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Physician Assistants in NHS Scotland: Reviewing the Issues

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1.Introduction

This paper was commissioned by the Scottish Executive Health Department (SEHD). It provides background information on the role of physician assistants (PAs), and on their deployment in the United States and in England. The SEHD is planning to recruit and deploy a small number of US educated PAs in the NHS in Scotland in 2006.

The primary focus of the paper is to identify lessons for consideration during planning and implementation of the planned “pilot”. This paper highlights key lessons from the literature, and from key informants, on the employment of PAs.

Readers who wish a comprehensive assessment and description of the development of the PA role in the USA, should consult the American Academy of Physician Assistants (AAPA) website (www.aapa.org) and also the core book by Hooker and Cawley (2003).

Given constraints of time and resources the focus of the review was on identifying key messages for Scotland; it was not structured as a systematic review (no systematic review of physicians assistants was identified during the search). The review was supported by follow up contact with key individuals and representatives of organisations in the US and with UK organisations working with PAs. The purpose was to identify the issues that need be considered in the lead up to the recruitment and deployment of PAs in the NHS in Scotland.

The remainder of the paper is in two sections: Section 2 reports key findings from the literature review; and Section 3 reports of follow up findings, and focuses on key messages for Scotland.

2.Reviewing the Literature

This literature review reports on publications from the USA. Whilst the physician assistant role, or similar, does exist in other countries, such as Canada, the Netherlands, Taiwan, and India, the role originated in, and is best described and assessed in the US context. There are a small number of reports and articles from the UK, which tend to fall into one of two categories – either comment or opinion relating to the potential for the PA role within the English NHS context, or early assessment or evaluation of pilot sites where US PAs have been employed. These few sources are highlighted and discussed in Section 3.

US Literature

The literature review was based on a search which was conducted using the following key terms: physician(s) assistant, PA, utilisation, deployment, employment, impact, costs, cost benefit, evaluation, working relationship, role differentiation, role delegation, substitution.

The time period searched was 1990 – 2005, and English language only. Databases searched were: Medline, CINAHL, BNI, PsycInfo and Web of Science. Websites consulted included The American Academy of Physician Assistants (AAPA), and the National Library of Medicine (NLM). In addition, the extensive bibliography available on the AAPA website was consulted (www.aapa.org). In total, approximately 160 references were identified.

This brief review of US publications covers the following key areas:

- background and demographics;
- education;
- role descriptions and assessments; and
- costs, benefits and evaluation of impact.

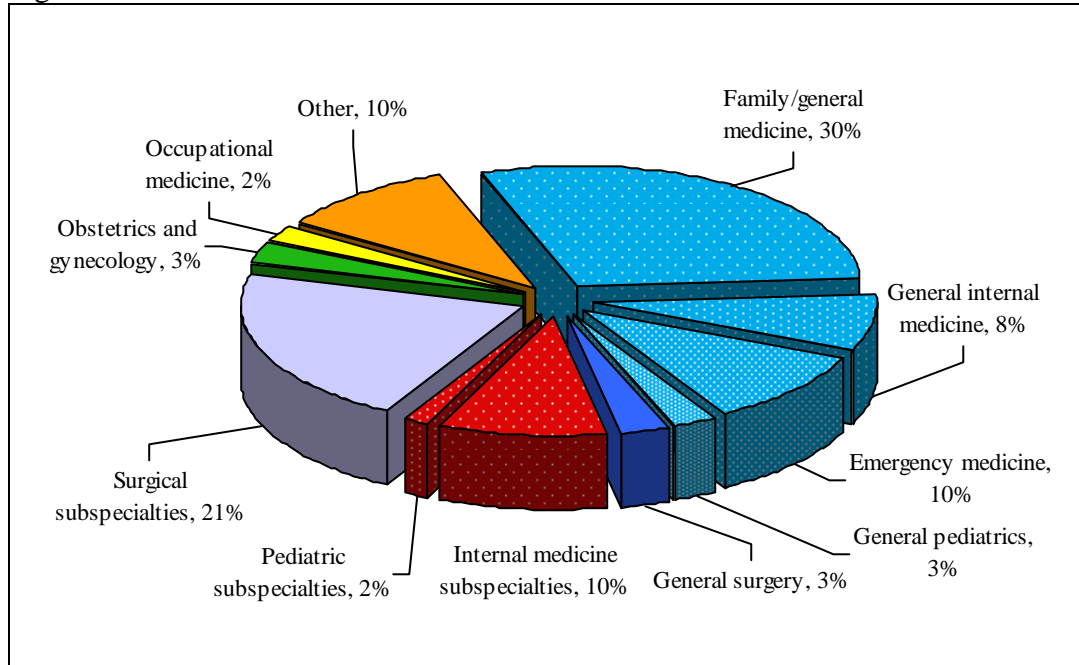
US: Overview of the US workforce

The physician assistant (PA) is a widely recognised, fully integrated licensed health provider working within the US health care system. The role has been in existence for about forty years, and was developed both in response to a shortage of doctors in primary care in the 1960s and in an attempt to increase access to health care for people in underserved, particularly rural, areas.

The first physician assistant trainees in the US were military paramedics - many were returnees from the Vietnam war. Formal education was established in 1965 and the Duke University Physician Assistant programme produced the first graduates in 1967. Duke University was also instrumental in the early development of regulatory legislation for the profession, initially within North Carolina (Estes & Carter 2005). From these early initiatives there is now a burgeoning array of PA educational programmes, numbering 138 at the last count (Fenn 2006).

Historically, the majority of physician assistants have worked in primary care, but increasing numbers are now working in hospitals, satellite clinics, community practice and government agencies. Less than half of all PAs now work in primary care. The chart below shows the practice location of PAs in the US in 2004:

Figure 1. Practice location of PAs in the US in 2004



Source: AAPA Physician Assistant Census Survey, 2004 (AAPA 2004a).

PAs work in a wide variety of healthcare settings, including occupational health, forensic medicine, radiology, cardiothoracic surgery, cardiology, respiratory medicine, gastroenterology, general medicine, obstetrics and gynaecology, paediatrics, anaesthesia, cancer surgery, emergency medicine, dermatology, rheumatology, health promotion, geriatrics, care and nursing homes, organ procurement, psychiatry and neonatal care (AAPA 2005a).

Some recent figures indicating type of employer and place of employment of PAs can be seen in the two tables below:

Table 1: Number and Percent Distribution of Clinically Practicing Respondents by Type of Primary Employer

	Count	Percent
Respondents	19987	100.0%
Self-employed	620	3.1%
Solo physician practice	2691	13.5%
Single-specialty physician group	6121	30.6%
Multi-specialty physician group	2453	12.3%
University hospital	1503	7.5%

Other hospital	2988	14.9%
Freestanding urgent care center	366	1.8%
Freestanding surgical center	22	0.1%
Nursing home or LTC facility	47	0.2%
Home health agency	3	0.0%
Hospice	1	0.0%
HMO	457	2.3%
Community health center	1215	6.1%
Medical staffing agency	66	0.3%
Physician practice management organisation	277	1.4%
Integrated health system	258	1.3%
Corrections system	218	1.1%
Other	681	3.4%

Table 2: Number and Percent Distribution of Clinically Practicing Respondents by Primary Work Setting

	Count	Percent
Respondents	19951	100.0%
Intensive/critical care unit of hospital	403	2.0%
Inpatient unit of hospital (not ICU/CCU)	1848	9.3%
Outpatient unit of hospital	1435	7.2%
Hospital emergency room	1863	9.3%
Hospital operating room	1350	6.8%
Other unit of hospital	237	1.2%
Federally Qualified Rural Health Center	778	3.9%
Other FQHC	306	1.5%
Other community health center/facility	526	2.6%
Freestanding urgent care facility	575	2.9%
Freestanding surgical facility	82	0.4%
Solo practice physician office	2742	13.7%
Single-specialty physician group practice	4287	21.5%
Multi-specialty physician group practice	1753	8.8%
HMO facility	332	1.7%
Nursing home or LTC facility	167	0.8%
University/college student health facility	120	0.6%

School-based health facility	66	0.3%
Other freestanding outpatient facility	406	2.0%
Correctional facility	243	1.2%
Industrial facility/work site	102	0.5%
Mobile health unit	10	0.1%
Patients' homes	29	0.1%
Other	291	1.5%

Source: 2005 AAPA Physician Assistant Census Report (Tables 3.2 and 3.4 respectively, AAPA 2005b)

PAs are employed by over one-quarter of all group practices in the US and provide a major source of patient access in large health maintenance organisations (Hooker 2003). The number of PAs currently in the US is around 66000, with a predicted growth to 90000 by 2010 (Fenn 2006). Although the physician assistant profession has historically been predominantly male, women now comprise over 60% of PAs working in the US (Lindsay 2005). This can be in part explained by the fact that many of the initial cohorts of PAs, who were men, have now reached or are nearing retirement age. The flexibility of the job is reportedly attractive to women who have childcare responsibilities. Many PAs have been recruited from other healthcare jobs, often as a second career (Nenstiel et al. 1997), but recently, there has been an increasing trend towards applications from younger life science graduates, who are embarking on a first career.

Recent debate in the US has focused on the likely extent of the projected physician shortage [note : “physician” in the US context has a broader meaning relating to the medical workforce than when used in the UK context] (see e.g. Grumbach 2002; Cooper 2004); whilst there is disagreement between commentators on the scale of, and reasons for, physician shortages, there is little disagreement that the US will be short of physicians to some extent over the next decade - which is one reason for continued growth in PA employment. Cawley (2005) suggests that now is a good time for the PA profession to increase the number of graduates.

Employment as a PA appears to be an attractive career option in the US. PAs have indicated very high vocational satisfaction about their work environment, clinical practice, and job factors, and a recent survey indicated that 89% said they would do the same job over again (cited by Fenn 2006). LaBarbera (2004) mailed a survey to 2323 PAs, randomly selected from the AAPA mailing list, in an attempt to identify the factors that PAs feel contribute to vocational satisfaction. The survey achieved a 50% response rate, and was found to be representative in composition. Overall, PAs were found to be highly satisfied with their careers (92.4%), specialty choices (90.6%) and jobs (81.8%), and 87% said they were highly or fairly likely to recommend a PA as a career.

The same survey also revealed 21 factors relating to vocational satisfaction and 29 factors for career dissatisfaction. Factors related to satisfaction included: helping others; patient interaction; flexibility – work hours, not being on call, shorter training

time; teamwork – working with both administrative and medical colleagues; variety – different medical conditions or different patient populations; problem solving – enjoyment of medical decision making; physician backup – having both autonomy and support; and limited liability – having fewer malpractice concerns than physicians. Many of the categorised dissatisfaction variables are generic, and include patient load, productivity demands, stress, compensation and hours worked. However, some variables specific to the PA profession were highlighted in responses from some PAs, including ‘misunderstood PA role’ and reports of being the ‘middle man’, or ‘dogsbody’, and dislike of being compared to NPs and having to compete with them.

There is an ongoing debate in the US regarding the job title, ‘physician assistant’. Whilst it has become a recognised role and conveys a sense of identity through the actions carried out, some commentators report that there are negative connotations surrounding the term ‘assistant’, linking it with the term ‘aide’. A full debate on the matter can be found on the JAAPA website (www.jaapa.com). [Note: In England, the term proposed for a similar role to the PA is medical care practitioner (MCP). This role may not be the exact equivalent of the PA role in that the training, background and job role may be different for the English model.]

US: Education

PA education is modelled on physician training. PAs are taught in programmes often co-located within medical schools and teaching hospitals. PA students frequently share classes, facilities and clinical rotations with medical students. As previously mentioned, the number of PA programmes has grown rapidly across the USA. Applicants to PA programmes must complete at least two years of college courses in basic science and behavioural science as prerequisites to PA training, which is analogous to the pre-medicine studies required for medical students.

The average education programme length has increased over the years, and now lasts for 26 months (AAPA 2004b). This programme is broad-based and generalist. The first year comprises basic medical science courses (in US terminology: anatomy, pathophysiology, pharmacology, physician diagnosis, in addition to professional development, communication skills and research), after which students enter the clinical phase of training. This includes classroom instruction and participatory clinical rotations in medical and surgical specialties – family medicine; internal medicine; obstetrics and gynaecology; paediatrics; general surgery; emergency medicine, psychiatry and elective sub-specialties. In order to graduate, students have to complete 2000 hours of supervised clinical practice, and pass a national standardised exam. They then have to apply for licensure in whichever State they are practising. After graduation, the PAs continue learning at work and through continuing medical education (CME), for which they must log 100 hours every two years (half of which must be courses/educational events approved by the AAPA). In addition, they must sit a recertification exam every six years, in order to remain licensed practitioners.

In their workforce review of PAs, physicians and NPs, Dehn & Cawley (2000) noted a consistent long-term trend towards admitting younger PA students. The gender distribution was 67% female enrollees in 2001 (Glicker 2002), and this percentage is predicted to increase further (APAP 2005). There has been an increase in the number of masters degrees being offered, and there has been a drive to make all PA

programmes masters level by 2007 (although this is not supported by all commentators). If this does happen, it is likely that some programmes will disappear. The average size of a graduation class from a PA programme has increased from 25 to just over 35 students between 1993 and 2003, despite the fact that new programs tend to start with smaller classes (AAPA 2004a).

The overall number of graduates emerging from PA programmes has consistently increased over the past 11 years, rising from 2000 in 1995, to more than 4500 in 2003, and is currently sitting around 4700 (Cawley 2005). Similarly, the number of enrolments in PA programs has risen steadily (Hooker & Berlin 2002).

US: Role

The AAPA definition of the profession is

“Physician assistants are health professionals licensed or, in the case of those employed by the federal government, credentialed, to practice medicine with physician supervision. Physician assistants are qualified by graduation from an accredited physician assistant educational program and/or certification by the National Commission on Certification of Physician Assistants. Within the physician/PA relationship, physician assistants exert autonomy in medical decision-making and provide a broad range of diagnostic and therapeutic services. The clinical role of physician assistants includes primary and specialty care in medical and surgical practice settings in rural and urban areas. Physician assistant practice is centered on patient care, and may include educational, research, and administrative activities” (AAPA 2000-2003 policy manual).

Recent economic pressures have promoted the increased use of PAs and expanded their scope of practice. Back in 1995, the AAPA initiated three studies to identify the core competencies of the PA profession, and in collaboration with work done by other medical professions, laid the foundation for a consensus on a statement of competencies. The competencies comprise medical knowledge, interpersonal and communication skills, patient care, professionalism, practice-based learning and improvement and systems-based practice. All PAs, regardless of their specialty or setting, are expected to acquire and maintain these competencies throughout their careers. PAs in the US are fully trained professionals who take on a role equivalent to that of a junior doctor for their entire career (Hutchinson et al. 2001). Full details can be found on the AAPA website <<http://www.aapa.org/>> and in the AAPA journal (AAPA 2005a).

It is reported that the role of the PA can be broken down into four main components, whereby they:

- practise medicine with physician supervision
- exercise autonomy in medical decision making (always with a physician partner)
- provide a broad range of diagnostic and therapeutic services
- may also perform educational, research, and administrative activities

PAs are always supervised by a physician, but in most cases this does not mean direct supervision, but may often be given remotely, via telephone or video, for example. “PAs are not independent practitioners, but practice-focused autonomous professionals delivering care in partnership with physicians, in a role described as ‘negotiated performance autonomy’ (Mittman et al. 2001, p. 485), which takes into account differences between skills sets. This means they can staff satellite clinics, provide on-call services and deliver care in rural areas, as the physician partner does not need to be physically present for the PA to practise.

At a service level, one early assessment of the potential to use PAs in the NHS suggested that PA roles in the US in primary and secondary care are comparable to those of senior house officers or early specialist registrars, or general practice registrars in the UK (Hutchinson et al. 2001).

PAs and other non-physician providers

Several studies have looked at the differences between PA and other so called “mid level practitioner” roles (see e.g. Cooper et al. 1998), particularly the nurse practitioner (NP). A key difference cited is the independent licensure bestowed on NPs (Beschle 1994, Dehn & Cawley 2005). However, in reality, in modern medical practice, very few clinicians operate entirely independently. The majority work in an increasingly interconnected hierarchy in which team practice and professional interaction are the norms.

Burgess et al. (2003) explored the perceptions of primary care physicians (rural and urban) of the role and practice of three types of non-physicians; NP, PA and certified nurse midwife (CNM). The study had a relatively small sample (n=681, only 15% response rate), and was conducted within one state (South Carolina), which is primarily rural in nature. In general, both rural and urban physicians held positive views regarding non-physician primary care service providers. They felt they possessed the necessary skills and knowledge to provide primary care to patients, were an asset to a physician’s practice, freed the physician’s time to handle more critically ill patients, and increased revenue for the practice, but increased the risk of patient care mistakes and a physician’s time in administrative duties. Urban physicians were more likely to perceive that non-physician providers are able to see as many patients in a given day as a physician, but experience barriers in the delivery of patient care. One particular limitation related to lack of full controlled prescriptive authority for non-physicians, which can be particularly problematic in rural areas, where physicians might be one or two hours away. This study did not differentiate between the three non-physician roles, but one interesting result was that when asked who they would hire if they were looking for an additional service provider, 51% said a NP, 42% said a PA and 28% said a CNM.

Hooker and Cipher (2005) examined PA and NP prescribing, and reported differing prescriptive authority, with PAs licensed in 47 states, and NPs licensed in 40 states (although Cox 2001 reported advanced nurse practitioners (ANPs) can prescribe in all 50 states). They found that PAs were more likely to prescribe a controlled substance than were physicians or NPs, except in rural areas, where NPs wrote more prescriptions, but that overall, both PAs and NPs prescribed in a manner similar to that of physicians. They also found that proportionally more primary care NPs and PAs than physicians were located in non-metropolitan areas.

US: Evaluation of Impact of PA

Productivity

There is an evidence base of literature on PA “productivity” stretching back to the 1970s. Early work suggested that the substitution ratio of PAs and NPs for physicians was between 0.5 and 0.75, (meaning that one PA could “replace” one half to three quarters of a physician (Record et al. 1980, cited in Scheffler et al. 1996). More recently, Larson et al. (2001), in an analysis of productivity data (collected in 1993-1994) from a nationally representative sample of physician assistants (PAs), showed that PAs performed 61.4 outpatient visits per week compared with 74.2 visits performed by physicians, for an overall physician full-time equivalent (FTE) estimate of 0.83. However, productivity of PAs varied markedly across practice specialty and location, with generalist PAs performing more visits than their specialist counterparts. Rural PA productivity was higher than urban productivity because of the concentration of generalist PAs in rural settings. The authors concluded that a generalist PA physician FTE estimate of 0.75 appears to be more accurate than the proposed measure of 0.5 under discussion at the time of the study.

A recent small scale study by Mathur et al. (2005) explored the scope of practice and complementary role of PAs as physician extenders in one paediatric intensive care unit (PICU) in a New York hospital. New legislation which restricts the number of hours worked by residents to 80 per week resulted in PAs being employed as physician extenders in order to enable regulatory compliance. Some parallels can be drawn with UK requirements to comply with the EWTD. All eight recruited PAs underwent a supervised orientation period, between six and twelve months (depending on experience) relevant to working in the PICU. With regard to working relationships, PAs reported vertically to the resident, but had lateral communications with other team members. The use of PAs was deemed to be successful in terms of addressing manpower shortages and being cost effective, reducing work-associated stress, work hours and workload, and improving procedure performance and continuity of care. However some negative issues were highlighted. Difficulty in retaining PAs following completion of orientation and training was reported, possibly as a result of friction generated at the resident-PA and nurse-PA interfaces. There was a suggestion that there may have been confusion regarding the PAs’ role, as they align themselves with physician staff, but the nature of their job caused their role to resemble that of nurses and other ancillary personnel. There was also the potential for experienced PAs to feel resentful at having to report and defer to less knowledgeable residents within the PICU setting.

Anderson & Hampton (1999) conducted a retrospective study looking at the role of payment sources in the utilisation of NP and PA, comparing rural and urban. The hypothesis was that the presence of a PA or NP at a patient visit is influenced by payment sources. Clear differences between rural and urban visits were found with a PA or NP present at 37% of rural visits, compared with only 5% of urban visits. There was no significant relationship between HMO or prepaid payment plans with PAs and NPs in either urban or rural sites, but significant rural and urban differences in relationships between other payment sources (includes any federal, state or local health care programme besides Medicare or Medicaid) and PAs/NPs. However, the

study did not differentiate between NP and PA, a point highlighted in recommendations for future medical education and workforce planning.

Patient Satisfaction

In general, reported patient satisfaction with PAs has been consistently high, whether in their own right, or whether compared with physicians and/or NPs (see e.g. Hooker et al. 2005, Mittman et al. 2001, Woodin et al. 2005).

Roblin et al. (2004a) carried out a large-scale retrospective evaluation of patient satisfaction surveys (n=41,209) in the Atlanta metropolitan area. They looked at satisfaction in relation to practitioner type and across three scales; practitioner interaction, care access and overall experience. The main hypothesis was that the likelihood of patient satisfaction would not significantly differ between PAs or NPs and physicians attending a visit. The study however did not differentiate between PAs or NPs, presenting them both as midlevel practitioners. In the main, PAs/NPs represented in this study were more likely to attend visits for minor acute illness and physician visits for chronic disease. The main finding was that overall, as far as patients were concerned, the NP or PA does as good a job as the physician.

However, the authors concluded that there were other factors which had a more profound influence on patient satisfaction, including both time of visit, and length of time spent on visit. In addition, the primary care provided by PA/NPs was cost-saving, in terms of saving money while providing sustained or improved patient outcomes.

Evaluation of impact measured against outcome measures/indicators

Miller et al. (1998) carried out a literature review and conducted an internal record review to examine the use of PAs in the trauma centre of a large community hospital. Current and historical outcomes were analysed, including patient demographics, type of trauma, injury severity score, transfer times, and length of stay. In addition, fiscal data were examined. Questionnaires to elicit physician perceptions of resource savings were given to all eight trauma surgeons affiliated with the trauma department. Reported improvements related to the appointment and utilisation of PAs included: increased time savings of 4-5 hours per day, per physician; transfer time to operating room decreased by 43% and to intensive care unit by 51%; length of stay for admissions decreased by 13% and for neuro-trauma intensive care patients, by 33%. Resource savings were reported by virtue of the fact that PAs could see outpatients in a clinical setting and perform bedside procedures without needing the supervising physician to be present. In addition, financial savings were also evident, as the cost of the PA trauma department can be offset by generated revenue charges. Decreased length of stay in critical care units and hospital resulted in significant savings also. This was a localised small scale study, but was felt to be a viable model of care provision for other trauma centres where it was not possible to maintain a surgical residency programme.

From her analysis of utilisation of PAs in the hospital setting, Duffy (2003) suggests that the delegation of resident and house staff responsibilities to PAs will facilitate improved inpatient training experiences and more efficient physicians. Highlighted were administrative and non-educational tasks, which if delegated to non-physicians

could considerably increase the value of the patient experience while reducing residents' hours.

Costs and Benefits

Health workforce and policy analysts have been interested in the cost effectiveness of PAs since they were first introduced back in the 1960s. McKibbin (1978) carried out an early review of cost effectiveness assessment of PAs, which concluded that the utilisation of PAs had a positive correlation with productivity measures and significant cost savings. However, he applied some caveats, as at that point, the generalisability of cost effectiveness had not been demonstrated, patients and third parties were not guaranteed to benefit, and reimbursement policies were inadequate and likely to impact on the cost-effective utilisation of PAs. A more recent review of the economic aspects of the PA role was carried out by Hooker (2000), which suggested that the majority of economic research to date has focused on cost-effectiveness, using physicians or NPs for comparison. His findings with regard to the economics of PA practice were:

- A PA can perform at least 75% of a physician's tasks at a cost of 44% of the physician's salary (based on 1999 salary information);
- A PA can safely assume at least 83% of primary care visits without direct physician supervision;
- Cost-benefit analyses of PA-delivered primary care suggest the use of resources is less than physicians, under comparable circumstances
- The cost of training a PA is approximately one fifth that of a physician
- Owing to the difference in the length of education between PAs and physicians, the PA provides 5 years of patient care valued at \$380,000 (1999 rates) before the physician completes a primary care residency, and enters health care practice.

He concluded that these factors, plus the compensation-to-production ratio (this compares the salary and benefit cost to employ a PA [compensation] with the revenue generated for their services) establish the PA as one of the most cost-effective health care clinicians from the employer's perspective (Hooker 2000, p. 51).

Further evidence of PAs being of significant economic benefit to family/general medicine practices was provided by Gryzbicki et al. (2002). They monitored the daily activities of a part-time (0.56 FTE) PA within one practitioner owned general practice, using observational data from site visits, and semi-structured interviews with the PA and the employer. They also reviewed office records, billing records and appointment logs, and data were compared for accuracy and validity with national statistics. The PA saw younger patients with more acute conditions than the physician, and saw more patients and for longer than the physician. The result was good from a financial perspective. Gryzbicki et al. calculated that, compared with a practice employing a FTE physician, the annual profit of a practice employing a full time equivalent PA would be \$52, 592. They also determined a same-task substitution ratio of 0.86, a compensation-to-production ratio of 0.36 and a gross financial productivity (adjusted to 1.0 FTE) of \$112, 572. This was all with no perceived detriment to patient satisfaction or treatment.

A study by Hooker (2002) examined the cost associated with employing PAs from the employer's perspective within a non-profit, prepaid group practice in Oregon and Washington State. He used an acute episode of care as the unit of analysis, and the dependent variable was the total visit cost by provider type. The study data comprised 12,782 medical office visits made by patients in 1998 for one of four diagnoses, and were shown to be representative of the larger population. A total of 305 different providers were identified for inclusion in the study. At the time of the study, the mean annual salary for a primary care PA was \$54,400, and for a primary care physician it was \$124,600. Hooker found that in every medical condition managed by PAs, the total episode cost was less than a similar episode managed by a physician, regardless of patient and department variables. Few differences emerged in the use of resources and the rate of return visits for a diagnosis between physicians and PAs. Whilst no actual figures were given, within the primary care setting, PAs appeared to be cost-effective from an employment perspective.

A later study by Hooker (2004) analysed differences in administrative practices between physicians and PAs working in occupational and environment medicine. The study site was a for-profit health organisation in Texas specialising in occupational and industrial health care and injury treatment services. Retrospective secondary data were gathered from employee administrative files, patient encounter files and billing records. These data were held in a patient encounter database, which contained a case or episode of injury information for an individual, which was used for analysis. At the time of the study, the mean annual salary was \$143,056 for a physician and \$74,208 for a PA. The study found that on average, PAs worked proportionately more hours than physicians, on approximately half the salary. Patients seen by PAs were more likely to keep their return appointments than patients seen by physicians (which might reflect satisfaction with care), and given that charges were fixed regardless of provider, a higher rate of return visits to see the PA may be viewed as beneficial to the organisation. While their productivity to compensation ratio suggests they may be economical members of the health team from a labour standpoint, some of their cost-effectiveness may be negated by a higher referral rate than the physicians. Further research into the role of PAs working in this specialty was recommended.

Roblin et al. (2004b) found that primary care practices that used more PAs/NPs in care delivery realised lower practitioner labour costs per visit than practices that used less. They analysed four years of computerised data on approximately two million visits provided by 206 practitioners in two departments, adult medicine and paediatrics, between 1997 and 2000. Their goal was to estimate the savings in labour costs per primary care visit that might be realised from increased use of PAs and NPs. They found that although estimated labour cost savings per visit were very low, in terms of a few dollars, the net savings to a managed care organisation (MCO) are substantial.

One important point to note is that the results of any cost effectiveness or cost/ benefit assessment in the US will be influenced by the type of payment system, and by the pay relativities between PA and any comparator group (e.g. physician or NP).

The average PA salary in the US is reported to be approximately US \$81,000, varying markedly by experience and by practice setting (PAs earn more in urban and hospital environments and less in rural areas). The results of any cost assessment, or scope for

cost based substitution will be largely dependent on the comparative cost of the PA and the potential “substitute”.

US: Conclusion

The PA role in the US is expanding, and the PA workforce has been growing. Recent growth has been fuelled by physician shortages, and the main areas of high growth are in hospital based care. The number of courses and number of graduates has been increasing; proportionately more graduates are now women, and there has been a growth in younger female applicants to the PA profession. Employment prospects in the US appear good, and salaries have been increasing. In terms of a first, or second career, it has many attractive elements, offering job prospects in widespread geographical areas (see Hooker & Cawley 2003 for a detailed description of the development of the PA role in the US).

3. PAs in the UK - The story so far, and key issues for consideration in Scotland

This section reports on the reasons why small numbers of PAs have already been introduced in the UK, or are planned, and also gives some consideration to the introduction of Medical Care Practitioners (MCPs) in the NHS in England, which have some similarities with the PA.

Reasons for introducing PAs in the UK

The context leading to the introduction and evolution of the physician assistant role in the USA has already been described in the literature review. Reductions in resident hours and other factors mean that current and projected future shortages are a cause of concern in the USA, which is reported to be a major factor in supporting likely continued growth in the number of PAs in employment.

Like the USA, one of the main drivers for exploring physician support roles in the UK, has been shortages of doctors, or reductions in availability of “doctors hours” as a result of the European Working Time Directive (EWTD). In primary care, difficulties with the recruitment and retention of GPs in the UK, particularly in deprived and/or rural areas, have been an issue (e.g. Scottish Executive, 2002).

These problems were particularly acute in Tipton and Sandwell, the location of one of the main PA utilisation sites in England, which had one of the poorest GP per head of capita ratios in the country. A nurse-led PMS service in the area looked at recruiting three ANPs/NPs (instead of GPs) but when this recruitment was unsuccessful, they decided to explore recruiting PAs from US. This was the beginning of a process of the recruitment of 15 PAs to the area. The introduction of the role was of interest to the Changing Workforce Programme, and they commissioned HSMC of the University of Birmingham to undertake an evaluation (Woodin et al. 2005).

In Wales, the problems leading to shortages of GPs were discussed in a symposium in 2003, and led to six research projects being undertaken to explore the recruitment and retention issues of GPs (CMO 2005). The research concludes: “...*the causes of depleted GP levels are many and varied. No single solution can resolve the problems – rather remedies need to be multifaceted, with a variety of strategies and involving a range of partners, to meet the wide diversity of needs amongst healthcare staff.*”

One of the Welsh research projects (exploring skill-mix issues) highlighted the potential for introducing alternative roles as a means of improving patient access and reducing GP workload. Alternative solutions – such as the ‘golden hellos’ introduced several years ago in Wales – had been reportedly ineffective in boosting the GP workforce in deprived or rural areas. Thus there has been interest in developing other roles, such as nurse practitioners (NPs) or advanced nurse practitioners (ANPs) to reduce primary care workload, but concern that existing roles alone would not be sufficient to meet demand, hence the interest in new roles.

Across the UK, the impact of EWTD on junior doctors’ hours has led to an overall reduction in the medical workforce capacity in secondary care. A linked issue in terms of staffing in secondary care is the reliance on senior house officers (SHOs), who are in transient training grades. This workforce is constantly changing so NHS organisations have an insufficient cadre of experienced staff working at this level.

It is necessary to reflect on the factors that are identified as having caused shortages in the UK, and contrast these with the US context. If the reasons for the shortages differ between the two countries, then the solutions to the problem may also differ – i.e. it cannot be assumed that introducing PAs will have the same impact on the UK health service as it has had in the USA. For example, lack of flexible working opportunities is seen as one of the factors affecting retention of the medical workforce (e.g. report on research into Recruitment and Retention of GPs in Wales, CMO 2005).

Whilst the main driver for interest in the PAs role in the UK has been the need to increase capacity in the face of medical workforce constraints, other factors have also been highlighted. The current circumstances are seen as an opportunity for service development, creating a new role that fulfils a different purpose. The following have been reported as attractions of introducing PAs or a UK equivalent:

- holistic/generalist perspective (as opposed to doctors who ‘know more and more about less and less’);
- because of its generic nature, the role has the potential to bridge the divide between primary and secondary care;
- experience/stability at a this level (i.e. as opposed to transient junior doctors in training grades);
- flexibility - potential to work in variety of settings/specialties; and
- recruitment - attract different range of people, who have skills to offer NHS.

Added to this, experience from USA suggests that PAs are also:

- an ‘agile and adaptive’ workforce;
- cost-efficient (in a US context PA earnings are about a third of the cost of physicians);
- good communicators and well received by patients.

Views of the PA role in the UK

The early phase of discussion about the potential introduction of a PA-type role was not without reported rivalry and territorial (‘turf’) disputes (Castledine 1996, Scott 1996, Hutchinson et al. 2001, Bashford 2005). Whilst the prospect of PAs being deployed in the NHS in England has been received enthusiastically by some (e.g. Gavin & Esmail 2002, Stewart & Cantanzaro 2005), other commentators, particularly from the nursing profession, have raised concerns regarding working relationships, impact on patients and services, knock on effects and cost implications (Castledine 1996) and role definition (Scott 1996).

Some of these concerns are voiced as “opinion pieces”, and pre-date any full introduction of PAs or similar type of roles. Some from within the nursing profession have questioned the need for an additional non-physician service provider, given the development of the NP who can meet the service needs within a team that is consultant-led, has prescription privileges and can also practise independently. They have been described as “*bicultural, in that they have a way of approaching patients, which comes from their nursing background, but have developed medical knowledge and skills*” (Maclaine 2005, p. 23, cited in Bashford 2005). One practice manager in England has reportedly rejected the PA role, and has instead created a new role, ‘nurse physician’, which more accurately reflects her extensive primary care

experience. The nurse physician is undergoing a specifically designed training programme, and will replace the practice GP when he retires, and a GP will be taken on in a part-time, consultative role (Bashford 2005).

Consideration must be given to the length of time it will take to train prepare UK educated PAs to practise, and also to regulation by a statutory body (Cox 2001). Certainly, *“simply importing an American physician ‘package’ would not be an ideal British solution, but evidence suggest that physician assistants can be suitably anglicised to patients’ benefits”* (Fenn 2002, p. 735)

UK: First experience of US trained PAs in England

The PA has now been introduced, in small numbers in England, but it is an emerging role and not fully defined or realised. Small numbers of US educated PAs have been working in the NHS in England for the past couple of years, and numbers have now increased in total to around 25 (Bashford 2005).

The interim report assessing the PA role in England (Woodin et al. 2004) states that *“the PA role has been well received by colleagues. Factors facilitating this integration included the team working ethos which is a fundamental characteristic of the PA role and training”* (page 2).

Within the UK, there is some early evaluation of the US PAs working in primary care teams in the Midlands (Woodin et al. 2004, 2005), and some personal accounts (Cantazaro & Burton 2005, Smith et al. 2005). The HMSC report (Woodin et al. 2005) found overall advantages of employing PAs to include more patient choice, less patient waiting time to see a skilled practitioner, and better team working through the promotion of interdependence. In the primary care setting, the following benefits were identified:

- Staffing: the introduction of PAs has enabled vacancies to be filled and additional staff to be brought into the NHS, avoiding depleting services elsewhere in the UK, and has increased levels of continuity of care;
- Access and waiting times: one GP confirmed that the practice was achieving the 24 and 48 hour targets, and that the PA had greatly facilitated this performance;
- Managing increasing workload: PA input helped practice staff manage an increasing workload while enabling them to increase their patient numbers; and
- Job satisfaction: this was felt to have increased across the whole team, largely due to sharing of workload;

From the A&E perspective, it was more difficult to attribute improvements in achievements of targets directly to the PAs, because they represented only a small addition to the overall staff resource, but their presence was felt to have assisted both departments with their workloads. This study, informed by patients' views, which were overwhelmingly positive, suggests that the PAs' working practices successfully facilitate patient-centred care, which is a key goal of NHS policy (Woodin et al. 2005).

Little evaluation has been carried out in the UK, given the recent nature of PA employment, but early indications within one PCT suggest that PAs are cost effective when they are compared with doctors salaries (in 2004/5, approximately £38295 p.a. for an experienced primary care PA compared to £65,000 for a GP), and less so when compared with NPs (ANPs were paid £30,800) (Lamb 2004). As noted in the review of US literature on cost effectiveness, cost benefit and scope for substitution, much depends on the comparative salaries and costs of the different providers. Also constraints in practice caused by the lack of regulation in the UK will constrain the PAs from working at full capability e.g. they cannot prescribe.

In the study of the use of PAs in the Midlands, the cost-effectiveness of the 11 PAs compared to GPs was found to vary; in some cases the lower cost of the PA was offset by longer consultation times and a lower volume of activity; in other cases the cost-effectiveness of the PA was more compelling. More importantly, according to the authors, is the fact that the PAs have increased medical capacity in the face of an inability to recruit GPs to these deprived localities (Woodin et al. 2005, p4). It should be noted that the recruitment and turnover costs were not examined within this study.

Some negative factors did emerge from the Midlands pilot studies. PAs were reported to be unhappy about not having prescribing rights, which they felt was also an inconvenience to the patients. Also, there were reported concerns about lack of direct supervision, which were reiterated by Smith et al. (2005) who stated the largest obstacle to overcome in the NHS is the lack of supervision from senior medical staff, including consultants. They highlight other issues for American PAs working in the UK. These include: difficulties in mastering the names of multitudes of drugs (different generic and trade terms are used), carrying out tasks such as recording vital signs, taking bloods, filling out diagnostic tests, giving IV medication and initiating treatment, which are carried out by nurses in the US, allowing the PA more time to take patient history and make diagnosis.

Developing a strategic approach to the introduction of PAs

Before looking at specific issues in terms of recruitment of US PAs or the issues regarding preparing a UK trained PA, we start by outlining some of the strategic support issues that have arisen in connection with the development of a new role. It is clear from the US, that even in that “market driven” healthcare system, an essential role was played by ‘pump-priming’ from the federal government in the 1970s, to support the development of the PA role and the educational support required to underpin development.

Whilst the DoH in England is seen as being generally supportive of the idea of the MCP role, there has been no clear guidance, or systematic and co-ordinated planning or funding. Responses from England suggest that the NHS Scotland proposals for PA recruitment are viewed as exciting, primarily because of the level of whole country coordination. This has been lacking in the England experience of recruiting US trained PAs. Another perceived strength was the involvement of all main staff groups in discussions about the PA role, as good preparation and communication are seen as critical to the successful introduction of a new role.

Getting nursing ‘on board’ has been one of the reasons for delaying the pilot project in Wales. The membership of the recently established steering group in Wales (due to have its first meeting in March 2006) has been compiled to cover all the stakeholders and affected professional groups.

Recruitment of US trained PAs

Another aspect of introducing the PA role in Scotland where there is scope to learn from previous experience in co-ordinated action, is in relation to international recruitment. Early attempts at NHS led international recruitment, mainly in England, in the late 1990s were compromised by a lack of co-ordinated action between NHS trusts, leading to duplication and overlap of effort and recruitment inefficiencies. This was solved by developing a more co-ordinated approach, supported by regional

international co-ordinators, and by a national policy framework which was based on a tailor-made approach, with different types of recruitment activity targeted at different types of worker and source country.

There is reported concern that recruitment of PAs in England is, and will continue to be, fragmented. This is not only be wasteful in terms of resources invested in recruitment, but means that there are no quality controls, so that the standard of PAs recruited and the terms and conditions they are employed, are likely to vary markedly from place to place. It has also been reported that private recruitment companies are already offering a 'price list' for PA recruitment.

Experiences in recruitment of PAs for Sandwell & Tipton report that a lot was learnt from the first time they recruited, so that the second wave of recruitment was regarded to have been much more effective than the first. Aside from ensuring that a high calibre of staff is recruited, a key criterion for selection is identifying staff who are likely to want to stay working within the UK. One interviewee reported that about half of the US PAs recruited to England have now returned, although we do not have the data to confirm this.

It could be argued however, that "later" recruits are more likely to stay as they have the advantage of coming to the UK after the role has been tried and tested, and systems established. Clearly the period of employment will make a significant difference to the cost-effectiveness of recruiting US PAs, and recruitment and turnover costs would need to be considered in future evaluations of the role. The PAs recruited to Birmingham/Sandwell were employed on two-year contracts.

One recruitment related issue to be borne in mind, is that the standard of US PAs recruited to the English pilot sites was reportedly regarded high; this has implications for evaluation and for consideration of transferability to UK developed and trained staff.

Another factor to consider in the mid term is the likely sources of recruits to any training programme established in Scotland. In the USA, becoming a physician assistant is seen as a 'challenging cognitive career', that is particularly appealing to women graduates and mature entrants, providing secure and well-paid employment with control over working hours. Fewer entrants now come from the 'traditional' sources i.e. military and Emergency Medical Services backgrounds. In comparison to both nursing and medicine, relatively large numbers of recruits are black or minority ethnic.

In some areas with a high proportion of second career mature entrants (from small town/rural areas), the entry criteria focus on academic aptitude and previous health care experience rather than academic qualifications per se.

England: MCPs

In England, more recent developments have focused on introducing the 'Medical Care Practitioner' (although the exact title is still being debated). The objectives of introducing the MCP role have been identified as to:

- increase access (meet access targets in primary care);

- reduce waiting times in A&E (meet 4 hour wait target in A&E; and
- reduce length of stay.

The MCP has been defined as “a new healthcare professional who, while not a doctor, works to the medical model, with the attitudes, skills and knowledge base to deliver holistic care and treatment within the general medical and/or general practice team under defined levels of supervision” (DoH 2005, p. 3). It is proposed that an MCP will be able to:

- formulate and document a detailed differential diagnosis having taken a history and completed a physical examination
- develop a comprehensive patient management plan in light of the individual characteristics, background and circumstances of the patient
- perform diagnostic and therapeutic procedures and prescribe medications (subject to the necessary legislation)
- request and interpret diagnostic studies and undertake patient education, counselling and health promotion. (DoH 2005, p.3)

(Paniagua & Stewart 2005) have summarised the main differences between the roles of MCP and advanced nurse practitioners in England (Table 3):

Table 3: Differences between ANPs and MCPs:

Medical Care Practitioners (MCP)	Advanced Nurse Practitioners (ANP)
Practitioners start from scratch in their role	Practitioners build on their nursing
When examining patients, will be able to recognise the normal from the abnormal	When examining patients, will be able not only to recognise not only the normal from the abnormal, but also take this further to the range of abnormal findings
Deal with the task in hand	Deals with more than the task, will consider and relate issued within the concept of nursing’s experiential experience and patterns of knowing
Have a medical mindset	Have a nursing mindset
At present cannot prescribe	Able to prescribe
Semi-autonomous working under the supervision of physicians	Ability to work as fully autonomous practitioners with all the potential that this carries, e.g. ability to run personal medical services (PMS) sites
Will work towards establishing the role and recognition of the MCP within the NHS	Will work to take nursing forward as a profession

(Paniagua & Stewart 2005, p. 406)

This table highlights the need for clear role definition, for both practitioner types, and in attempting to recognise and identify these, the authors caution against solely looking at the tasks undertaken, but to also take into account the underpinning

training, level of education, and background behind the roles of the practitioners performing them.

These debates and discussions were paralleled in the US when the PA was introduced to that country's health system.

Cantanzaro & Burton (2005) propose that the American model can form the basis of the MCP role in primary care in the UK. The proposed MCP course will be full time and will take two years to complete, and be based on a set of competencies and standards. These, in the form of a Competence and Curriculum Framework, are being developed in partnership with a number of stakeholders, including the Royal College of Physicians, RCGP, Skills for Health, trainee MCPs and higher education institutions (DoH 2005). There are plans for the programme to be run by up to eight universities in the UK, at least half of which will already have medical schools (Cantanzaro & Burton 2005). It is envisaged that course participants will be life science graduates in the main, as well as nurses, allied health professionals, and other health workers. It is proposed that non life science graduates, such as psychologists, may be able to enter via a bridging course.

Whilst courses in England have not yet been formalised, several higher education institutions (e.g. University of Birmingham, University of Wolverhampton and University of Hertford) are offering or plan to offer courses modelled around the proposed MCP competences; around 14 MCP trainees are undertaking a tailored education package, supervised by a GP or a hospital consultant (DoH 2005).

In England, it is envisaged that recruits to the MCP programme could be existing health service staff or life-science graduates, and that the programme may have a greater appeal to men and black and minority ethnic recruits than does nursing or other associated healthcare professions. It is hoped that recruits will have 6-12 months experience of working in health care, but this may well have been gained in a hospital environment without much experience of direct patient contact (e.g. working in laboratories).

Informally, it is reported that there have been 'lots of enquiries from both outside and inside the NHS' about the new programmes, many from recent graduates, but also from mature entrants. Some interest has also reportedly come from nurses. It had been suggested that two large cohorts of students might start in Autumn 2006, although funding issues may mean this will be delayed.

The England MCP model outlined in the consultation document is based closely on the US model and comprises:

- 3 years/90 week programme if follow academic year or which may be compressed into two years intensive study
- 3,150 hours total study time
- 1550 hours (49%) teaching
- 1,600 hours (51%) clinical – 200 hours can be in simulation, 1,400 in practice.

Individual programme providers will determine the qualification achieved, and it looks as though this will vary, with some HEIs planning to run an undergraduate bachelors degree, others a post-graduate diploma or degree. There is debate about which is the most appropriate level for the new MCP qualification. Whilst the majority of programmes in the States are postgraduate diplomas, more are becoming masters level, although this is not a move supported by all stakeholders in the US. On the one hand, it is likely that the majority of entrants will already have a first degree, possibly in a related subject. It thus could be defined as post-graduate, and pitched at the diploma or masters degree level, depending on the structure of the specific course. On the other hand, it could be argued that the course does not build on first-degree knowledge, in which case it may be more akin to Bachelors degree, regardless of individual's academic achievements.

The consultation document proposes that APL/APEL may be used to accommodate the first MCPs, whose training was not based on the proposed framework. Other professionals becoming an MCP will be required to undertake a minimum of 1,000 hours clinical experience as part of MCP training.

An argument can be made in favour of the courses being embedded within medical schools, for two main reasons. Firstly, it is seen as important conceptually that the role is clearly identified as a medical role, and preparation is embedded within the medical culture – *“doctors have a different way of working/thinking, and MCPs need to understand this”*. Secondly, it is asserted that medical schools (or those with very strong links to medical schools) provide a better depth and quality of medical education (e.g. of subjects such as physiology and anatomy), which is better attuned to the medical model. An added bonus of medical schools, it is argued, is that much of the infrastructure required to organise clinical/medical placements already exists. However, ultimately the critical issue is that the course provider has strong links with a medical school.

Finding suitable clinical placements may be an issue, although this is seen as part of a wider problem in terms of the funding available to support supervision and training of students within the NHS. [note: there is a proposal that MCPs will undertake a period of provisional registration or apprenticeship of 6 months or more following graduation].

Scotland: Induction of PAs/preparation in workplace

PAs recruited from the US require an effective induction programme. The critical point is deciding when the induction period ends and “real” employment begins. It is likely that this will be best achieved by mutual agreement between PA and supervisor, and will require flexibility (the HSMC evaluation showed that adaptation speed of the recruited PAs varied considerably, from a single supervised surgery, to three months, where two to three months was typical).

Preparation of other staff, through communication and training, both before and after PAs arrive, is equally important, if not more so. They need to be well informed about PAs: their role; activities they do and do not undertake; how the PA fits in to the team; and supervision requirements. Staff also need to have the opportunity to discuss how the role relates to their own, particularly if they are working in similar roles, such as NPs.

A key message is to involve everyone so that all understand the PA role (including ward clerks, receptionists etc.). Staff need to be clear that “*it’s not about PAs ‘taking jobs’, but about increasing capacity*”.

One problem with new approaches that gain interest across the NHS is the demand placed on the originators/pilot sites to share their experience – through talks, visits from other trusts etc. Anticipating that this is likely to be the case regarding PAs, it was suggested that it would be useful to consider methods for sharing the experience of those in the Sandwell/Birmingham, particularly for prospective supervisors. For example, preparing question and answer sheets and videos/DVDs - “*We need to be creative to get the most out of the experience that pioneers have had*”, so that they can lead future developments.

Experience from the PA employers in England suggest that support is also needed from higher up in the organisations involved, to get the role fully established. Support needed is on two levels:

- Practical resources e.g. administrative support, training etc.
- Strategic support – championing and help to deal with strategic/policy issues e.g. appraisal, where to go if the PA or the supervising doctors have problems.

Scotland: Supervision & working relationships

The proposed plan (and adopted in England so far) is that PAs have a named supervisor, with a named deputy to provide cover for holidays/absence. In secondary care, PAs will be part of the medical team or ‘firm’, with consultants as the named supervisor. In primary care, a GP will be the designated supervising physician.

Reportedly, employers and evaluators of the PAs working in the Midlands were surprised at how little supervision the individual PAs typically required (it has to be borne in mind that these were staff with a minimum of four years experience as qualified PAs). The number of consultations with supervisors was small, and many of these related to developing an understanding of the system rather than clinical issues.

It was also evident from the experience of employing US PAs in England that the US and UK understanding of ‘supervision’ differs, both in terms of the nature of supervision and amount of time. As dependent practitioners, the US PAs recognise their own limitations, and use supervision to deal with specific queries that relate to limits of their scope of practice. In contrast, the UK ‘supervisors’ had the expectation that the PAs would require more generalised and ongoing support and advice. The English model for supervision is quite different from that typically used in the USA. In the US, PAs are often supervised by more than one physician (reportedly on average by five physicians at any time), rather than having a one-to-one model. This in part reflects a move towards teams in multi-practice acute care.

The new MCPs to be trained in England will clearly have quite different supervision requirements as they will be inexperienced. A probationary period, probably of 12 months, is proposed. Mentoring/support, in addition to supervision, has to be considered. The HSMC evaluation raised a number of issues about the setting and

supervisory relationship It is suggested that off-site supervision, e.g. by telephone, should be considered, such that supervisors do not have to be in same building.

Scotland: Deployment/Scope of practice

The reported potential key strength of the PA role in the UK is that it is generic, giving the PAs the ability to be deployed in a variety of settings, and compensating for the progressive specialisation of medical staff (and to some extent nursing staff also). Retaining generic skills means that staff are more transferable. However, in England, the development of the MCP role required support from the Royal Colleges, who were keen to see the role linked to the distinct colleges/specialties. Individual MCPs may wish to specialise post qualification, but there is also a need to make decisions about whether, and how, the role should retain its breadth. Retesting of the generic skills/knowledge base (e.g. every six years, as in the US) is seen as one way of achieving this goal.

Prescribing rights (prescriptive authority) has been highlighted by many commentators as an essential requirement of PA role. Legislation will be required; this may happen after the awaited report of the Foster review of health professional regulation.

Another barrier reported is problems occurring when investigations are being requested by PAs (this was highlighted in the Birmingham report). Prescribing and investigation refusals have also been obstacles for the development of NP roles. Whilst considerable progress has been made regarding nurse prescribing, it has taken a good number of years (e.g. see Luker et al. 1998), and they face similar problems regarding investigations requests. A third of advanced or specialist nurses surveyed (Ball 2005) who order investigations reported that they have had them refused because they were requested by a nurse, not a doctor. This suggests that it is a problem that goes beyond the role of PA, and reinforces the need for investment in educating colleagues about new roles, and how they relate to their own sphere of practice.

One critical issue related to the scope of practice of PAs has been identified by US commentators: physicians hiring a PA to work in a speciality outside their own area of competence/expertise, for example, a GP using a PA to work in advanced dermatology. To maintain the underlying principles of the PA as dependent practitioner, the PA must always work within the scope of practice of the supervising physician and know/recognise their limits.

Scotland: Regulation & public protection

Regulation is essential to the long-term establishment of the PA role, both in the US and the UK.

In the UK Currently there are three key activities concerned with regulation which relate to the PA agenda:

- The post-Shipman Review of Medical Regulation (chaired by Sir Liam Donaldson, CMO England)
- The post-Shipman Review of Non-Medical Regulation (chaired by Andrew Foster, at the time Director of Workforce, DH)

- Medical Act 1983 (Amendment) and Miscellaneous Amendments Order 2006: A paper for consultation. (Officials from the GMC and the Department of Health England have been working together since the autumn of 2003 to produce a further draft Order under section 60 of the Health Act 1999 to take forward the continuing modernisation of medical regulation by amending the Medical Act 1983. This consultation is being conducted in advance of the publication of the findings of the Chief Medical Officer's review of the regulation of the medical profession. Consultation closed at the end of January 2006).

The culture of regulation has changed and, as a result of high profile cases, protection of the public is at the fore. Meanwhile there is increased scepticism from the public about whether professional self regulation is fair and effective. In England, the MCP is just one of several 'new' roles that are currently being considered for regulation. If MCPs are to be regulated on a UK-wide basis, then possible options for regulation are:

- regulation with the Health Professions Council (HPC), acknowledging the MCP as a distinct professional group.
- Regulation by an existing uni-professional regulator, acknowledging that the MCP is a member of the 'family' of that existing professional group.
- Regulation by a variety of regulators, against a common set of standards, through a 'dispersed' model of regulation, acknowledging that some MCPs will already be on an existing professional register.

One of the problems from a regulatory perspective is that the MCP role is new and untested (in part because it is similar to, but differs from, the tried and tested PA model). There is a need to have the education, role, competences, and accountabilities fully developed in order to ensure that legislation and regulation supports the boundaries and goals of a new role. It is often a requirement that a voluntary register is set up as a pre-requisite to statutory regulation (an HPC criterion for professions wishing to be regulated by them). Thus regulators consider that there is a lot of work to be done before regulation can be achieved, yet from a service perspective the lack of regulation is a concern and a major obstacle to introduction of new roles. (However, some roles such as Operating Department Assistants have been fully functional for decades before becoming regulated in 2005). It is however possible to have another non-statutory model of regulation as an interim measure.

Although the MCP role is now being developed nationally across England, there have been a great number of other new roles emerging across the UK (to meet service needs and stemming from the modernisation agenda to develop new ways of working – e.g. 'surgical assistants'). This has resulted in an acknowledgement of the delays inherent in developing statutory regulatory arrangements on the one hand, yet the need for prompt action on the part of local employers to define and circumscribe new roles on the other. Therefore, employers have often had to put their own governance arrangements in place to define role boundaries and to support clinical safety.

The need for regulation is not just related to the protection of the public, but from a service/workforce perspective regulation enables standardisation, so that new roles are defined and recognisable, and skills are transferable between employers. New roles

require meaningful systems to ensure local developments can be linked to a national framework/understanding of these roles. Regulators have the task of trying to bring together the different local developments.

There is also the question of how to accommodate MCPs who are already registered as health professionals, for example, nurses registered with the Nursing and Midwifery Council (NMC). Whilst to practise as an MCP would require MCP registration, individuals may want to maintain their original registration (in order to return to this career, or to have a job in both professions). This in turn may produce complications, such as undertaking sufficient CPD/CME to satisfy both regulatory bodies, or dealing with ramifications of misconduct when working in one of the roles – should being struck off one part of a register have any impact on status on another part, or should restrictions on practice simply apply? These issues will have to be addressed if and when the role becomes more widespread, and is established through UK educated practitioners rather than imported staff from the US.

The proposed title is an issue, with concern expressed as to whether it may cause confusion. Legally a doctor is defined as a ‘medical practitioner’, hence medical care practitioner may be confusing. It may be that research/consultation is needed to find out what the different titles really mean to patients, other staff, and other new groups.

In summary, the issues from a regulatory perspective are:

- Role development of the MCP has been restricted to England to date;
- Development of the role has been compressed within a very short time period;
- So far, only a small number of PAs are deployed nationally across England, based on local development;
- What is the longevity of the role?;
- How will the role develop/change over time?;
- Will training be commissioned centrally or locally?;
- Will service want them- and where, and in what care environments?;
- What will be implications when MCP programmes open to direct entrants with no clinical care experience?;
- Dual registration issues;
- The role of the employer in regulation; and
- The need for public safety and confidence.

Scotland: Pay and rewards

In the USA PA salaries average approximately US\$ 81,000, although it may be double this for experienced PAs working in some hospital specialities, such as cardio-thoracic. This is about half the salary of a family practitioner, thus the marginal cost of a PA is nearer that of a physician in family practice (where about 45% of PAs work) than in hospital where the salary differential is usually greater.

There is discussion in England that newly qualified MCPs will be paid on AFC payscale on level 6 with more experienced MCPs moving to level 7. (There is an argument that market forces will increase the banding). Formal job evaluation under AFC would determine the final level for both MCP and PA roles. Another view put forward is that MCP posts should not be graded within the AFC pay scale at all, because the role is a medical one, and medical pay is not covered by AFC.

In introducing PAs in the NHS there are also issues of pay parity and equal pay with other staff groups to consider, especially if posts are filled by larger proportions of men than, for example NP posts. The Birmingham report did not set out to compare PAs and NPs, and was not well placed to do so - the nine practices where the PAs worked employed only two NPs.

Scotland : Perceived benefits of PA role

The literature reviewed in this report has highlighted many of the benefits of the PA role – both perceived and researched. However, much of the literature is from the USA. Given the differences in the health systems, in the type of education and role, and in pay and funding differences, it is clear that not all the findings from these studies can be extrapolated to a Scottish context.

There has so far been one published evaluation of US PAs in England (HSMC) (Woodin et al 2005) which provides information on the role working in a UK environment. However, whilst this research is very useful in highlighting many of the issues to be considered in deploying American PAs in the UK, there are a number of caveats that should be noted in terms of using it as proof for the potential of a new role, MCP, in England:

- the study was a post hoc evaluation – it was not set up as pilot, so no before/after data were collected;
- it is based on small numbers of PAs (and other staff, particularly NPs);
- the recruits from the US were very experienced PAs (between 4 and 20 years post qualification as PA);
- the aspects of service patients were reportedly most positive about (information provision, communication) may relate more to being “American”, than they do to being an American PA (e.g. how would 15 US Nurse Practitioners be received in the UK?);
- the US recruits were staff from an established professions (they know who they are, what they do, how they trained, how they should be deployed, even if their colleagues and patients initially did not); and
- there was no cost benefit analysis (this was not part of the research brief, and would have been difficult to achieve given the paucity of cost/activity/outcome data, plus lack of benchmark data).

Added to this, one of the most notable findings from the research was that within this small sample of PAs, the response to the role and supervisory relationship varied considerably, particularly between the two A&E sites. There was also considerable variation in terms of the speed of adaptation, with individual PAs settling in at very different rates. Whilst this variation is not in itself necessarily a problem, it does suggest caution is needed before drawing inferences about what will be required for the ‘average’ PA, and extrapolating from reports of pioneer PAs in the UK.

Of particular interest from HSMC evaluation is the description of patients’ perceptions/reactions, which were very positive. Researchers report that they were surprised by the strength of patient views and the level of confidence in PAs that was expressed. Patients reportedly particularly valued the style of communication and level of information provided by the PAs. Whilst this, in part, may be due to being “American”, it is nonetheless seen as an opportunity to build on this model, and

ensure that good communication skills are fostered amongst UK PAs/MCPs. Another identified potential advantage of having this role is that the emergence of a new medically oriented staff group provides an opportunity to re-establish the value of communication and inter-personal skills from the outset.

Conclusion

In reviewing the potential use of PAs in the NHS in Scotland, it is also important to note and take account of opposing views, and potential pitfalls. Success will depend on good preparation and ensuring that all staff and stakeholders involved are well informed, and ideally are 'on board' the project. Anticipating some of the potential problems and concerns they may have will enable better preparation.

The challenge of introducing a new role is felt keenly by those occupying current or "traditional" roles. Doctors in the UK may be uncomfortable about relinquishing control of activities previously within their sphere of control. The nature of a PA or MCP role as a 'dependent practitioner' is not well understood or developed in the UK system, where autonomous practice within regulated professions is the norm. In the PA model, responsibility is shared, but accountability rests with the supervising doctor, as with others in the team. The history of the development of the PA role in the US also highlights a sometimes somewhat problematic relationship between PAs and the nursing profession; most particularly in the role overlap with nurses in advanced practitioner posts and working as nurse practitioners, leading some to question why there is a need for a PA role. Clarity of role definition, and engendering mutual respect based on fair treatment and effective management of multi-disciplinary teams will be pre-requisites for effective deployment.

The final point to note is that the recruitment of US PAs to the NHS in Scotland is designed as the first stage in a process leading (if the pilot is evaluated as successful) to educating new PAs in Scotland and deploying them in established posts in defined roles in identified care environments where they can make a cost effective contribution to delivering patient care. As such, any evaluation of the pilot project has to look beyond the US individuals who will be in the first posts, and assess the roles they perform, the impact that these roles have, and the receptiveness of NHS health system in Scotland to sustaining the new role.

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