Research & physician associates – building the evidence base and the physician associate researchers

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Disclaimer: this presentation draws on NIHR and NHS funded research (2009-present) – the views presented are those of the researchers not the NHS, NIHR or Department of Health.
In this presentation:

- Building the evidence base
- Building PAs’ research questions
- Building PA as researchers
Introductions

• Something about you:
  • Hands up
    • Are you a student PA?
    • In your first job as a PA?
    • Are you working or studying in Scotland,
      • Wales?
      • Northern Ireland?
  • Is your first degree in a social science or a professional qualification?
  • Is your first degree in a natural or biomedical science (s)?
Different types of research questions about health, well-being, illness, health care and public health

• Questions about people and society,
• Questions about technologies,
• Questions about organisation and processes ,
• Questions of finance,
• Questions on dimensions of : acceptability , appropriateness, equity (fairness) , efficiency, effectiveness, and safety . (Donabedian 1966,1988)

Some of the questions I am interested in:

• Workforce in health and social care provision,
  • All countries are challenged to having a sustainable health professional workforce, in the places that they are needed, undertaking the (changing) work that the health care system requires and within the finance the health care system can afford,
  • Key policy strategies: re-shaping health care workforce, re-skilling health care workforce, upskilling and engaging public/patients/carers to undertake self-health care. (e.g. World Health Organisation 2014)

• What works, for who and in what context? i.e. questions/methods of realist evaluation (Pawson and Tilley 1997),

Building the evidence base about PAs in the UK: pilot projects

Evaluation of physician assistants in National Health Service Scotland

Abstract
Physician assistants (PAs) have medical training and work supervised by a doctor. In 2008-2008 the Scottish Government piloted use of USA-trained PAs. The aim of the paper is to evaluate the impact and contribution made by PAs to delivering effective health care in National Health Service (NHS) Scotland. Mixed methods, longitudinally, including interviews, feedback forms and activity data collection. Data analysis used nVivo, SPSS and Excel. Participants were 15 USA-trained PAs, medical supervisors and team members, 20 patients, four NHS senior managers and three trade union representatives. Settings were four Scottish NHS boards where PAs worked in primary care, out of hours clinics, emergency medicine, intermediate care and orthopaedics. Two minor patient safety issues arose. Patients were satisfied with PAs. Scope of practice did not replicate US working. Inability to prescribe was a hindrance. PAs tended to have longer consultations, but provided continuity and an educational resource. They were assessed to be mid-level practitioners approximating to nurse practitioner or generalist doctor. Valued features were generalism, medical background, confidence, differential diagnosis and communication. Interviewees suggested PAs could fulfil roles currently filled by medical staff, potentially saving resources. In conclusion, there is potential for PAs to fulfil distinctive mid-level roles in the Scottish NHS adding value in continuity, communication and medical approach.

Evaluation of US-trained Physician Assistants working in the NHS in England

The introduction of US-trained Physician Assistants to Primary Care and Accident and Emergency departments in Sandwell and Birmingham

Final report

Juliet Woodin
Hugh McLeod
Richard McManus*

General Practice Observed

Attachment of a physician’s assistant to an English general practice

B L E C REEDY, T I STEWART, J B QUICK

Summary and conclusions
A final-year student from the physician’s associate programme at Duke University in North Carolina, USA, worked in an English health centre for eight weeks between May and July. He managed 221 cases under supervision, and they were typical in terms of sex ratio, diagnosis, and the preponderance of children. Current social and economic trends in Britain suggest that selective under-doctoring, especially in inner urban areas, may become acute, and a type of physician’s assistant specially selected and trained for the work in areas with serious and unusual problems should be considered as among the possible, even desirable, solutions.

At Duke University students receive two years’ training in basic and clinical science, including history-taking, physical examination and practical procedures. A problem-solving approach using the subjective, objective assessment and plan (SOAP) system enables them on graduation to “… assume many of the diagnostic, therapeutic, and administrative responsibilities traditionally performed only by the physician … to integrate and interpret findings on the basis of general medical knowledge, and to exercise a degree of independent judgment.”

All prospective physician’s assistants must have had one year’s health-related experience before training, and this student had worked as a hospital emergency technician for two years with six months in a public health department. As a former mountaineering instructor he had also had experience in triage and medical care and had worked in two family practices in America. This experience and training was relevant to his work in an English health centre practice.
Theories of diffusion/adoPTION OF innovation in health care: its not linear!

1985 for the first time the Department of Health and Social Security issues guidelines asking health authorities to introduce smoking policies in all NHS premises (Source ASH http://ash.org.uk/information-and-resources/briefings/key-dates-in-the-history-of-anti-tobacco-campaigning/)

Physician assistants in English general practice: A qualitative study of employers' viewpoints

Vari Drennan, Ros Levenson, Mary Halter, more...

First Published April 1, 2011 | Research Article | Check for updates

https://doi.org/10.1258/jhsrp.2010.010061

Abstract

Objective:

Effective use of staff is a major aim in all health-care systems both to maximize their impact and to minimize costs. In England, a few general practitioners (GPs) have been recruiting physician assistants (PAs) to work in their practices, independent of any pilot schemes. Our objective was to study the motivation of GPs and practice managers who employed PAs and to understand the factors that sustained their employment.

Methods:

A qualitative study using semi-structured interviews, analysed thematically, was carried out with 13 GPs and three practice managers from 15 general practices employing PAs in five areas of England.
If PAs are substituting for another health professional and/or complimenting the work of another health professionals, are PAs:

- **Acceptable** to a range of stakeholders including patients and the public?
- **Appropriate** to provide that health care?
- **Providing equitable** health care (or are some parts of the population treated inequitably)?
- **Efficient** in the care they provide, and contribute to the efficiency of their team/service?
- **Logic effective and cost effective**?
- **Safe**?
Building the evidence base: step one - synthesis of evidence and gap analysis

The contribution of Physician Assistants in primary care: a systematic review

Mary Halter, Yari Drennan, Kaushik Chattopadhyay, Wilfred Carneiro, Jennifer Yiallouros, Simon de Lusignan, Heather Gage, Jonathan Gabe and Robert Grant

BMC Health Services Research 2013 13:223

Received: 17 September 2012 Accepted: 5 June 2013 Published: 18 June 2013

**Step two – address the gap in evidence**


Building an evidence base for the primary care workforce

BMJ 2018; 360 doi: https://doi.org/10.1136/bmj.k3248 (Published 25 January 2018)
Cite this as: BMJ 2018;360:k3248

Varad M Brennan, professor of healthcare and policy research, 1
Simon de Lusignan, professor of primary care and clinical informatics, 2 Heather Gage, professor of health economics, 2 Jon Gabe, professor of sociology, 2 Mary Halter, associate professor 2

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patients' experiences of consultations with physician associates
in primary care in England: A qualitative study

Mary Halter PhD, Varli M. Drennan PhD RN, Louise M. Joly PhD, Jonathan Gabe PhD, Heather Gage PhD, Simon de Lusignan MD

First published: 21 April 2017 | https://doi.org/10.1111/hex.12542 | Cited by: 1

Building an evidence base for the effects of different types of staff in general practice is challenging and takes time. McCartney is right to say that no evidence shows that physician associates make a difference to clinician stress and burnout. 1 But more evidence is available than she suggests, which may be important at a time of considerable vacancies for general practitioners and practice nurses.

We found that physician associates were safely attending a younger, less complex group of patients than GPs. 2 These were patients requesting same day or urgent appointments with problems classified mainly as minor and self limiting. Surveyed patients reported high levels of satisfaction with their consultations with both physician associates and GPs. Interviewed patients reported willingness to consult a physician associate, contingent on their assessment of the severity of the problem and desire for provider continuity.

McCartney expressed concern that physician associates might interrupt a GP for prescription signature. We found that this was done in ways to avoid interrupting.

Finally, our interviews with GPs (some employing physician associates and some not) found two viewpoints on how to best manage clinical workload and to deploy staff in general practice. 3 One view was that “doctor first” — whereby the GP attends all patients and then delegates activities to members of the team — was the most efficient. Others thought that GPs should attend the more complex patients and those with medically acute problems, while other team members, with supervisory support, attended those with more minor, self limiting problems.

Our research indicates that physician associates can contribute safely to skilled general practice teams. As such they have the potential to be an asset to the primary care workforce in the face of doctor shortages, increasing demand, and financial stringency.
PAs as researchers:
The example of Charlotte Scott-Wilson PA, PA ambassador for the HEE West Midlands
Presented at the one day conference “Physician Associates in the Health Care Workforce: designing a research agenda for the coming decade” July 13th 2018

Rising to the challenge from GPs –
“ What could a PA do in my practice, how many patients could a PA see in a session, how many get referred back to the GP, how many patients does the PA have to consult the GP about etc. etc.?”

Charlotte went away and engaged the practice manager to help run the queries on her practice’s database – So not only has she the answers to the GPs’ questions, she’s telling other PAs how to gather the data. I’m looking forward to the publication of this evidence
A report will be published by the organisers later this year.
Letter in response from
Sam Roberts, Laura Stroud and Helen E Millott
Br J Gen Pract 2018; 68 (666): 15. DOI: https://doi.org/10.3399/bjgp17X694061

Since the establishment of secondary care roles for physician associates within the two local trusts, we have observed unprecedented interest from secondary care, with almost all trusts in our area planning to create roles for physician associates. We hope that we will see this process replicated in primary care and that, by developing ‘pioneer programmes’ to introduce physician associates to the primary care workforce within our region, we can demonstrate to the rest of our general practice colleagues how the barriers to physician associate integration can be managed and that physician associates themselves can become the facilitators of a dynamic, sustainable general practice workforce for the future.
Building the evidence base for PAs in secondary care: importance of published case examples

Building the evidence base for PAs in secondary care in the NHS:

• I am drawing on evidence from two funded studies that I have led over the last 3 years,

• This has included gathering evidence from 14 NHS acute trusts in England,

• 85+ PAs have supported these two studies and participated in some way – thank you all.
The first NIHR funded study is PA-SCER

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

Project title: Investigating the contribution of physician associates (PAs) to secondary care in England: a mixed methods study

Call to action: 14/19 HS&DR Follow-on Studies

Research type: Primary Research

Chief investigator: Professor Varinder Drennan

Contractor: Kingston University

Cost: £483,778.00

Co-investigators: Dr Mary Haller, Mr James Ennis, Mr Robert Grant, Ms Sally Breslin, Professor Heather Gage, Professor Jim Parle, Professor Jonathan Gabe, Professor Phillip Begg, Professor Simon de Lisguin.

Started: October 2015 | Status: Waiting to publish

PROSPERO registration: CRD42016032895

Website: http://pa-scer.info/

Twitter: @pa_scer
The evaluation of the National Physician Associates Programme (NPAEP) (2016-2018)

- Recruitment of experienced US PAs to 8 NHS trusts in England for two years.
PA-SCER: Mixed methods, multi-phase study design

Evidence at the level of the health care system

Survey of Medical Directors  | Survey of PAs working in hospitals  | Systematic review of research evidence

Evidence from the operational level: 6 hospitals (Trusts) employing PAs

PA work & experience  | Patient perspectives  | PA, clinician and managers views  | Strategic leaders perspectives  | Comparison of PA & FY2 Dr consultations in Emergency Dept.
Halter M, Wheeler C, Pelone F, Gage H, de Lusignan S, Parle J, Grant R, Gabe J, Nice L, Drennan VM.
Extract from the abstract

Results: 5472 references were identified and 161 read in full; 16 were included—emergency medicine (7), trauma and orthopaedics (6), acute internal medicine (2), mental health (1) and care of the elderly (0). All studies were observational, with variable methodological quality. In emergency medicine and in trauma and orthopaedics, when PAs are added to teams, reduced waiting and process times, lower charges, equivalent readmission rate and good acceptability to staff and patients are reported. Analgesia prescribing, operative complications and mortality outcomes were variable. In internal medicine outcomes of care provided by PAs and doctors were equivalent.

Conclusions: PAs have been deployed to increase the capacity of a team, enabling gains in waiting time, throughput, continuity and medical cover. When PAs were compared with medical staff, reassuringly there was little or no negative effect on health outcomes or cost. The difficulty of attributing cause and effect in complex systems where work is organised in teams is highlighted. Further rigorous evaluation is required to address the complexity of the PA role, reporting on more than one setting, and including comparison between PAs and roles for which they are substituting.
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.

Thank you to all who responded!

- 63 PAs working in secondary care in England responded to the survey (33 specialities)
- We asked questions about work environment – avoiding duplication with FPA census
- We asked “which other professionals are in the team you work in?” (missing data =8)

<table>
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<tr>
<th>Consultant(s)</th>
<th>Specialty training doctor(s)</th>
<th>Non-training doctor(s)</th>
<th>Foundation programme doctor(s)</th>
<th>Physician associate(s)</th>
<th>Clinical nurse specialist(s)</th>
<th>Other healthcare professional(s)</th>
<th>Number of PAs</th>
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Evidence from the operational level: 6 hospitals (Trusts) employing PAs

<table>
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<tr>
<th>PA work &amp; experience</th>
<th>Patient perspectives</th>
<th>PA, clinician and managers views</th>
<th>Strategic leaders perspectives</th>
<th>Comparison of PA &amp; FY2 Dr consultations in Emergency Dept.</th>
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</thead>
<tbody>
<tr>
<td>Observations and work logs</td>
<td>Requested routine data @ service /patient level</td>
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### PA-SCER The interview data

<table>
<thead>
<tr>
<th>Type of participant</th>
<th>Number interviewed</th>
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<tbody>
<tr>
<td>Executive level managers and clinicians</td>
<td>18</td>
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<tr>
<td>PAs</td>
<td>41</td>
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<tr>
<td>Patients and relatives</td>
<td>28</td>
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<tr>
<td>Consultants (including those with lead responsibilities for PAs)</td>
<td>24</td>
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<tr>
<td>Junior doctors</td>
<td>17</td>
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<td>Operational managers</td>
<td>11</td>
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<tr>
<td>Nurses</td>
<td>28</td>
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<td>Other types of staff e.g. allied health professions</td>
<td>8</td>
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<td>Total</td>
<td>175</td>
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</table>
PA-SCER Factors influencing decisions to employ PAs

1. A decrease in the availability of junior doctors with a consequent over-reliance on locum doctors to cover medical shifts with attendant concerns about cost and safety,

2. Junior doctors not being able to undertake their training activities as they were being diverted to cover service rota gaps – an issue that had been the subject of a Deanery review in one hospital,

3. An increase in patient workload and consequent challenges in ensuring sufficient doctors available to cover the in-patient wards,

4. A need to improve the quality of care, this included the necessity to improve the quality performance of hospital as assessed by the Care Quality Commission (CQC).
From all stakeholders: PAs make a positive contribution and are safe.
Patients’ and carers’ perspectives

Source https://unsplash.com/
Positive contributions in detail and the caveats
(NB Publications forthcoming)

Source https://unsplash.com/
Junior doctors and PAs

Source https://unsplash.com/
Comparative outcomes and patient safety

• Pragmatic retrospective record review of patients attending 3 EDs with first attending clinician a PA or a Foundation Year Two Doctor.

• Stratified randomised sample from over 16 week rotation

• Primary outcome as a proxy for safety – return to same ED within 7 days,

(publication forthcoming )
Quantifying the impact and costs

Source https://unsplash.com/
If PAs are substituting for another health professional and/or complimenting the work of another health professionals, are PAs:

- Acceptable to a range of stakeholders including patients and the public?
- Appropriate to provide that health care?
- Providing equitable health care (or are some parts of the population treated inequitably)?
- Efficient in the care they provide, and contribute to the efficiency of their team/service?
- Logically effective and cost effective?
- Safe?

**PA-SCER & the NPAEP evaluation** offers some of the answers at a point where PAs were a small innovation in the workforce, which is set to change.

Next era of research requires

a) step wedge designs in single specialties or comparative teams with/without PAs in more than one site e.g. Timmermans et al. study in the Netherlands,

b) PA researchers.

PAs and roles in research – some examples:

• Developing critical appraisal skills for interpreting published research,
• Learning about research methods and how to conduct research,
• Active involvement in clinical research e.g. consenting patients, data collection,
• Active involvement in observational and audit types of inquiries,
• Active dissemination through co-authoring posters and publications,
• Being a co-applicant in a research team bidding for funding,
• Developing research questions and seeking funding to answer those,
• Developing research leadership skills and a programme of research.

Source: Claire Lawrence PA, twitter account
SAM Conference 2017
New funding call

Clinical Research Time Awards will open on 10 September 2018

New call for Clinical Research Time Award applications

13 August 2018

Examples of UK country specific sources of support for developing clinical research skills

http://www.nhsresearchscotland.org.uk/education-and-funding/fellowships

Clinical Academic Careers Framework

HEE/NIHR Integrated Clinical Academic Programme *
(all healthcare professionals outside of doctors and dentists)

1. Internships (HEE funded and managed)
2. Pre-doctoral Clinical Academic Fellowship (HEE funded/NIHR managed)
3. Clinical Doctoral Research Fellowship (HEE funded/NIHR managed)
4. Clinical Lectureships (HEE funded/NIHR managed)
5. Senior Clinical Lectureships (HEE funded/NIHR managed)

Award holders will be provided with informal or formal mentorship opportunities and supervised to specific quality standards

EEE Clinical Academic Careers Framework

Appendix A

Eligible professions for the HEE Integrated Clinical Academic Programme

Applicants to the HEE/NIHR ICA Programme must belong to one of the following healthcare professions and hold registration with the listed professional body/council by the proposed award start date:

https://www.hee.nhs.uk/our-work/clinical-academic-careers
In this presentation I aimed to cover aspects of:

- Building the evidence base
- Building PAs’ research questions
- Building PA as researchers

How did I do?
Questions? Observations?
Thank you for listening
Contact
v.drennan@sgul.kingston.ac.uk
Happy to be invited to present where you are – email me.
References for published PA research led by Vari Drennan

Primary care


References for published PA research led by Vari Drennan

Secondary care

PA-SCER (see also the website http://pa-scuer.info/ and the NIHR website https://www.journalslibrary.nihr.ac.uk/programmes/hsdr/141926/#/)


NPAEP Evaluation


Contact v.drennan@sgul.Kingston.ac.uk for further details