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REVIEW

Commentary from the front lines: American physician assistants working in a United Kingdom emergency department

J S Smith, B Tevis, K Murali

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Physician assistants (PAs) have been an integral part of the emergency medicine team in the USA for the past 30 years. This review outlines the reasons why PAs can play a vital role in UK National Health Service (NHS). The experience of American PAs working in one NHS trust are discussed, highlighting the cultural differences in the environment of the emergency departments in the two countries that will influence the scope of practice of PAs in the UK.

conditions, prescribe medications (in 48 US states), order and interpret diagnostic tests, counsel patients on preventive health care, refer to specialists, and assist in surgery.

The duration of educational programmes for PAs is variable. The average time is 25 months after a four year undergraduate degree.⁶ The programmes place emphasis on family medicine but develop the foundation for PAs to work in any medical or surgical setting with increasing responsibilities as their experience and competence increase. Most PA programmes require applicants to have previous healthcare experience and a college degree. The typical applicant already has a bachelor's degree in science and some healthcare experience. PAs come from a variety of backgrounds—many are nurses, emergency care workers, and laboratory technicians. Although most PAs have undergraduate science degrees, accredited PA programmes accept an undergraduate degree, such as psychology, and additional core science classes, such as biology, anatomy and physiology, chemistry, and physics.

PAs are trained in medical programmes accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). There are currently more than 130 accredited programmes, and all must meet the stringent ARC-PA standards. The average PA programme curriculum is covered in approximately 25 months. Education consists of classroom and laboratory instruction in the medical sciences (such as anatomy, pharmacology, pathophysiology, clinical medicine, and physical diagnosis), followed by clinical rotations in family medicine, internal medicine, surgery, paediatrics, obstetrics and gynaecology, and emergency medicine.

Because of the close working relationship PAs have with physicians, PAs are educated in a medical model designed to complement physician training. PA students are taught, often alongside medical students, to diagnose and treat medical problems.⁶

After completing the rigorous coursework and clinical rotations, a PA must pass the certifying examination of the National Committee for Certification of Physician Assistants. In addition, PAs must complete 100 hours of continuing

Since 2001 the National Health Service (NHS) has been investigating the feasibility of initially employing and ultimately incorporating a physician assistant (PA) educational programme to increase the medical workforce within its primary and secondary care trusts.^{1,2} Following the success of the primary care trust pilot programme in which two American PAs were employed in 2003, Sandwell and West Birmingham Hospital NHS Trust recruited six PAs with experience in emergency medicine. In April 2004, four full time and two part time PAs began working in the accident and emergency departments.³

This review will discuss (a) the role of the PA in the emergency department in the USA and (b) the integration of the profession into the NHS bearing in mind the differences in the cultural and practice styles of the two countries.

WHO IS A PHYSICIAN ASSISTANT?

PAs are mid-level health professionals qualified to provide medical care in conjunction with a physician. The profession began in the USA in the 1960s when there was a surplus of medically trained military veterans and a need for health-care providers, especially in medically underserved rural and urban areas. However, the roots of the profession can be traced to a similar healthcare practitioner model that had been used during the seventeenth century in Europe and later by the Russian Army.⁴ In the USA, there are more than 40 000 PAs in clinical practice with approximately 4300 working in emergency medicine.^{5,6}

TRAINING AND SCOPE OF PRACTICE OF PAs IN THE USA

In the USA, PAs are qualified to conduct physical examinations, diagnose and treat medical

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Requirements for a physician assistant (PA) to work in the USA

- (1) Graduate of an accredited PA programme
- (2) Successful completion of national certifying examination
- (3) Licence and registration with individual state in which PA is employed
- (4) Develop scope of practice with supervising physician
- (5) Purchase malpractice insurance
- (6) Complete 100 hours of continuing medical education every two years and re-take examination every six years

medical education every two years and take a re-certification examination every six years.⁴ Although there are standards of education and qualifications to practise as a PA, the individual skills and abilities of PAs may vary according to the clinical setting, and their experience and scope of practice. A number of postgraduate PA programmes have also been established to provide practising PAs with advanced education in medical specialties, such as emergency medicine, surgery, and hospitalist training. However, most PAs advance their skills through on the job training.

The scope of practice defines the role of a PA in a specific healthcare environment. Each PA and his or her supervisor agree upon a set of diagnostic and therapeutic modalities that the PA may employ with varying levels of supervision. The scope of practice allows for development and progression of skills of the PA.⁷⁻⁹ A key relationship is that of the PA and the supervising physician. It is a relationship built on experience, mutual trust, and reliance. The stronger the relationship the more positive the working environment is for both providers. The physician must feel comfortable delegating tasks to the PA, and the PA must know the physician is available when the complexity of a case or procedure exceeds his or her level of competence.

Physician assistants in the emergency department

The role of the PA in the emergency department depends on his or her experience and the practice preferences of the supervising physician. Together, they develop a scope for practice, defining the role of the PA in a specific emergency department setting. The types of cases seen by a PA depend on the scope of practice and include minor and major illness or injuries, including resuscitation.¹⁰ Some aspects of the role are: history taking and physical examination, and ordering diagnostic tests including radiographs, ultrasound, or computed tomography (CT) scans as needed and interpreting the tests. The PA then administers the necessary treatments as indicated, from prescribing medications, suturing, splinting, minor surgical procedures such as foreign body removal and incision and drainage of abscesses to more invasive procedures such as resuscitation, including central line placement, intubation, inserting chest tubes, and arterial lines. Patient disposition may involve discharge, admission, or referral to a specialist. Another aspect of variability of PA practice in the USA is level of physician supervision. Most PAs practise with a supervising physician on site, although there are PAs in rural areas who treat patients with a supervising physician available for consultations by phone only.

WHY ARE PAs NEEDED IN UK?

Physician assistants have the unique ability to fill a need within the NHS. With the limitations placed on the senior house officer (SHO) working hours by the European Working Time Directive, hospitals are pressed to find ways to provide experienced care to acute patients.¹¹ Rotas in the emergency department rely heavily on the role of the junior doctor to

Table 1 Profile of PAs working in UK in July 2004

Sex	3 women, 3 men
Age in years	2: 25-35; 3: 36-45; 1: 46-55
Highest degree	4: bachelor's; 2: master's
Combined years of experience in emergency medicine	23: urban setting; 21: rural setting
Level of supervision	5: on site; 1: by telephone

diagnose and treat the high volume of patients. PAs in accident and emergency (A&E) can provide continuity of care in this setting, especially during those months when SHOs without A&E experience are posted in the department. In the USA, where residents (junior doctors/registrars) have also faced a mandatory cap on working hours, PAs have been a vital part of the healthcare team, allowing patient flow to run smoothly. PAs working in such areas as general and trauma surgery, emergency medicine, internal medicine, transplant surgery, vascular surgery, cardiovascular surgery, orthopaedics, and paediatrics have enabled hospitals to continue to provide much needed acute care while complying with national regulations on resident working hours.¹²⁻¹⁴

Staffing an emergency department with experienced PAs can free up consultants, registrars, and clinical assistants to attend to unstable or critical patients, as well as afford consultants time for teaching. Sandwell and West Birmingham Hospital NHS Trust has employed PAs to provide rota coverage while consultants teach medical students and junior doctors and registrars use dedicated education time.

The NHS directive to assess, treat, and discharge or refer patients within a four hour time frame requires a team approach by skilled A&E staff.¹⁵ PAs in the A&E can be essential partners in reaching the four hour goal; their ability to see and treat patients can keep waiting times down, help to attain the four hour target, and increase patient satisfaction.¹⁶

The PA professional in the USA works closely and in parallel with the US nurse practitioners. With the nursing shortage in the UK, PAs are another alternative to providing skilled care. A UK based PA education programme could produce qualified graduates from a pool of school leavers, biomedical graduates, army medics, or second career students rather than drawing from the already short nursing supply.^{17 18}

The demographics of the group of PAs working in the UK (table 1) demonstrates what a varied group of individuals PAs are.

EXPERIENCE OF WORKING IN UK AS A PA

Although the UK and the USA appear from the outside to have basic similarities, further examination reveals that the two countries are indeed "divided by a common language". American PAs have encountered many differences while working in A&E in the UK. Primarily, the largest obstacle to overcome is that of the lack of supervision from senior medical staff, including consultants. In the USA the emergency department is staffed 24 hours a day with a consultant level physician who works in the department and sees patients alongside the PA to provide on-site support as needed. In the UK, some supervisory responsibility has fallen on the registrars and staff grade doctors, who have been invaluable in sorting out the intricacies of the NHS system. However, a true test of this pilot programme will be the ability to preserve the essential PA-physician relationship as found in the USA that allows for adequate supervision, understanding, and autonomy of the PA.

An integral part of working as a PA in the UK is explaining the PA role and scope of practice to the doctors and nursing

staff. While working in the UK, the American PAs observed differences in the nursing role from that in the USA. Emergency nurses in the USA are the first point of contact for a patient. They record vital signs, insert an intravenous access as indicated, draw bloods, giving intravenous medications, and often initiating radiographs or treatments as per a standard protocol. Since most American PAs are not trained nurses, it not standard for PAs to carry out many of these tasks routinely. In the UK, most of these tasks are carried out by medical staff—although at Sandwell and West Birmingham Hospital NHS Trust the nursing role is expanding to include taking bloods and obtaining intravenous access. Nurses are a vital part of the healthcare team and it is crucial that they have an accurate understanding of the role of the PA for the PA–nurse relationship to be successful and patient care to be maximised.

The emergency department environment varies greatly between the two countries. In the USA the goal is not only to stabilise emergencies, but also to diagnose and treat specific disease processes while the patient is in the department. The luxury of time allows for observation and more tests to be done while in the department so that a patient is admitted with a diagnosis. In the UK, it is more common for a patient to be admitted based on symptoms and further tests carried out over successive days. Targets and cost are two driving forces in the emergency department in the UK. In the USA more money is spent in the emergency department diagnosing and treating illness to avoid costly admission, and in the UK more is spent on diagnosing illness while admitted to the hospital. Sophisticated diagnostic modalities such as troponin testing, beta-type natriuretic peptide testing and CT scanning are routinely used by PAs in the emergency department in the USA. In addition, in the USA more medical staff time is spent examining patients and making a disposition as opposed to phlebotomy, establishing venous access, taking vital signs, and filling out requests for diagnostic tests, tasks which can be delegated to other individuals. Medicine in the UK is protocol driven with little variation accepted by policy makers. In addition to adapting to protocol medicine, American PAs working in the UK must master the names of a multitude of drugs that are different from the names used in the USA (for example acetaminophen/paracetamol).

Although there are significant hurdles to overcome with staff, patients in the UK are very similar to those in the USA. Patients in the UK understand socialised medicine and are accustomed to the waiting periods and protocols of the NHS. They understand the limitations of the emergency department provider and have adjusted their expectations accordingly. Overall, the reception has been positive and the patients appear to appreciate the patient education or explanation of illness and treatment that is part of the PA standard of care. And although the American PAs are often mistaken for Canadians or Australians, many patients are interested in why they have come to their corner of the world,

which allows a prime opportunity for education about the profession.

CONCLUSION

PAs are healthcare providers who have proved their competence, skills, and usefulness over the past 30 years in the USA. The UK has a need PAs could fill well, but adapting the role to socialised medicine will test the perseverance and negotiation skills of all parties involved. However, it is a cause that is worthwhile and from which all parties will reap benefits in the end.

CONTRIBUTORS

J Smith had the idea for the article, carried out the literature search, wrote part of article, and is guarantor for the paper. B Tevis assisted in writing article. K Murali assisted in planning and critiquing article.

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