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Title page

Physician Associates in primary health care in England: a challenge to professional boundaries?

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Abstract

Like other health care systems, the National Health Service (NHS) in England has looked to new staffing configurations faced with medical staff shortages and rising costs. One solution has been to employ physician associates (PAs). PAs are trained in the medical model to assess, diagnose and commence treatment under the supervision of a physician. This paper explores the perceived effects on professional boundaries and relationships of introducing this completely new professional group. It draws on data from a study, completed in 2014, which examined the contribution of PAs working in general practice. Data were gathered at macro, meso and micro levels of the health care system. At the macro and meso level data were from policy documents, interviews with civil servants, senior members of national medical and nursing organisations, as well as regional level NHS managers (n=25). At the micro level data came from interviews with General Practitioners, nurse practitioners and practice staff (n=30) as well as observation of clinical and professional meetings. Analysis was both inductive and also framed by the existing theories of a dynamic system of professions. It is argued that professional boundaries become malleable and subject to negotiation at the micro level of service delivery. Stratification within professional groups created differing responses between those working at macro, meso and micro levels of the system; from acceptance to hostility in the face of a new and potentially competing, occupational group. Overarching this state agency was the requirement to underpin legislatively the shifts in jurisdictional boundaries, such as prescribing required for vertical substitution for some of the work of doctors.

Keywords

England, health professions, physician associates, physician assistants, primary care, professional boundaries.

Introduction

A new health professional group, physician assistants, is developing in many countries around the world (Hooker et al. 2007). In the United Kingdom (UK), where they are now known as physician associates, this new group has been growing over the past ten years (Ross et al. 2012). They are a type of mid-level or non-physician advanced practitioner (World Health Organisation [WHO] 2008). Given that the UK already has a well-developed panoply of health professions, recognised by the state and employed in the National Health Service (NHS), it raises questions as to how a new professional group fits with other already established professions? What are the work practices the jurisdictional boundaries and the occupational relationships of this new profession in relation to the other established professions? This paper explores these questions from a study of the contribution of physician associates in general practice in England, from which issues of patient outcomes, patient safety and costs have been reported elsewhere (Drennan et al 2015). Our inquiry, reported here, is framed by theories of dynamic systems of health care professions, which we outline first before describing our methods and presenting our findings.

Shifting boundaries between health care professions

Middle and high income health care systems are characterised by complex delivery models provided by teams with overlaps in the roles of different occupations (Ono et al 2013). Managers in all health care systems have sought flexibility between occupational groups and the use of subordinate, technical posts to address issues of workforce shortage, cost containment and increase productivity (Buchan and Dal Poz 2002). However, health professions are part of an inter-dependent system (Abbott 1988) in which the activities and developments of one occupational group impact on others and are tied up with issues of power, status and control. Accomplishing professional status is a strategy of limiting entry to and defending jurisdictional boundaries supported by state legislation to ensure the highest financial and social rewards; with medicine as the most successful exemplar (Larkin 1983).

Abbott (1988) suggests that professions are shaped by three types of interaction: contests for jurisdiction between professions (inter-professional), the stratification and creation of hierarchies

within a profession (intra-professional) and the influence of societal changes and state agency. He offers a range of possible settlements to jurisdictional disputes between groups. These include: the legal right of only one group to perform certain tasks, the subordination of another group, splitting the jurisdiction into two parts, and advisory control over the tasks of others. He argues that subordination without contest is common below dominant professions and cites physician assistants as one example of a group to have emerged in this way (p 83). Nancarrow and Borthwick (2005) have elaborated on ways to conceptualise shifts in boundaries. They suggest that *intra*-professional jurisdictional shifts can be viewed as either diversification or specialisation. Empirical studies of intra-professional shifts within medicine in the UK, promoted by state policy, while demonstrating specialisation, have demonstrated continued forms of stratification into elite and other groups (MacDonald et al 2009, Martin et al. 2009).. Nancarrow and Borthwick (2005) conceptualise *inter*-professional shifts as vertical or horizontal substitution between occupations. Vertical substitution is the substitution by occupations for others above them in a hierarchical pyramid, with attendant acquisition of some of the status or reward of the higher order group. Horizontal shifts are between occupations at the same level within the hierarchical pyramid and consequently do not confer higher status or reward

Major system level shifts in jurisdiction between established professions are best exemplified by the legislated authorisation of nurses in some countries to prescribe medicines, which has intra country variation, reflecting differences in macro level settlements between the professions of medicine and nursing (Kroezen et al 2012). Linked with this jurisdictional settlement has been the extent to which advanced nurse practitioner (ANP) roles have developed in primary care (Delamaire and Lafortune 2010). ANPs are one type of mid-level non-physician clinicians who undertake some of the activities of doctors (World Health Organisation 2008). At the micro level there have been many studies of attempted changes between the work of doctors and nurses in hospital settings with evidence of enforced, accepted, contested, and negotiated boundaries (see for example Allen 2001). Within primary care, studies have been reported in Canada, the US and the UK in which GPs were concerned about the jurisdiction of ANPs (Schadewaldt et al. 2013). These concerns included: the extent of ANPs' capabilities, the level of training, the scope of responsibility, the impact on GPs' supervisory workload, inefficiencies in dealing with patient work flow and threats to the employment of doctors.

More positive views were reported in studies in which doctors had worked with ANPs (Schadewaldt et al. 2013).

The evidence above is drawn from studies of shifting work roles and jurisdiction between *existing* health care occupations rather than the introduction of a *novel* health care occupational group. The introduction of physician associates within the UK NHS offers the opportunity to investigate the ways in which existing professional groups perceive shifts in work roles, jurisdictional boundaries and relationships when a completely new occupational group is introduced.

Physician assistants (PAs), as physician associates were first called, were introduced in the 1960s in the US by physicians in response to primary care medical shortages and uneven access to healthcare (Mittman et al 2002). PAs were designed to be legally dependent on medicine i.e. a subordinate group (Sadler et al 1975). A sociologically informed analysis of publications concerning PAs demonstrated the evolutionary processes from a designed programme of education to a PA occupation (Schneller 1976). Schneller argued that PAs “*challenged the task, status and prestige of other paramedical personnel*” (1976 p465) and reported confrontation with the nursing profession. Today PAs in the US “provide healthcare services typically performed by a physician, under the supervision of a physician. Conduct complete physicals, provide treatment, and counsel patients. May, in some cases, prescribe medication. Must graduate from an accredited educational program for physician assistants” (The Occupational Information Network 2016). They have to be registered in the state they work in, each of which has separate regulations and limitations on their prescribing authority (American Academy of Physician Assistants 2016). Over the last two decades other countries such as Australia, Canada, India, Kenya, the Netherlands, Saudi Arabia, South Africa and the United Kingdom have been introducing and developing PAs in their health care workforce to varying degrees (Hooker et al. 2007). In the UK PAs have been suggested as one solution to workforce shortages in general practice. General practices are small to medium size businesses owned by GP partners who receive NHS contracts to provide primary health care (NHS Employers et al. 2016). Occasionally practice managers, and more rarely nurses, are partners too (Queens Nursing Institute 2016). Partners in the general practice make the decisions about staffing and the division of labour.

Within a wider study of PAs in general practice in England (Drennan et al. 2014) we investigated the question: what are the jurisdictional boundaries and relationships of a newly introduced occupational group into health care services, both at the system and workplace level?

Methods

Using a broadly interpretivist approach (Crotty 1998), a mixed qualitative methodology was used to encompass macro, meso and micro levels of the health care system. Data collection was in overlapping phases to contribute iteratively to the overall analysis. Data were gathered and analysed at the different levels, and then synthesised using the theoretical frame of shifting professional boundaries. At the macro level, a document and text analysis (Silverman 2011) informed semi-structured interviews with a purposive sample of key macro and meso level stakeholders (Patton 2002). This, in turn, informed semi-structured interviews with staff at the micro level of general practice.

The macro level document and text analysis drew on published (electronic or print) UK policies, reports, opinion pieces and response letters from the 1980s to March 2013. They were identified through: journal database searches (reported in Drennan et. al. 2014), repeated internet searches using the Google™ search engine, repeated scanning of UK government websites, and follow up of cited sources. Search terms related to the topic of interest e.g. health care workforce. A data extraction form was used systematically to categorise types of evidence, opinion and policy on physician assistants/associates. This was undertaken by two researchers independently and any difference in view resolved through discussion. A narrative synthesis was developed in discussion with the wider research team.

At the macro and meso level, a purposive sampling framework was devised of national and regional government, professional and patient organisations with an interest in the health care workforce, including primary care. Fifty senior individuals in these organisations were identified from public websites and published documents. They were approached to participate in face to face or telephone (their choice), semi-structured, interviews (Patton 2002) or if unavailable to suggest someone else in the organisation to be approached.

At the micro level, a purposive sampling frame was devised to identify a range of staff (GPs, practice managers, nurse practitioners or nurses, PAs and receptionists) working in 11 general practices participating in the wider study (Drennan et. al. 2015). Six of these general practices employed PAs and five did not; forty eight staff members were invited to participate in interviews. The PA employing general practices were in rural, suburban and inner city areas and the non-PA employing practices were matched to these in setting and size. Interviews (25 at the macro and meso levels and 39 at the micro level) were conducted by three researchers using topic guides. These topic guides, which were informed by the theoretical framing and the documentary analysis, explored areas such as: perceived factors supporting or inhibiting the development of the PA occupational group and their employment in general practice, the relationships between PAs and other groups, and the work they and other occupational groups undertook in general practice. Interviews were undertaken in 2011 and 2012, and duration ranged from 20 minutes to an hour. Reflective techniques were used in the interview so that the researcher checked and had validated their understanding of the interviewees' viewpoint (Patton 2002). All interviews were digitally recorded with permission, transcribed and made anonymous in electronic versions. Data were managed through secure, shared electronic folders between team members. The analytic process involved familiarisation through reading and re-reading, and then coding thematically against a framework derived from the theories and literature (Ritchie and Spencer 1994) as well as from the data. The final narrative synthesis was informed by the theoretical framing and through constant comparison discussions with the larger research team.

The study received ethical review from an NHS Research Ethics Committee.

Findings

We present evidence from the macro and meso level before turning to the micro level of general practice.

Perspectives at the macro level : the state and professional organisations

The documentary analysis identified that the early 2000s saw significant shortages in doctors and nurses in the UK, prompting the Department of Health (DH) to develop new roles through its Changing Workforce Programme (NHS Modernisation Agency 2007). The American model of

physician assistant was one of these. The extent of the macro –level support for the PA role was demonstrated through government funding for two large scale pilot projects in which US trained PAs were employed in primary and secondary care in England (between 2002 and 2005) and in Scotland (between 2005 and 2008). The evaluations reported that PAs were well received by patients, accepted by other professionals and were safe in practice (Woodin et al 2005, Farmer et al. 2011). Our analysis of the 63 published opinions about PAs, contemporary with the English pilot, demonstrated a more varied set of opinions. While senior officials in the Department of Health offered positive views, leading figures in national medical and nursing professional organisations stated they were opposed to the introduction of this new group as in this example citing leaders of two national nursing organisations: the Community Practitioner and Health Visitor Association (CPHVA) and the Royal College of Nursing (RCN).

“The RCN is also worried about the potential impact of this medical role [physician assistant] on the nursing profession.Mr Jones [CPHVA director] argues that the best solution to the GP shortage is continuing to develop highly skilled nurses, a view supported by Ms MacLaine [RCN]. ‘NPs [nurse practitioners], with appropriate underpinning education, don't need to be supervised – they're highly competent. NPs are bicultural in that they have a way of approaching patients, which comes from their nursing background, but have developed medical knowledge and skills. They are completely different from medical assistants,’ says Ms MacLaine.” Anon Independent Nurse 2005

Other reasons found in the published commentaries for opposing the introduction of PAs included: the transferability of a US model to a UK setting; confusion for the public; concern that PAs were not cost-effective in general practice; and a viewpoint that nurses and ANPs fulfilled this role in the UK health-care workforce and offered greater value to patients. Despite the negative commentaries from leaders of the medical profession during this period, it was also evident that a small number of GPs were employing PAs in order to meet patient demand and government set targets on patient access times and in the face of GP and nurse workforce shortages (Drennan et al. 2011).

Policy documents demonstrated that the Department of Health continued to support the introduction of this new occupational group until the mid to late 2000s. Senior officials worked with the Royal

Colleges of Physicians and of General Practitioners to publish a competency and curriculum framework for PA education at post-graduate level, modelled closely on that of the US (Department of Health 2006). This was used by medical and allied health professional academics, with the support of regional NHS managers, to establish the first English PA courses (Ross et. al 2012).

However by the end of the decade this macro level support was no longer evident. Our analysis of English government policy on the NHS and workforce (n= 20) in the period of our wider study (2010-2014) found a complete absence of reference to PAs. In addition PAs were not included in the state regulation processes for health professions. One consequence of this is that PA jurisdiction in the UK was and is curtailed as without state regulation it cannot be included in the legal statutes which permits nurses and other health professionals, with additional qualifications, to prescribe medicines or order ionising radiation.

We now present the evidence at the macro and meso level from the perspectives of different occupational groups: managers (civil servants and regional NHS managers), doctors and nurses.

Perspectives at the macro and meso level: managers, doctors and nurses

The managers emphasised the need for a cost efficient workforce to meet increased future demands on the health services. They talked of the need for ‘*flexible working*’ and “*blurred boundaries between roles*’ indicating a view of vertically shifting jurisdictions between occupations (Nancarrow and Borthwick 2002). Their discourse reflected the language of the new public management in respect of the discipline and promotion of parsimony in resource allocation (Osbourne and McLoughlin 2002).

“So from a workforce perspective, we’re acutely aware there should be a much greater role for skill extensions, role extension, role substitution, all of that is going to become necessary. The budgetary position isn’t going away... . There is no way we can medicalise our way out of meeting the needs of an aging population.” Participant 2, manager.

Most managers were neutral in their views about PAs, wanting more evidence that PAs in the UK setting were a cost efficient occupational group in comparison to other regulated professions who might substitute for doctors. This was particularly evident from those regional managers responsible for allocating NHS finance to health professional education as directed by NHS employers. Without central government directives they reported no particular impetus to support the development of a PA

workforce. In this they illustrated the agency of the state in supporting occupations to achieve closure and status (Freidson 1985). They commented on the lack of visible macro level support as an explanation for their view that a PA workforce was unlikely to be established within the English NHS.

“I think the whole thing around PAs and new roles, the countries where it’s succeeded is other countries where there’s been government backing, that’s unfortunate that in England, that backing hasn’t been prevalent and that’s why we’re struggling”. Participant 13, manager.

The lack of state regulation for PAs was thought to make them less cost effective and consequently less desirable to employers as substitutes for doctors, in comparison to nurses and pharmacists with authority to prescribe medicines. Many participants went on to refer to the dynamic tensions between health professions (Abbott 1988) suggesting that perceptions of limited cost effectiveness increased in the face of resistance to their employment by the medical profession.

“Of course, you know that there is a pushback against Physicians Assistants, that there are people, medics in particular, who are very anti and hostile and just see it as nothing but a threat.” Participant 2, manager.

The views provided by the doctors varied according to their roles. Those in leadership positions in the profession (Royal Colleges, Medical Education, and Department of Health) supported vertical substitution as a way to protect medical training and specialisation. They were neutral as to which occupational group(s) should support doctors but they wanted staff that could contribute to the medical workflow in an efficient manner rather than increase medical workloads.

“If we look at the medical side of it, what the impact of European Working Times Directive is [a European Union direction to member states that the maximum hours worked in a week is 48 ,which came fully into effect for junior doctors in the UK in 2009, British Medical Association 2016], we’ve got much fewer hours to train doctors..... that’s going to, you know, really put a problem on the service because you know people have relied on these trainees [doctors] , that sort of [workforce] resource is not going to be there ...those functions are going to have to be transferred to another resource and that could be physicians’ assistants, it could be advanced nurse practitioners.” Participant 7, doctor in national role for medical education.

While we were unable to secure interviews with national leaders of the junior doctors (i.e. qualified doctors in grades below a consultant), published commentaries by junior doctors contemporary to the time of the study were found to be mainly negative, arguing that PAs were a managerialist, cost saving strategy which threatened the future employment of doctors and the profession as a whole.

*“The implication that a two year postgraduate degree teaching a ‘medical model of thinking’ will prepare someone to work at the level of senior house officer is a laughable one.
And do you know how much they cost? A brief look at the job adverts show that they are employed on the band 8a or b in Agenda for Change [a senior clinical ,usually managerial, part of clinical pay scale for nurses and allied health professionals as nationally agreed and used in the NHS, NHS Staff Council 2016]. That is much more than the starting salary of an SAS [Staff Grade, Specialty and Associate Specialist] doctor who will require much higher level of clinical competence and responsibility. Value for money? I think not.....But by the time the profession ...realises the threat, it may be too late. And it is the responsibility of the senior doctors to save the NHS from these half cooked, gap fillers with no accountability. But is someone listening? “(Sajayan 2010)*

The nurse participants also varied in their views about physician associates. Those nurses at the macro level had often held senior management roles in the NHS. This was reflected in a discourse of managerialism (Osborne and McLaughlin 2002) in arguing for a cost efficient workforce that included PA type roles. They rehearsed similar reasons to the managers for why the NHS workforce had to change. However their arguments were also couched in terms of protecting registered nurse time to undertake *nursing* work rather than *medical* work. In this they were also arguing for the defence of nursing work from the encroachment of support roles.

*“I think the expectation will be it will be nurses [to cover the reduction in working time of doctors in training] because medicine tends to assume that nurses will pick up the slack.
.....The focus will be on technical skills..... Now, I’m not saying that the work isn’t entirely legitimate work but I do think that nursing will have to look very clearly about redefining where the role is because the temptation will be for the caring, compassion, fundamental*

skills of nursing to be completely devolved to other worker, principally unregulated healthcare support workers.” Participant 1, Nurse Leader.

Those participants representing nurses at the macro level who were in active clinical roles such as ANPs were more resistant to a new occupational group. They argued that nurses were the best occupational group to provide vertical substitution for doctors. They contended that NHS finance for professional development would most effectively be used in skilling up nurses as an existing workforce for whom there was evidence to support their value in general practice rather than an untried, untested new occupational group.

“Why would you want physician assistants if we can get that [the mid-level role] and more from an advanced nurse practitioner?” Participant 11, nurse leader and advanced nurse practitioner

In summary, our evidence from the macro and meso level of the health care system demonstrates the importance of state agency for the growth or otherwise of this new health profession, reflecting Abbott’s (1998) third type of interaction shaping professions. The arguments identified here in support of PAs were largely managerial, reflecting the tenets of new public management (Osbourne and McLaughlin 2002) and those against largely professional or occupational role protection. The degree of neutrality or degree of resistance to PAs by the participants from the nursing and medical professions varied according to their positions within the profession suggesting stratification, internal to the profession, shaped their perspectives. We turn now to consider the perspectives of those working at the micro –level within the general practices.

Micro level – the general practice perspective

We report on four thematic areas: decisions about staffing, jurisdictional boundaries of the PAs, responses to the vertical substitution for doctors, and boundaries and relationships.

Decisions about staffing: the views of GPs and practice managers

Most of the GPs and the practice managers who employed PAs described how they had decided to employ them after failing to attract any doctors or nurse practitioners to their vacancies i.e. it was a decision of necessity. PAs had not been these GPs’ first choice to recruit. Some practices had been assisted by the local NHS commissioning organisation in recruiting US PAs. One GP had been

employing US PAs for a number of years as his preferred staffing model. The PAs were recruited to substitute for doctors in attending patients with appointments in same day or urgent sessions.

The GPs were clinician-managers (Fulop 2012), or more accurately clinician-business owners and their discourse on staffing decisions reflected these two perspectives. All of the GPs and some of the practice managers described staffing decisions in terms of cost efficiency. The GPs discussed this in terms of ensuring the most efficient process of clinical decision making about patients' problems, which minimised risk of medical error and also minimised double handling of patients for the same problem.

All of the GPs employed staff other than doctors to do clinical work i.e. providing vertical substitution for the doctors (Nancarrow and Borthwick 2002). However, they were divided in their views of the boundaries of their own and others' work. There were those who were not employing or intending to employ any mid-level practitioners. They viewed the medical role as attending all patients to make decisions and diagnosis, and then delegating tasks from that process to other staff in their team.

“Health care assistants can do the blood pressures etc. But this middle area, Nurse Practitioner level, we think [the GPs] can do it more efficiently, quicker.” GP, 8.

The second group of GPs were either employing mid-level practitioners or wanted to employ staff able to work at this level. In their reasoning for staffing decisions, they reflected on the type of patient care required and workload in their practices. They considered that the GP role was one of specialism, attending mainly to the most complex or medically acutely ill patients. In order to maintain their professional boundary as a specialist, they required a team of differently clinically skilled staff ;with some competent to make medical decisions about the less complex patients i.e. those with minor self-limiting problems and others to be competent to undertake delegated tasks such as phlebotomy.

“With doctors [GPs] having to deal with more complex items that they didn't have to before , it's [having a PA or nurse practitioner] to free up doctor time so you deal with the complex not the routine sore throats.” GP, 6.

These divergent views of GPs as generalists or specialists have been reported before (Martin et al 2009) and there is ongoing debate about how best to organize the primary care work flow and staffing to best effect (see for example Iliffe 2008).

Jurisdictional boundaries of the PAs

The jurisdictional boundaries of the work of the PAs were set by the GP partners. This was reported to be based on clinical competence and the degree of medical risk the presenting patient group or condition posed.

“So he [the PA] sees a surgery of patients, morning and afternoon on four days of the week, which are almost entirely unselected. We have selected out our under-one-year-olds because he’s not trained for those.” GP, 1.

Some of the practice managers described initial uncertainties about specific tasks, for example whether the PA could sign medical certificates of sickness, and that they with the GP had had to make decisions about these types of task to inform the work of the PA. The GPs as clinician employers provided a very different type of jurisdictional settlement between occupational groups with that described in hospitals, for example by Allen (2001).

The PAs described boundaries to their knowledge and competence. They also described, as did the GPs and practice managers, how trust was gained in the competence of the PAs over time, leading to the PAs expanding their jurisdictional boundaries to new types of patient or clinical activities.

“OK, so initially she was mainly seeing walk-ins ... As time progressed she also took on more responsibility with chronic patients and in particular she took on ... COPD [Chronic obstructive pulmonary disease] and asthma reviews, learnt how to do them, co-ordinated the care as well as the service.”GP, 10.

Many of the GPs and practice managers commented that the lack of authority to prescribe potentially made the PAs less efficient and therefore more costly than nurse practitioners with prescribing authority. GPs and PAs devised systems which minimised the disruption and time for doctors to sign all prescriptions and radiograph requests. These “work arounds” or light touch supervision processes were only agreed once the GP trusted the clinical competence and safety of the PA.

“When I first qualified, I mean, and also when any new doctor starts, there’ll be a period where when they’re signing my prescription, you would tend to give them a lot more information about what you’re doing, ... because they’ve got to learn to trust youand then once the relationship has developed I tend to notice that they don’t question as much, so it’s just about building up a trust and an understanding of your competencies.” PA, 10.

It was evident that the establishment of individual trust outflanked externally set jurisdictions. Trust is a multi-layered concept characterised by both cognitive elements and affective dimensions (Calnan and Rowe 2007). The interlinking of professional competence and trust building over time has been noted before in a study of primary care doctors and nurses (Pullon 2009).

The PAs and others reported that they had moved to work in areas left vacant through the absence of doctors or nurses or where there was demand for additional staffing. The PAs undertook both substitution vertically for the activities of the doctor but also horizontally for the work of the nurses:

“I’m very flexible with my working, so, like today, I was doing the Warfarin [an oral anti-coagulant used in the prevention of blood clots and requires regular blood tests] clinic but I was also flitting in and out of the on-call session and taking some patients off the doctors, doing all of the telephone triaging, helping the nurse practitioner as well.....doing a bit of everything really, and just helping everybody out.” PA, 6.

Responses to the vertical substitution for doctors

Overall other professionals and services were reported to accept the substitution of the doctor by the PA. However, it was not universal acceptance. Some GPs and practice managers reported initial refusal by secondary care consultants and the ambulance transport service to accept PA referrals. The reluctance of others in the health care system to accept jurisdictional changes from GPs to others has been noted before (Delamaire and Lafortune 2010).

Patients on the whole were reported to view the substitution of the GP by a PA as acceptable although as we report else where there was sometimes a lack of transparency to and understanding by patients as to what type of professional they were consulting (Halter et al. 2017). There were some who were reported by receptionists to prefer to see a doctor.

“I would say ‘we’ve got a 9.40’ [appointment] with [name of PA]’and they say ‘Oh who is that?’ and then you say ‘he’s our Physician Assistant and he’s covered by a doctor’. And it’s ‘Yeah OK’ or ‘well no I’d rather see a doctor’. Receptionist, 1.

Some participants reported patients who expressed a preference to consult the PA rather than the GP. We report elsewhere the patients’ views (Halter et al. 2017) which reflect the contingent nature of the patients’ preferences.

Boundaries and relationships

GPs and practice managers reported that prior to employing the PA they prepared other practice staff in order to pre-empt any inter-professional difficulties, particularly with the nursing staff. Only one practice reported a nurse who was openly resistant and left the practice to work elsewhere. Overall, while nurses were reported and described themselves as being ‘*apprehensive*’ and ‘*worried for their jobs*’ when the PAs first started, the subsequent working relationships were described as good. This process of resistance to accommodation at the team level reflects that described by Abbott (1988). Practice managers considered any resistance from nurses to new PA members of the team had dissipated very quickly in the face of the reality of managing the workload. Some nurses stated that while they could do some of the work the PA was doing, the inclusion of the PA in the team allowed them to focus their time on the areas they were most expert or interested in.

Contrasts were made between the PA and nurse practitioner roles, with the PAs reported by doctors and practice managers as having wider range of competencies (although overlap was also reported), requiring less supervision and being more willing to take their own decisions.

“Nurses’ decision-level-making skills are much lower[than PAs]...I have worked with nurse practitioners, and they are great with the case mix I’ve seen them with, but actually, I’ve never seen them with anything complex and my PA could knock spots off them.” GP, 5.

One GP commented that PAs differed from nurse practitioners in her practice in that PAs made their own referrals to hospital, whereas nurses would refer patients to the GP to make the referral. Nurses too were reported to identify differences in the ways in which PAs worked compared to them as illustrated here:

“I think the nurses found it very difficult because nurses work very strictly to protocols, if they hadn't had the training, if they haven't been signed off they won't do it, and I think they saw [the PA] doing things that they wouldn't have been comfortable with and they were ... ‘ooh, should she be doing that, is she allowed to do that?’ .” Practice manager, 6.

Nurses, practice managers and receptionists reported consulting PAs on matters when they could not either find a doctor available or found it easier to approach the PA rather than the doctor, as in this example:

“I think she definitely bridges the gaps [between doctors' and nurses' work] quite a lot and I can certainly ask, I maybe wouldn't feel as silly asking her some of the questions that I might feel a bit silly asking a doctor.” Practice manager, 6.

Many participants considered the PAs as an occupation that spanned the boundaries of medicine and nursing. While the role of boundary spanning in inter-organisational relationships has been explored extensively (see for example Williams 2002) we have not identified discussion of this within individual health care teams before. Some of the nurses reported this boundary spanning as the reason they considered the PAs not to be a threat to nurses in general practice.

“Because their roles are different, they are very, entirely different from nurse's role; they've got bit of nurse and bit of doctor so they're no threat to any nurses.” Nurse, 10.

A number of the practice managers and nurses reflected on which professional group the PAs belonged to in general practices, deciding they were *“part of the doctors' team rather than the nurses”*. Practice manager 2.

In summary, evidence from the micro level presents the employment of PAs by GPs as clinician-managers as a largely pragmatic ,managerial response to medical and nursing shortages as opposed to active support for a new profession. However GPs were split on their views about whether any advanced level clinical professional should be undertaking part of their medical work, reflecting a wider debate within medicine as to the nature and status of general practitioner work (Iliffe 2008, Calnan and Gage 2009). The differences commented on between ANPs and PAs may reflect different professional socialisation and orientation as PAs are explicitly trained in a medical model (DH 2006).

It may also reflect the absence in the UK of any national credentialed use of the title nurse practitioner (DH 2010) unlike PAs (DH 2006).

Discussion and concluding comments

This paper provides empirical evidence of the response of health professions at the macro, meso and micro level in England to the introduction of a new professional group. The study has limitations, for example while the purposive sampling framework at the macro level included qualified doctors in training we were not able to secure those interviews and at the micro level we omitted GPs in training. However, the breadth of the sample, the spread across different parts of England for the micro level work and the use of combined qualitative methodologies mitigated these limitations to some extent.

The findings can be understood in terms of Abbott's (1988) theory of a dynamic system of health professions in which individual professions are shaped by three types of interaction. For physician associates, as a new profession, we observed two of these: the influence of *inter*-professional interactions and the impact of state agency but not *intra*-professional influences.

With regard to inter-professional interactions, PAs were developed as a group subordinate to medicine. However, at all levels of the system, we found the extent to which PAs were accepted as a new profession without contest by doctors differed between different types or strata of the profession. Medicine was divided between: the professional leaders who supported mid-level practitioner development as one way to protect specialism and training of consultants, the junior ranks in training who opposed mid-level practitioner development and were concerned about future jobs, and the medical small business owners (the GPs). This last group, as clinician-managers, were divided as to whether mid-level practitioner substitution for some medical work was cost effective for patient work flows or not. In this, we offer new empirical evidence of the intra-professional divisions within medicine and particularly within general practice (Calnan and Gabe 2009).

Similarly in the profession of nursing at all levels of the system we found differences in the degree of contest or acceptance. Profession leaders offered neutral viewpoints to a new profession couched in terms of managerialism and also in defence of nurses' work boundaries against the shedding of medical work. The accommodation by the practice nurses to the new PAs may reflect perceptions of

being able to focus on 'nursing' work or may be the consequence of working in small organisations where the workload is increasing in the face of an aging population. In contrast, the leaders of ANPs expressed greater opposition in defence of both job opportunities and also NHS education funding for ANPs. In this regard we offer new empirical evidence of the stratification within nursing between the managers, the professionalists and generalists as observed originally by Habenstein and Christ (1955) and elaborated by others since (see for example Carpenter 1977).

At the micro level of inter-professional interaction, PAs substituted vertically for doctors and horizontally for nurses. This raises the question as to whether this was evidence of expansionism by a profession (Abbott 1998) or merely a reflection of working in a small organisation with few staffing options. Further investigation is required to answer these questions, perhaps in contrast to larger health care settings such as hospitals. The substitution for two professional groups has not previously been observed in studies of occupational substitution (Schadewaldt et al. 2013, King et al. 2015); whether it is a feature of PAs in particular or of any novel health occupational group requires further study.

The observation of PAs as boundary spanning medical and nursing teams raises the question as to whether this is a facet of all types of mid-level and advanced clinical practitioners or whether it is particular to the PA occupation and requires further enquiry. The viewpoint that PAs were seen by others as part of the medical team may not hold true in different settings or in settings where many PAs work and this benefit from further examination.

We found accommodation rather than occupational resistance at the micro level. Our evidence contrasts with that offered in other studies reporting resistance at the workplace to horizontal substitution (see for example Timmons and Tanner 2004). One potential explanation is that the context for this study is small to medium size health care businesses employing a limited number of clinical staff who have to work together to meet workload demands in contrast to a hospital employing thousands of staff.

The discourse of cost effectiveness and managerialism (Osbourn and McLaughlin 2002) in decisions about workforce development and staffing was evident both from the managers and those in elite strata of the professions. An important issue for those making resource decisions at macro and micro

levels of the publically funded health care system was the PAs' lack of jurisdictional authority to prescribe and order ionising radiation ultimately made them less cost effective than other professional groups with that authority. This issue reflects Abbott's third type of interaction– that of state agency. For PAs, there was evidence of state agency, in the context of severe medical and nursing shortages, in funding demonstration projects and publishing a competency and curriculum statement agreed by two medical speciality colleges. However, as these shortages dissipated, there was no state action to ensure PAs were included in state regulatory processes. That the general practices employed PAs without the jurisdictional authority to prescribe demonstrated pragmatism in the face of GP and practice nurse shortages (Hunt 2015). Systems were set up in each practice to make the PAs as efficient as possible. One explanation for the success of these systems was trust in individual PAs. At the micro level the study demonstrated how trust within small teams outflanked externally set jurisdictional boundaries and finding that has been observed between GPs and nurses observed before (Pullon 2008)

The macro-level evidence suggested that as a profession PAs in England were not likely to thrive without some state intervention and support which was not apparent in 2013. This situation changed in 2014 with the Department of Health stating that PAs were one of the workforce solutions to problems within general practice (BBC 2014) with 1000 PAs to be trained and made available to general practice by 2020 (Hunt 2015). In 2016 more stated funded workforce solutions for general practice were announced including: piloting medical assistant roles, employing clinical pharmacists and training more nurses for general practice (NHS England 2016). However the issue of PA prescribing remains unaddressed in the UK, in contrast to nursing for which it is well established (House of Commons 2016). The introduction of PAs as a new health profession in English primary care remains an unfolding story in which the influences of civil servants, professional organisations and professionals play a part as does the pragmatism and preferences of clinician –manager employers.

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