Barriers and facilitators of introducing new non-medical practitioners into the general practice workforce: a scoping review.

The general practice team of general practitioners and practice nurses is not increasing quickly enough to meet patient demand. One of the proposed new care models is the inclusion of new non-medical practitioners. New non-medical practitioners are healthcare workers who perform duties like those of a general practitioner. In general practice, clinical pharmacists (CP), physician associates (PA), advanced nurse practitioners (ANP), paramedic practitioners (PP), advanced clinical practitioners (ACP), and first contact physiotherapists (FCP) are some examples.

This review's purpose is to summarise what is known about incorporating new non-medical practitioners into general practice.

Keywords: general practice; interprofessional practice; advance practice

Introduction

The number of personnel entering general practice has not been sufficient to match those leaving the profession. Over 30% of GPN (General Practice Nurse) and GP (General Practitioner) surveyed aimed to retire by 2020 (Dale et al 2015; The Queens Nursing Institute, 2016). In addition, general practice has remained a difficult speciality to recruit into when compared to other specialities (IPSOS Public affairs 2016; Centre for Workforce Intelligence, 2014). Hobbs et al (2016) and Dale et al (2016) noted that GP workload is progressively increasing. More recently, the British Medical Association (2020) found that GPs reported a 50% increase in patient contact, and a significant increase in the length of contacts.

According to Nelson et al (2019) the general practice team is evolving to meet the needs of a complex population, specifically with the introduction of new non-medical

practitioners. Abrahams et al (2016) defines, non-medical practitioners as clinicians who work in an extended or advanced scope of care; and do tasks which were traditionally done by GPs. This description of non-medical practitioners is used consistently in research in this area (Imison et al 2016; Sujan et al 2017; Pearce & Breen, 2018; Nelson et al 2019; Abraham et al 2019; Lyness et al 2021). Authors such as Imison et al (2016) and Pearce and Breen (2018) define advanced practice as practice which required masters level education. This distinction is not consistent in the literature. For example, the Royal College of Nursing recognises that some nurses work at an advanced level without a full master's degree and provide a voluntary credentialling service to legitimise this (Royal College of Nursing, 2022). In addition, in England there is no statutory distinction made between advance and extended practice. Therefore, no distinction was made between advanced and extend scope within this review.

In 2019, the NHS published the new primary care network contract, directed enhanced service (DES): ARRS (Additional roles reimbursement scheme). The ARRS provides financial incentive to primary care networks (PCN) who employ additional staff including some new non-medical practitioners. The ARRS is the only incentive that has streamlined the simultaneous introduction of multiple professional groups into general practice. Prior to the ARRS, there was no initiative which facilitated the simultaneous integration of multiple non-medical practitioners in general practice at scale. For reference, the ARRS includes several non-medical professional groups, however they do not all meet Abrahams et al (2016) definition of non-medical practitioners. The professionals included in the ARRS and meet this definition are PA, CP, FCP and PP. While ANP and ACP meet Abrahams et al (2016) definition, however, are not part of the ARRS.

PCNs are a collection of individual practices sharing resources to meet the primary care needs of roughly 30-50000 people (Baird & Beech, 2020). The geographically determined PCNs are expected to recruit and retain more staff than before, with the help of additional £891 million investment in 2023 (NHS England, 2019). Pettigrew et al (2020) acknowledged that the financial support is welcome, however it does not guarantee that additional staff groups will be permanently recruited into the workforce. ARRS is at significant cost to the taxpayers. Sustainability is paramount to accessible primary healthcare in England. It is pertinent to investigate how new non-medical practitioners are integrated into the general practice team.

Aim

To complete a scoping review identifying published resources which report on the barriers and facilitators to integrating new non-medical practitioners into general practice in England.

Objectives

- To gather and review literature regarding new non-medical practitioners in general practice.
- To report findings of literature regarding barriers and facilitators to integrating new non-medical practitioners into general practice in England.
- To use the themes uncovered to make recommendations for future research.

Methodology

Rationale for a scoping review

For this review, the seminal protocol by Arksey and O'Malley (2005) was used, as it has been used successfully in similar scoping reviews (Martin-Misener et al 2016; Torrens et al 2019). The aim of this review is not to answer a specific question related to efficacy, nor is it to appraise the literature. Instead, this review will identify and scope the literature on a broad topic and present them in themes. The themes can inform further analysis.

As evidence is still emerging about new non-medical practitioners in general practice, it is unclear precisely what question to pose, a scoping review is most appropriate.

Table 1.1 A table outlining the key words and how they were used in the search process.				
Population: new non-medical practitioner		**Concept: integration**		**Context: general practice**
" non-medical practitioner*" "new non-medical practitioners" new non-medical practitioner*""new non-medical practitioner*"		Integrate*		general practice, GP.
OR	AND	OR	AND	OR
"Advance Nurse Practitioner", "Nurse Practitioner", ANP. advanced practice nurs*		work*		"primary care", "primary healthcare "
OR		OR		OR
"Advance Clinical Practitioners", A*P, "advanced clinical practice"		career*		Community
OR		OR		OR
"Physician* Associate", "Physician* Assistant", PA, "Associate Practitioner" medical associate role		employ*		first contact
OR		OR		OR
ANP **Pharmacist*, "Clinical Pharmacist"**		Appl*		First contact
OR		OR		OR
Physiotherapist, "physical therapist*" Physio physiotherapy "physical therapy"		Position		
OR				

Paramedic, “paramedic practitioners", paramed*				

Identifying the review question

What is known about the barriers and facilitators to integrating new non-medical practitioners into general practice in England since 2018?

Table 1.2 A table detailing the inclusion and exclusion criteria for the scoping review.		
	Inclusion	Exclusion
Population	ANP, PA, ACP, CP, FCP and PP	Studies which do not include ANP, PA-r, ACP, CP and FCP as their population
Concept	Studies must be referencing the populations' integration/ introduction. Studies should be looking at the barriers of facilitators to their introduction or integration.	Studies should not be investigating other aspects such as their competence, or ability to work in general practice. Studies pertaining to a specific patient group, health problem were excluded.
Context	General practice team	Studies pertaining to their introduction into secondary and tertiary care were excluded. Studies that looked at other primary care context that are not general practice were excluded.
Language	English	Papers not written in English.
Dates	April 2018 onward	Before April 2018
Country	England	Papers written outside of England.

Identifying relevant studies

Electronic database search

Firsly, The Cumulative Index to Nursing and Allied Health Literature (CINAHL). Secondly, MEDLINE Complete was searched (see Table 1.1).

Study selection

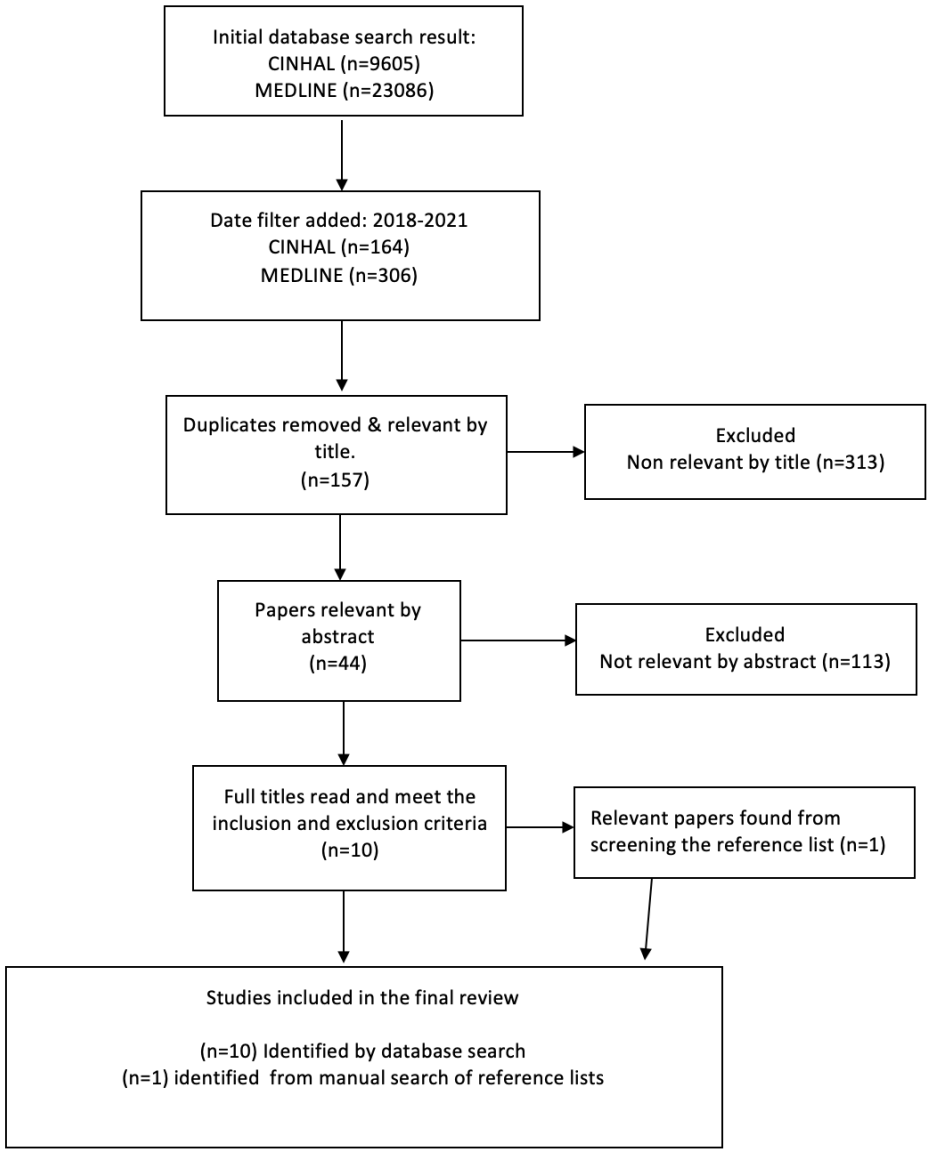
The full study selection process is outlined in Figure 1.1.

Rationale for study selection criteria

Papers were included if published from 2018 to present, this date was chosen to reflect the most significant policy and educational changes affecting the new non-medical practitioners (see Table 1.2) (Health Education England, 2017; Health Education England, 2020; NHS, 2019; Baird & Beech, 2020). Only papers discussing new non-medical practitioners' integration into general practice were included. This decision was made due to the unique workforce challenge which general practice faces. In addition, their introduction into general practice is somewhat novel (NSH, 2020), because general practice is undergoing a structural change. In England practices are developing into PCNs (Baird & Beech, 2020). Many of the additional staff will be allocated to a PCN rather than hired directly by the surgery (NHS, 2019) and this peripatetic practitioner model is new to general practice.

Although there is evidence of new non-medical practitioners working outside England, the health systems differ significantly (Martin-Misner, 2016; Torrens et al 2019; Freund et al 2015). Papers referencing this topic in the devolved nations were also excluded. According to Bevan et al (2017) since the 1990s healthcare has been the responsibility of each nation of the United Kingdom (England, Wales, Ireland, and Northern Ireland), therefore, only papers referencing England were included.

Figure 1.1 A diagram outlining the full study selection process.



Charting the data

The data extraction tool headings were guided by Arksey and O'Malley's (2005) original paper and revised to meet the aims of this review.

Collating, summarising, and reporting the results.

A narrative synthesis of the results was devised and presented in themes. The themes were derived from the literature, rather than prior to the review.

Results

From the 11 papers, four papers were published in 2018, one paper in 2019 and the remaining papers were published in 2020. There were no relevant papers identified published in 2021. Table 1.3 outlines the professional groups included in this review.

From the papers included, three were funded by Health Education England, two by National Institute of Health Research, one by the local clinical commissioning group and the rest disclosed no specific funding arrangements.

Table 1.3. A table outlining the new non medical practitioners included in the review.

Physician Associates	Clinical Pharmacist	Physiotherapist	Advanced Clinical Practitioners	Advanced Nurse Practitioners	Paramedics	Multiple
Nelson et al (2019)*	Nabhani-Gebara et al (2020)	Moffatt et al (2018)	Evans et al (2020)+		Schofield et al (2020)	Nelson et al (2019)
	Ryan et al (2018)	Goodwin et al (2020)	Hook and Walker (2020)+			
	Marques et al (2018)	Igwesi- Chidobe et al (2020)	Thompson et al (2018)+			
	Nelson et al (2019)*		Nelson et al(2019)*			

***= The same paper included multiple new non-medical practitioners.**

+= ACP from a nursing background previously/also known as ANP

Theme 1: Reduced GP numbers as a facilitator.

Every paper included in the review, cited the decline in the rate of GPs as the biggest incentive for employing pharmacists (Marques et al 2018; Nelson et al 2019; Ryan et al 2018; Nabhani-Gebera, 2020), physician associates (Nelson et al 2019), ACP (Thompson et al 2018; Nelson et al 2019; Evans et al 2020; Hook & Walker 2020), paramedics (Schofield et al 2020) and first contact physiotherapists (Moffatt et al 2018; Goodwin et al 2020; Igwesi-Chidobe et al 2020). Evans et al (2020) conducted a qualitative study into the implementation of nurse ACP in the East Midlands, which included ACP, GP, and practice managers (PM) as part of the sample. The East Midland was chosen as it was a Health Education England, East Midland commissioned and funded project. Evans et al (2020) revealed that the 'dwindling' number of GPs was one of the motivations for implementing ACP. In fact, the PM and GP emphasised that their inability to employ and retain GPs had *'forced them into it'* (Evans et al 2020) pp.6.

Hook and Walker (2020) conducted semi-structured interviews with ACP, line managers and one non-ACP. Hook and Walker (2020) aimed to understand the barriers and facilitators to implementation of ACPs in the East of England. The findings revealed that the inability to fill the role with GPs was the primary driver for introducing the ACP. The reducing GP numbers, were consistently reported as a key factor by participants who identified their role as GPs or PM.

There is a sense that new non-medical practitioners are being introduced to serve the general practice workforce crisis rather than coming in to provide additional or varied

skills. Notably, Schofield et al (2020) explored the deployment of paramedics in general practice by conducting a three-phase study. The study had 165 responses, which ranged from paramedics, GP, PM, nurses, and pharmacists. This study confirmed what had already been outlined by Evans et al. (2020) and Hook and Walker (2020). Uniquely, Schofield et al (2020) found that practice staff had considered hiring paramedics due to the shortage of GPs, rather than on paramedics varied skill set. Nabhani-Gebara et al (2020) study reviewed the role of pharmacists in England via case studies and in-depth reviews and found similar results. From the perspective of the existing workforce, the introduction of additional roles is to plug the gap in the medical and nursing workforce.

Theme 2: Reduced GP numbers as a barrier.

The ACP (nurses) interviewed by Evans et al (2020) viewed general practice as a potential area for career progression. Similarly, Nabhani-Gebara et al (2020) and Ryan et al (2018) found that pharmacists perceived general practice as an opportunity for more patient contact. Increased scope of practice as a facilitator, was also reported among FCP (Moffatt et al 2018).

The motivators for introducing ACP were different depending on which stakeholder was interviewed. This discrepancy between the drivers for the service and the drivers for those recruited was directly acknowledged by Evans et al (2020). Evans et al (2020) described this as '*divergent agendas*'. Although not explicitly identified by other authors, individual participants within their studies acknowledged this diverging of agendas. Some participants went further and rejected the idea that they were replacing the GP role:

> *'I don't like the thought that nurse clinicians or ACPs are a cheap option of a GP because I believe that we bring a completely different way of working to our role…'*

ACP Evans et al 2020 pp.7

A similar sentiment was shared by another participant in a different study:

'I see it as a role as a mega-nurse, not a mini-medic'
Hook and Walker, 2020, pp.866

Insufficient GPs provide a tangible gap that can be filled by other disciplines within general practice. However, some rebuff the notion that their role is primarily to fill this gap:

'I don't see it as a medical substitution… We're here to complement and build the workforce'
Hook and Walker, 2020, pp866

Thomson et al (2020) found that ACPs perceived the lack of GP colleagues as a barrier to seeking employment in general practice rather than an opportunity. In the real-world of practice, ACPs identified that this may affect how they are utilised. The lack of GPs also provided practical problems, two studies discovered that the shortage of GP meant that there was scarcity of appropriate supervision and mentoring available to them (Evans et al 2020; Nabhani-Genera et al 2020).

The shrinking of GP personnel has opened new opportunities for practice managers and GPs to consider alternative roles as part of the general practice team. However, this is not a facilitator for attracting and retaining new non-medical practitioners. Indeed, in the longer term the challenges with GP recruitment and retainment are more likely to be a barrier to meaningful integration/retention of new non-medical practitioners.

Theme 3: lack of familiarity with the role as a barrier.

All 11 papers identified that existing members of staff in general practice reported a limited awareness of the role of an ACP, FCP, PA, PP and CP. Thompson et al (2020); Evans et al (2020); Hook and Walker (2020), revealed a consistent concern with the paucity of knowledge regarding the educational requirements needed to become an ACP. Indeed, similar concerns were raised regarding the qualifications of pharmacists (Ryan et al 2018) and paramedics (Schofield et al 2020).

For roles traditionally associated with specialised functions, such as pharmacists (Ryan et al 2018; Nebari-Gebara et al 2020) and physiotherapy (Moffatt et al 2018; Igwesi-Chidobe et al 2020) there weas uncertainty about the broader scope of these roles among the wider general practice team. The three studies that included administrative staff members (Moffatt et al 2018; Ryan et al 2018; Goodwin et al 2020), suggest poor education regarding the function, purpose, and expertise of these roles (Igwesi-Chidobe et al 2020). Therefore, some administrative staff did not feel empowered to signpost patients towards them (Goodwin et al 2020).

In the five studies that included patients in the sample, the data demonstrated a consistent knowledge gap about the new non-medical practitioner roles. Nabhani-Gebera et al (2020) and Ryan et al (2018) highlighted that some patients did not know they were seeing a pharmacist and assumed that they had consulted a GP. Where patients had prior *knowledge* of a role, it was difficult for them to understand it in the context of general practice, especially in roles that already exist in the NHS such as physiotherapy. Goodwin et al (2018) and Igwesi-Chidobe et al (2020) found that it was more difficult for patients to understand the role of the first contact physiotherapist in primary care; patients did not see diagnosis as a remit of a physiotherapists' role. Nelson et al (2020) also found, over familiarity with the role may hinder innovation and

implementation into general practice. None of the 11 studies included a sample beyond the confines of the general practice setting, this may have provided insight into interorganisational acceptance of new non-medical practitioners. A notable omission is the lack of GP registrar representation in the studies.

Theme 4: Blurred professional boundaries as a barrier.

All 11 studies discussed skill mix changes and teamwork. The introduction of new non-medical practitioners in general practice best resembles transdisciplinary model of healthcare, which can be defined as healthcare professionals sharing knowledge, skills to meet the patient's needs (NHS, 2021). All 11 papers noted that the blurring of professional boundaries as a barrier. Moffatt et al (2018) and Schofield et al (2020) uncovered that having specific members of staff undertaking certain aspects of the GP role produces unintended consequences. For example, some GPs felt that this contributed to increased complexity of their work; GPs felt that more straightforward work was being directed away from GPs and toward new non-medical practitioners.

The absence of distinct boundaries was identified as a barrier by ACPs in Thompson et al (2020) study. Five studies mentioned the hierarchy in GP (Moffatt et al 2018; Ryan et al 2018; Nelson et al 2019; Goodwin et al 2020; Nabhani-Gebara et al 2020). Goodwin et al (2020) outlined how GPs are seen as the default practitioners. Nelson et al (2019) conducted the only study which investigated the implementation of ACP, CP, and PA. This unique study showed that there is potential for interprofessional tensions among the new non-medical practitioners themselves. The use of hierarchal terms to describe each group was common, such as the clinical skills of physician associates are positioned *between* those of a nurse and doctor.

In studies that included new non-medical practitioners that are seen to have specialist

knowledge, for example pharmacists (Marques et al 2018; Ryan et al 2018) and physiotherapists (Igwesi-Chidobe, 2020; Moffatt et al 2018), deskilling is noted as a concern in the general practice environment. For example, by removing one aspect of the GPs role and giving it to another practitioner. It would have been interesting at this point to have some insight from doctors training to become GPs.

Those team members who were perceived to have more generalist roles such as paramedics (Schofield et al 2020), ACP (Evans et al 2020; Hook & Walker, 2020, Thompson et al 2018) and physician associates (Nelson et al 2019) highlighted blurred boundaries as a barrier to integration. Hook and Walker (2020) identified that ACPs found that the fuzzy practice parameters raised questions about completing clinical tasks that perhaps a GP *should* be doing. To ease pressure off GPs and GPNs it is clear some blurring of roles must exist. Although, it is not clear what is an acceptable crossover for all parties.

Findings

The challenges faced by the general practice workforce can be positively reframed as facilitators for managers and GPs to consider alternative ways of working. Although this is a facilitator for introducing new non-medical practitioner roles, there are other reasons why new non-medical practitioners are coming to general practice. The literature suggests that the NMP seek the ability to be more patient facing and extend their scope of practice, rather than to predominantly fill a void in the current workforce. New non-medical practitioners rejected the assertion that they were joining general practice to replace GPs. This response is unsurprising due to the media reaction to the new non-medical practitioners' introduction into general practice. For example, Johnston (2014) wrote in reference to new non-medical practitioners: 'doctors on the

cheap’ .Themes one and two highlight that the divergent agendas should be addressed to maintain sustainable recruitment of new non-medical practitioners.

Most studies suggested that the previous model of general practice meant that patients perceived GPs as the default practitioner. In addition, patients held specific beliefs about who can diagnose, prescribe, and refer. This, coupled with misconceptions of the traditionally accepted roles of a nurse, pharmacist and physiotherapist may hinder acceptance of extended scope non-medical practitioners in general practice. Disappointingly, only one study included several new non-medical practitioners. Apart from Nelson et al (2019), a professional groups integration into general practice is often considered in isolation. The dynamics are often considered in comparison to GPs, and yet due to the ARRS multiple professionals are being introduced simultaneously at pace.

Theme three highlights the reality of transdisciplinary working. The fact that boundary clarity was often seen as a barrier, suggests that professionals may not be ready to let go of the traditional role definitions. The issue of role definition and substitution of work by the new non-medical practitioners has potential effects on the other parts of the general practice team, namely GP trainees. There are no studies that included GP registrars as part of their sample. Therefore, it is difficult to understand what their experience of transdisciplinary working is, and how it impacts their future career plans. Within secondary care, some questions have been raised with regards to how new non-medical practitioners can impact the postgraduate education of junior doctors (Roberts et al 2019).

Only three papers included admin staff, and they highlighted a sense of disempowerment to signpost patients to new non-medical practitioners. More needs to

be done to enable receptionists to signpost patients to the new non-medical practitioners.

In conclusion, the introduction of non-medical practitioners in general practice is not new. However, ARRS is the only initiative which has coordinated this so it can be done with a number of different professional group, simultaneously and at scale. A significant amount of financial investment has been awarded. It is important to research further to ensure sustainable workforce development which can deliver safe, effective, and responsive primary care.

Recommendations

The scoping review makes several recommendations for further research. Firstly, further exploration is needed regarding the sustainability of the new skill mix changes in general practice. Secondly, primary research into the current general practice workforce's experience of transdisciplinary working would be a justified area of enquiry. Thirdly, GP trainees were underrepresented in the literature, this should be addressed in future work in this area. Specifically, regarding the effects of non-medical practitioners on general practice trainees' training and supervision.

Conclusions

The workforce challenges in general practice have provided an opportunity for new non-medical practitioner to join the general practice team. There is clearly an appetite from health professionals to work in general practice. Their introduction has always concentrated on the effects of the general practice workforce rather than the more complex dynamic of transdisciplinary working. The literature suggests that transdisciplinary working is not always well received by GP, GPN and new non-

medical practitioners. To ensure sustainable workforce development more research is needed regarding the effects of this new way of working.

Declaration of Interests

No conflicts of interests to declare.

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