Invited Editorial

The Evolutionary Role Of Physician Assistants Across The United States, Canada, And The United Kingdom

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ABSTRACT

International Journal of Exercise Science 6(1) : 1-8, 2013. With physician shortages looming ominously on the horizon, healthcare systems across the globe are awaiting a surge of eager young doctors to enter the field. Much to the dismay of these systems, it does not appear that there will be a collective sigh of relief in the coming years. Fortunately there still remains a promising position to fill the gaps and potentially overcome the growing inundation of patients, shortage of general practice physicians, and ever growing underserved rural populations: the position of physician assistant (PA). Through this review, the evolution of the PA position will be discussed from the perspective of healthcare systems in the United States, Canada, and the United Kingdom. Further, an outline of the educational requirements, projected student debt-to-income ratios, and position availability will be touched upon.

KEY WORDS: Medical assistant, physician extender, doctor shortage, underserved

BACKGROUND

A physician assistant (PA) has been described uniformly across Canada, the United States (US) and the United Kingdom (UK) as a licensed health professional who is trained using the medical model in order to perform an extensive range of both diagnostic and therapeutic services under the supervision of physicians (18). Accordingly, the PAs field of study focuses primarily on general medicine in primary care and hospital settings, enabling PAs to work across a broad spectrum of clinical positions. Similar in function to a nurse practitioner (NP), PAs differ with respect to their level of specialization. While the in-depth knowledge required by NP's in more specialized settings minimizes their ability to provide the same breadth of services offered by a PA, this level of specialization allows the NP to practice independently (19). Conversely, should a PA choose to enter the realm of specialty medicine, the skills they acquired through PA school serve as a foundation for extensive on-the-job training to bridge the gap between the knowledge and skills required for general practice and those tailored to a more concentrated specialty practice. It is the expansive knowledge akin to the PA position that allows for such flexibility within a variety of healthcare settings.

Over the next 40 years, healthcare systems within Canada, the US, and the UK will be put to the test as Baby Boomers reach retirement age. Projections across these countries show that from 2010 to 2030 the population of persons aged 65 and older is expected to increase from below 20% to 25% (16, 22, 27). Concurrently, Americans are expecting a physician shortage of nearly 100,000 physicians by the year 2025; a need which will undoubtedly require remediation in the coming years (17). Likewise, the UK is facing physician shortages, issues with physician recruitment and retention of nurses, and the retirement of a large proportion of general practitioners in inner city areas (25). With similar problems in Canada, it is not surprising that all three countries are looking in the direction of PAs to overcome these impending issues. Despite the striking similarity in population projections and physician shortages, each country's healthcare system has uniquely evolved to accommodate staffing issues in the coming years.

THE VARIABLE ROLE OF THE PHYSICIAN ASSISTANT

United States

In considering the most prominent and historically sound country in regards to PA implementation, the US is home to the most integrated PA programs in its respective healthcare system. The PA position can be traced back to 1965 when the first education program was founded by Dr. Eugene Stead at Duke University (30). While the majority of the inaugural class was primarily comprised of military medics, the students were well suited for careers later dubbed as "physician extenders" (13). Coming on to the scene during the last wave of physician shortages in the 1960's, PAs were used to relieve doctors of tasks that were perceived to be of lesser importance than the qualifications for which physicians were intended (4). While the education, responsibility and reputation of the PA position has evolved over the years into a position of its own, rather than merely a band-aid for physician shortages, this role continues to hold true for present day PAs. Many primary care practitioners now offer the option of seeing either the doctor or the PA (demonstrating a high level of integration and the acceptance of the PA position), yet as doctors take on an increasing number of patients (4), the PA and NP positions often serve as an avenue to offset paperwork and data entry. This symbiotic relationship has helped to re-establish the face-to-face doctor-patient relationship that has been slighted in the US over the last decade (4). One North Carolina internist that has taken advantage of this opportunity, Douglas Kelling, describes his interaction with the PAs and NPs as colleagues who can relieve him of cases that are routine, allowing him to take on more complicated cases which may require a higher level of service or specialty (17). The team effort established in such a setting has overridden the days when it was common for a single physician to run their own solo practice.

Beyond the scope of primary care, the addition of PAs has reduced both the length of stay and transfer times for patients in Level I and II trauma centers while positively impacting workplace moral and stress levels (8). As Obamacare continues to unfold, increasing the demand for healthcare services that can be accommodated by PAs over the next couple of decades (11), the need to accommodate

an influx of patients with no prior access to health insurance will undoubtedly be a shock to all areas related to the healthcare system. While it was previously believed that the solution to the doctor shortage was to increase the number of practicing physicians, it is now accepted that PAs can effectively fill many of these positions in a fraction of the time.

While the original intent of the PA position was to contribute to primary care throughout the 1990's, the role of the PA began to rival a more independent medical provider in underserved areas as doctors sought to accommodate a higher demand for treatment (6). Beginning in the late 1990's, PAs also began to develop a certain penchant for specialty practices. Between 1997 and 2006, the PA workforce in the US doubled, yet the percentage of PAs working in family care or general practice increased by a mere 39%, while internal medicine subspecialty PAs and surgical subspecialty PAs increased by 262% and 186%, respectively (see Table 1; 14). Though it is plausible that a career in specialized medicine has become preferable to primary care due to its more concentrated nature, previous authors accredit this behavior to profitability on the behalf of higher paid specialty physicians (6). Despite the fact that PAs have continued to flood the more profitable sector of specialty medicine, rather than enter primary care where they are often needed most, it should be noted that the most qualified specialty doctors are now seeing more patients than ever.

With nearly 85,000 certified PAs in the workforce (5,979 of which graduated last year), the PA position is continuing to grow across the US (5). Despite the tremendous growth in this field, and in light of the tendency for PAs to matriculate toward more specialized medical practice, previous authors continue to describe the primary care workforce as being three tiered, with physicians comprising 74% of the workforce, supplemented by NPs and PAs at a mere 19% and 7%, respectively (17). Considering the projection of 110,000 certified PAs in the workforce by 2015, a shortage in the medical workforce is imminent, as this projection represents less than a single PA for every five medical and surgical specialists in practice (4).

Table 1. Physician Assistant workforce in the United States, 1974 – 1992.

Year	Number of PAs	Primary Care	Surgical Subspecialty
1974	939	69.8%	18.9%
1978	3,416	67.3%	11.7%
1984	6,552	55.8%	17.6%
1992	13,500	42.7%	29.7%

Note. Adapted from Morgan & Hooker, 2010 (14).

Canada

The PA program in Canada evolved in a fashion similar to the American model, staffing public sector practices with returning military medics in the 1980's (12). It was not until 2003 that the first civilian PA was introduced into the workforce in Manitoba; moreover, McMaster University in Hamilton and The University of Manitoba in Winnipeg did not graduate their first PA classes until 2008, consisting of 12 and 23 students, respectively (12). Currently, only 250 PAs serve in the Canadian workforce, versus 84,855 in the US (12). As such, job availability in Canada remains promising. In contrast to the US however, a unique barrier within Canadian healthcare relates to the funding model

used to employ PAs, which depends largely on government subsidies. In Ontario for example, a physician wishing to employ a PA must apply for a grant justifying a need based on criteria established by the government (e.g., clinical area and geographic location). In return, Health Force Ontario will provide funding between $46,000 and $92,000 to support the employment of a PA, and offers a one-time $10,000 incentive for work in northern and/or rural geographies (9). This funding is prioritized for emergency medicine, primary care and general internal medicine, ensuring that the financial incentives favor areas related to general care (where aid is of particular need) rather than in specialty care, which tends to have more appeal in the US (9). Based on the 2010 Canadian National Physician Survey, these funding models serve as the primary barrier to PA employment throughout Canada (2).

When considering the use of PAs provincially, Manitoba has spearheaded the implementation of PAs within Canadian medical practice, with Ontario following suit. While British Columbia, Alberta and New Brunswick currently have policies in place for PAs, certified civilian PAs are still unable to practice in their respective provinces (12). As physician shortages persist throughout the provinces, healthcare providers in typically underserved areas (i.e., rural and northern geographies) are monitoring the efficacy of PA implementation in actively participating parts of the country. In a recent article describing this trend (11), Roderick S. Hooker PhD, PA, comments that, "a lean ratio of doctor to population, pent up demand for access, and a citizenry somewhat familiar with PAs suggests that expansion [within the Canadian PA job force] is likely". While the apparent potential for success looks promising in the Canadian healthcare system, the results of ongoing studies will be vital in promoting a shift in favor of implementing the PA position throughout all provinces.

Despite the tenor created by the Canadian funding model, Ducharme and colleagues argue that the benefits of including PAs within medical practice far outweigh the inconvenience of applying for grants to support them (7). In this article, the authors indicated that by staffing PAs and NPs in six medium-sized hospital emergency departments, patient wait time and length of stay declined, while discharge disposition improved. Moreover, a study conducted on the financial impact of PAs on the delivery of surgical care indicated that the addition of a PA maximized productivity in the operating room by 37% at neutral cost (20). Provided there is adequate availability of surgical staff and operating rooms, the inclusion of a PA enhances the efficiency of practice due to a reduction in scheduling conflicts (20). Despite these benefits, one of the primary concerns that may arise from the improved productivity associated with PA implementation involves the pressure placed on specialty hospital services (7). In particular, due to a more efficient initial screening, x-ray technicians, hospital lab staff, and nurses may become overwhelmed with an influx of patients; the immediate and long-term effects of this inflow is unknown, especially during times of high traffic (7).

United Kingdom

With 165 PAs currently active, the UK has also experimented with the induction of PAs in the National Health Service (NHS;

22). While the US and Canada derived their programs from military breeding grounds, the UK did not incorporate PAs into the NHS until 2003, when twelve experienced American PAs worked in England as a pilot project to determine the potential for, and eventual success of, matriculating this position into the NHS (25). Spurred by the general success of the pilot project, four graduate-level PA programs were developed and currently operate at St. Georges University of London, the University of Wolverhampton, the University of Hertfordshire, and the University of Aberdeen, each graduating 20 to 27 students annually (11).

Despite initial concern over flooding the job market with PAs, demand from hospitals and primary care has already exceeded the availability of PAs in the UK (19). Spurred by a much-needed increase in primary care applications and doctor shortages, members of the NHS and the Royal College of Physicians concur that it is necessary to investigate and implicate the PA role as an answer to overworked general practitioners and physicians in the UK (25). Similar to placement trends in Canada, the primary areas of practice throughout the UK include rural areas across Scotland, Midlands, and South and London (19).

Regardless of this rural focus, PAs in the UK are gravitating towards specialty practice, much like their American counterparts. It is unknown whether this trend is a function of demand within specialty medical practice in the UK or a desire for higher salary (18). Another complication that must be considered with the integration of PAs is how well the US PA model fits the structure of the NHS. Prescriptions and paperwork are primary issues due to legal and systemic differences noted during the initial trial period of PA integration, as these issues still continue to prove problematic for US-trained PAs who choose to work in the UK (31). Currently, one of the more prominent barriers to PA success is that advanced NPs have the ability to prescribe medicine, which makes them a more attractive candidate for the position (19). In spite of these issues, the UK is well on track for maintaining a steady initiation of PAs, perhaps more so than the Canadians who continue to struggle with the barrier of overcoming the funding model that is currently in place. Similar to the US however, the tendency among PAs in the UK to favor specialty practice may prove problematic in the future.

EDUCATION

Across the US, Canada, and UK, educational requirements for PAs are quite similar, with the average length of the program lasting between 24 and 26 months (11). In the US, PA students are required to pass the *Physician Assistant National Certification Exam* (PANCE) before they are permitted to work as PAs. In addition to this, US PAs are required to complete 100 hours of continued medical education (CME) every two years, including conference attendance and classes. After six years, a recertification course is taken, called the *Physician Assistant National Recertifying Exam* (15). Canada has a similar certification process, which requires PA students to pass the *Physician Assistant Certification Exam*. This exam provides a five-year certification during which 250 credits of continued professional development (CPD) must be earned through events such as conferences and

classes (not unlike the CME program; 3). The UK also uses the PANCE exam, treating it as the graduation and/or the registration requirement for PA certification. As in the US, PA students in the UK are required to renew this certification every six years and partake in a program similar to that of CME or CPD (10). Additionally, universities in the UK have developed an objective structured clinical examination (OSCE) that will be used to certify PAs (19). Regardless of differences in certification and licensure requirements across the US, Canada, and UK, it is important to note that "the PA profession should be entered into because of an interest in practicing as a mid-level medical provider, not because of an inability to practice as a doctor" (p. 347; 25). It should also be known that in the position of PA there is a ceiling to be reached, and at no point will a PA be allowed to practice independently.

SALARY AND DEBT

The successful expansion of the US PA program, wherein all 50 states have recruited and retained PAs, may be attributable to the tuition driven nature of the US educational system (compared to Canada and the UK which rely heavily on government subsidies and actively seek to overcome limited expansion across rural areas; 11). Yet despite the benefits of this expansion, for American PAs, expansion comes at a cost. In the US, the average PA finishes school with a debt of approximately $100,000, with an average of $50,567 stemming directly from tuition (1). In Canada and the UK, the average PA amasses approximately $24,000 of debt directly related to tuition (23, 28). Regardless of the disparities in tuition and differences in the education systems, PA salaries across Canada, the US and UK indicate that the position will eventually pay for its education, especially considering the abundance of job availability. In the US, the average PA brings home a median salary of $90,000 a year (1), while the average salary for a Canadian PA is often described in a range from $80,000 to $100,000 per year (28). A PA graduating from one of the programs in the UK can expect to make between £24,000 ($35,000) and £38,000 ($61,000) while some of the ex-patriot PAs trained in the US are currently making £40,000 ($64,000) (24).

THE FUTURE OF THE PA POSITION

Physician Assistants across the US, Canada and the UK have been received positively by patients who, in many cases, request PAs over doctors. Canada and the UK continue to foster young programs with expansion to under-represented areas serving as a leading objective. The UK and Canada are in the process of completing impact studies on the use of PAs in order to make job projections and employment models available (26). Within the US, the development of the PA role continues to propel forward and the PA workforce is expected to increase by 30% before the year 2020 (approximately 24,700 jobs) as educational programs move to establish gold standards of care in the field (29). One thing in particular to look for in the coming years is the option or addition of specialized certification within the PA program, more so in the US where it is believed it will provide a competitive advantage within the PA workforce and insure higher standards of practice (21). With the PA position constantly adapting to the ebb and flow of various healthcare

needs, it will be interesting to see how the position evolves in the coming years. Presently, the PA position is indeed a convincing solution to healthcare issues across the US, Canada and the UK.

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