These funding models allowed stakeholders time to evaluate PA efficacy and value with the hope that support can be secured and the role can be self-sustaining (i.e., that the PA salary will be paid for by physicians, hospital funding, etc.). For example, a family physician could roster more patients to increase revenue and offset the cost of hiring a PA, while improving community access to care.

Funding models in hospitals

Hospital models are more complex, as PA salaries can be part of the overall hospital budget, be covered by physicians, or be a hybrid mix of both. Many PA positions were terminated when time-limited grants from the Ontario Ministry of Health and Long-Term Care ceased. Ontario's remuneration model privileges the activities of physicians, but makes it challenging for PAs to demonstrate their financial value to employers. This, in turn, makes it difficult for employers to commit to hiring PAs (Vanstone, Boesveld & Burrows, 2014).

Manitoba's funding model

Manitoba Health, Seniors and Active Living is responsible for health services and allocates program funds to the Regional Health Authorities for PA salaries. Positions are assigned to programs or specialties services such as Cardiac Sciences, Neurosurgery, a hospital's emergency department, or rural hospital.

Since 2014, fee-for-service physicians have piloted practise models where the PA is a salaried employee of the Regional Health Authority with performance measures required from the Physician group where they work. This hybrid practise allows PAs to work in fee-for-service practises with the expectation of improved service delivery (e.g., increased patient access, decreased emergency room visits, decreased wait times). Physicians cannot bill for services performed by PAs unless the physician is directly involved. The Manitoba Medical Act allows PAs to work remotely with offsite physician supervision. The structure for PA funding is under review in Manitoba. In the summer of 2014, Manitoba physician and clinical assistants organized into a collective bargaining unit.

PA salaries across the provinces

PA salaries across country range from $75,000 to $130,000 per year depending on position, responsibilities and experience. In Ontario, the Ministry of Health and Long-Term Care set the base salary for the first graduating class of PAs (2010) at a minimum of $75,000 per year; and this base salary has remained unchanged despite ongoing advocacy efforts. Alberta salaries range from $78,000 to $99,500 per year (personal communication, Dwayne Nagy, 2014); and Manitoba salaries range from $77,000 to $110,000 per year over six steps for a 40-hour straight-day schedule. Manitoba pay scales are under collective agreements (2015–2019) and are publicly available under the Physician and Clinical Assistants of Manitoba's website (PCAM) (ref: https://pcam.ca/membership/collective-agreements/). Salaries may vary depending on on-call requirements and various overtime reimbursement models.

Cost effectiveness of PAs

Four years after PAs were introduced to the Canadian health care system, an economic analysis concluded there was not sufficient existing literature to evaluate the costs or effectiveness of PAs in Canada (Gafni, Birch & Buckley, 2011). Evaluating this cost effectiveness is difficult partly because of the ways PA deployments vary, and partly due to the lack of consensus around comparator groups—e.g., should a PA be compared to a single physician, or to a physician and a nurse practitioner, etc. (Gafni et al., 2011)?

Further, most existing literature on PAs is produced in the U.S. due to the relative infancy of the profession in Canada, which is not always a comparable health care model; does not employ PAs the same way Canada does; and often does not control for important patient confounders, patient volumes, or access to ancillary services (Doan et al., 2012; Gafni et al., 2011). Some data, however, is available on the economic effectiveness of PAs working in very particular health-care contexts, such as individual surgery practises (Araneta, Bohm, Dunbar, Pitman & Rhule, 2010).

The Conference Board of Canada released a series of reports outlining the role of PAs in the Canadian healthcare system, including the value of PAs, gaining efficiency and economic models. The reports concluded that PAs can impact health systems by reducing resident and physician workload (thus saving physician time), by increasing health care productivity, and through cost effective savings. The report outlines how the introduction of a PA to specific settings, such as primary care, emergency medicine and orthopedics, can generate health care system cost savings (Desormeaux, Stewart, Grimes & Prada, 2016) by efficiently substituting for designated medical tasks.

The impact of the COVID-19 pandemic on physician assistants

PAs continue to play a signficiant role in the COVID-19 pandemic. Some hospital sites, such as Hamilton Health Sciences in Hamilton, Ontario, recruited PAs to form a "COVID-19 PA team" who were cross-trained to work in emergency medicine, internal medicine and critical care to help manage increased COVID-19 hospital admissions.

Despite ongoing advocacy regarding the role of PAs as front-line clinicians, PAs were not included in provincial "pandemic pay" bonuses. As front-line clinicians, PAs were responsible for managing patients on COVID-19 designated wards, infectious disease services, critical care settings, emergency rooms, mass vaccination clinics, contact tracing, COVID-19 research, pandemic preparedness, and also transitioned to providing virtual care in other settings.

Reference: https://ojs.lib.umanitoba.ca/index.php/jcpa/article/view/867

Conclusion

PAs have been deployed across Canada's provinces with varying strategies—and varying degrees of success. Provincial regulation and funding models are central to success: in Manitoba, for example, provincial regulation and stable funding models have helped the PA role flourish, whereas the lack of funding and regulation in Ontario is cited as a large barrier to wider acceptance of PAs in that province. The diverse range of PA roles and practise areas also makes it challenging to generate evidence regarding safety, efficacy and cost-effectiveness of PAs that is generalizable.

Part of CAPA's mandate as a professional association is to expand the PA profession, and the association is actively engaged in discussions at many levels across Canada to fulfill this mandate. The PA profession has already demonstrated its value in the U.S., and with appropriate provincial legislative and financial support, PAs will continue to become an integral part of patient care within the Canadian health care system.

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Acronyms

ARC-PA	Accreditation Review Commission on Education for the Physician Assistant (US)
CanMEDS-PA	Canadian Medical Education Directions for Specialists, Physician Assistant
CAPA	Canadian Association of Physician Assistants
CBME	Competency Based Medical Education
CCPA	Canadian Certified Physician Assistant
CFPC	College of Family Physicians of Canada
CPD	Continuing Professional Development
CMA	Canadian Medical Association
CPSA	College of Physicians and Surgeons of Alberta
CPSM	College of Physicians and Surgeons of Manitoba
CPSNS	College of Physicians and Surgeons of Nova Scotia
CPSO	College of Physicians and Surgeons of Ontario
EPA	Entrustable Professional Activity
HFO	HealthForceOntario
HPRAC	Health Professions Regulatory Advisory Council
MOC	Maintenance of Certification
MOHLTC	Ministry of Health and Long Term Care
NCCPA	National Commission on Certification of Physician Assistants (US)
NCP	National Competency Profile
NOSM	Northern Ontario School of Medicine
OHA	Ontario Hospital Association
PA	Physician Assistant
PACCC	Physician Assistant Certification Council of Canada
PAEP	Physician Assistant Education Program
PAIWG	Physician Assistant Integration Working Group (Ontario)
PCAM	Physician and Clinical Assistants of Manitoba, Inc.
RCPSC	Royal College of Physicians and Surgeons of Canada

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