International Journal of Clinical Pharmacy (2019) 41:496–503
https://doi.org/10.1007/s11096-019-00795-6

RESEARCH ARTICLE

# The value of pharmacists in general practice: perspectives of general practitioners—an exploratory interview study

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Received: 2 May 2018 / Accepted: 21 January 2019 / Published online: 12 March 2019
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## Abstract

*Background* NHS England has recently invested on a large scale in the development of the role of pharmacists in general practice. Despite this initial funding, the perpetuation of pharmacists' roles ultimately relies on the funding and co-operation of GPs. *Objective* This study aimed to explore the perspectives of GPs with experience of fully funding a pharmacist in general practice, focussing on the value that GPs place on the role of the pharmacist. *Setting* General practice in the Midlands and East area of England. *Method* In-depth, face to face, semi-structured qualitative interviews were carried out with seven purposively sampled GPs. Interviews were audio recorded, transcribed verbatim and thematically analysed. *Main outcome measure* Main outcomes were defined themes in the data. *Results* GPs valued the medication expertise of the pharmacist, which enabled the pharmacists to unburden the GPs of workload. GPs also valued the capability of pharmacists to adapt their role to meet the changing needs of their individual practice. GPs supported the role of pharmacists in general practice but identified funding as a possible barrier to wider uptake of the role. *Conclusion* This study provides an initial insight into what GPs value in the role of pharmacists in general practice. It highlights the value of the medication-related expertise which pharmacists bring to the team. Heterogeneity in the role is necessary to meet the needs of individual practices. Sustained funding was identified as a possible barrier to wider implementation of the role.

**Keywords** Collaboration · England · General practice · General practitioner · Opinion · Pharmacist · Value

## Impacts on practice

- GPs experienced in employing pharmacists utilised their pharmacists according to the changing needs of their individual practice. The role of the pharmacist in general practice is therefore diverse and variable.
- GPs experienced in employing pharmacists are positive about the impact and value of pharmacists. Their views support the movement to increase the employment of pharmacists within GP practices.

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## Introduction

In England, the majority of "cradle to grave" primary healthcare takes place in general practice [1, 2]. General practitioners (GPs) are independent contractors, contracted by the National Health Service (NHS) to provide primary healthcare services to the local population. In recent years, general practice in England has been under mounting pressure due to an increasingly elderly population [3, 4], a surge in lifestyle-related preventable disease [5] and a retention and recruitment crisis amongst GPs [6, 7].

In 2016, NHS England (NHSE) developed the General Practice Forward View, a strategy for the future of general practice which highlighted that "pharmacists remain one of the most underutilised professional resources in the system" [8], a fact which has been repeatedly reported [9, 10]. NHSE committed to invest over £100 million between 2015 and 2020 in the development of a new extended role for pharmacists based in general practice [11]. The aim is to facilitate better utilisation of pharmacists' clinical skills by situating them within the general practice setting [12, 13]. Pharmacists in

general practice have full access to patient records and are patient-facing, undertaking clinical medication review, chronic disease review and in some cases dealing with minor ailments. The expertise of the pharmacist is also utilised in relation to medication queries, medicines reconciliation following transfer of care, and review of processes such as repeat prescribing and monitoring of medication [14].

The NHSE programme provides a reducing proportion of the pharmacists' employment costs over a 3 year period with the aspiration that GPs will take over the full costs at the end of the programme. Therefore currently in England, the role of pharmacists in general practice exists only where GPs have invested financially in the role, either by funding a pharmacist themselves, or via the NHSE programme [12]. A recent evaluation of the initial phase of the NHSE programme indicated that most of the small number of GPs surveyed intended to continue to fund their pharmacist beyond the programme [15]. However, questions have been raised about the wider sustainability of the scheme [16]. In addition to funding, the realization of the pharmacist role requires GPs to facilitate the pharmacist's presence and function within the GP practice [14]. The significance of this is apparent from experiences within the NHSE scheme [15] and elsewhere [17–19]. In similar extended roles in England, such as non-medical prescribing, the co-operation and support of the GP was found to be a key factor in success [20, 21].

Hence, in the current healthcare setting in England, it appears that GPs have significant influence over the future of the role of pharmacists in general practice [16]. Evidence from around the world suggests that funding is a significant barrier to the development and more widespread uptake of the pharmacist's role in general practice [16, 19, 22, 23].

## Aim of the study

At present, despite the huge investment in the role of pharmacists in general practice, there is little published research in the UK exploring the perspectives of GPs with extensive experience of working with pharmacists in this context. This qualitative study aimed to contribute to addressing this gap in the literature by exploring in depth the opinions of a small number of GPs who have funded a pharmacist within their practice, focussing on the value that GPs place on the role of the pharmacist and why they consider funding a pharmacist a worthwhile investment.

## Ethics approval

Ethical approval was obtained from De Montfort University Faculty Research Ethics Committee (Faculty of Health and Life Sciences) in January 2017.

## Method

A pragmatic qualitative approach was undertaken. Non-probability, purposive sampling was employed to identify practising GPs in the Midlands and East region of England who had experience of funding a pharmacist outside of the NHSE programme. Identifying what GPs value in the role of pharmacists in general practice was the key driver behind the research question. Hence, GPs who funded pharmacists themselves with no funding from other sources were specifically sought in the assumption that these GPs valued their pharmacists and would therefore be best placed to answer the research question.

Research on this topic elsewhere has included interviews with up to 11 GPs [15, 23–25]. Guest et al. [26] noted that 12 interviews are usually enough to achieve data saturation but that the majority of themes are achieved within six interviews. Taking into account this information and the time limitation of this self-funded research, a target of eight interviews was set.

An initial convenience sample was identified using known pharmacist contacts of the researcher. This was a pragmatic approach given that no published list of GP practices employing pharmacists exists. Twelve GP practices across four English counties were identified as funding a pharmacist outside of the NHSE programme. Twenty eight GPs from these 12 practices were contacted via NHS e-mail, with a follow up e-mail 2 weeks later to non-responders. Responses were received from ten GPs, and a total of seven GPs were successfully recruited within the limited timeframe for the research. None of the GPs interviewed were known to the researcher prior to the research.

Interviews were conducted during March and April 2017. In depth, semi-structured face to face interviews of up to 1 h duration were undertaken by the researcher using a topic guide which was pilot-tested with a separate GP, known to the researcher, whose practice funded a pharmacist (see Box 1). Informed consent was obtained from all individual participants included in the study. No payment or reimbursement was available for GPs' time. A letter confirming their participation in the research was provided to each GP following their interview.

Interviews ranged from 28 to 57 min, were audio recorded, transcribed verbatim and anonymised. Interview data was analysed using Braun and Clark's analytical framework of thematic analysis [27]. During thematic analysis, each interview was analysed using both annotation of word processed transcripts and mind maps created while listening to audio recordings. Codes were generated from transcripts and mind maps using both latent and semantic coding. Codes from the entire dataset were then developed into candidate themes and refined into final themes.

**Box 1** Interview topic guide

| Key questions |
|---|
| You currently/recently employ a practice pharmacist. How did this come about? |
| Tell me about what your practice pharmacist does |
| Tell me about your experiences of working with a practice pharmacist |
| What is positive about working with a practice pharmacist? |
| What is challenging about working with a practice pharmacist? |
| What clinical and patient facing aspects of the practice pharmacist role do you value? |
| Is there anything about the current arrangement with the practice pharmacist that you would like to change? |
| From your own personal point of view, what is the single most valuable aspect of the practice pharmacist's role? |
| In your opinion, in an ideal world, what would a practice pharmacist do? |
| How should the role be developed? |

## Results

GPs from seven different practices were interviewed. Table 1 lists the characteristics of GPs and their practices, and illustrates the heterogeneity of practices sampled.

### What GPs value in the role of the pharmacist

On the question of value, two main themes were identified: the medication expertise of pharmacists and the capability of individual pharmacists to adapt their role to the needs of the practice.

#### Medication expertise

In all discussions of value, the overarching aspect which GPs consistently valued was the medication-related expertise of the pharmacist, which GPs rated as superior to nurses and to the GPs themselves.

> I'm not very good at thinking about all the interactions all the time. Perhaps I should be better, but I don't think I'm as good as the pharmacist. GP2

Table 2 lists the knowledge and tasks which GPs considered to be within the remit of pharmacists' medication expertise.

GPs described how the medication expertise of the pharmacist enabled them to delegate tasks and roles to the pharmacist which would otherwise be the remit of the GP. These included patient-specific tasks such as prescription queries and medicines reconciliation of discharge forms; practice level tasks such as undertaking audits and addressing safety alerts; and patient-centred roles such as complex medication review and chronic disease management in patients with multimorbidity.

**Table 1** Characteristics of GPs and practices

| | N = 7 |
|---|---|
| GP characteristics | |
| Sex | |
| Male | 2 |
| Female | 5 |
| GP role | |
| Partner | 7 |
| Practice characteristics | |
| List size | |
| 5001–10,000 | 3 |
| 10,001–15,000 | 3 |
| > 15,000 | 1 |
| Location | |
| Semi-rural | 5 |
| Suburban | 1 |
| Urban | 1 |
| Registered vocational training scheme training practice (GP training) | |
| Yes | 6 |
| No | 1 |
| Dispensing practice | |
| Yes | 2 |
| No | 5 |
| Most recent Care Quality Commission Rating (independent regulator) | |
| Outstanding | 2 |
| Good | 5 |
| Duration of pharmacist in practice | |
| < 1 year | 2[a] |
| 1–5 years | 1 |
| 6–10 years | 1 |
| > 10 years | 3 |

[a]In both cases the practice had employed another pharmacist previously for a period of > 1 year

**Table 2** GPs' perceptions of the medication expertise of pharmacists

| |
|---|
| Knowledge |
| Drug interactions—implications and what to do |
| Drug formulary knowledge—indication, contraindication, formulation, appropriate alternatives etc. |
| Medication safety and monitoring |
| Knowledge of medication across all therapeutic areas, enabling comprehensive medication review of patients' medication |
| Tasks |
| Medicines reconciliation of discharge forms and clinic letters |
| Responding to medication-related queries |
| Medication review in a wide range of patients |
| Dealing with medication-related safety alerts and incidents |
| Evidence-based guidance on prescribing at both practice and patient-specific level—choice of drug, dose, monitoring etc. |
| Medication-related searches and audits |

> He's now become very, very valuable for us because he's helping with the management of the prescribing across the piece, but also he is extremely good with helping us with chronic disease management. GP1

In some cases, GPs commented that they felt that it was more appropriate for the pharmacist to deal with complex medication review, as GPs found it difficult to fit this in amongst the acute issues the patient was presenting with on that day.

> Patients who are now on more complex drugs, for me to do their medication review …in the middle of everything else is just too massive and, all the boxes don't get ticked properly. So if the pharmacist can do some of those more complex medication reviews I think the patients would get a better quality and therefore then I might feel safer that we were ticking the boxes as well. GP5

In other cases, GPs utilised the pharmacist's skills to optimise the care of a particular cohort of patients, thus freeing up GP time to address more complex cases.

> Allowing us to maybe see the people that are really complicated. You know, knowing that the sort of chronic disease, the other bits and bobs that she is doing is being really nicely looked after … I think that's probably the key thing really in terms of allowing us to focus on these people that need a GP. GP4

The majority of GPs (n = 4) also specifically mentioned the personal value and reassurance they felt in having easy and direct access to a medication expert within the team whom they could approach about prescribing-related decisions in specific patients.

> I think to me the pharmacist is a very knowledgeable person and you know we just need that help, we need that support. GP3

### Adaptability of the pharmacist's role

GPs valued the ability of the pharmacist to complete work which was important to *their* practice, with the remit of the pharmacist varying over time and between practices in line with the individual and changing needs of the practice. In their initial recruitment, the ability of the pharmacist to meet the needs of the practice and to fit in with the team were key considerations.

> So he was acquired as an individual really, for who he was and what he could bring to the practice. GP7

Priorities for the pharmacist role varied and included reduction in workload, saving GPs' time, increase in income from quality-related payments, and improvement in quality and safety of prescribing and patient care. GPs described how the definition of the role of the pharmacist in each practice was directly influenced by the existing skills, knowledge and interests of the pharmacist and the needs of the practice and its population. It was clear that the role varied over time and extended and grew with the duration of time the pharmacist had been with the practice.

> Well it's changed over the years and it's very much what we need, I suppose. Her remit is whatever's needed and she will do it if she can. So yes I think her role is endless. GP3

There was a complex balance between the need to get through the workload and the desire to maximise quality and safety; and also a balance between the personal investment of the GPs in the pharmacist versus the outcomes of the pharmacist role.

> Part of the challenge sometimes is this bit about improving quality, this sounds bad, improving quality and actually just creating more workload. GP5

> I mean it is, unfortunately, fundamentally a business and a small business so you have to be able to demonstrate how it's individually helpful for that doctor to invest their own income in a member of staff. GP7

Some GPs described the possibility that the thorough methodical approach of some pharmacists could tip the balance such that they were unable to complete the work at an appropriate pace to save GPs time or that they sometimes created additional work for the GPs which they viewed as unnecessary. GPs described how the pharmacists in this study had mastered the required balance by understanding the needs of the practice and then identifying how they could utilise their skills to best meet these needs. Good communication was required to continually review and adapt the role in line with the development of the pharmacist and the changing needs of the practice and its population.

### How GPs measured the value of pharmacists

The GPs interviewed did not have a formal process for measuring the value or impact of the work which their pharmacists undertook. GPs who had employed a pharmacist for many years felt they got value for money from their investment, a fact confirmed by the continued employment of the pharmacist.

> Obviously it costs us, but then we see it as money well spent. GP4

In cases where the pharmacist's role had been established more recently, the GPs described a desire to extend the role but felt limited by lack of funding.

> Well if money wasn't an object then I would love to have a pharmacist here full time. GP5

The perceived value was illustrated in the way in which GPs described the success of their pharmacist in terms of improving patient care and safety, reducing workload burden and contributing towards the practice's achievement of national targets and quality standards. Two GPs specifically credited the pharmacist with helping them to obtain an outstanding rating from the national independent regulator of healthcare services, the Care Quality Commission (CQC).

> He was really key in us getting our outstanding CQC GP7

GPs also described a general positivity of effect in having a pharmacist in the practice.

> So there's no formal process of being able to say that (having a pharmacist) it's positive, but I know that generally everyone is much happier for having her. GP4

GPs valued their pharmacist as an integral member of the team, someone who understood the ethos and intricacies of the practice and worked within that to achieve the best outcome possible.

> You know … kind of seeing things from our viewpoint … so having that sort of, our perspective, and someone fighting our corner, erm, is brilliant. GP3

Several GPs stated that they thought the role of the pharmacist should become standard within general practice.

> I think every practice should have a clinical pharmacist GP4.

## Discussion

The role of clinical pharmacists in general practice is developing rapidly in England. This small scale in-depth exploratory interview study provides an initial insight into what GPs value in this role.

The GPs interviewed primarily valued the medication expertise of their pharmacists, which concurs with the views of physicians in Australia [25] and Scotland [28] and with the recent evaluation of the NHSE programme [15]. The importance of understanding the pharmacists' expertise and how this can contribute to their role in general practice has been described elsewhere as a key factor in the successful integration of pharmacists into general practice [22–24]. The fact that GPs in this study had specifically identified pharmacists with knowledge or skills that would benefit their practice suggests that these GPs had an insight into the potential benefits of the pharmacist role. This may not be the case for all GPs.

GPs in this study identified the level of medication expertise of the pharmacist as being unique within the team, surpassing that of GPs and nurses. Appropriate utilisation of this expertise enabled pharmacists to take on roles that would otherwise be the remit of GPs, including medication-related administration, medication review and management of chronic disease. Stone and Williams [29] have described how one pharmacist in an English practice could cut over an hour of prescription-related workload every day per GP. In this study, the pharmacist was seen as someone who could unburden the GP of tasks requiring medication expertise, enabling GPs to focus on patients who really needed their input.

GPs also valued their direct access to the medication expertise of the pharmacist when they had queries relating to an individual patient or when they needed support undertaking a piece of work such as a clinical audit, demonstrating trust in the pharmacist. This finding reflected those of Canadian physicians, who noted the benefit of feeling more

secure as a result of being able to consult with a pharmacist [22]. Hence, the GPs interviewed placed value on the impact of the pharmacist at an overall practice level in terms of reducing workload and improving quality and safety, but also at an individual patient level providing medication-related expertise and advice. The integration of a pharmacist into the general practice team provides a level of medication expertise which was previously absent. Treating the multimorbidity of an increasingly ageing population inevitably involves more complex prescribing and associated review and follow-up [4]. Hence, it is unsurprising that GPs value the medication expertise of pharmacists in the management of these patients, both at an individual level and strategically across their practice.

Demonstration of value appeared to be dependent on the appropriate role definition which ensured that the role was actually meeting the individual needs of a given practice. In the practices in this study, the pharmacists' roles varied between practices and over time in order to meet the changing needs of the practice and reflecting the growing skills of the pharmacist. This finding has been mirrored in the NHS England programme in terms of the development of pharmacists' skills during their early months in practice [14] and in the finding that GPs wanted to localize the pharmacist role according to the demands of the practice and the specialisms of the pharmacist [15]. The heterogeneity of the pharmacist role was important to the GPs interviewed in ensuring that the needs of the practice and its population were met, and therefore in the success of the role. However this heterogeneity presents challenges in defining and promoting the role and in measuring its success. GPs in this study had no formal system for measuring the value or outcomes of their pharmacist's role. The difficulty in developing measurement outcomes has been described in the NHSE programme evaluation [15]. It is apparent that there is a need to develop relevant performance indicators relating to the role of the pharmacist which both measure the impact of the pharmacist role and take into account the heterogeneity of the role.

In this study, the value which GPs place on the pharmacists' role was demonstrated by ongoing employment of pharmacists at the practice's expense and a desire to continue to employ and expand the role of the pharmacist. Many GPs referred to a noticeable reduction in workload for them and an improvement in overall practice performance which, in some cases, produced an increased income via national quality incentive schemes such as the Quality Outcome Framework. In some cases, outstanding ratings from the independent healthcare regulator provided an external verification of the value of pharmacists. More commonly, GPs stated a reassurance that the quality and safety of prescribing had improved, and a general positivity across the practice about the impact of the pharmacist through informal staff and patient feedback. The value placed upon this reassurance is echoed in UK literature on medication review [30]. However, the question of value was complex. Some GPs described the balance of value versus investment. GPs wanted to be safe and provide good quality care, but they also needed to complete work at an appropriate pace. A number of GPs expressed an opinion that some pharmacists had the potential to add to their workload by creating additional queries or tasks; an opinion which has been raised previously [28]. This finding did not apply to the pharmacists at the time of the research and may relate to the experience of pharmacists in the role. A recent study identified that some pharmacists felt that they had limited capabilities early in the role due to lack of experience. Others noted the increased responsibility and accountability of the role in comparison to the traditional dispensing role, and noted that the clinical uncertainty of general practice presented challenges to the characteristically risk averse approach of pharmacists used to following clear processes and structures within their careers [31]. Bradley et al. [14] also noted that pharmacists new to the role require clinical support from GPs and warned against practices expecting immediate gains in terms of a reduction in GP workload. It may be that a lack of experience or an inability to cope with clinical uncertainty contributes to some pharmacists increasing workload by seeking reassurance or sticking rigidly to guidance. At present there is no career framework for pharmacists in general practice. These findings suggest that a structured career framework with associated training support may be of benefit.

In this study, the GPs interviewed described the recruitment of the right pharmacist in the first place who would "fit the team", along with constant review and rebalancing of the role, as important factors in ensuring that an appropriate balance between investment in the pharmacist and outcomes which were beneficial to the individual practice were maintained. It was apparent in this study (Table 1) that both the practices and the pharmacists had significant experience of the role over many years, making it more likely that the pharmacists involved had developed the skills and experience necessary to negotiate the role successfully. More research is required to determine how the impact of pharmacists' role may develop and change over time with increasing experience in the general practice setting.

Finally, the GPs in this study demonstrated that they valued the role of the pharmacist by recommending that all practices should have a pharmacist. However, GPs also acknowledged that the lack of defined funding stream outside of the time-limited NHSE programme was a potential barrier to practices taking on pharmacists. Historically, the funding of extended pharmacy services have proved to be a barrier to their development [32], and continue to be so [19, 22–25, 33–35]. A small survey in the UK revealed that GPs potentially supported the role but had concerns about funding [36]. It may be that until GPs are experienced in working

with a pharmacist, they do not see the potential benefits and are therefore more reluctant to fund the role. There is a need for the role of the pharmacist in general practice to be clearly defined such that GPs have realistic awareness and expectations of the role.

All of the GPs in this study were fully funding the pharmacist from their own practice budget. This is in contrast to the funding model for the NHSE programme whereby practices are receiving proportional funding of the pharmacist post [12]. Hence, the outcome of the NHSE programme, whereby the intention is for GP practices to self-fund the pharmacist role at the end of the programme, may be of great significance in determining whether or not GPs will be willing to fund the role on an ongoing basis. GPs need to know what they are going to gain by investing in a pharmacist. More research is required to determine the impact of pharmacists in general practice across a range of measures taking into account the heterogeneity of the role and considering not just costs, but safety, quality of patient care and impact on GP workload.

### Strengths and limitations

To the knowledge of the authors, this is the first study to explore in depth the perspectives of GPs who fully fund pharmacists within their practice in England. Benefits of the study include the in-depth approach to obtain rich data from a sample population carefully selected to most appropriately address the research question. Clearly defined sampling criteria, the publication of the pilot-tested topic guide (Box 1), verbatim transcription and careful use of an analytical framework [27] all add to the reliability and replicability of the research.

The main limitation is the small sample size limiting the representativeness of the data. A target of eight interviews was set but only seven achieved due to the time-limitations on the research. It is unlikely that data saturation was achieved and hence this research, as implied by its title, represents an initial exploration into the topic. The transferability of findings is difficult to measure due to the lack of data on GPs who employ pharmacists. However, heterogeneity was achieved in the sample in terms of type and size of practice and duration of funding a pharmacist.

## Conclusion

This study has provided an initial insight into the value which experienced GPs place on the role of pharmacists in general practice, namely the medication expertise of the pharmacist, and the ability of the pharmacist to adapt their role to meet the needs of the practice and to unburden GPs of workload.

Further research to clearly define the content, range, scope and impact of the role of pharmacists in general practice is necessary to facilitate wider comprehension of the role. The question of funding for the long term sustainability of the role also needs to be addressed.

**Acknowledgements** The authors are grateful to the participating GPs who gave up their time to contribute to the research.

**Funding** This research was self-funded by the corresponding author as part of a Master's degree in Research. The master's was funded by De Montfort University, Leicester as part of a staff development programme.

**Conflicts of interest** The corresponding author is a practising pharmacist in general practice and an education supervisor on the NHSE programme for clinical pharmacists in general practice.

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