

Final Report

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Project Title/ Qualification: Pharmacist led care in General Practice (PLAGE) Study (MSc)

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I. Summary of Masters Research Project Report

Rationale/Background

The current and estimated future shortfall in GPs and nurse numbers has amplified concerns regarding the unsustainable pressures on primary care services. With the changing landscape of the NHS, it is imperative to develop sustainable and innovative models of practice. To deliver the vision set out by the NHS Five Year Forward View, there is an urgent need to reshape the NHS workforce; extending the roles of the non-medical workforce offers one solution.

In 2015, the Royal College of General Practitioners (RCGP) in partnership with the Royal Pharmaceutical Society (RPS) proposed the widespread integration of pharmacists within general practice. The perceived benefits include a reduction in waiting times for patients to see GPs thereby improving patient experience, a reduction in prescribing errors, improved communication during transfer of care, delivery of medicines optimisation objectives and a reduction in medicines waste, to name a few. To this end, NHS England has recently launched a national pilot that has provided funding for general practices to employ clinical pharmacists.

It is evident from the literature that the integration of the role of pharmacists into primary care teams has been widely explored by many countries. Few studies have evaluated the views of key stakeholders in primary care, and identified the barriers and facilitators to embedding pharmacists in general practice. The aim of this piece of research is to understand the perceptions of GPs by the use of semi structured interviews and to explore and refine the themes that have emerged from the current evidence. The perceptions of GPs in addition to other key stakeholders in primary care will shape the development of the integrated role of pharmacists in general practice and this study aims to inform the effective delivery of the recently launched NHS England clinical pharmacists in general practice pilot scheme.

Aims and Objectives

Aims:

- (1) To explore in depth, the attitudes and perceptions of GPs to pharmacist led care in general practice and

- (2) to identify perceived barriers and facilitators to the integration of pharmacists in to general practice.

Objectives:

To elucidate the views of GPs using semi-structured interviews and thematic analysis including the perceived roles for pharmacists in general practice and potential barriers and facilitators to this integrated model of working.

Method

Design: A qualitative study was conducted using semi-structured in-depth interviews.

Setting: Invitations for suitable participants were extended to all geographical areas in England.

Participants: All participants had experience of working within the primary care sector in general practice for at least three years. GPs were recruited from varied backgrounds, including GPs with no prior experience working with clinical pharmacists based in general practice and GPs who currently work with or may want to work with clinical pharmacists based in general practice. A total of 14 GPs participated in the study; 5 female and 9 male. This included 11 GP Partners, 2 salaried GPs and 1 retired GP.

Sampling: A convenience, but maximum variation sample was recruited via established contacts, professional organisations and local networks, as well as via snowballing method.

Data Collection and Analysis: General participant demographics were collected using a data collection form. Semi structured interviews were carried out face to face or via video calls, lasting up to an hour. The current literature informed the structure of the interview schedule and questions were developed from interview to interview in an iterative fashion using Grounded theory.

Interviews were recorded digitally and transcribed verbatim by an independent contractor. Transcripts were checked for accuracy against audio recordings and field notes and memos were reflected upon during the analysis process. Transcriptions were analysed using the constant comparison method and data analysis was iterative with data collection. A thematic analysis was performed to identify key emergent themes.

Ethics: Ethics approval was gained from the University of Sunderland Ethics Subcommittee in February 2016. All participants provided written informed consent following receipt of the Participant Information Leaflet.

Results

General demographics were captured from participants; these are presented in Table 1. A total of 14 GPs participated in the study, 5 female and 9 male. Participants included 11 GP Partners, 2 salaried GPs and 1 retired GP; the mean number of years qualified being 22 years (n=13). Participants were from a range of practice sizes, 2 small practices (<3000 patients), 8 medium practices (3,000-10,000 patients) and 4 large practices (>10,000 patients).

Table 1. Participant demographics

Participant	Status	Number of years qualified	Location of GP practice	Size of practice [†]
GP1	Retired	36	Newcastle	Medium
GP2	Partner	15	Newcastle	Large
GP3	Partner	18	Newcastle	Medium
GP4	Partner	Undisclosed	Blyth	Medium
GP5	Partner	17	Sunderland	Small
GP6	Partner	27	Sunderland	Large
GP7	Partner	17	Maryport	Large
GP8	Partner	25	Warks	Medium
GP9	Salaried	10	Brampton	Large
GP10	Salaried	16	North Shields	Medium
GP11	Partner	19	Washington	Small
GP12	Partner	22	Somerset	Medium
GP13	Partner	37	Luton	Medium
GP14	Partner	22	North Yorkshire	Medium

[†]large>10,000 patients, medium 3,000-10,000patients, small <3000patients

Five key themes emerged from the thematic analysis; (1)reduce GP workload by use of non-medical workforce, (2)pharmacists' pharmaceutical knowledge, (3)GPs are protective of their roles, (4)GPs have a lack of confidence in pharmacists' clinical aptitude and (5)colocation and team integration. The overlap and correlation of the themes and subthemes are demonstrated diagrammatically in Figure 1.

1. Reduce GP workload by use of non-medical workforce

GPs feel there is an inherent need for diversification in skill mix in general practice due to increasing workload pressures and workforce shortages.

"I think in light of the workforce in the NHS, there will be a different way of working to maximise the use of other professionals. So I see that as a way forward, one of the things that we can definitely encourage." (GP11)

GPs believe that it is important that patients are seen by the right person, and it is acknowledged that this is not necessarily the GP in many situations.

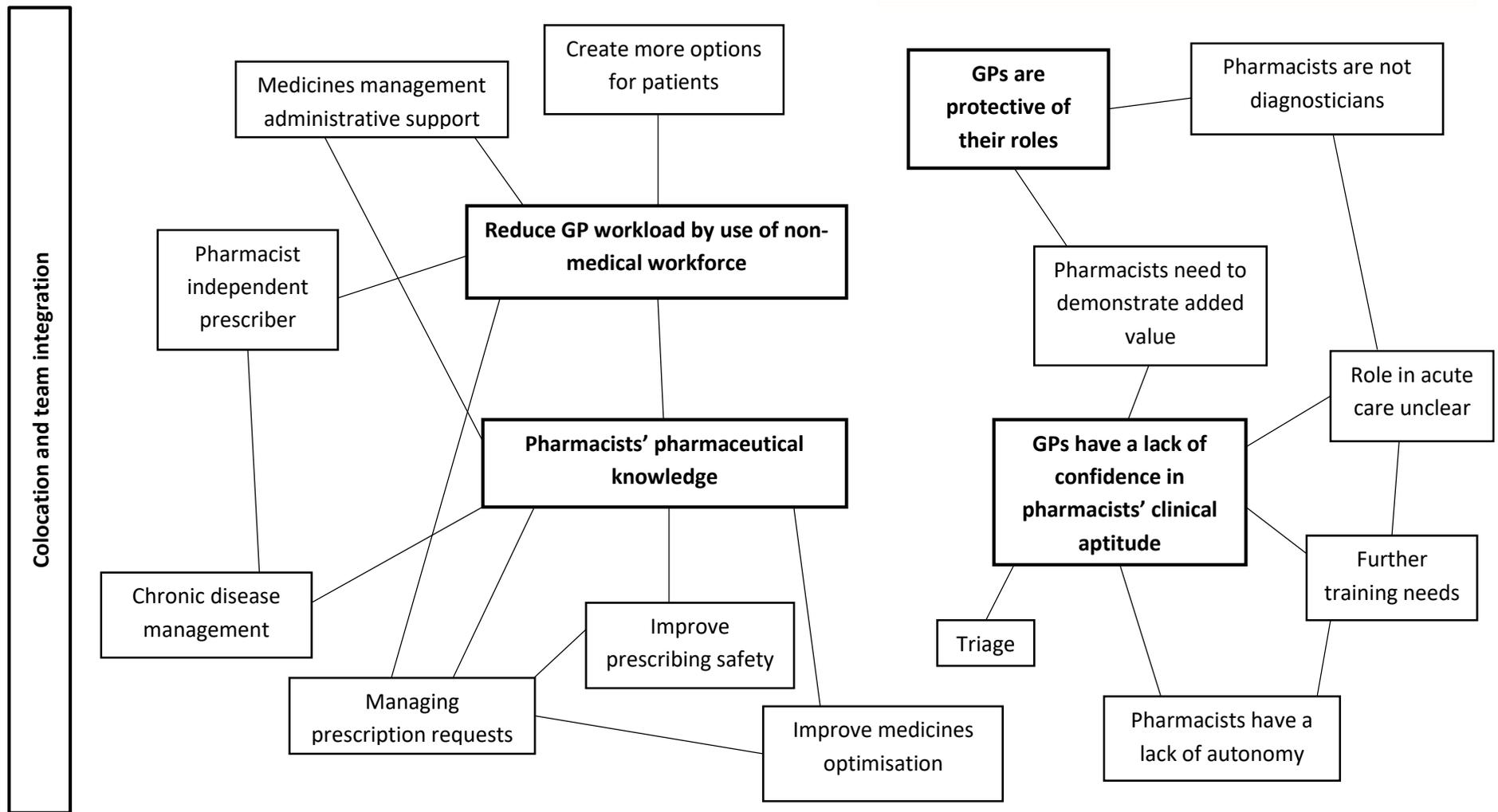


Figure 1: Concept Diagram (the key themes are highlighted in bold boxes)

1.1 Medicines management administrative support

Seemingly there is a significant burden on the general practice team in relation to medicines management; GPs believe support from pharmacists in this area will relieve workload pressure and importantly free up time to enable GPs to do more appropriate work that they feel they are currently unable to do.

“with the modern workload of GPs, we’re more than happy to have some of that burden taken off us” (GP3)

Participants identified that there was a clear need for support with prescribing and medicines management due to increasingly complex medication regimes and the need to keep up to date with the changes in clinical guidelines and emerging treatment options. It was apparent that they believe pharmacists to be the ideal group of healthcare professionals to support with this.

“clinical pharmacists without question have a role when we look at the polypharmacy that our patients are subjected to often from a relatively early age” (GP2)

“a great aspect of what we do as general practitioners has to do with drugs and treating patients, and I feel if there is one group of professionals that know a lot about drugs are the pharmacists.” (GP10)

1.2 Pharmacist independent prescriber

GPs believe that the scope of practice of pharmacists will be extended significantly if the pharmacist working in general practice is an independent prescriber; they did however acknowledge that this was not essential. In particular, participants believe that managing acute and repeat prescription requests is a key role which will result in a demonstrable reduction in GP workload.

“The ability to prescribe clearly takes an awful lot of the workload off the GP” (GP8)

1.3 Create more options for patients

GPs feel generating another option for patients when accessing a healthcare professional in general practice will be positively received particularly as pharmacists are anticipated to have dedicated time to discuss medicine related problems and conduct medication reviews.

“It gives more flexibility, more options for the patients, the people that they can see.” (GP13)

2. Pharmacists’ pharmaceutical knowledge

GPs recognised that pharmacists have a sound pharmaceutical knowledge which is likely to be superior to other healthcare professionals in the general practice setting, including GPs. Participants who had prior experience of working with practice-based pharmacists described that the additional resource was helpful in a range of situations where expertise and an in depth knowledge of medicines was required.

*“we do have a knowledge of medicines but it’s obviously not as in depth as a pharmacist”
(GP6)*

2.1 Improve prescribing safety

Participants perceived that the presence of a pharmacist in the team will improve patient safety particularly around prescribing. Interestingly, although some participants acknowledged this role being undertaken by community pharmacists to an extent, they believed that embedding pharmacists within the general practice team would have a further added benefit in terms of safety.

“I think a lot of the problems we have with regards to drugs and safety, a lot of that would probably be reduced if we have a lot more input from pharmacy” (GP11)

2.2 Managing prescription requests

GPs highlighted a significant risk due the volume of prescribing and the lack of time GPs have to spend on appropriate review of prescription requests.

“That is something that again because of how busy things are, often things end up just being on a rolling prescription without being challenged. So having somebody to highlight those things has been really helpful. I just see it getting better.”(GP10)

Participants strongly believe that this is a role that does not necessarily need to be carried out by GPs and is likely to be improved if it was carried out by pharmacists; it was apparent that this was a pertinent role identified by many of the participants which they believed can have a significant impact on reducing GP workload.

2.3 Improve medicines optimisation

As well as managing prescription requests it was acknowledged that pharmacists are well placed to take an active role in medicines optimisation and promote cost effective prescribing practices through audit.

“So again, I think the pharmacist can help us with that, to see if obviously we can save the CCG some money, without necessarily compromising the care of the patient. So I think pharmacists really will go a long way to doing that.” (GP11)

2.4 Chronic disease management

Additionally, participants believe that pharmacists can make a significant contribution to chronic disease management, both in running pharmacist-led independent clinics as well as providing prescribing support for nurse-led clinics. GPs also feel that pharmacists were more adept to following and keeping up to date with treatment protocols and guidelines.

*“they’re very good with chronic diseases and delivering a population based outcome”
(GP8)*

3. GPs are protective of their role

Although, majority of participants were largely positive and supportive of pharmacist led care in general practice, they acknowledged that this was not necessarily the feeling amongst all GPs including some of their colleagues within their own practices. Participants believe that this is due to protectiveness of GP roles and responsibilities and resistance to change.

“Like in any team, people can sometimes be a bit protective of their boundaries. Is that person doing my job?” (GP9)

3.1 Pharmacists are not diagnosticians

GPs perceive that pharmacists do not have the adequate skills to be able to diagnose and perceive the role of pharmacists predominantly in the management of stable patients with established diagnoses.

“I think it would be a mistake to ask clinical pharmacists to be very advanced diagnosticians” (GP3)

“most of their consultations will probably be about patients with established diagnoses on established medications” (GP3)

3.2 Pharmacists need to demonstrate added value

GPs feel that as well as doing the work, pharmacists need to share the work being done with the rest of the team as well as demonstrably reduce GP workload. GPs recognise that there are negative perceptions amongst peers and colleagues due to a lack of understanding of the skills and knowledge pharmacists bring and the potential impact they can have. However it was proposed that these views may be overcome by demonstrating a reduction in workload as well as a positive impact on patient care.

“if you can show them somehow, the value, what you’re actually doing is adding value, to actually improve the patient care and to make their lives easier.” (GP1)

4. GPs have a lack of confidence in pharmacists’ clinical aptitude

There is also an inherent lack of understanding of what pharmacists can potentially offer and a lack of confidence in their capabilities and clinical aptitude.

“I think there may be some misunderstanding and a bit of cynicism from GPs about what it is that local pharmacists can achieve” (GP2)

Participants raised concerns regarding the level of experience pharmacists have to be able to work in some of the potential roles identified. It was perceived that there may be a lack of experience in face to face patient consultations and the ability to identify nuances that present when seeing patients which comes with experience.

“My perception is that as pharmacists, you’re trained in a very scientific subject in a way that mine is but there’s a lot of woolly edges around it, particularly as a GP. It’s all about nuances and it’s very soft as a science in that sense.” (GP2)

4.1 Pharmacists have a lack of autonomy

It was perceived that pharmacists are risk averse in nature and this may be due to a lack of experience. This can be a barrier as there is an expectation that the proposed extended roles for pharmacists includes shared responsibility for some of the risks that exist in general practice. GPs also feel that pharmacists demonstrate a lack of autonomy and again this may be a barrier to the extension of their role.

“I think that where you come from, you’re quite risk averse and that’s quite right and I’m not suggesting that’s wrong but I think the biggest risk is that at the moment we have to get you from – it’s about into a realistic approach as to what it is we’re doing in primary care and living with some of the risks that we do on an ongoing basis, on the basis that we’ve just got to get this work done.” (GP2)

4.2 Further training needs

There were a number of areas where GPs felt that further training and support is potentially needed relevant to working in general practice. Participants believe it is important for pharmacists to be aware of the issues in primary care and have an understanding of how general practice works which they are likely to be unfamiliar with if they have no prior experience in this setting.

“know how General Practice works, that is important I think... it’s useful to have that sort of insight.” (GP5)

It was also recognised that additional training in chronic disease management and consultation skills as well as clinical supervision similar to trainee GPs would prove useful.

“chronic disease management courses” (GP4)

“communications skills training” (GP4)

“hour or two a week per clinical pharmacist for clinical supervision” (GP2)

Furthermore, it would be useful to formalise the training by developing a set of competencies or curriculum and a formally recognised course or qualification which would be particularly useful for recruitment purposes.

“I think we probably need a curriculum, I think we probably need a set of competencies in due course.” (GP2)

“just for equal qualifications it’s useful to go through an accredited course. So General Practitioners can also be reassured that they have gone through the right training, both for patient safety, but also regards to indemnity issues.” (GP5)

4.3 Triage

Participants believe that in the preliminary stages at least, until the scope of practice for pharmacists in general practice is fully defined, it would be appropriate to adopt a system of triage, in terms of identifying patients who are suitable for an appointment with the pharmacist.

“if you had a pharmacist who was seeing patients, what you would clearly try and do is direct the appropriate types of patients to the pharmacist.”(GP9)

It was believed that there is a potential risk of pharmacists seeing patients who should be seen by a GP and triage could minimise this risk. GPs also felt that pharmacists should be confident in identifying circumstances that fall beyond their remit and area of competence and appropriate mechanisms for referral should be in place.

“I think the important thing is those people realise that once they’re out of their comfort zone or skillset, they refer onto someone else.” (GP3)

4.4 Role in acute care unclear

There was a difference in perceptions regarding the place of pharmacists in the management of acute care in general practice. Participants did not categorically express that pharmacists were unsuitable for this role however did not perceive this as the preferred role.

“I’m not quite sure whether I see pharmacists in the practice seeing patients on first presentation” (GP9)

It was apparent that some participants had reservations particularly due a lack of confidence and understanding about the skills pharmacists have to deal with acute presentations in general practice.

“difficulty would be, making sure that you’ve gone through the training to be able to pick up significant abnormal signs” (GP4)

5. Colocation and team integration

Team work and acceptance by the wider practice team was deemed integral to the success of this model of working. GPs feel that it is important for all team members to be aware of the knowledge and skills that pharmacists have and how best to utilise this in the individual set up of each practice. To do this it was suggested that active involvement in team meetings is needed as well as supporting the work that other team members do and sharing knowledge and expertise. It was also identified that continuity and full integration in the team is crucial rather than sessional or periodic input.

“it’s about being genuinely part of team and not being somebody who’s added on who does bits and pieces” (GP2)

Comparison with existing literature

GPs have identified a number of roles for pharmacists in general practice primarily based on the perceived pharmaceutical knowledge that pharmacists have. This is consistent with existing studies

by Freeman et al (2012) and Wilcock and Hughes (2015) which reported positively viewed roles such as medication reviews and medicines information. In contrast to these two studies however, GPs believe pharmacist prescribing is hugely beneficial and has the potential to significantly reduce GP workload and improve prescribing safety. Studies by Latter et al (2010) and Gerard et al (2012) confirm that pharmacist prescribing is clinically appropriate and safe, and anecdotal accounts by Williams and Stone (2015) suggest this reduces GP workload. Furthermore, the PINCER study proved the cost effectiveness and value of pharmacists supporting good prescribing practice. (Avery et al., 2012)

GPs consider professional attitudes as a potential barrier to the integration of pharmacists in general practice; this is supported by Freeman et al (2012) and Tan et al (2013). In addition, GPs believe pharmacists require further training to facilitate integration and expand the scope of practice. (Freeman et al, 2012; Pottie et al, 2008) Some GPs also believe pharmacists are risk averse which interestingly was reported by Wilcock and Hughes (2015).

This is the first study in the UK which explores in depth the perceptions of GPs regarding widespread pharmacist integration in general practice. Roles in medicines management were perceived to have a number of benefits however the place of pharmacists in acute care remains unclear. Barriers to integration and a number of perceived risks were also identified.

Conclusions

GPs believe integration of pharmacists in general practice can reduce GP workload, improve prescribing safety and improve medicines optimisation. In particular pharmacist independent prescribers were perceived to have a wider scope of practice and a greater impact on workload pressures. Negative professional attitudes and a lack of confidence in pharmacists' clinical aptitude were thought to be potential barriers to the integration of pharmacists in this setting; however it is thought that this can be overcome by colocation and team work, as well as further pharmacist training. The views of GPs towards the role of pharmacists in acute care in general practice remain inconsistent; this is an area for further research.

Implications for practice and future research

The findings from this study may inform future planning, development and implementation of this emerging role on an individual practice level and nationwide. Evaluation from the NHS England clinical pharmacists in general practice pilot is expected following the three year pilot period which may validate or contest these findings. Future research which seeks the perceptions of other key informants including nurses working in general practice, pharmacists working in primary care and alternative sectors and patients seems prudent. Furthermore, research to explore the role of clinical pharmacists in acute care in the general practice setting is needed.

N.B. A full reference list can be provided on request.

II. Training, Development and Reflections

I have had 1 to 1 meetings with my project supervisor, scheduled on a monthly basis to discuss progress, any difficulties faced, training needs and upcoming assignments. I have also scheduled meetings with Dr Catherine Hayes who is a lecturer in Public Health and expert in qualitative research methods. Dr Hayes has provided advice regarding the method of data analysis and discussion of emergent themes. I have also received peer support throughout. The main points of discussion during these meetings are highlighted in Table 2.

Table 2. Supervision

Date	In attendance	Main points of discussion
29.10.15	Professor Scott Wilkes, Dr Wasim Baqir	Exploring research question and methodology. Literature search and literature review.
18.12.15	Professor Scott Wilkes, Dr Wasim Baqir	Methodology, literature search.
22.01.16	Professor Scott Wilkes, Dr Wasim Baqir	Research protocol (assignment), Ethics application including letter of invitation, participant information leaflet, consent form, demographics form and interview topic guide. Review of multiple drafts via email.
19.02.16	Professor Scott Wilkes	Recruitment plan, suitable training courses, digital recorder.
16.03.16	Professor Scott Wilkes	Suitable training courses, recruitment, literature review.
15.04.16	Professor Scott Wilkes	Recruitment velocity chart, recruitment, literature review.
20.05.16	Dr Catherine Hayes	Data analysis clinic, 1 script. Framework analysis – look at the literature to gain an understanding of the principles. Start coding transcript. Discussed recruitment.
23.05.16	Professor Scott Wilkes	Recruitment – concerns regarding the number of interviews completed and report due in September. Likely extension will be needed – request.
22.06.16	Professor Scott Wilkes	Reflection on 2 day course, recruitment, literature review and framing report.
11.07.16	Dr Wasim Baqir	Recruitment
21.07.16	Professor Scott Wilkes	Recruitment, literature review, data analysis.
25.08.16	Professor Scott Wilkes	Recruitment, literature review, data analysis.
14.09.16	Professor Scott Wilkes, Dr Catherine Hayes	Method of data analysis, key emergent themes, development of interview schedules.
07.10.16	Professor Scott Wilkes	Data analysis, planned interviews, draft report.
10.11.16	Professor Scott Wilkes	Draft report
01.12.16	Professor Scott Wilkes	Final draft – ready for submission, plans for future work and publications.

I attended a 2 day course at Newcastle University on Qualitative Interviewing which included a number of taught sessions and workshops. I gained significantly from the peer-reviewed interview workshop which allowed me to reflect upon my interviewing method and approach and encouraged me to review my Interview Topic Guide to ensure that I was capturing the data relevant to answer the research question. The second day focussed predominantly on data analysis, again with the opportunity to practice, which I found particularly useful as I was in the early stages of this. Throughout the 2 day course, a number of speakers were arranged to share their research experience and discuss the challenges that can present in qualitative research and how to overcome these which provided valuable insight.

I have also worked through the distance learning material provided as part of the Masters modules including the self-directed reading. I feel combined with the course at Newcastle University I have gained a better understanding of qualitative research methods and data analysis which I have applied to my project. Having completed the project I now feel I have a much deeper appreciation of the advantages and limitations of qualitative research and this will no doubt inform the planning of any future work. I also understand that there are qualitative research methods which I have not been exposed to such as focus groups and structured interviews which will present a different set of challenges however I feel I have the underpinning knowledge to be able to embark on such projects. Furthermore, during the past year my project supervisor has been invaluable in my development and I will continue to seek support from him and research active peers in future endeavours.

Additional assignments which form part of the Masters module marks, comprises of a critical review of a scientific paper including a presentation and a second presentation of the research project (assignment submitted 15.09.16; presentations completed 15.09.16). The written research project report was submitted on 09.12.16 and the oral viva is due to be scheduled in January 2017. All marks for submitted assignments are pending.

Challenges

As detailed in my interim report, recruitment of participants has posed the greatest challenge during my research journey. Clearly, I had overestimated the success in recruitment and did not consider setbacks. Nevertheless, through changes in recruitment strategies and persistence, in total I completed 14 interviews (maximum saturation) with substantial efforts in between July and October 2016. A significant number of participants were recruited via email invitations to members of professional societies including RPS, RCGP and Primary Care Pharmacist's Association (PCPA). Figure 2 is a revised recruitment velocity chart which demonstrates the progress in recruitment following the last report.

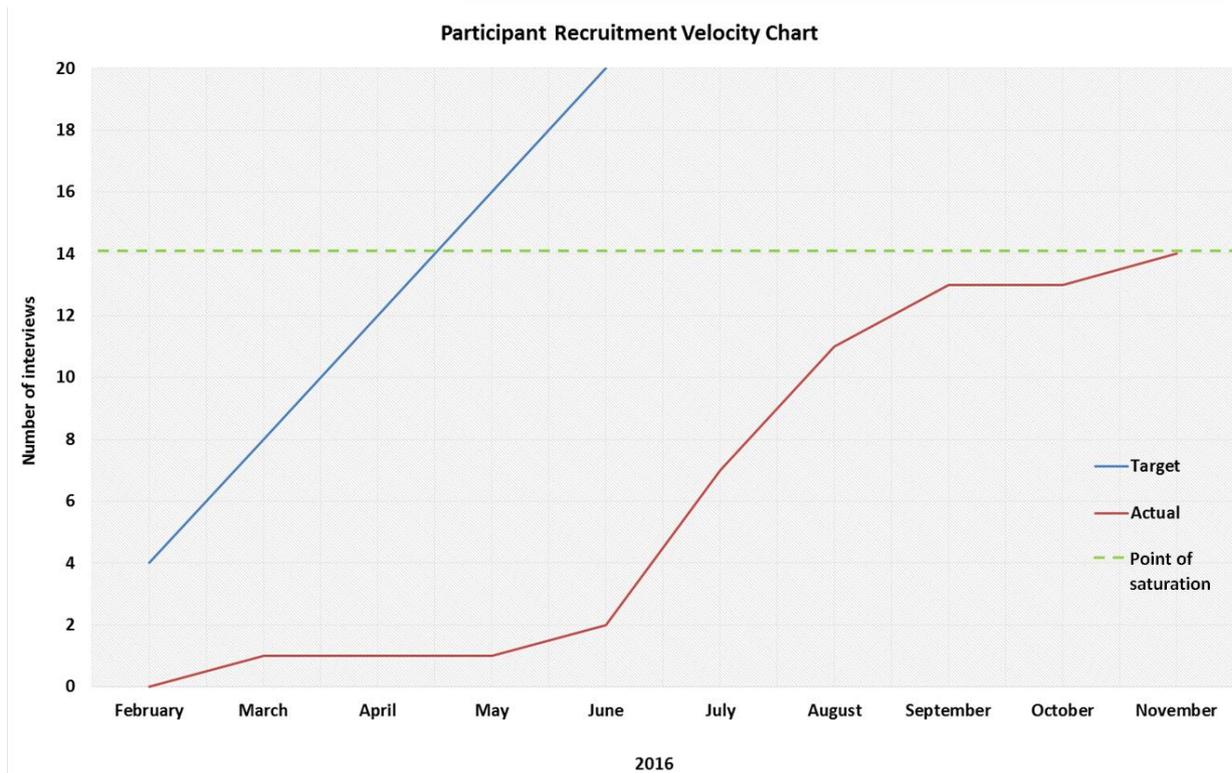


Figure 2. Recruitment Velocity Chart; a total of 14 interviews (maximum variation) were completed, 8 of these were carried out in the period between July and October 2016.

III. Planned Future Work

The findings of the completed research project will be published in peer reviewed journals, primarily aimed at general practice, for example, the British Journal of General Practice. The work will also be submitted for poster presentation at professional conferences including the National Society for Academic Primary Care Conference in July 2017.

I am interested in extending this piece of research by exploring the perceptions of other key stakeholders in primary care as well as exploring further, the pertinent themes identified in this study. Currently, I am overseeing a qualitative study to be carried out by undergraduate pharmacy students to understand the perceptions of community pharmacists to pharmacists led care in general practice. I am also co-supervising a post-graduate student exploring the collaboration of pharmacists based in general practice and community pharmacists using mixed methods.

My current position in academia and the clinical environment offers a unique opportunity for clinical practice research. The completion of the Masters in Clinical Pharmacy has equipped me with a greater understanding of research methods and processes which will be applied to future projects.