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### Research Journals related to Physician Associates

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**Date range used** (5 years, 10 years): 2012-  
**Limits used** (gender, article/study type, etc.): UK, English language  
**Search terms and notes:** "physician\* associate\*" -- assistant\* -- develop\* -- education -- training -- impact --

**Journals:** currently there are no journals dedicated to Physician Associates, the American Journals refer to Physician Assistants, but there are only a few of these. This list includes journals which have published research articles on the development of the Physician Associate role, education, training and impact:

BMJ  
Clinical Medicine  
Emergency Nurse  
Education for Primary Care  
Journal of Interprofessional Care  
Journal of the American Academy of Physician Assistants  
The British Journal of General Practice  
The Journal of Physician Education

The Faculty of Physician Associates at the Royal College of Physicians: <http://www.fparcp.co.uk/>

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## A. Institutional Publications

*BMA*

**Physician Associates in the UK (2017)**

[Available online at this link](#)

Due to a lack of central co-ordination or formal national programme of introduction of PAs into the NHS, there is local variation in their roles and how they are managed. Consequently, a considerable amount of fear and concern has been generated among the medical profession as to what PAs mean for the future of the role of doctors, and also about the way their introduction is already impacting on day to day life in the NHS. This briefing aims to provide doctors with useful information about the role of PAs and the concerns that have been raised about them, as well as looking at how the BMA will be influencing the roles of PAs and the ways they are introduced into the service.

## B. Original Research

1. **Barriers and facilitators to integration of physician associates into the general practice workforce: a grounded theory approach.**

Jackson B. The British journal of general practice: the journal of the Royal College of General Practitioners 2017;67(664):e785-e791-.

**BACKGROUND:** Physician associates (PAs) are described as one solution to workforce capacity in primary care in the UK. Despite new investment in the role, how effective this will be in addressing unmet primary care needs is unclear. **AIM:** To investigate the barriers and facilitators to the integration of PAs into the general practice workforce. **DESIGN AND SETTING:** A modified grounded theory study in a region unfamiliar with the PA role. **METHOD:** No a priori themes were assumed. Themes generated from stakeholder interviews informed a literature review and theoretical framework, and were then tested in focus groups with GPs, advanced nurse practitioners (ANPs), and patients. Recorded data were transcribed verbatim, and organised using NVivo version 10.2.2, with iterative analysis of emergent themes. A reflexive diary and independent verification of coding and analysis were included. **RESULTS:** There were 51 participants (30 GPs, 11 ANPs, and 10 patients) in eight focus groups. GPs, ANPs, and patients recognised that support for general practice was needed to improve access. GPs expressed concerns regarding PAs around managing medical complexity and supervision burden, non-prescriber status, and medicolegal implications in routine practice. Patients were less concerned about specific competencies as long as there

was effective supervision, and were accepting of a PA role. ANPs highlighted their own negative experiences entering advanced clinical practice, and the need for support to counteract stereotypical and prejudicial attitudes CONCLUSION: This study highlights the complex factors that may impede the introduction of PAs into UK primary care. A conceptual model is proposed to help regulators and educationalists support this integration, which has relevance to other proposed new roles in primary care.

2. **Continuing professional development for Physician Associates in primary care.**

Howie N. Education for primary care: an official publication of the Association of Course Organisers, National Association of GP Tutors, World Organisation of Family Doctors 2017;28(4):197-200-.

The Physician Associate role is relatively new to the United Kingdom and is currently undergoing a period of significant expansion. This includes an aim of 1000 PAs working in primary care by 2020. The profession has specific continuing professional development requirements which need to be addressed. These requirements can be met through the deployment of some well-established pedagogical strategies which are already in use for junior doctors and allied health professionals.

3. **Development of the United Kingdom physician associate profession.**

Aiello M. JAAPA: official journal of the American Academy of Physician Assistants 2017;30(4):1-8-.

The world of healthcare is changing, and patient needs are changing with it. Traditional doctor-driven models of workforce planning are no longer sustainable in the United Kingdom (UK) healthcare economy, and newer models are needed. In the multiprofessional, multiskilled clinical workforce of the future, the physician associate (PA) has a fundamental role to play as an integrated, frontline, generalist clinician. As of 2016, about 350 PAs were practicing in the UK, with 550 PAs in training and plans to expand rapidly. This report describes the development of the PA profession in the UK from 2002, with projections through 2020, and includes governance, training, and the path to regulation. With rising demands on the healthcare workforce, the PA profession is predicted to positively influence clinical workforce challenges across the UK healthcare economy.

4. **Factors that Influence a Physician Assistant/Associate Student Career Choice: An Exploratory Study of Students from the United States and United Kingdom**

Rizzolo The Journal of Physician Assistant Education 2017;28(3):149-152 .

PA students from two universities (US & UK) were invited to participate in the study to understand why PA students choose this career pathway and also the differences between the US and the UK

[Available online at this link](#)

5. **Investigating the contribution of physician associates (PAs) to secondary care in England: a mixed methods study**

Health Services and Delivery Research 2017;:online.

Research in progress: Latest documentation available online This study aims to investigate the contribution and impact of including physician associates (PAs formerly known as physician assistants) to medical teams on the organisation and delivery of patient care in hospitals in England. Increasing numbers of hospitals in England are employing PAs in a widening range of medical and surgical specialties. Demand for PAs from hospitals is outstripping the supply of PAs graduating from UK Universities. In response, the Minister of Health announced in August 2014 the doubling of NHS funded training places and there is anticipated to be 500 PAs graduating a year by 2018. The Royal College of Physicians is establishing a Faculty for PAs under its governance. Student PAs have a first degree, usually in a bio-medical science, and are trained at a post graduate level in the medical model to assess, investigate, diagnose and commence or change treatment under supervision of a doctor within their agreed scope of practice. While they have a 50-year history in the United States they are new or unknown to most British health care settings. There are currently nearly 300 PAs, mostly UK trained, employed in medical teams in hospitals. We know little about how PAs are deployed in different teams, what activities they undertake, what difference their involvement makes to patient pathways, costs and service delivery systems. Likewise, little is known about the patient perspective on the involvement of this new type of professional in their medical team. This mixed methods study proposes to investigate these questions in order to better inform the public, managers, clinicians and commissioners. Four interlinked research work-streams are proposed. Work stream 1 investigates the extent of the employment, deployment and role of PAs in hospital medical teams using two electronic surveys; one to medical directors of NHS acute Trusts and the other to PAs through their professional organisation. Work stream 2 investigates evidence of impact and factors supporting or inhibiting the adoption of PAs through a systematic review and policy review. Work stream 3 undertakes a more detailed investigation in four different types of hospitals each employing between 4 and 20 PAs in different specialties. These case studies include a) interviews with patients, managers, team and service members, b) analysis of routine management data and reports, c) observation of PAs at work and PA diaries of their activities, and d) a comparative analysis of patient outcomes and costs between consultations with PAs and doctors in the minors section of the emergency department. The final work stream is a synthesis of evidence from the other work streams, which is then presented in emerging findings workshops with invitees from the research participants, the patient and public forum and other advisors to the study. Throughout the study, papers will be submitted for publication in professional and lay journals and a final report will be submitted to the funding body.

[Available online at this link](#)

6. **Meet the new team players: physician associates.**

Paschoal Vicente J. Emergency nurse: the journal of the RCN Accident and Emergency Nursing Association 2017;25(3):14-.

Physician associates (PAs) were introduced into the NHS to add a new kind of team player to the medical workforce. The role originated in the US where they are known as physician assistants and have been practising since the mid-1960s (Peate 2016). The PA competency

and curriculum framework states that a newly qualified PA must be able to perform clinical work 'at the same standard as a newly qualified doctor', and trainees undergo a rigorous two-year postgraduate training (Peate 2016). Before becoming eligible to practise, they must pass a Royal College of Physicians licensing exam and certified PAs are required to retake the examination every six years.

**7. Patients' experiences of consultations with physician associates in primary care in England: A qualitative study.**

Halter M. Health expectations: an international journal of public participation in health care and health policy 2017;20(5):1011-1019-.

**BACKGROUND:** Physician associates are new to English general practice and set to expand in numbers. **OBJECTIVE:** To investigate the patients' perspective on consulting with physician associates in general practice. **DESIGN:** A qualitative study, using semi-structured interviews, with thematic analysis. **SETTING AND PARTICIPANTS:** Thirty volunteer patients of 430 who had consulted physician associates for a same-day appointment and had returned a satisfaction survey, in six general practices employing physician associates in England. **FINDINGS:** Some participants only consulted once with a physician associate and others more frequently. The conditions consulted for ranged from minor illnesses to those requiring immediate hospital admission. Understanding the role of the physician associate varied from 'certain and correct' to 'uncertain', to 'certain and incorrect', where the patient believed the physician associate to be a doctor. Most, but not all, reported positive experiences and outcomes of their consultation, with some choosing to consult the physician. Those with negative experiences described problems when the limits of the role were reached, requiring additional GP consultations or prescription delay. Trust and confidence in the physician associate was derived from trust in the NHS, the general practice and the individual physician associate. Willingness to consult a physician associate was contingent on the patient's assessment of the severity or complexity of the problem and the desire for provider continuity. **CONCLUSION:** Patients saw physician associates as an appropriate general practitioner substitute. Patients' experience could inform delivery redesign.

**8. Physician associates in England's hospitals: a survey of medical directors exploring current usage and factors affecting recruitment.**

Halter M. Clinical medicine (London, England) 2017;17(2):126-131-.

In the UK secondary care setting, the case for physician associates is based on the cover and stability they might offer to medical teams. We assessed the extent of their adoption and deployment - that is, their current usage and the factors supporting or inhibiting their inclusion in medical teams - using an electronic, self-report survey of medical directors of acute and mental health NHS trusts in England. Physician associates - employed in small numbers, in a range of specialties, in 20 of the responding trusts - were reported to have been employed to fill gaps in medical staffing and support medical specialty trainees. Inhibiting factors were commonly a shortage of physician associates to recruit and lack of authority to prescribe, as well as a lack of evidence and colleague resistance. Our data suggest there is an appetite for employment of physician associates while practical and attitudinal barriers are yet to be fully overcome.

9. **Physician associates in primary health care in England: A challenge to professional boundaries?**

Drennan VM *Social science & medicine* (1982) 2017;181:9-16-.

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.

10. **Physician associates working in secondary care teams in England: Interprofessional implications from a national survey.**

Wheeler C. *Journal of interprofessional care* 2017;31(6):774-776-.

Physician associates (PAs) are a new type of healthcare professional to the United Kingdom; however, they are well established in the United States (where they are known as physician assistants). PAs are viewed as one potential solution to the current medical workforce doctor shortage. This study investigated the deployment of PAs within secondary care teams in England, through the use of a cross-sectional electronic, self-report survey. The findings from 14 questions are presented. Sixty-three PAs working in a range of specialties responded. A variety of work settings were reported, most frequently inpatient wards, with work generally taking place during weekdays. Both direct and non-direct patient care activities were reported, with the type of work undertaken varying at times, depending on the presence or absence of other healthcare professionals. PAs reported working within a variety of secondary care team staffing permutations, with the majority of these being interprofessional. Line management was largely provided by consultants; however day-to-day supervision varied, often relating to different work settings. A wide variation in ongoing supervision was also reported. Further research is required to understand the nature of PAs' contribution to collaborative care within secondary care teams in England.

**11. Development and implementation of non-medical practitioners in acute care.**

Abraham J. British journal of nursing (Mark Allen Publishing) 2016;25(20):1129-1134-.

The purpose of this article is to discuss the evolving workforce required to deliver quality healthcare in NHS acute care settings within the UK. The development and implementation of non-medical practitioner (NMP) roles, such as advanced clinical practitioners, surgical care practitioners, surgical first assistants, physician associates and physician assistants in anaesthesia are discussed in relation to training, regulation, governance and evaluation in clinical practice.

**12. Job satisfaction among British physician associates.**

Ritsema TS Clinical medicine (London, England) 2016;16(6):511-513-.

All British physician associates (PAs) were invited to participate in the annual census of the UK Association of Physician Associates (UKAPA) in May 2014. Each participant completed the Cooper 10-item Job Satisfaction Scale and a PA-specific job satisfaction survey. In general, PAs were found to be satisfied with their work. No factor assessed by the survey had lower than a 66.6% satisfaction rate. Of the factors assessed, PAs were most satisfied with their relationships with the doctors on their teams. They were least satisfied with their ability to use their training and abilities, with only 66.6% of participants reporting satisfaction with this aspect of their work. Like their American colleagues, British PAs are generally satisfied with their work. They are least satisfied with their ability to fully use their training, which is likely due to the youth of the profession, lack of prescriptive rights and lack of understanding of the PA role.

**13. Physician Associates -- new kids on the primary care block.**

Watkins Jeannie Practice Nurse 2016;46(4):19-21.

The article acknowledges the growing opportunities for the role of physician associates (PA) in the British healthcare sector as of April 2016. Topics discussed include variety of medical specialties that a PA works for across primary and secondary care, benefits and its impact in the field of primary care, and an outline of its job description including maintenance and delivery of clinical management alongside patients and supervising physician.

[Available online at this link](#)

**14. Physician associates-what do they do?**

Rimmer A. BMJ (Clinical research ed.) 2016;354:i4661.

Physician associate roles have been proposed as a way of filling workforce gaps and freeing doctors' time. But doctors themselves have raised concerns about the scope of physician associates' practice, their length of training, and the possibility that their training will encroach on that of junior doctors.

[Available online at this link](#)



**15. Reconfiguring health workforce: a case-based comparative study explaining the increasingly diverse professional roles in Europe**

de Bont A. et al. BMC Health Services Research 2016;16(637):online.

Over the past decade the healthcare workforce has diversified in several directions with formalised roles for health care assistants, specialised roles for nurses and technicians, advanced roles for physician associates and nurse practitioners and new professions for new services, such as case managers. Hence the composition of health care teams has become increasingly diverse. The exact extent of this diversity is unknown across the different countries of Europe, as are the drivers of this change. The research questions guiding this study were: What extended professional roles are emerging on health care teams? How are extended professional roles created? What main drivers explain the observed differences, if any, in extended roles in and between countries? Methods We performed a case-based comparison of the extended roles in care pathways for breast cancer, heart disease and type 2 diabetes. We conducted 16 case studies in eight European countries, including in total 160 interviews with physicians, nurses and other health care professionals in new roles and 600+ hours of observation in health care clinics. Results The results show a relatively diverse composition of roles in the three care pathways. We identified specialised roles for physicians, extended roles for nurses and technicians, and independent roles for advanced nurse practitioners and physician associates. The development of extended roles depends upon the willingness of physicians to delegate tasks, developments in medical technology and service (re)design. Academic training and setting a formal scope of practice for new roles have less impact upon the development of new roles. While specialised roles focus particularly on a well-specified technical or clinical domain, the generic roles concentrate on organising and integrating care and cure. Conclusion There are considerable differences in the number and kind of extended roles between both countries and care pathways. The main drivers for new roles reside in the technological development of medical treatment and the need for more generic competencies. Extended roles develop in two directions: 1) specialised roles and 2) generic roles.

[Available online at this link](#)

**16. Physician associates and GPs in primary care: a comparison.**

Drennan VM The British journal of general practice: the journal of the Royal College of General Practitioners 2015;65(634):e344-50-.

BACKGROUND: Physician associates [PAs] (also known as physician assistants) are new to the NHS and there is little evidence concerning their contribution in general practice. AIM: This study aimed to compare outcomes and costs of same-day requested consultations by PAs with those of GPs. DESIGN AND SETTING: An observational study of 2086 patient records presenting at same-day appointments in 12 general practices in England. METHOD: PA consultations were compared with those of GPs. Primary outcome was re-consultation within 14 days for the same or linked problem. Secondary outcomes were processes of care. RESULTS: There were no significant differences in the rates of re-consultation (rate ratio 1.24, 95% confidence interval [CI] = 0.86 to 1.79, P = 0.25). There were no differences in rates of diagnostic tests ordered (1.08, 95% CI = 0.89 to 1.30, P = 0.44), referrals (0.95, 95% CI = 0.63 to 1.43, P = 0.80), prescriptions issued (1.16, 95% CI = 0.87 to 1.53, P = 0.31), or

patient satisfaction (1.00, 95% CI = 0.42 to 2.36, P = 0.99). Records of initial consultations of 79.2% (n = 145) of PAs and 48.3% (n = 99) of GPs were judged appropriate by independent GPs (P<0.001). The adjusted average PA consultation was 5.8 minutes longer than the GP consultation (95% CI = 2.46 to 7.1; P<0.001); cost per consultation was GBP pound6.22, (US\$ 10.15) lower (95% CI = -7.61 to -2.46, P<0.001). CONCLUSION: The processes and outcomes of PA and GP consultations for same-day appointment patients are similar at a lower consultation cost. PAs offer a potentially acceptable and efficient addition to the general practice workforce.

#### 17. Physician associates in the United Kingdom.

Parle J. JAAPA: official journal of the American Academy of Physician Assistants 2015;28(2):14-5.

Similar to other developed countries, the healthcare system in the United Kingdom faces the challenges of rising demand and cost at a time of economic constraints. Workforce modernization is one of the strategies for addressing these challenges. Traditional job demarcations and conventional team structures are being challenged and redesigned to maintain quality while reducing cost. The deployment of physician associates is one part of this broader strategy for improving workforce performance. With five physician associate programs (Aberdeen, Birmingham, St George's London, Wolverhampton, and Worcester) and about 250 physician associates employed, mostly in hospital practice, an opportunity presents to ask: How did they get here? The first American-trained physician assistants came to the United Kingdom in 2000 to work in the West Midlands as part of a demonstration project and to launch the UK physician associate movement. Although a few have remained, the leadership of the profession has shifted to UK-trained physician associates and the UK Association of Physician Associates. Within the National Health Service, physician associates have been seen as a threat by some clinicians (those who have never worked with a PA) or as the "best thing since sliced bread" by many of those who have. In the early days, most physician associates worked in family practice (all UK citizens have the right to a family physician and 99% of UK residents are registered in a local physician's practice). Family practices were the primary employers more than big hospitals, probably because they are small independent businesses, more flexible, and able to innovate rapidly. Since 2010, physician associates also have been recruited extensively into hospital practice, particularly in acute internal medicine and emergency medicine. However, physician associates work in a wide range of specialties, including forensic psychiatry, pediatric intensive care, trauma, and orthopedics. Most UK physician associates now work in hospital practice and about 17% of UK hospitals now employ physician associates. Demand is outpacing supply for physician associate services. One of the main challenges facing UK physician associates is the lack of legal regulation governing their activity. Consequently, they cannot prescribe nor order radiographs. Although work-arounds are the nature of innovative service delivery, the profession and the universities providing education are lobbying actively for statutory regulation, with strong support from the medical Royal Colleges and from employers. Regulation is viewed as important to protect patients (by having a compulsory register and protected title) and to set educational standards for pre- and postqualification, as well as politically to establish physician associates as a real clinical profession. The UK physician associates are optimistic that the right to prescribe and to order radiographs will follow soon after statutory regulation is in place. The Royal College of Physicians of London has recently agreed to set up a faculty specifically for physician associates (the first exclusively nonphysician faculty it has instituted). This will provide a high-prestige home for the

physician associate profession, will involve other colleges (including surgery, primary care, pediatrics, and family medicine), and is seen as a very positive step toward full acceptance and statutory regulation. A number of strategies have been developed to better-inform the public and the medical community. Some examples involve having physician associates speak at medical meetings and conferences; and a presence on the web, Facebook, and Twitter. In March 2014, a highly successful conference was held in Birmingham, convened jointly by University Hospitals Birmingham (one of the biggest hospitals in the United Kingdom), the University of Birmingham, and the UK Association of Physician Associates. Published research and experience in various medical journals is critically viewed as essential for legitimization.

**18. Physician associates: the challenge facing general practice.**

Parle J. The British journal of general practice: the journal of the Royal College of General Practitioners 2015;65(634):224-5.

UK medicine is facing a ‘perfect storm’ of rising expectations, an ageing population with more complex and chronic needs, and a growing number of interventions that we can offer. Delivery of comprehensive high-quality care in general practice is also threatened by the increasing shift in workload from secondary care to primary care and the age profile of the GP workforce, as many GPs contemplate retirement (or indeed have already retired), go part-time or leave the profession entirely. Recruitment is also stuttering with only one in 10 newly-qualified doctors choosing a career in general practice and GP registrar posts going unfilled.<sup>1</sup> Family medicine is groaning under the strain: are physician associates (PAs) part of the solution?

[Available online at this link](#)

**19. A new kid on the block: the role of physician associates.**

Ritsema TS Clinical medicine (London, England) 2014;14(6):692-3.

Letter to the Editor – You called attention to the possibility of using physician associates (PAs) as one part of the solution to the insufficient number of emergency medicine trainees (Clin Med June 2014 pp 219–20). In the USA, where the profession has been established for 45 years, more than 10% of all US PAs practise emergency medicine and 68% of teaching hospitals employ PAs in the emergency department.<sup>1</sup> Although the PA profession is in its infancy in the UK, emergency medicine is one of the most common specialties for British PAs. In the spring of 2014, we conducted the fourth annual census of British PAs. An online survey link was sent to all PAs who have graduated from one of the recognised PA programmes, all members of the UK Association of PAs, all registrants on the PA Managed Voluntary Register and all known American- or Canadian-trained PAs in the country. In total, 134 (70.2%) responded out of 191 PAs believed to be living in the UK and eligible to practice as a PA.

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