Physician Assistants in the Canadian Forces

Guarantor: Roderick S. Hooker, PhD
Contributors: Roderick S. Hooker, PhD*; Master Warrant Officer Kent MacDonald*; Commander Rebecca Patterson†

Canada is struggling with burgeoning health care access problems. At the same time, this nation may be overlooking an available resource to help address specific physician shortages. The services of more than 130 physician assistants in the Canadian Department of National Defense are used to offset and amplify physician services. Their extensive education and training, along with their international experience in war-torn areas, dealing with wounded and ill military personnel, refugees, civilians, epidemics, and other health care problems make them particularly valuable assets. Yet, upon discharge from military service and reentry into the civilian sector, they are left without the legislation and formal recognition as a health care provider that would enable them to use these skills to help improve medical care access. This study provides the first description of the training and activity of Canadian physician assistants.

Introduction

Universal health care access is an ideal that most countries strive for; Canada and its citizens are no exception.[1] However, despite many attempts to improve access for all Canadians, barriers to physicians' services persist in select areas of the country.[2] Various proposals have been offered to ensure that all citizens have equal access to necessary medical services.[3-7] One means to improve physician access within this country has been at Canada's doorstep since 1992. This is the model of extending physician services that has been highly successful in the Canadian Forces—the nation's small but growing cadre of physician assistants (PAs).

PAs are highly skilled members of the health care team who provide a broad range of medical services, in both primary care and specialty areas, under the supervision of licensed physicians. They are trained to perform medical practice functions under a physician's direct or indirect supervision. Within the physician/PA relationship, PAs exercise autonomy in medical decision making and provide a broad range of diagnostic and therapeutic services. The clinical role of PAs includes primary and specialty care in medical and surgical practice settings. The PA's activity centers on patient care and may include educational, research, and administrative activities. As part of their scope of practice, PAs take comprehensive medical histories, conduct physical examinations, diagnose and treat illnesses, order and interpret tests, counsel on preventive health care, assist in surgery, and write prescriptions. What a PA does varies with training, experience, and clinical setting. In general, PAs see many of the same types of patients as physicians do. Cases handled by physicians are generally more complicated or those that require care that is not a routine part of the PA's scope of practice.

PAs in the Canadian Forces

Developed and extensively used by the Canadian Forces, military PAs have been an important component of extending scarce physician services. At the same time, they limit the labor cost of employing more doctors. Currently, the nation's 53,000 active duty military personnel rely on 80 physicians and twice that number of PAs (Table I). This creates a lean ratio of physician-to-patient population that would be unmanageable without highly trained and experienced medical personnel such as PAs, nurses, as well as various allied health members. Contract physicians are routinely employed to supplement military physician shortages at many bases, which may paradoxically cause an increased physician shortage in the community, as civilian patients are not entitled to receive care through military facilities.

Because so little has been promulgated about this national resource, we undertook a descriptive study on Canada's use of PAs. No health workforce research has examined this group of health professionals until now. If the nation is to address improvements to health care access for its residents, then all available and tested models at hand should be considered.

Canada, like many other nations, developed various attendants and assistants to care for sick and injured soldiers and sailors throughout the 20th century. Before World War II, they were called Sick Berth Attendants. After World War II, they became known as Medical Assistants, and the more advanced trained are Medical Technicians.[8] Similar titles have been adopted in other countries. Prior to 1992, the role of the Canadian Medical Technician was expanded, which was modeled after a similar type of provider in the United States. In 1992, the PA title was authorized for its senior medical technician personnel.

Whether "in garrison" within army units or aboard naval vessels, PAs in the Canadian Forces are independent duty medical personnel. A PA in a typical garrison medical unit has many responsibilities and demands (Table II). The morning usually begins with screening and managing patients at "Sick Parade," a type of walk-in, urgent care clinic for uniformed personnel. Many of the patient problems consist of upper respiratory infections, muscle sprains, abdominal pains, and medication requests. The remainder of the morning may consist of return visits, undertaking procedures such as incision and drainage of abscesses, checking the status of injuries, and follow-up of referrals. Reservists and, especially in overseas or isolated posts, families of military personnel may be seen. In the afternoon, the PA has a number of responsibilities from performing physical examinations to overseeing the administration and hu-

* Division of Health Services Research, University of Texas Southwestern Medical Center, 6011 Harry Hines Boulevard, Dallas, TX 75390-9090.
† Canadian Forces Health Services Academy, P.O. Box 1000, Station Main, Borden, ON L0M 1C0 Canada.

This manuscript was received for review in July 2002. The revised manuscript was accepted for publication in December 2002.

TABLE I

CANADIAN FORCES MEDICAL PERSONNEL (2002)

Active duty personnel	53,000[a]
Air Force	12,000 ± 2,000
Navy	18,000 ± 1,000
Army	23,000 ± 2,000
Medical personnel	
Physicians	80
PAs	130
Nurses	216
Medical Technicians	650

[a] Full "active duty" strength approximately 60,000.

TABLE II

TYPICAL DAY FOR A CANADIAN FORCES PA IN A GARRISON

Time	Activity	Comment
8:00 a.m.–10:00 a.m.	Sick parade	Medical care for uniformed personnel. Unrestricted urgent care for troops in garrison.
10:00 a.m.–12:00 p.m.	Appointments	Return visits, procedures, and other cases. Average four visits per hour.
12:00 p.m.–1:00 p.m.	Meal break	
1:00 p.m.–4:00 p.m.	Appointments	Physical examinations and medical administration.
4:30 p.m.		End of day, secure clinic.

Note: Five-day workweek but on call frequently, including weekends and holidays.

man resource management of the medical unit personnel. This includes responsibility for the overall deportment and discipline of clinical noncommissioned staff and patients. Secondary duties include medical education for junior Medical Technicians and ensuring the readiness of all equipment and personnel in the unit. Throughout the day, the PA may encounter 20 to 30 patients.

Because of the nature of the military, all medical personnel are assigned collateral nonmedical duties as well. These roles are commensurate with their rank and experience and include inspections, training in combat readiness, senior watch keeping, diving, parachuting, and other nonmedical duties. At various times, the Canadian federal government has recognized and used the Canadian Forces military PA in many patient care roles outside of the Department of National Defense. This role was best seen in the Vietnamese and Cambodian refugee reception centers of the 1980s and as recently as 2000 during the Kosovo refugee crisis. Many of these families were held in Canada for several months at designated military locations and provided medical care by PAs before settling in Canada as immigrants or the screening of illegal refugees. Other agencies that have used

TABLE III

CAREER PROGRESSION OF A CANADIAN FORCES PHYSICIAN ASSISTANT

Year	Qualification Level	Comment
0	Recruit	Recruit training (boot camp) 13 weeks
1	QL-3 Med Tech training	18 weeks. Equivalent to entry-level emergency Medical Tech Med Tech training includes primary care, paramedic training, basic life support, handling and transporting skills (phase 1); clinic-based, primary care (phase 2); nursing-related skills (phase 3); field skills oriented section (phase 4)
2	QL-3 Med Tech in field	Employed across a full spectrum of Canadian Forces activities; however, the majority serves in Army field force units
3–5	QL-5 Med Tech training	20 weeks. Three phases of training including a nonemergent primary care phase, a field-oriented phase, and advanced paramedic training to include suturing, splinting, and advanced trauma life support
4–7	QL-5 Med Tech in field	Work in garrison, clinics, combat arms units, Air Force, and surface ships of the Canadian Navy
8–10	QL-6 Med Tech	2 weeks administration course enables them to serve as Clinic Manager/Junior Med Tech Supervisor
10–12	QL-6 Med A in field	Medical assistant semi-independent of a medical officer. Med Tech (Med A) is an independent medical care provider but a physician is always nearby for consultation or referral
12–18	PA training Enlisted Med Tech promoted to Warrant Officer upon graduation	Current PA 2-year program; 53 weeks of didactic classroom training encompassing the basic sciences, pharmacology, physical examination, disease state, and a clinical rotation phase of 49 weeks including a wide spectrum of 15 rotations in various specialties and health care areas Confirmation examination where the student undergoes a battery of evaluations on various medical conditions, focused history and physical examinations. Tested on Advanced Cardiac Life Support, suturing and minor surgical procedures, and pharmacology
12–18	PA (Warrant Officer)	Independent duty as medical authority in garrison, squadron, aboard ship, or submarine.
18–25	PA (Master Warrant Officer)	As senior noncommissioned officer usually moved to administrative role. Eligible to retire at this time with 50% of basic pay. May select employment as a civilian PA (under another name) for a corporation.
≥25	PA (Chief Warrant Officer)	Regimental Sergeant Major. Primarily an administrative role as an advisor to unit commanders.

Note: Throughout the Medical Technician (Med Tech) and PA career, personnel may take additional training in aviation medicine, submarine and diving medicine, air evacuation, and other courses.

PAs include the Coast Guard, the Department of Citizenship and Immigration, and the Royal Canadian Mounted Police.

Canadian Forces hold a historical place in international peacekeeping and peacemaking, often at the request of the United Nations and NATO. This invariably results in the deployment of Canadian Forces PAs along with ground, air, or maritime units in troop carriers, planes, ships, and submarines. PAs have served in Bosnia, Afganistan, Yugoslavia, the Persian Gulf Crisis, Somalia, Rwanda, Haiti, Iraq, Turkey, Israel, as well as many other short-term postdisaster sites around the world. Their experience with war-wounded military, refugees, epidemics, public health, and community clinics tends to be both comprehensive and vast. Canadian Forces PAs inevitably work with medical personnel from other countries and are constantly honing new skills and methods through this international exchange. Because of NATO's policy of promoting interoperative ability and intermilitary comparable roles, PAs often work with medical personnel from other nations through an exchange of equipment and personnel, frequently undertaking specialized training in those countries.

Training and Education of Canadian PAs

The training of a Canadian Forces PA is extensive and somewhat protracted compared with comparable medical personnel (Table III). Over a 20- to 30-year career, the Medical Technician is continuously exposed to more patients, responsibilities, and education. This parallels the expanding breadth of medical conditions, both in the field and back at base. At the same time, they are continuously assigned greater responsibilities. When compared with military PAs in the United States, they have comparable, if not greater, ranges of experience and training.[9] They work extensively with physicians, nurses, other allied health personnel, and unit commanders as a provider of physician-level medical care in underserved areas, administering a wide range of traditional physician-type skills and roles. These include diagnosing, managing, prescribing, interpreting laboratory results, providing preliminary imaging assessment, and determining a treatment plan.

The typical career trajectory is from recruit to Medical Technician, to Warrant Officer, and to Chief Warrant Officer, the senior enlisted rank of warrant officer in Canada. In contrast to the approximately 800 commissioned officer PAs in the U.S. military (ranging in rank from Ensign/Second Lieutenant to Colonel/Captain).[10,11]

When these experienced and capable PAs leave the military, they often leave behind highly refined medical skills and roles that could be transferred to the public sector. This is due to the lack of enabling legislation. A few are able to find medical work in industry managing the health and safety of oil rig workers or mining personnel, often in remote and rural areas of the far north. Some are employed in a civilian role as a safety officer or an industrial manager for deep-sea oil platforms. PAs take these hardship roles because there is no currently recognized role for Canadian-trained former military PAs in the civilian sector. Without enabling legislation for military-trained medically qualified personnel, many feel frustrated and are unable to continue postmilitary service medical careers. Currently, there are an estimated 200 active Canadian PAs (Table IV). The majority serve Canadian Forces members, but at least 30 are civilians. During national emergencies (as in the Ontario/Quebec ice storm in 1999 and the Manitoba flood in 1998), all were welcomed for their expertise. However, short of any national emergency, Canadian Forces PA skills are forever lost to a country that valued them highly for taking care of soldiers and sailors but not their fellow Canadians.

TABLE IV

CANADA'S CORPS OF PAS

Military	
Warrant Officers	130
Master Warrant Officers	23
Chief Warrant Officers	17
Civilian (estimated)[a]	30
Total	200

[a] Civilian PAs are retired military PAs who often assume corporate titles such as safety or occupational health officer, first aid manager, etc. They usually function in roles similar to the military.

Conclusion

Canada is experiencing medical workforce shortages and access to care and yet has created one of the world's most highly trained and experienced health personnel for the military. The extensive education and experience of the Canadian Forces PA allows military physician services to be effectively extended. The developers can take pride in the fact that they have created an economical and efficient means to meet the needs of a select population. Perhaps, this valuable resource is being overlooked as Canadians search for ways to expand physician access in the civilian community. As other countries entertain introducing PAs into their health delivery systems, we suggest that Canada has an opportunity to provide Canadians with Canadian-trained PAs as a strategy to improve medical access for its citizens.

References

1. Donelan K, Blendon RJ, Schoen C, Binns K, Osborn R, Davis K: The elderly in five nations: the importance of universal coverage. Health Affairs 2000; 19: 226–35.
2. Dunlop S, Coyte PC, McIsaac W: Socio-economic status and the utilisation of physicians' services: results from the Canadian National Population Health Survey. Soc Sci Med 2000; 51: 123–33.
3. Reay T: Allocating scarce resources in a publicly funded health system: ethical considerations of a Canadian managed care proposal. Nurs Ethics 1999; 6: 240–9.
4. Davies BJ: Canada's health system. Croat Med J 1999; 40: 280–6.
5. Davies BJ: Cost containment mechanisms in Canada. Croat Med J 1999; 40: 287–93.
6. Wolfe S, Badgley RF: Universal access in Canada: questions of equity remain. Health PAC Bull 1992; 22: 29–35.
7. Alter DA, Basinski AS, Naylor CD: A survey of provider experiences and perceptions of preferential access to cardiovascular care in Ontario, Canada. Ann Intern Med 1998; 129: 567–72.
8. Richards ST: Operation Sick Bay, Ed 1. West Vancouver, British Columbia, Centaur Publishing, 1994. pp 1–267.
9. Hooker RS: The military physician assistant. Milit Med 1991; 156: 657–60.
10. Hooker RS, Cawley JF: Physician Assistants in American Medicine, Ed 2. New York, NY, Churchill Livingstone, 2003, p 285.
11. Salyer S: Physician assistants in a changing world: continued growth for military PAs. JAAPA 2002; 15: 35–9.