
Role Development: Physician Associates

Quality Impact *Evidence Summaries*

Measurable evidence of the impact of policy interventions on quality

A rapid evidence review for
The Health Foundation

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About Quality Impact *Evidence Summaries* (QIES)

Quality Impact *Evidence Summaries* (QIES) present measurable evidence of the impact of policy interventions within the NHS. Distinctively, impact is viewed through the lens of quality, using the Institute of Medicine (IOM) domains of quality as a framework.¹

QIES began as a series of structured reviews featured in [A Clear Road Ahead](#), a 2016 Health Foundation project delivered in collaboration with Professor Sheila Leatherman, to shape a quality strategy for the NHS.² The Health Foundation re-commissioned Research Matters in 2017-18 to develop the structured reviews further, with the aim of exploring the potential to develop a sustainable tool or service to support and promote evidence-based policy and decision making across the NHS in England.

Scope

QIES focus exclusively on national policy interventions in the English health care sector. Typically, these are centrally developed by the Department of Health, NHS England or other national bodies and rolled out nationally, albeit with local variations in implementation. Some interventions may have initiated at a local or institutional level and been adopted nationally. The time period for both policies reviewed and evidence used is from 1997 onwards.

NHS Taxonomy

As the scope and volume of relevant policy interventions is significant, a Taxonomy of Policy Interventions for the NHS in England was developed. Policies are grouped into four policy areas - governance, finance, delivery and improvement - split further into focus areas. Groups of policy interventions combine as policy levers, which forms a thematic basis for a series of QIES. Each individual QIES focuses on a single policy intervention as an example of the use of that policy lever. This enables groups of policy interventions which share conceptual or practical similarities to be described alongside each other, allowing for comparison about what works.

For further information, see the separate working paper: *Taxonomy of health care policy interventions for the NHS in England, Working paper for Quality Impact Evidence Summaries (QIES) project*, February 2018.³

Impact on quality

In assessing and presenting the impact on quality of policy interventions, we have used the Institute of Medicine (IOM) framework for the quality of health care.¹ This describes six domains (or aims), across which improvements in quality can occur. These are:

- **Safe:** avoiding harm to patients from the care that is intended to help them.
- **Effective:** decision-making and service provision based on clinical and scientific evidence and knowledge, as well as refraining from providing services to those not likely to benefit (avoiding underuse and misuse, respectively).
- **Patient-centred:** providing care that centres on the patient, respecting and responding to individual patient preferences, needs, and values and ensuring the patient is in control.
- **Timely:** reducing waits and delays for both those who receive and those who give care.
- **Efficient:** providing care that is cost-effective and avoids waste.
- **Equitable:** providing care that does not vary in quality because of personal characteristics such as gender, ethnicity, geographic location, and socioeconomic status.

Evidence about a policy intervention is reviewed and findings which show impact against one or more domain of quality form the basis of results gathered and presented in a QIES. Assessments of the level of impact within each domain are made: impact on quality can be positive, uneven and can also be unintended.

Methodology

QIES identify the key and most relevant evidence, only where measurable impact on quality is demonstrated, resulting in a sufficiently secure evidence base for conclusions to be tested and drawn. The approach is time-limited and pragmatic and is not intended to be comprehensive or meet the academic standards of a systematic review.

For each policy intervention, a structured search of published literature is conducted using, key databases, such as NHS Evidence, PubMed and Cochrane Library, as well as relevant sources of grey literature and stakeholder reports. Searching combines database searching, reference scans, looking at recommended studies/authors and targeted desk research. Full texts of reports and studies are obtained and viewed for the majority of studies, but sometimes the abstract provides sufficient information.

A discussion of the evidence used describes the key sources used to produce the QIES, including the number of relevant studies and different evidence types. Results are presented thematically, based on the IOM domains and describe the measurable impact of the policy intervention on aspects of quality of care in the English NHS. This is supported by a summary table with judgements about the strength of the impact for each IOM domain.

About Research Matters

[Research Matters](#) is a small, well-established research company delivering high quality, client-focused research to tight time-scales for clients across many sectors. Our work is bespoke, pragmatic and insight driven and our style is always friendly, flexible and professional.

We have completed a number of rapid evidence reviews for the Health Foundation, as well as developed a methodology for Quality Impact Evidence Summaries and an NHS taxonomy to facilitate a structured approach to producing of evidence reviews. Most recently, we have completed a review on retention in the health and social care workforce.

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Role Development: Physician Associates

In this Quality Impact Evidence Summary (QIES), we examine the impact on quality of the Physician Associate role. This policy intervention sits within the policy lever of Role Development within the NHS Taxonomy.

NHS Taxonomy: Positioning of Policy Intervention

Policy area	Policy focus	National policy levers
Governance		
Finance		
Delivery	Service provision	
	Workforce strategy	Workforce planning
		Role development <i>Adjustments to NHS roles, including developing existing roles, task shifting and creating new roles</i>
		Team-based-working and collaboration
	Patient involvement	
Public health programmes		
Improvement		

Related evidence summaries within the policy lever of Role Development are: Modern Matrons, Emergency Care Practitioners, Community Matrons, Clinical Pharmacists and Clinical Nurse Specialists.

Description of intervention

Role description

The Department of Health (DoH) defines a physician associates (PA) as a new type of healthcare professional who, while not a doctor, works to the same medical model, with the attitudes, skills and knowledge base to deliver holistic care and treatment. They operate within the general medical and/or general practice team, under defined levels of supervision.

PAs are trained to perform a number of day-to-day tasks, including taking medical histories from patients, performing physical examinations, diagnosing illnesses, seeing patients with long-term chronic conditions, performing diagnostic and therapeutic procedures, analysing test results, developing management plans and providing health promotion and disease prevention advice for patients.⁴ Currently, PAs are not able to prescribe or request chest x-ray or CT scans. The title 'physician associate' has replaced a previous term, 'physician assistant.'

Policy context and implementation

PAs were seen as a way to reduce workforce pressures in the NHS. In 2004, several primary care trusts in the West Midlands recruited a small number of US-trained PAs to work in local GP practices. A DoH commissioned evaluation of this pilot led to a recommendation to roll out the role more widely.⁵ Following a further consultation, a degree-level training programme was developed with agreed national standards of training, assessment and accreditation.⁶ Alongside this push to 'home grow' PAs, the *National Physician Associate Expansion Programme*

aimed to recruit up to 200 PAs from the United States (although indications are that the scheme faced difficulties recruiting, and only placed 35 PAs by January 2016).^{4 7}

In June 2015, the Government announced that 1,000 PAs would be introduced into general practice in England by 2020. This commitment was included in the GP workforce 10 point plan, agreed by NHS England, Health Education England (HEE), the British Medical Association and the Royal College of GPs,⁸ and subsequently formed part of the NHS England and HEE *GP Forward View*.⁹ To meet this demand, HEE doubled the numbers of higher education institutions offering PA programmes in England, from 14 in 2015-16 to 29 in 2017-18.

There is debate about regulation and the prescribing rights of PAs. The Royal College of Physicians established the Faculty of Physician Associates in 2015 to oversee and administer a Physician Associate Managed Voluntary Register and is campaigning to achieve statutory registration of the profession. In October 2017, the DoH launched a consultation on the regulation of four medical associate professions, including PAs, recommending statutory regulation, and will collect views on issuing prescribing rights. Consultation closed in December 2017.¹⁰

It is estimated that there are over 360 qualified PAs working across the UK, with ~30% working in emergency care. Graduate numbers are projected to exceed 900 by 2019, bringing the total qualified UK PAs to more than 3,000.¹¹

Funding

Funding is directed towards supporting students training to be PAs. HEE currently funds students on approved courses (not all PA courses are HEE funded), providing £15,655 per student per year (£2,156 clinical placement, £7,310 tuition fees, £6,189 maintenance).¹² There seems to be variability in local support and the level of funding is changing for different cohorts.¹³ Some universities offer additional bursaries, whilst others work in partnership with NHS trusts to 'employ' and pay students during their studies. For other courses, there is no support and students have to pay the full tuition fees and living expenses.

Discussion of evidence

Only twelve relevant studies were identified that reported on the impact of PAs on the quality of healthcare delivered. The first UK evidence was from 2005, with more seen from 2009 onwards. An early pilot in the West Midlands provided the first empirical evidence of impact, combining qualitative interviews with quantitative activity data, and included an attempt to evaluate cost-effectiveness. It covered PAs were employed across a range of settings, including primary care and A&E.⁵

A similar Scottish study evaluated a pilot programme of PAs across a range of settings, and found them to be safe, cost effective and valued by patients.¹⁴ This evidence was excluded from this analysis as it was not related to England, but was consistent with our findings.

A number of single site evaluations, generally using qualitative methods such as questionnaires and semi-structured interviews, focused on how PAs fitted into specialist teams and what the impact was. Studies examined PAs working in psychiatry (Birmingham and Solihull Mental Health NHS Trust),¹⁵ an intensive care team (St George's Hospital, Tooting)¹⁶ and also a single PA in a cardiology team in district general hospital.¹⁷

There was also a focus on the impact of PAs in general practice. An NIHR funded project evaluated PAs in primary care settings and contributed significantly to the evidence base.¹⁸ This included detailed data around competency, consultation lengths, costs and patient satisfaction. As this was a multi-strand project, it generated several articles detailing specific aspects of the study.¹⁹⁻²¹

A further, current, NIHR-funded project, *Investigating the contribution of physician associates (PAs) to secondary care in England: a mixed methods study*, includes four interlinked research work streams. Some early results have been published as articles,^{22,23} but the main research report has yet to be published.

The development of the PA role in the UK was the focus of much research and commentary, but this was excluded from this analysis as it did not include any measurable evidence of the impact on the quality of patient care.

Gaps in the evidence

There were no studies looking at the long term impact of PAs on patient outcomes or the wider health system. Also, more work was seen to be required to understand the effectiveness of PAs across all the settings where they were operating, particularly in different secondary care settings. Potential significant changes to the PA role such as mandatory professional registration and authority to issue prescriptions are likely to require evaluation in time.

Strength of evidence

The relatively small numbers of PAs working in UK has meant that research has been limited in scope and was often small scale. The results were consistently positive however, recognising value in the role. The emerging evidence provides a starting point for decision makers exploring the implementation of PAs, but does not yet provide fully secure base for national policy making.

Impact on quality

Studies focused on assessing whether PAs are ‘as safe as’ or ‘as effective as’ the roles they substitute. The key advantages of PAs were seen to be the faster route to qualifying and the relatively lower costs to develop. The emerging evidence supported this and also provided insight into other positive impacts, such as contributions to other team members training and development and providing continuity of care for patients.

Safety

The focus on evidence examining the impact of PAs on patient safety was limited to judging whether they were as safe as an alternative. A clinical review of PA records and consultations, as part of an NIHR study “*judged them competent and safe.*”¹⁸

Effectiveness

Again, evidence of impact on effectiveness was measured against the roles being substituted. A multi-methods study focusing on primary care settings indicated that PAs were at least as effective as GPs across a number of parameters, including no difference in the rate of patients returning with the same problem within 2 weeks, the rate of procedures undertaken, diagnostic tests ordered, referrals to secondary care or prescriptions issued. The study also noted actual benefits in that PAs were significantly more likely to document general advice and documented activities in the initial consultation (for patients re-consulting for the same problem) were more appropriate - 80% were appropriate in PA records, compared to 50% of GP records.¹⁸

The good medical/clinical knowledge base of PAs was reported in two studies,^{15,24} and their ability to work in a medical framework was recognised.^{15,25} However, within the evidence, there was consensus that the effectiveness of PAs was limited by their lack of authority to issue prescriptions or order ionising radiation (chest X-ray or CT scan):^{16,18,24} for example a survey of PA employers found “*they were consistent in pointing to the same challenges: in particular, the lack of prescribing authority.*”²⁵

Efficiency

While some evidence showed that consultations with PAs took longer and they often saw less complex cases, the evidence recognised the cost-effectiveness of employing PAs. In the West Midlands pilot, the cost-effectiveness of PAs was compared to GPs: “*In some cases the lower cost of the PA is offset by longer consultation times and a lower volume of activity; in other cases the cost-effectiveness of the PA is compelling.*”⁵ A case study of a single PA employed in a cardiology team estimated that the income generated by the PA seeing referrals to the heart failure team, on behalf of the consultant could lead to a potential increase of income of £80,000 brought into the trust, as well as reducing patient waiting times.¹⁷

The NIHR funded multi-methods study reported a number of impacts on efficiency. It found that after adjusting for covariates, the average patient consultation with a PA was 5.8 minutes longer than with a GP. However, despite longer consultations, PAs were found to be cheaper on average than a GP: “*Consultation costs were £34.36 for GPs and £28.14 for PAs. Although we were not able to cost the supervising of a PA for GPs, we report for the first time that consultation costs were £6.22 lower with a PA than with a GP.*” The study concluded that as there were no significant differences in referral rates to other professionals or for diagnostic tests, the “*impact of PA consultations on the wider health system was the same as GP consultations for the same patient case mix.*” The study also noted that primary care practices were deploying the PAs by undertaking activities under Quality and Outcomes Framework which maximised income.¹⁸

Patient-centred

Evidence showed that patients were satisfied with their experience of a PA and would be happy to consult a PA again.^{5,18,24,25} The evaluation of US-trained PAs in the West Midlands reflected that the focus on dealing with individual patient needs, communication skills and proactive sharing of information “*successfully facilitate patient-centred care.*”²⁵

Timeliness

An impact on timeliness through increased capacity was noted in some studies. In one study, most of the participating GP practices with PAs saw increases in the number of registered people for whom a practice provides care by between 2.4%–5.3% in the first year.²⁶ Another study anticipated reduced waiting times, but did not quantify this.¹⁷

Equity

Evidence does not address equity of patient care, although one study reported no indications that employing PAs in a GP surgery was not equitable.¹⁷

Other impacts

PAs were found to provide patients with improved continuity of care, as they tended to remain in post longer than rotating junior doctors.^{17,24} Initial wariness of the new PA role from other staff was reported, including some distrust from junior doctors and practice nurses.²⁵ PAs were able to contribute to training and development of other staff and also provide ‘cover’ and therefore opportunities for trainees to undertake learning activities,^{26,27} but the static nature of the PA roles means there is a lack of structured career opportunities for them.²²

In summary ...

- There are still small numbers of PAs actually in practice in the UK, although the recent expansion of training places should increase the flow over the next few years.
- PAs were found to be as safe and as effective as the roles they substituted.
- Patients were on the whole satisfied with being treated by a PA and the general response from other team members was positive despite some initial wariness.
- Evidence suggests that PAs provided a cost effective alternative role in both primary and secondary care, offering a means to expand capacity and improve continuity of care as well as provide training support and opportunities for junior doctors.
- However the scope of PAs’ practice and therefore their ability to fully reach their potential was felt to be limited by their lack of prescribing authority. This may be addressed, but the process for expanding prescribing responsibilities can take a number of years.

Summary of evidence of impact on quality: Physician Associates

Domains of quality	Impact
Safe	<ul style="list-style-type: none"> Limited evidence, but found to be safe
Effective	<ul style="list-style-type: none"> No significant difference in re-consultation rate or rates of process outcomes (procedures, referrals, issuing of prescriptions) between patients who have consulted a PA or GP Better documentation Limited by lack of authority to prescribe
Efficient	<ul style="list-style-type: none"> Some evidence showed that consultations with PAs took longer and they often saw less complex cases Evidence was not able to calculate the costs GPs spending time supervising PAs and authorising prescriptions on their behalf. Overall the evidence pointed to the benefits of employing PAs outweighing the costs
Patient-centred	<ul style="list-style-type: none"> Patients were satisfied with being treated by a PA and would consult a PA again
Timely	<ul style="list-style-type: none"> One study suggest that the effect on increased capacity may have impact on waiting times, but this was not quantified
Equity	<ul style="list-style-type: none"> No evidence seen
Strength of evidence	<ul style="list-style-type: none"> Secure starting point, but more research needed as role evolves Evidence reviewed drawn from 14 studies
Funding	<ul style="list-style-type: none"> HEE providing some funded training places on approved PA courses

	Strong impact		Some impact		Mixed impact
	No impact		Possible negative impact		No evidence

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