The physician assistant: would the US model meet the needs of the NHS?

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An additional box showing an example masters course in physician assistant studies is available on the BMJ's website

The public and the government have both identified "more staff" as a way of improving the NHS.[1] Problems with recruitment and retention in nursing and allied health professions and falling numbers of applicants to primary care are potential constraints on the meeting of targets. One option is to introduce a new group of staff (box 1).[2 3] Practitioners who perform "mid-level" duties in the United States include doctors in training, nurse practitioners (including advanced practice nurses and other titles), and physician assistants. These three groups perform similar duties and, at the level of the patient, act interchangeably. The American term "physician" encompasses all doctors, and physician assistants work in all branches of medicine and surgery. Physician assistants in the United States are fully trained professionals who take on a role equivalent to that of a junior doctor for their entire career. They pride themselves on their "dependent" status, have the ability to move to and from various clinical settings, have their own recertification processes, and do not compete for senior medical posts. Higher education institutions in the United Kingdom are starting to look into the education needs of such a profession. But is the US physician assistant model the right solution for the NHS?

Box 1: Recent UK policy statements on new healthcare workers

"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."—Sir George Alberti, president of the Royal College of Physicians[2]

"There needs to be concerted action to take forward work to develop the roles of new types of workers … Action in this area should build on the thinking about a "physician's assistant" role and on the current work in hand taking forward recommendations from the reports on *The Future Healthcare Workforce*."—Consultation document on the review of workforce planning[3]

"The profession is not closing its mind to new types of health worker. The idea of the physician's assistant will be looked at."—John Denham, health minister[4]

"Physician's assistants would have a two year training followed by two years learning on the job and would be trained in specific tasks working in accident and emergency departments, taking blood samples, arranging X-rays, and making all of the measurements for the doctor to come along."—Sir George Alberti[4]

"This principle [to train staff for new roles] can be extended to other areas of care, building on Royal College proposals for a physician's assistant."—The NHS Plan[1]

"We recommend a radical review of the work undertaken by doctors and other health care workers. The introduction of a new cadre of Health Care Practitioner is strongly suggested."—Royal College of Physicians[5]

Summary points

Physician assistants make a major contribution to provision of health care in the United States

They function as "mid-level" practitioners, along with doctors in training and nurse practitioners

They train and work in a biomedical model and do not perform "nursing" tasks or tasks of other therapists

Introduction of US-style physician assistants in the United Kingdom would reduce medical staffing difficulties but would not help to remove professional boundaries or barriers to expanding scope of practice

It is not known whether introduction of another healthcare career pathway would attract into the health service people who would not have joined professions with poor recruitment

The US physician assistant

In the 1960s a shortage of primary care medical providers in the United States, especially in the rural and urban underserved communities, coincided with the return of military servicemen who had delivered medical care in Vietnam but were "unqualified." One solution was to train these men quickly and allow them to work under the supervision of a physician. Dr Eugene Stead, an advocate for a new breed of healthcare worker, created the first training programme for physician assistants in North Carolina in 1965. Four former Navy corpsmen enrolled. From this, the profession has grown to over 45 000 practitioners, 55% of whom are women.[6] This compares with 2 697 000 registered nurses (95% women), 196 000 nurse practitioners (data on proportion of women not available),[7] and 778 000 physicians (23% women).[8] Half of all physician assistants work in primary care; others work in emergency care, surgery, orthopaedics, and other specialties (box 2).[9]

Most applicants today are not former military personnel but school leavers or health professionals who have made an early decision to become physician assistants. They have decided against medical school, trading some future income and additional prestige for lifestyle factors such as a more defined schedule and fewer hours on call. Physician assistants are dependent practitioners, always working under the supervision (direct or by telephone) of a designated physician. Physicians may delegate to physician assistants only those medical duties that are within their scope of practice (box 3).

Training

There are 126 accredited educational programmes throughout the United States.[6 10] The typical programme lasts 24 months, but the range from 11 to 51 months reflects widely varying entry requirements and qualifications awarded (table 1).[10] Most programmes require some previous healthcare experience. The training offered in a typical physician assistant programme (see box on *BMJ*'s website) is strikingly similar to a condensed traditional medical course. Programmes vary in the degree or credential awarded at the end of training, with an increasing trend towards masters degrees.

Students take a national board certification examination before graduation, and success in this is a requirement for licensure in most states. To maintain certification, 100 hours of continuing medical education every two years must be documented and a recertification examination must be passed every six years.[11]

Conflicts and difficulties

Several factors have affected and continue to affect the profession. The relationship with physicians is a major issue. Despite increasing acceptance of the value of physician assistants to healthcare teams considerable opposition remains to non-physicians providing any medical care, especially diagnosis and treatment.[14 15] Competition in a system oversupplied with physicians seems to be the main concern.[14] The interface with doctors in training has also not always been an easy one; misunderstanding of roles and working practices and competition for cases are among the difficulties cited.[16]

Equally important is the relationship with the nursing community, especially nurse practitioners. Although these groups perform similar duties in the workplace, substantial differences exist between them in the philosophical model of practice used, the number of hours of clinical experience acquired during training, and whether training is specific (nurse practitioners) or general (physician assistants) (table 1).[12 17]

Practicalities of introducing US-style physician assistants

Education and training

Higher education institutions in the United Kingdom would be able to offer education and training to supply US-type physician assistants, probably at bachelor degree level, and initially only in institutions with medical schools. A high level of involvement of clinicians in the design and delivery of curriculums would be needed to aid credibility and ensure full partnership with the service.

A policy decision would be needed on whether the courses would be funded by the NHS—as are nursing, midwifery, physiotherapy, and radiography, for example—or by the higher education funding councils, as are medicine, pharmacy, and biomedical sciences.

Regulatory issues

New regulatory councils will be established in April 2002 for nursing and 12 therapeutic and scientific professions. This will not change the regulatory issues for potential physician assistants, as all existing and prospective health regulation takes autonomous practice as its point of departure. Both the current General Medical Council and the proposed new models are inappropriate and unworkable for physician assistants. Alternative regulatory options include:

- Not directly regulating physician assistants at all but relying on the regulation of the supervising doctor(s) by the GMC
- Seeking a subregister at the GMC in the same way that dental auxiliary groups are registered by the General Dental Council
- Seeking health service guidance, equivalent to that published in 1999 for the clinical perfusionists, requiring all physician assistants to be members of a specified (and still to be set up) professional association with responsibility for standards in education and conduct.

Box 2: Real examples of role of physician assistants

Primary care

The Howard City Medic One Clinic is a family medicine clinic in an underserved rural region of Michigan. An advanced practice nurse and a physician assistant routinely staff the clinic. A general practice doctor is on site for a day and a half each week and otherwise available for consultation via email and telephone. The practitioners on site provide medical care for the entire range of outpatient conditions from "well child" check ups to emergency treatment of myocardial infarctions and surgical conditions before transport to hospital.

The Kentwood Family Medicine Center in suburban Grand Rapids, Michigan, is staffed by a team of five physicians in private practice, one physician assistant, one advanced nurse practitioner, and junior doctors at various levels of training. All patients are private patients who select the centre as the site for their medical care; reimbursement for services follows the traditional US model. The physician assistant and advanced nurse practitioner provide health maintenance and preventive care, diagnose and treat minor illness, provide prenatal care, and perform routine follow up care for illness and surgery. In addition, the centre provides instruction to medical students, physician assistant students, and advanced practice nursing students during the clinical experience part of their training.

Secondary care

The urology service at Spectrum Health Medical Center in Grand Rapids is staffed by 12 trained urologists (consultants and surgeons) and two physician assistants. In addition, the medical centre provides nursing services, and medical students, postgraduate physician assistants pursuing additional training in the surgical services, and junior doctors training in surgery provide medical care. The physician assistants on the unit provide preoperative care (including presurgical histories and physical examinations), assist in surgery, and provide postoperative care.

The emergency department at St Mary's Mercy Medical Center is staffed at all times by three to five board specialty trained physicians in emergency medicine, an advanced practice nurse, and a physician assistant. As a training health facility, the department also has medical, nursing, and physician assistant students. In this setting the mid-level practitioners provide care such as first response at trauma cases, diagnosis and treatment of illnesses commonly seen in community clinics, repair of uncomplicated lacerations, and treatment of minor fractures and sprains.

Box 3: Typical tasks performed by physician assistants

- Taking histories
- Performing physical examinations
- Making clinical diagnoses
- Ordering and interpreting laboratory tests
- Suturing
- Applying casts
- Assisting at surgery
- Educating patients
- Making rounds in nursing homes and hospitals

Table 1 Differences between physician assistants and nurse practitioners in the United States[10-13]

	Physician assistant	Nurse practitioner
Entry to course	Varies from high school leaver to bachelor degree Some require healthcare experience	2-4 years' basic nursing education 1 year's practice as registered nurse
Course length	11-51 months	Minimum 24 months
Course award	Certificate, bachelor, or masters	Masters
Course type	Generic Medical model	Family practice or single specialty Nursing model
Practice	Dependent (always under supervision by physician) Prescribing rights in 47 states	Independent or collaborative Collaborative prescribing rights in a third of states; independent prescribing rights in a quarter of states

Table 2 Differences between training for physician assistants and doctors in the United States[8 10 23 24]

	Physician assistant training	Medical training
Entry to course	Some ask for prerequisite courses Varies from high school leaver to bachelor degree Some require healthcare experience	1-2 year courses in biology, physics, English, chemistry (including organic chemistry) Bachelor degree, including courses in biology, physics, English, and chemistry Medical college admission test
Course length	11-51 months	48 months
Course award	Certificate, bachelor, or masters	MD
Starting income (1999)	Approximately $57 700	Approximately $35 700 for first year post-MD
Further training	None or, for example, 1 year surgical residency option	1 year internship then 3-7 years' residency

Impact of introducing US-style physician assistants

Primary care

Even though over half of current fully trained doctors are in primary care, only 32% of UK medical graduates now enter general practice.[18] It is hard to recruit general practitioners in some parts of the country, especially in inner city practices with intensive case loads.[19] The work of general practitioners could be augmented by allowing them to supervise physician assistants, who could be the first contact in minor illness and injury in the same way that some practices currently employ nurse practitioners, physiotherapists, and others.[20 21] Patients would need to be convinced that they were getting at least as good a service from the expanded team. As with nurse practitioners, the high level of patient satisfaction from care delivered by physician assistants is achieved partly by allowing them to spend more time with each patient.[22]

There is little doubt that physician assistants are highly trained and able to function with a considerable level of competence. This is hardly surprising after what, in some centres, is six years of training. The training for doctors in the United Kingdom is among the shortest of all European countries, and even shorter courses are proposed.[1] The costs of offering higher education programmes for US-style physician assistants are therefore unlikely to be much less than those incurred for the undergraduate training of doctors. The question is whether it will be quicker, cheaper, and more feasible to train physician assistants than to implement the current proposed solutions for primary care: training more doctors and increasing recruitment into general practice. Physician assistants in the United States have higher starting salaries than newly qualified doctors entering postgraduate training but do not progress thereafter to the high salaries enjoyed by senior medical staff (table 2).

Secondary care

Reduction in junior doctors' hours has massive implications for provision of services in hospitals; junior doctors provide the middle level of secondary care. Reduced hours, national restrictions on numbers of training posts allowed, and the hidden costs of providing supervision and education for trainees have encouraged the creation of a variety of mid-level non-training posts. This is generally recognised as being an unsatisfactory solution. Initiatives for training clerical and healthcare staff to perform administrative and technical tasks previously performed by junior doctors have been developed in some places to alleviate the pressure on junior doctors' hours and intensity of work. Wider use of nurse practitioners is a common solution but results in a depleted general nursing pool.[25]

Employing physician assistants would be another way to fill the gap. At service level, the roles of physician assistants in the United States are comparable to those of senior house officers, early specialist registrars, or general practice registrars in the United Kingdom. The NHS Plan for England (para 8.18 and 8.24) restates the policy of moving service from being led by consultants to being delivered by consultants.[1] Replacing junior doctors with other "juniors" will not achieve this. On the other hand, replacing doctors in training with fully trained professionals could be seen as improving patient care.

A striking feature of US physician assistants is their professional identity and commitment. This may be based on a conscious decision at entry to training to opt for an alternative career style. It has been suggested that restricted career progress is the main reason for turnover of senior physician assistants.[16] Physician assistants wishing to retrain as doctors are given no recognition of their existing knowledge and skills and have to complete the entire medical school course. This is in contrast to emerging UK policy that supports staff switching careers and paths of training more easily than is currently possible (NHS Plan, para 9.18).[1 3]

The total pool of healthcare workers

We can only speculate on the impact of a new grade on overall recruitment to the healthcare professions. If applicants to physician assistant training would otherwise have opted for an existing healthcare profes-

sion there is no overall advantage, although it may be that unsuccessful applicants for existing programmes would have another option. Local experience of recruiting to a biomedical science degree indicates that physician assistant programmes would be very attractive to students who are not accepted for medicine. These students typically do not choose nursing or another healthcare career as an alternative.

The physician assistant role may prove attractive to staff who would otherwise leave the health service owing to frustration in their existing roles and inability to widen their practice. However, the proposed extended and expanded scopes of practice and the consultant grades in nursing and therapy professions are already tackling this problem.[1 20 26]

Demarcations between staff

Physician assistants have to seek their supervising physician's authority to refer patients to other professionals, although most states have allowed them prescribing rights.[11] They are trained in the biomedical model and see themselves as providing medical services; they are not trained in, and do not expect to perform, nursing or other healthcare tasks and therapies. The US physician assistant role does not reduce unnecessary duplication of tasks at the level of the patient or improve transfer of care between services.

The US experience with physician assistants has shown that interprofessional rivalries can be exacerbated,[27 28] including clear antagonism with the nursing profession. When physician assistants were mooted in the United Kingdom a few years ago, Castledine cautioned against introducing a "new species" that would lead to competition over roles.[29]

Conclusions

The NHS today, like the US health system in the 1960s, faces a potential shortage of staff to deliver primary care. Initiatives already in place to deal with staffing shortages include training more doctors and training other staff to take on "medical" tasks. The critical issues are the cost of training, the safety of patients, and whether the role of physician assistant would attract new people into the health service.

Other initiatives aimed at reducing professional barriers and mixing skills may be more effective in solving the problems in primary and secondary care. It would be a shame to respond to the impending shortfall in medical staff by creating a "mini medic" and losing the chance to tackle simultaneously the barriers to expanded practice and to seamless care. The best aspects of the US physician assistant system could be incorporated into new initiatives, both locally and nationally, but a comprehensive national programme to train and employ US-style physician assistants may not be the answer.

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