

Can physician assistants be effective in the UK?

Antony Stewart and Rachel Catanzaro

Antony Stewart

MPH HonMFPH,
Specialist in Public
Health, North
Birmingham
Primary Care Trust,
Birmingham

Rachel Catanzaro

MPAS PA-C,
Physician Assistant,
Tipton Care
Organisation,
Glebefields Health
Centre, Tipton,
West Midlands

Clin Med
2005;5:344-8

ABSTRACT – The National Health Service (NHS) faces a serious shortage of medical staff. One solution is to introduce US-style physician assistants (PAs) who train for around two years following previous clinical work or a first degree, and perform duties similar to junior doctors. This paper reviews the history and role of PAs, the quality of their work and their likely impact in the UK. A variety of sources were searched to identify suitable studies. The use of PAs in the UK appears to be an acceptable model that could eventually reduce the current skill shortage and provide high quality patient care. Twelve US-sourced PAs currently work in Sandwell, West Midlands. A recent report suggests they have made a substantial contribution to primary care and have improved patient access. For PAs to be successful in the UK, they must be highly regarded practitioners. High quality educational courses must be established to ensure their credibility.

KEY WORDS: education, physician assistant, primary care, secondary care, standards

It is widely acknowledged that the shortage of qualified medical staff is crippling the NHS.¹⁻⁵ There appear to be fewer doctors and nurses per capita in the UK than in other developed countries.⁶ The NHS Plan stated that staffing constraints, rather than lack of funding, posed the greatest threat to NHS modernisation.⁷ The provision of additional trained staff should improve access to health care, improving waiting lists.⁶ One possible solution is to introduce US-style physician assistants (PAs) who undergo two years' intensive training following previous clinical work and a first degree, and perform duties similar to junior doctors.⁵

This paper reviews the history and role of PAs, as well as the quality of their work and how their introduction in the UK would be likely to impact on health services. Results from a recent study of American PAs working in Sandwell are reported.

Need for a new type of health professional

The reduction in junior doctors' hours and a shortage of doctors being trained, problems with recruitment and retention of nursing and other

health professionals, and the decline in number of applicants to primary care are creating a staffing crisis in the NHS.^{2,3,8} The problem is even more acute in inner city areas, where a substantial proportion of general practitioners (GPs) will shortly reach retirement age.³ The possibility of appointing more doctors, mainly in non-consultant grade posts, has been discussed,⁶ although the Audit Commission's report, *Medical staffing*, indicates inadequate opportunity for study and difficulty finding doctors to fill such posts.⁹ The first Wanless Report, *Securing our future health: Taking a long-term view*, suggests that even if the government met all its current targets for increasing doctor numbers by 2008, by 2020 the shortfall to meet levels of demand would still be around 25,000 doctors.¹⁰ It has also been recommended that greater emphasis should be placed on better integration of professional groups and team working, so that human resources are used more wisely.¹¹

One option for improvement is to introduce a new group of staff – PAs, to function at 'mid-level' between fully trained doctors and nurses. There is much support for this within the UK.⁸ Sir George Alberti, past President of the Royal College of Physicians has written that:¹²

The time is right to consider a new breed of healthcare professional, the medical assistant, who could take on many of the tasks currently undertaken by doctors and nurses, and free staff for work for which they are trained.

Method

To identify suitable studies, a variety of sources were searched, using the term 'physician assistant'. Sources included various internet sites and search engines, such as Medline, the Cochrane Library, Database of Abstracts and Reviews of Effectiveness (DARE), NHS Economic Evaluation Database (NHS EED) and Google.

Training

In the USA, PAs study for around two years after either a first degree, generally in a life science, or having worked as another type of clinical professional, eg physiotherapist, occupational therapist, or paramedic. Entry requirements and degree qualifications vary, although most courses in the USA are

moving to Masters degree level.¹³ Training courses follow a bio-medical model and resemble a condensed traditional medical course.⁸ Most PA students are expected to have 45 months of healthcare experience in addition to their first degree before commencing training.¹³

PA graduates are required to pass a national certifying board examination; thereafter, 100 hours of continuing professional development must be completed every two years, along with a recertification examination every six years.^{8,9}

A number of PA training courses are being developed in the UK, although it is not yet clear how similar their content will be to courses in the USA. National competencies are being developed to help inform the curricula for these programmes.

History and role of physician assistants

PAs were developed in the USA during the mid-1960s when it was recognised that there was a shortage and uneven distribution of primary care doctors.¹⁴ They initially worked only in primary care.¹⁴ The first trainees were highly skilled military paramedics who, following the Vietnam war, had no equivalent medical role in their civilian life.^{14,15} It is widely considered that PAs make an important contribution to healthcare,¹⁶ and have the potential to decrease doctors' working hours.¹⁷

There are currently more than 50,000 PAs in the USA working in all areas of medicine and 134 education programmes for PAs.¹³ Similar professions exist in India, the Netherlands and Canada.⁹ Over half the PAs in the USA are women.¹⁸ Most applicants make an early career decision to become PAs, rather than moving from other professions.

PAs perform duties at a similar level to junior doctors and some advanced nurse practitioners, and at patient level are thought to act interchangeably. They have a close working relationship with their supervising physician and within that relationship exercise autonomy in medical decision-making, providing a broad range of diagnostic and therapeutic services within their agreed scope of practice.^{8,14} Although the tasks

carried out by PAs vary depending upon area of practice, they typically include:¹⁴

- taking full patient histories
- performing physical examinations
- making clinical diagnoses and treating illnesses
- ordering and interpreting laboratory tests
- prescribing
- suturing
- applying casts
- second operator in major procedures in theatre
- educating patients on preventative healthcare, illness and medications
- making rounds in nursing hospitals and homes
- may also teach and carry out research and administrative services.

Forty-eight States in the USA license PAs to prescribe and all PAs have the authority to refer patients to other professionals.¹³ PAs in the UK are not currently licensed to prescribe.¹⁹

Physician assistant work settings

Around half of PAs in the USA work in primary care and are responsible for a broad range of tasks.⁸

They may, however, work in a wide variety of other healthcare settings, including occupational health, forensic medicine, interventional neuroradiology, cardiothoracic surgery,⁹ cardiology (including coronary arteriography),²⁰ respiratory medicine, gastroenterology (including endoscopic procedures),²¹ general medicine, obstetrics and gynaecology, paediatrics, anaesthesia,²² cancer surgery,²³ accident and emergency (A&E),²⁴ dermatology^{25,26} (including skin cancer screening²⁷), health promotion,²⁸ geriatrics, nursing homes,²⁹ organ procurement,³⁰ and neonatal intensive care.³¹

Quality of care and physician assistant attitudes

Several studies report that PAs are competent and deliver high quality care.^{8,9} The *Eighth Report to the President and Congress on the status of health personnel in the United States* (released in 1992) states:¹⁴

Physician assistants have demonstrated their clinical effectiveness both in terms of quality of care and patient acceptance.

Access to and quality of care is preserved and even enhanced by PAs.³¹ It has long been recognised that PAs demonstrate competence and acceptability,³² making an efficient workload contribution,³³ and they can significantly improve the quality and quantity of A&E care.³⁴ Patient outcomes are similar to those for resident physicians,³⁵ and within their scope of practice, PAs have been shown to provide care that is indistinguishable in quality from care provided by physicians.³⁶ The use of a gerontologist PA in a nursing home setting reduced both the number of hospital admissions and days in hospital.²⁹

In a survey of 5,000 non-physician employees, PAs expressed

Key Points

.....
USA-style physician assistants (PAs) train for around two years and perform duties similar to junior doctors

.....
Twelve PAs from the USA are working successfully within primary and secondary care in Sandwell, West Midlands

.....
A recent report suggests that these PAs have made a substantial contribution, and have helped to improve patient access to services

.....
A number of PA-like training courses are being developed in the UK

.....
The use of PAs in the UK could drastically reduce the current skill shortage and provide a high standard of care to patients

the most satisfaction with their amount of responsibility, support from co-workers, job security, working hours, supervision and task variety; they were less satisfied with workload, control over work pace and opportunities for advancement, however. Most PAs were satisfied with pay and fringe benefits.³⁷

Views of patients

High levels of patient satisfaction with PAs have been recorded in several studies.⁹ For many years it has been acknowledged that PAs can enhance patient care and satisfaction.^{25,26}

Reaction to PAs is reported to be more favourable among women, better educated patients and those with greatest contact with PAs.³⁸ A study of patients in an emergency department fast track service reported that patients were very satisfied with PA care, with few willing to wait longer in order to be seen by an emergency physician.³⁹ PAs, along with nurse practitioners and midwives, have high empathy and low avoidance towards people living with HIV and AIDS.⁴⁰ It is acknowledged that PAs have helped to reduce barriers to healthcare access, especially in rural communities.⁴¹

In the UK, there is concern that patients may regard PAs as sub-standard. However, the interim report for the PA evaluation in the UK indicates that patients appear to have responded well to the role, with no adverse reactions and evidence of satisfaction from repeat patient visits and anecdotal comments.⁴² For the scheme to be successful, patients will need to feel that the quality of care provided by a PA is just as good as that provided by a doctor.⁴ It is possible that some patient satisfaction would result from PAs being able to spend more time with each patient.⁸

Views of other health professionals

Generally, PAs appear to be regarded as a welcome addition to the primary care team, although some conflicts have been reported.^{3,9,43} While there is some opposition to non-physicians providing medical care, especially regarding diagnosis and treatment, most physicians who work with PAs like having them on their staff.¹⁴ Much of the opposition seems to be related to an oversupply of physicians coupled with the desire of healthcare organisations to reduce costs.^{13,44,45} Concerns regarding oversupply do not, of course, apply to the current position within the NHS.

It is essential for healthcare professionals to understand each other's roles and working practices. Although PAs may require an inconvenient amount of physicians' time during their early stages of working, it is claimed that physicians who work with PAs feel that their advantages outweigh their disadvantages.⁹

Cost-effectiveness

Although few true cost-effectiveness studies have been found, in the USA PAs are generally regarded as being cost-effective. Physicians and institutions are expected to employ more PAs to provide primary care and to assist with medical and surgical procedures because PAs are cost-effective and productive mem-

bers of the healthcare team. They can relieve physicians of routine duties and procedures,⁴⁶ and thereby free up time for physicians, at a cost of around one-third of a doctor.⁴⁷

A study assessing the cost-effectiveness of using a gerontologist PA for nursing home visits (3–4 times per week, alongside an alternation in routine visits with supervising physicians versus regular monthly visits by physicians and family practice residents) concluded that the PA intervention reduced hospitalisation and medical costs.²⁹

PAs in the same practice setting as residents appear to use resources as, or more, effectively.⁴⁸ Family/general medicine PAs are of significant economic benefit to the practices that employ them.⁴⁹ Rural PA productivity can be higher than urban, due to the concentration of generalist PAs in rural settings.⁵⁰

A report by the American Medical Association suggests that the incentives for employing PAs include an increase in net income and physician productivity, specifically office visits per hour and visits in all settings, both on a weekly and yearly basis. By employing PAs, solo doctors are able to expand the scale of their practices and provide greater access to care.⁵¹ One study, however, concluded that PAs were expensive in comparison to house staff.³¹

Experience of physician assistant care in the UK

There is little experience of PAs being used in the UK. It is thought that a US-trained PA was the first to join a UK PMS practice, in early 2003, in Tipton, Sandwell, West Midlands.⁴ A further 11 US-trained PAs have since been recruited to work within Sandwell, both in primary care and A&E departments. An interim report by the Health Services Management Centre at the University of Birmingham looked at two of these PAs working in primary care.⁴² The study suggested that the PA role had made the transition from the US healthcare system and had contributed successfully to primary care in Tipton. The PAs had, to a great extent, replaced GP roles in this under-doctored area. The PAs were reported to have made a positive impact on the workload carried out by other members of the practice teams and to have contributed to improvements in access for patients to primary care services.⁴²

Discussion

There is every indication that the PA scheme works well in the USA, although there has been some conflict between PAs and physicians as well as concerns about oversupply. In the UK, tensions may be experienced between PAs, doctors and nurse practitioners. PAs appear to be competent, motivated, cost-effective and acceptable to patients.

It has been proposed that a PA training scheme would be attractive for asylum seekers who qualified as doctors overseas, and are unable to practise as doctors in the UK.³ Although this approach might be regarded as a stepping stone to medical practice by some, it might then preclude overseas doctors from achieving the level of medical training to which they originally aspired. Asylum seekers who are doctors are not

always informed about available opportunities to qualify as doctors in the UK.⁵² The United Examining Board (UEB) course is arguably a better opportunity for overseas doctors as it allows them to make full use of their skills and training. The PA profession should be entered into because of an interest in practising as a mid-level medical provider, not because of an inability to practise as a doctor.

The *British Medical Journal* published two papers discussing whether the US PA model would meet the needs of the NHS, and also providing an overview of the role of PAs in the USA.^{8,15} The rapid responses from readers were also published. These two papers attracted a total of 24 responses (18 and 6, respectively). These came from a number of UK and US clinicians, and one service user. In all 20 (83%) of the responses supported the introduction of PAs. Two of the negative responses were from the same service user who felt that yet another NHS role would be detrimental to the service; a rural GP from Australia assumed that PAs would become a new class of severely underpaid professionals, which would diminish quality, and a medical student expressed apprehension that there would be insufficient senior doctors to supervise the PAs. The overwhelming number of positive comments mainly reinforced the quality of PAs' work, their acceptability to patients, and the potential for the scheme to reduce workforce shortages.

Conclusion

While much of the available evidence indicates that using PAs would be a useful move, a careful approach should be adopted if this model is to be successful in the UK.

A UK practitioner who functions in a similar way to a US PA will need to be acceptable to other health professionals as well as to patients; neither must perceive them as second-rate under-trained doctors. To assist in this process, high quality educational courses based on national standards of practice and competencies, as well as accreditation schemes, must be established to ensure credibility of this new PA-like profession. It is planned that the UK version of PAs will be able to prescribe following national registration of this new profession.

The use of PAs in the UK appears to be an acceptable model that could drastically reduce the current skill shortage in both primary and secondary care. This highly trained and qualified group of practitioners can provide a high standard of care to patients, as well as help to support the medical multidisciplinary team.

Contribution of authors

Contributors: AS initiated and designed the review. AS and RC wrote and revised the paper. AS is guarantor.

Competing interests

None.

References

- Lissauer R. Career focus: The future workforce. *BMJ* 2002;325:S73.
- Cox CL. Advanced nurse practitioners and physician assistants: what is the difference? Comparing the USA and UK. *Hosp Med* 2001;62:169–71.
- Gavin M, Esmail A. Solving the recruitment crisis in UK general practice: time to consider physicians assistants? *Soc Policy Admin* 2002;36:76–8.
- Hogg C. A new kind of doctor for the UK. BBC News, 10 February 2003. news.bbc.co.uk/1/hi/health/2745851.stm
- Lamb A. Skillmix – new staff roles in health care. *Clin Med* 2001;1:413–4.
- Moss F. Editorial: Staffing by numbers in the NHS. *BMJ* 2002;325:453–4.
- Department of Health. *The NHS Plan: A plan for investment, a plan for reform*. London: Stationery Office, 2000.
- Hutchinson L, Marks T, Pittilo M. The physician assistant: would the US model meet the needs of the NHS? *BMJ* 2001;323:1244–7.
- Audit Commission. *Medical Staffing: A review of national findings*. London: Audit Commission, 2002.
- Wanless D. *Securing our future health: Taking a long-term view, Final Report*. London: Stationery Office, 2002.
- Department of Health. *A health service for all talents: Developing the NHS workforce – Consultation Document on the review of workforce planning*. London: Department of Health, 2000.
- Alberti G. We need a new breed – the medical assistant. *Daily Telegraph*, 20 January 2000.
- American Academy of Physician Assistants. *Facts at a glance*. Alexandria, VA: AAPA, 2004. www.aapa.org/glance.html
- American Academy of Physician Assistants. *Information about PAs and the PA profession*. Alexandria, VA: AAPA, 2004. www.aapa.org/geninfo1.html
- Mittman D, Cawley J, Fenn WH. Physician assistants in the United States. *BMJ* 2002;325:485–7.
- Askins DG Jr, West VT. The physician assistant in South Carolina. *J S C Med Assoc* 1998;94:440–4.
- Victorino GP, Organ CH Jr. Physician assistant influence on surgery residents. *Arch Surg* 2003;138:971–6.
- USA Academy of Physician Assistants. *2000 AAPA Physician assistant census report*. Alexandria VA: AAPA, 2000.
- Henry J. Medical degrees lasting two years created to fill shortage of GPs. *Sunday Telegraph*, 1 February 2004. www.telegraph.co.uk/news
- DeMots H, Coombs B, Murphy E, Palac R. Coronary arteriography performed by a physician assistant. *Am J Cardiol* 1987;60:784–7.
- Lieberman DA, Ghormley JM. Physician assistants in gastroenterology: should they perform endoscopy? *Am J Gastroenterol* 1992;87:940–3.
- Rigg JR, Harries JD. Future of anesthesia. *Can J Surg* 1977;20:467–70.
- Rubenstein EB, Fender A, Rolston KV, Elting LS *et al*. Vascular access by physician assistants: evaluation of an implantable peripheral port system in cancer patients. *J Clin Oncol* 1995;13:1513–9.
- Law H, Sloan J. Doctor's assistants – do we need them? *J Accid Emerg Med* 1999;16:114–6.
- Leshin B, Hauser D. The role of a physician assistant in dermatologic surgery. *Dermatol Surg* 1999;25:148–50.
- Baker KE: Will a physician assistant improve your dermatologic practice? *Semin Cutan Med Surg* 2000;19:201–3.
- Oliveria SA, Altman JF, Christos PJ, Halpern AC. Use of nonphysician health care providers for skin cancer screening in the primary care setting. *Prev Med* 2002;34:374–9.
- Fasser CE, Mullen PD, Holcomb JD. Health beliefs and behaviors of physician assistants in Texas: implications for practice and education. *Am J Prev Med* 1988;4:208–15.
- Ackermann RJ, Kemle KA. The effect of a physician assistant on the hospitalization of nursing home residents. *J Am Geriatr Soc* 1998;46:610–4.
- Anderson ME. A role for physician assistants in organ procurement. *Prog Transplant* 2001;11:245–8.

- 31 Schulman M, Lucchese KR, Sullivan AC. Transition from housestaff to nonphysicians as neonatal intensive care providers: cost, impact on revenue and quality of care. *Am J Perinatol* 1995;12:442–6.
- 32 Bottom WD. Physician assistants: current status of the profession. *J Fam Pract* 1987;24:639–44.
- 33 Tirano NC, Guzman M, Burgos FL. Workload contribution of a physician assistant in an ambulatory care setting. *PR Health Sci J* 1990;9:165–7.
- 34 Goldfrank L, Corso T, Squillacote D. The emergency services physician assistant: results of two years experience. *Ann Emerg Med* 1980;9:96–9.
- 35 Rudy EB, Davidson LJ, Daly B, Clochesy JM *et al.* Care activities of patients cared for by acute care nurse practitioners, physician assistants, and resident physicians: a comparison. *Am J Crit Care* 1998;7:267–81.
- 36 White GL Jr, Davis AM. Physician assistants as partners in physician-directed care. *Southern Med J* 1999;92:956–60.
- 37 Freeborn DK, Hooker RS. Satisfaction of physician assistants and other nonphysician providers in a managed care setting. *Public Health Rep* 1995;110:714–9.
- 38 Oliver DR, Conboy JE, Donahue WJ, Daniels MA, McKelvey PA. Patients' satisfaction with physician assistant services. *Physician Assist* 1986;10:51–4.
- 39 Counselman FL, Graffeo CA, Hill JT. Patient satisfaction with physician assistants (PAs) in an ED fast track. *Am J Emerg Med* 2000;18:661–5.
- 40 Martin JE, Bedimo AL. Nurse practitioner, nurse midwife and physician assistant attitudes and care practices related to persons with HIV/AIDS. *J Am Acad Nurse Pract* 2000;12:35–41.
- 41 Jones PE, Hooker RS. Physician assistants in Texas. *Tex Med* 2001;97:68–73.
- 42 Woodin J, McLeod H, McManus R. *Evaluation of US-trained physician assistants working in the NHS in England: Interim Report: The introduction of US-trained physician assistants to primary care in Tipton: First impressions.* Birmingham: University of Birmingham, Health Services Management Centre, Department of Primary Care and General Practice, 2004.
- 43 Paniagua H. Do physicians' assistants have a role in the UK? *Br J Nurs* 2004;13:349.
- 44 Grumbach K, Coffman J. Physicians and nonphysician clinicians (editorial). *JAMA* 1998;280:825–6.
- 45 Miller RS, Jonas HS, Whitcomb ME. The initial employment status of physicians completing training in 1994. *JAMA* 1996;275:708–12.
- 46 Bureau of Labor Statistics, US Department of Labor. *Occupational outlook handbook, 2004–05 edition, Physician assistants.* www.bls.gov/oco/ocos081.htm
- 47 Terry K. How 'physician extenders' can strengthen your practice. *Med Econ* 1993;70:57–8, 60, 65.
- 48 Van Rhee J, Ritchie J, Eward AM. Resource use by physician assistant services versus teaching services. *JAAPA* 2002;15:33–8.
- 49 Grzybicki DM, Sullivan PJ, Oppy JM, Bethke AM, Raab SS. The economic benefit for family/general medicine practices employing physician assistants. *Am J Manag Care* 2002;8:613–20.
- 50 Larson EH, Hart LG, Ballweg R. National estimates of physician assistant productivity. *J Allied Health* 2001;30:146–52.
- 51 Wonzniak G. Physician utilization of non-physician practitioners. In: Gonzolas ML (ed), *Socioeconomic characteristics of medical practice 1995.* Chicago, IL: American Medical Association Center for Health Policy Research;1995:15–21.
- 52 Tayal U. No place to call home (career focus). *BMJ* 2003;327:s93.