



**University of
Nottingham**

UK | CHINA | MALAYSIA

Clinical Pharmacists in General Practice: Pilot scheme

Independent Evaluation Report: Full Report

June 2018

Authored by

Dr. Claire Mann, Prof. Claire Anderson, Prof. Anthony J. Avery,

Prof. Justin Waring and Dr Matthew J. Boyd.

The University of Nottingham

Funded by

NHS England

Contents

Acknowledgements	4
Introduction	5
Scheme outline	5
Methods	6
Introduction and overview	6
Breakdown of stages of research	8
Routine service data	9
External stakeholder consultation	9
Audit	10
Survey of scheme participants	10
Qualitative data	12
Data analysis.....	12
Reporting and dissemination.....	12
Literature review	13
UK primary care context.....	13
What is the impact of pharmacists in general practice on patients' health outcomes?	13
What is the patient perspective on pharmacists working in GP practices?	15
What is the general practitioner perspective on clinical pharmacists working in GP practices?	15
What is the pharmacist perspective on clinical pharmacists working in GP practices?.....	15
What are the barriers preventing successful implementation of this role?	16
What are the facilitators to ensure successful implementation of this role?	17
Findings – responses to the research questions	18
Introduction.....	18
The role and activities undertaken	18
Practice staff perspective and sustainability	20
What is the general practitioner perspective on clinical pharmacists working in GP practices? ..	20
What is the site lead perspective on clinical pharmacists working in GP practices?	20
What is the MDT perspective on clinical pharmacists working in GP practices?	21
Summary	21
Identify costs and effect of the Clinical Pharmacist role	22
Cost	22
Effect	22
Return on investment.....	24

Developing and capturing cost and effect.....	25
Facilitators and barriers.....	26
What are the barriers preventing successful implementation of this role?	26
What are the facilitators to ensure successful implementation of the CP role?.....	27
Collaborative working.....	28
Strengths and limitations of the work	29
Conclusion.....	30
Summary of recommendations.....	31
References.....	33
Appendix A – Example of local data collection by a pilot site	36
Appendix B – Routine service data	37
Data collection.....	37
Observations of the evaluation team with regard to routine service data.....	38
Summary of routine service data provided to evaluation team.....	38
Summary.....	42
Appendix C – National survey of pilot sites.....	43
Audit data	43
Survey findings.....	45
Clinical pharmacist participants.....	45
Pilot site lead participants	54
“Colleagues” participants	67
Summary	74
Appendix D – External stakeholder perspectives - Overview of SWOT data....	75
Introduction.....	75
External stakeholders.....	77
Strengths.....	77
Weaknesses.....	78
Opportunities.....	81
Threats	83
Summary	84
Appendix E - Case studies	85
Case Study Overview.....	85
Case Study A	87
Background (Site and Staff).....	87

Conceptualisation.....	88
Implementation.....	89
Operationalisation	90
Outcomes.....	93
KPIs.....	95
Case Study B	96
Background (site and staff)	96
Conceptualisation.....	97
Implementation.....	100
Operationalisation	102
Outcomes	106
The future	109
Case Study C	111
Background (site and staff)	111
Implementation.....	112
Operationalisation	114
Outcomes	118
Uniquity	120
The Future.....	121
Summary	121
Appendix F –Qualitative thematic analysis.....	122
Introduction.....	122
Overview	122
Participants.....	123
Summary table of participants for in-depth interviews	123
Site Leads	124
GPs	126
Pharmacists.....	127
Patients	129
Terminology.....	130
Conceptualisation.....	132
Planning and application	132
Ratios	136
Turnover	137
Conceptualisation summary.....	138
Implementation.....	139
GP Expectations and assumptions	139
Induction.....	141

Mentoring	142
Training	145
Education	147
Implementation summary.....	148
Operationalisation (The Day Job)	149
Activities	149
Colleagues and relationships	153
Role development	160
Changes in primary care practice	162
The multi-disciplinary team mix.....	163
Operationalisation summary	166
Outcomes	167
Capacity	167
Quality	170
Uniquity	176
Safety	178
KPIs.....	181
Sustainability	186
Outcomes summary	187
Patient stories	188
Appendix G – Glossary and abbreviations	190

Acknowledgements

The project team wish to express their gratitude to Dr Chris Freeman (University of Queensland, Australia) and Dr Helen Boardman (University of Nottingham) for their contributions and advice to the project team. Mr Antony Chuter, patient representative, for his challenging cross examination and guidance in project meetings. The staff and students of the University of Nottingham Division of Pharmacy Practice and Policy for their assistance with data acquisition and analysis. Mrs Loraine Buck for her administrative and extensive transcribing support and the NHS England Clinical Pharmacists Working Group for their direction.

The evaluation team are grateful to all those who took the time to contribute to this evaluation.

Introduction

This report presents an overview of the requested research questions and how they were answered including a review of current literature, methods, breakdown of data by type and an overview of the findings responding to the research questions. This is followed by appendices (A-F) of underpinning data by type and includes in depth case study data (Appendix E).

This evaluation aims to provide an overview of the Phase 1 Pilot to integrate clinical pharmacists into general practice and identifies how best to implement and evaluate the final roll out. Within this process we identify the potential impact of the clinical pharmacists, describe how they are likely to affect working practices and how they may improve service delivery related to medicines both within the medical practice and externally with Clinical Commissioning Groups (CCGs), community pharmacy and hospital pharmacy.

The objectives of this evaluation were to:

- Describe a range of activities undertaken by clinical pharmacists and their perceived impact on medicines optimisation
- Describe medical practice staff satisfaction with the innovation and likelihood of continuation beyond pilot phase
- Identify the potential costs and effects of clinical pharmacists working in general practice from an NHS perspective e.g. GP and practice staff workload, medicines and monitoring costs and use of secondary care services such as emergency and urgent care
- Identify and describe the barriers and facilitators associated with their effective integration and delivery of role and service
- Develop and test a generic model of effectively capturing the costs and effects of clinical pharmacist delivered services
- Identify and describe activities undertaken to enhance collaborative working between hospital pharmacy, community pharmacy and general practice to improve service delivery and patient care

A review of current academic literature was necessary to ground the research in the current knowledge in the field.

Scheme outline

The General Practice Forward View (GPFV, NHS England, 2016) outlined the measures that NHS England (NHS England) are taking to develop general practice. The report suggests that a range of healthcare professionals can become an integral part of the practice team, in much the same way as nurses have and emphasises the inclusion of pharmacists to contribute to patient care.

'Pharmacists remain one of the most underutilised professional resources in the system and we must bring their considerable skills in to play more fully.' (NHS England, 2016)

The GPFV outlined an investment of £31million to pilot 470 clinical pharmacists in over 700 practices. This is to be supplemented by new central investment of £112 million to extend the programme. This

will result in over 2000 clinical pharmacists in general practice by 2020, a ratio of one clinical pharmacist per 30,000 patients. (NHS England, 2016)

NHS England funded this one year evaluation of the initial pilot phase of the 'Clinical Pharmacists in GP Practices' scheme.

The 'Clinical Pharmacists in GP Practices' scheme was launched as a pilot scheme in 2016-17, with further rollout phases. NHS England reports that in February 2017 the pilot scheme had funded 89 applications from federations who in turn recruited over 490 pharmacists (greater than 450 whole time equivalent (WTE)) to work across more than 650 GP practices. (Sharma, 2018)

The first scheme was launched as a pilot phase and there are some minor differences between this initial pilot scheme and later iterations. Most notable differences between the operationalisation of the pilot scheme (phase 1) and the next iteration (phase 2) are improvements in the management of the scheme with a clear clinical leadership role, clearly defined ratios for sites and mentoring, and a changed approach to reporting KPIs.

Each site application was at a level of scale, including a group of GP practices or other sites, referred to as a 'federation' site. At each 'federation' site a nominated person led the bid, and developed the scheme locally. The bids were assessed by regional teams. In the pilot, practices could apply for 60% of costs in year 1, 40% in year 2 and 20% in year 3. Practices were required to meet the remaining costs themselves, although some CCGs have put in additional funding as well to reduce the initial amount payable by practices. Some additional funding is provided on a case by case basis towards the management of the scheme. Over the course of the 3 year funded implementation period it is envisaged that practices will recognise the value of the work done by the pharmacists and cover the full cost of their employment.

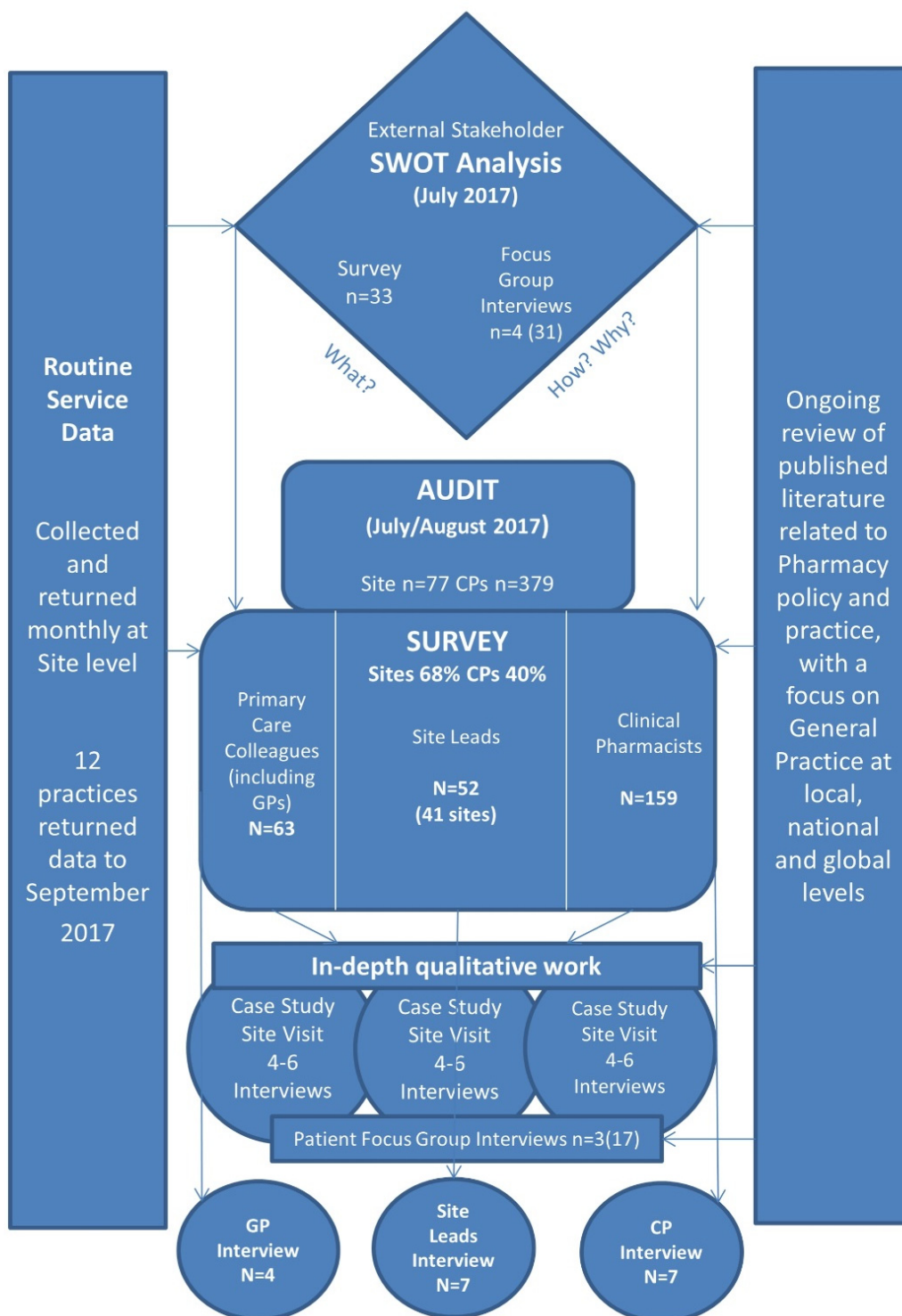
Health Education England (HEE) procured the education and training programme which was delivered by the Centre for Pharmacy Postgraduate Training (CPPE) for pharmacists in this pilot wave, some in conjunction with Red Whale, another training provider. Further funding and time in the scheme is dedicated to upskilling clinical pharmacists without existing qualifications to become independent prescribers. Independent prescribing training is undertaken at local higher education institutions with underpinning mentoring provided by practices.

Methods

Introduction and overview

The research took a mixed methods approach to understanding the scheme implementation. The evaluation worked to a very tight budget and schedule and optimisation decisions were taken to maximise data collection. All areas proposed for evaluation were included, alongside additional iterative methods. This section outlines the research approach and the way data was collected and analysed in this pilot evaluation.

The following diagram outlines the data collection approaches utilised in this short pilot evaluation study.



Breakdown of stages of research

Table 1 outlines the data collection approaches utilised and numbers of key participants at each phase.

Type	N=	Date
Routine Service Data (Monthly spreadsheet completed on a per site basis)	12 Practices	Data provided to September 2017
SWOT	Questionnaires n=33 (40%)	4 th July 2017
External stakeholder consultation	Focus Groups n = 4 (31)	
Audit	Tracking of sites returned NHS England data Site 89 CPs 491 Audit data Site 77 CPs 379	July and August 2017
Questionnaires	Sites 68% CPs 40% Site leads n=52 (over 41 sites) Colleagues (including GPs) n=63 CPs n =159	September and October 2017
Qualitative Data		
Case study site visits	N=3	October 2017 – January 2018
Site Lead interviews	N=7	
GP Interviews	N=4	
Pharmacist Interviews	N=7	
Patient Interviews	N=17 (3 Focus groups)	

Table 1: Data collection phases

Each phase of the data collection was delayed due to unanticipated obstacles. Notwithstanding this, an enormous amount of multimodal data was collected to inform the research in this report.

Routine service data

The research team were provided with the monthly return data for 12 practices up to August 2017. The purpose of this was to describe basic pharmacist activity. Data were extracted from the provided spreadsheets and analysed using descriptive statistics using Microsoft Excel 2013. Data provided was not always complete and was a very small percentage of the potential return available. Data was submitted to NHS England by sites via email making data extraction more challenging.

External stakeholder consultation

The research commissioned was to engage with stakeholders involved in the pilot phase of the 'Clinical Pharmacists' in general practice scheme. Data collection methods were both planned and emergent, in order to respond to arising circumstances.

The stakeholder day organised by Health Education England (HEE) in July 2017 offered a unique emergent opportunity for the research team to engage with key stakeholders from the pilot scheme and gather research data.

Stakeholders attending the day represented a wide range of geographic as well as job role and level diversity. Attendees (n=80) included both 'on the ground' roles such as CPs in the role, pharmacists in a range of wider roles, GPs and pilot site leads, as well as representatives from more strategic stakeholders representing organisations such as government, universities, Royal Pharmaceutical Society (RPS), Centre for Pharmacy Postgraduate Education (CPPE), HEE, Royal College of General Practitioners (RCGP) and others.

Two key data collection methods were used to generate feedback from key stakeholders on the scheme so far. Both methods utilised a 'SWOT' (Strengths, Weaknesses, Opportunities and Threats) analysis approach to ensure representation from all areas of the. This is a technique previously utilised successfully in a range of studies. (Helms and Nixon, 2010, Jackson et al., 2003, Pickton and Wright, 1998)

The first method involved the completion of a paper based SWOT analysis, asking stakeholders to respond to these key areas relating to the scheme at three levels – patient, practice and policy. The paper based exercise was distributed to all stakeholders attending the event early in the day and collected at the end. Thirty three completed SWOT analyses were collected representing 40% of participants. Data was collected in a database, analysed thematically and top level findings are presented in full in tabular format in the report. (Appendix D)

The second method involved stakeholders attending focus group interviews facilitated by the research team to discuss stakeholder views on the SWOT of the pilot scheme. The total number of interview participants was 31, split into 4 groups of similar sizes. Focus group participants included participants from both 'on the ground' and 'strategic' roles. Data was recorded and transcribed verbatim and analysed according to the SWOT framework. Data was subject to collaborative emergent thematic analysis. (Appendices D & F)

Audit

NHS England were unable to provide the evaluation team with an up to date list of clinical pharmacists in post as this information was not routinely captured by NHS England for this Pilot wave, the only records held were at the level of the site that completed the initial application. The training provider CPPE was also not able to share an up to date complete list of clinical pharmacists as training was provided on an “opt-in” basis and included pharmacists not on the pilot. From the original application data and CPPE training registers, NHS England believed that the pilot wave consisted of:

- 89 application sites
- 451 CPs WTE employed (491 posts)
- 58 GP practices acting as hosts to GP Pharmacists

In order to facilitate an online survey and track response rates it became vital to conduct an audit which could clarify the numbers of sites and employees and establish a line of online communication.

An audit took place over June-September 2017. Each pilot application site was contacted by email and asked to confirm their participation in the pilot and provide the names and email addresses of the clinical pharmacists and the GP practices worked at. A first request for information was sent in June with follow up emails in July. In the event of non-response, a series of telephone calls to the site were placed to establish this information. Supportive emails from NHS England in August asking that sites participate in the evaluation were helpful.

We were able to confirm data for 78 out of the 89 proposed application sites. 9 sites chose not to respond to the multiple requests for audit data. (2 responded after the survey had been closed, and the others chose not to be involved) 2 sites were found to be duplicate sites. 1 site informed us that they did not progress with the scheme.

We were able to confirm, from the 78 sites who engaged with the audit process, a list of 373 pharmacists who were employed on the pilot scheme. We were also made aware of where there were vacant posts.

Survey of scheme participants

The research team collaboratively designed the content of the survey/s based on the original research questions submitted in the evaluation tender bid and issues emerging from the current published literature in the field. Whilst the original study design had been to survey only clinical pharmacists and their colleagues in the practice, an important new category of participants emerged from conducting the audit. The pilot site leads who were contacted for the information about clinical pharmacists were sharing valuable information about the scheme and clearly played an important role in its implementation. It was therefore decided to iteratively develop a survey for this new category of colleagues who emerged as significant gatekeepers to the scheme, the clinical pharmacist and therefore the evaluation research. Each iteration of the questionnaire was piloted both internally with the steering group, and externally with a local sample of Pharmacists. Adjustments were made over 5 rounds of amendments to incorporate changes to face and content validity.

The platform for the online survey was Bristol Online Surveys (BOS), as this platform meets all data protection and local ethical requirements. Unfortunately the ethical requirements to use this platform were problematic since the platform moved hosts (University of Bristol to JISC) during the period of the survey administration without prior knowledge to the team. This caused both a delay to the survey and a disruption during the survey period that may have had a negative impact on response rates. The final version questionnaire was distributed by email on 27th September, remained open for three weeks and closed on 18th October. All CPs and pilot site leads were sent a personalised emailed a

unique participant link to their respective surveys to allow completion tracking. CPs were also sent a further link to distribute to colleagues who worked with them. Two reminders were sent to non-responders.

Survey responses were received from

- 52 'Pilot site leads' across 41 sites (some sites shared their link) – this represents a 46% response rate at Federation (site) level. It was not possible to identify a single response that could be taken to represent the multi-completion sites. Data were therefore taken as *prima facie* without exclusion.
- 159 'CPs – this represents a 42% response rate at an individual level
 - Of the responses by CPs, 30% were from 'Senior' (band 8) CPs and 70% were from (band 7) CPs

Qualitative data

The survey generated a number of sites willing to engage further with the research; this was a much higher number of potential participants than anticipated. 65% of pilot site leads, 54% of pharmacists and 22% of colleagues (who returned survey data) expressed willingness to engage with further research interviews. A period of site engagement and intensive qualitative data collection was designed to explore data at an experiential level and maximise this opportunity. 16 in-depth individual qualitative interviews were undertaken with a varied range of participants, along with 3 patient focus groups comprising a total of 17 patients.

Through this detailed qualitative work, this final report is able to present case studies of how local pilot schemes have been operationalised and the local benefits enjoyed from the schemes. These are located in the appendices. Three full case studies were undertaken where qualitative interviews were undertaken with pharmacists, practice staff, site leads and patients. Partial case studies were conducted across a further 5 sites. This wide ranging qualitative work underpins and triangulates the wider data already collected on the project.

Data analysis

Descriptive statistical analysis was undertaken on the Routine Service data provided. It is recommended that further analysis is undertaken of any further data collected post September 2017 and that pilot schemes are joined into a wider centralised data collection process with later sites.

Questionnaire data was subject to descriptive statistical analysis as well as qualitative thematic analysis and raw findings are presented in descriptive format.

A collaborative focused review of SWOT analysis was undertaken to present clear analysis of external stakeholder data.

All qualitative data which captured experiential participant perspective data was subject to iterative thematic analysis by professional group and scheme stage. Where full data exists it is presented in case study format to represent context-based data. All sites have been coded with letters A-H. Participant's details have been pseudonymised with names beginning with the site letter code. E.g. Betty comes from site B.

Reporting and dissemination

Due to the very limited timescale of the evaluation, project data has been reported at the cohort response level.

This report is published as the main output from the work as an independent evaluation by the University of Nottingham. Further data analysis and reporting is anticipated through academic peer reviewed journals and dissemination work.

Literature review

A review of current academic literature was undertaken to ground the research in the current knowledge in the field. This theoretical knowledge is triangulated with the empirical data collected to make recommendations for NHS England based on the most up to date knowledge and data in Pharmacy policy and practice research at a national and global level.

UK primary care context

Primary care services, including General Practice, continue to face unprecedented and growing demand. This reflects widely recognised system pressures associated with an ageing population, multimorbidity, polypharmacy. Between 1996 and 2008, GP consultations increased by an estimated 11%, and nurse consultations by 150% (GMC, 2016). At the same time spending on the NHS, and in particular, in general practice in Great Britain has declined (Deloitte 2014). Furthermore, there are significant reductions in the numbers entering general practice as a career, and a high rate of turnover of those working in the profession. (Baird et al 2016) The General Practice Forward View (GPFV) (NHS England, 2016) recognises some of the key issues in efficiently and effectively managing the frontline demand and supply of healthcare in the UK.

The Royal College of General Practitioners (RCGP) suggests one potential solution is to develop a more diverse skill mix in primary care workforce and outlines the fact that community pharmacy is a 'significant unexploited potential' (Gerada and Riley, 2012). In 2013, the Royal Pharmaceutical Society's 'Now or Never' report (Smith et al., 2013) proposed a significant rethink of the models of care through which pharmacy is delivered, towards a model utilising the full professional expertise and potential of pharmacists.

The GP workforce 10 point plan (NHS England, 2015a) acknowledged that GP practices were recruiting pharmacists and laid out plans for the national pilot launching in 2015 with the first pharmacists working in General Practice on the pilot scheme by 2016 (NHS England, 2015b) The General Practice Forward View (2016) committed over £100million to support an extra 1,500 clinical pharmacists to work in general practice by 2020/21 as part of a wider expansion of the general practice workforce.

What is the impact of pharmacists in general practice on patients' health outcomes?

A meta-analysis of randomised controlled studies found improved medication concordance and reduced potential medication-related problems in general practices with an integrated pharmacist (Tan, 2014a). The first randomised controlled trial of pharmacist prescribing in the UK suggested that there may be a benefit for patients with chronic pain.(Bruhn, et al. 2014) An Australian study (Freeman et al., 2012a) shows that pharmacists improve the timeliness and the overall completion rate of medication reviews in general practice, the study also concludes that the time between referral and pharmacist consultation is reduced. The same applies to the time between the pharmacist consultations to GP follow-up consultation, furthermore more patients were getting reviewed overall. Pharmacist interventions greatly improve ACT and CAT scores in asthma and COPD patients, they further reduced the utilization of healthcare services and significantly reduce drug cost (Khachi, 2014). Pharmacist consultations can be highly effective in identifying and resolving medication related problems (Tan et al., 2013) the same study also concludes that the patients welcomed these

consultations and improved medication adherence. For high-risk patients with type 2 diabetes mellitus, proactive case management by a pharmacist can reduce HbA_{1c} levels of 1.2% compared to control in a primary care clinic setting (Choe et al., 2005), this reduction in HbA_{1c} levels would result in an estimated 40% to 50% relative reduction in microvascular complications. Patients that are seen by a pharmacist have a higher chance of their medication being changed compared to a control group, although the cost of the drug increased in both groups, the intervention group was smaller than the control group. The intervention did not increase the workload of general practitioners but it did not prove to have decrease the workload either (Zermansky et al., 2001). Falls can be significantly reduced in elderly patients in care homes by clinical pharmacist medication reviews compared with usual GP care (Zermansky et al., 2006). Pharmacists are able to provide independent medication advice within a primary care setting making this role to be a simple extension to their cost saving role which they already undertake in the GP practice (Chen and Britten, 2000). Pharmacists also prove to be value in management of more niche conditions such as insomnia (Sake et al., 2016). In a small Icelandic study (Blondal, 2017a) with 100 patients the pharmacist identified two drug therapy problems per patient. The most frequent problem was related to noncompliance, next was adverse drug reaction and the third was unnecessary medicines. Almost all pharmacist interventions were accepted by the general practitioners. This clearly demonstrates that pharmacists practice safe and knowledgeable medicines review which can have clear benefits for patients' health and lifestyle outcomes.

Hazen et al's (2017) systematic review investigates how the degree of integration of a non-dispensing pharmacist into a healthcare team impacts medication related health outcomes in primary care. Some pharmacists are fully integrated into the health care team, whereas others only temporarily provide a specific service. Common opinion is that integrated care for patients with chronic conditions may improve patient outcomes. Pharmacists have been shown to positively affect surrogate outcomes, such as blood pressure, glycaemic control and lipid goal attainment. Evidence of the effect of pharmacists on clinical endpoints, such as mortality, hospitalizations and health related quality of life, is less clear probably due to very heterogeneously defined pharmacy activities as well as strongly differing study settings. Most of the studies did not include prescribing pharmacists and the authors acknowledge that this might change health outcomes and needs further study. They also acknowledge that pharmacists operating in isolation may negatively influence the quality of care and that studies highlight the importance of communication between pharmacists and GPs about the patients. The authors concluded that full integration adds value to patient-centred pharmacy services, but not to disease-specific clinical pharmacy services and that to obtain maximum benefits of pharmacy services for patients with multiple medications and comorbidities, full integration of pharmacists should be promoted. The importance of pharmacist integration in a multi-disciplinary team has clear implications for the context of this study.

Bush et al. (2017) attempted to characterise the breadth and volume of activity conducted by clinical pharmacists in general practice in an English Clinical Commissioning Group (CCG), and to provide quantitative estimates of both the savings in general practitioner (GP) time and the financial savings. This descriptive, retrospective, observational study analysed data collected by the CCG concerning the activity of pharmacists in GP practices during 2015. This descriptive paper based on routine data collection and relies on self-reporting of activity. Over the 9-month period for which data were available, the 5.4 whole time equivalent pharmacists operating in GP practices identified 23,172 interventions. 95% per cent of interventions identified reportedly resulted in savings to the CCG in excess of £1 000 000. However, there was no attempt to validate these interventions using for example an expert clinical panel. During the 4 months for which resource allocation data were available, it was reported that the clinical pharmacists saved 628 GP appointments plus an additional 647 hours that GPs currently devote to medication review and the management of repeat prescribing. The authors conclude that the findings suggest that pharmacists in general practice in the CCG are able to deliver clinical interventions efficiently and in high volume, generating considerable financial

returns on investment. The CP role has significant overlap with the CCG pharmacist and share a similar position to deliver clinical interventions, in volume, generating financial return on investment.

What is the patient perspective on pharmacists working in GP practices?

Petty et al. (2003) conducted extensive research looking into the views of patients on pharmacists conducting medication reviews in a GP setting. They concluded that not all patients will benefit from medication reviews as most patients already have these reviews with their GPs. They found that some patients welcomed the more detailed and longer review but some were disappointed by the services as the pharmacists did not meet their expectation.

Independent prescribing pharmacists are valued by patients as an alternative to GP prescribing in GP practices (Gerard et al., 2012). However, patients in Gerard's et al's study had a stronger preference for their own doctor than a prescribing pharmacist. In an Australian study (Freeman et al., 2012a) patients still viewed pharmacists as suppliers of medicines, though they welcomed the integration of pharmacists into GP practice, they also wished for more dispensing, therapeutic drug monitoring and supply of over the counter medicines. Younger patients have been found to be more likely to welcome the extended roles of pharmacists (Tinelli et al., 2009), including more willing to have their pharmacist to have both prescribing and dispensing roles. Tan et al. (2013) in an Australian study concluded that there were positive patient attitudes towards pharmacists in primary care and stated that patients were highly satisfied with pharmacist consultations. Green et al. (2016) interviewed seven patients in one London GP practice and they mostly found the pharmacist to be experienced and beneficial. The authors conclude that as better understanding of the pharmacist's role might improve patient uptake. The studies above were all conducted before the NHS England initiative was introduced, thus the perspectives of patients in UK might have changed as a result of the intervention.

Snell et al. (2017) investigated patient views about a pharmacist led patient-centred polypharmacy medication review service completed within 17 English GP practices with those ≥ 75 years of age and prescribed ≥ 15 medications, during 415 consultations. Of the 40% who returned the questionnaire, 83% found the service helpful. Medication-related concerns of 94% were addressed, and 80% understood their medicines better after the review. Patients appreciated pharmacists' personal approach, advice and explanations.

What is the general practitioner perspective on clinical pharmacists working in GP practices?

GPs are much more welcoming to the idea of a pharmacist working in their practice if the GP has worked with a pharmacist before (Bajorek et al., 2015). Both GPs and pharmacists think that patients would accept these new services, they also agree that the initial acceptance by GPs would be low but would increase with further exposure (Freeman et al., 2012b). A recent Icelandic action research study (Blondal et al, 2017b) where pharmacists provided medicines reviews in either patients' homes, or the GP practice, where they had access to patient records, showed that GPs' knowledge about pharmacist competencies as healthcare providers and their potential in patient care increased. GPs said they wanted to have access to a pharmacist on a daily basis.

What is the pharmacist perspective on clinical pharmacists working in GP practices?

Butterworth et al. (2017) indicated an enthusiasm for the role and called for a definition of the role, with examples of the knowledge, skills, and attributes required, to be made available to pharmacists,

primary care teams, and the public. The authors conclude that training should include clinical skills teaching, set in context through exposure to general practice, and delivered motivationally by primary care practitioners. Consultations with a pharmacist regarding medicines, in a general practice setting in the UK, have previously been reported to be rich in content, acceptable to patients, and perceived by pharmacists to be a possible way to extend their role (Chen et al., 2000.) A UK analysis of audio-recorded consultations about medications, between patients and pharmacists in general practice, concluded that pharmacists were patient centred, and responded positively and effectively to patients' emotional cues and concerns. The pharmacists in Butterworths (2017) study recognised the importance of a holistic, individualised approach to patient care and they valued the communication skills training on this course.

Canadian pharmacists (Farrell et al, 2008, Pottie, 2009) needed time to expand their knowledge and skills to address family practice needs. They felt their identity changed with time and that they became more holistic and less black and white in their approach pharmacists need to be prepared for the emotional challenges of becoming part of an interdisciplinary team and need to use integration strategies to work. Mentoring and guided integration activities were helpful to facilitate integration into family practice but pharmacists still experienced a variety of emotions in the early months (Farrell et al 2010).

In order to be successful in gaining patient referrals and feeling part of the team, pharmacists needed to be visible, communicate well and be flexible and innovative. Once they demonstrated their value, they felt that buy-in from doctors happened. This quote (Goldman et al. 2010) highlights the uniqueness of the role and the initial feelings:

'I'm a pharmacist so I know how to be a pharmacist. I don't know how to be a pharmacist in a Family Health team because nobody knows about that yet. I walked in and I did pharmacy things, but I didn't know what that meant in relation to what the nurse does or what the dietitian does.'

What are the barriers preventing successful implementation of this role?

Funding is a very clear barrier to implementation. Depending on whom you ask, it seems that different stakeholders have different opinions on how to fund this initiative. (Freeman et al., 2016, Bajorek et al., 2015, Tan et al., 2014b, Sake et al., 2016). However, the current NHS England initiative has a clear funding model, but at the time of writing the sustainability of the model remains uncertain. Avery (2017) in a recent editorial suggested that while some general practices will be prepared to make a financial contribution unless a more generous approach is offered to general practices and the funding formula is changed the scheme may lack sustainability. He emphasised that although pharmacists may sometimes ease GP workload the majority of the impact of practice-based pharmacists will be on quality and safety.

Freeman et al, (2016) in their report of their Australian study have suggested a more 'flexible' model, which in theory would allow customization of specific GP practices to match their own needs. Uptake by patient's poses as a common barrier in many studies reviewed (Green et al., 2016, Sake et al., 2016), patients do not realise that the service is available and what kind of care might be expected. The perceptions of other health care professionals can also be a barrier, particularly that of GPs (Tan et al., 2014a, Wilcock and Hughes, 2015, Adepu and Nagavi, 2006, Freeman et al., 2012b, Saw et al., 2017). Lack of infrastructure is also a common barrier (Freeman et al., 2012b), many general practices do not have a spare room to accommodate a pharmacist. Freeman et al. (2012c) highlighted barriers to pharmacist integration such as medical culture and remuneration.

What are the facilitators to ensure successful implementation of this role?

Well established pharmacists are considered to be more suited to the role. Choe et al. (2005) highlight the importance of established relationships with doctors and patients stating that this would improve trust and allow for more inter-professional working. Pharmacists have more time to evaluate medicine usage and reduce medicine wastage (Khachi, 2014) and so clearly there is a cost saving benefit related to the medicines budget. According to one study, independent prescribing pharmacists would benefit the GP practice more as the pharmacist can drastically reduce workload of GPs as the pharmacist is more capable in this aspect (Stone and Williams, 2015). If the implementation of pharmacists in general practices has resulted in overall health improvement this would naturally serve as a facilitator (Khachi, 2014, Tan et al., 2013, Choe et al., 2005, Zermansky et al., 2006, Zermansky et al., 2001, Sake et al., 2016). (ASU editorial) GPs benefit in multiple ways from the pharmacist presence. Pharmacists' support and input are provided in a timely manner in instances when they may not have previously been sought, from clinical meetings to incidental ('corridor') consultations. The practice pharmacist and GP relationship allows for advice tailored to the GP's preferred style and immediate needs and enables ongoing, long-term collaboration on more challenging cases. Further, GPs are more likely to enact advice from a trusted and respected colleague than recommendations from an external 'contractor'.

Freeman et al. (2012c) highlighted facilitators to pharmacist integration such as remuneration and training, benefits of integration such as access to the patient's medical notes, and potential funding models.

Blondal et al. (2017b) concluded that direct contact between the pharmacist and GPs is better when working in the same building and that pharmacist's access to medical records is necessary for optimal service. Pharmacists having other roles working in the practice (such as educating other health care providers), and the pharmaceutical care service needing to be well structured and streamlined to have benefits. However, the one thing the GPs interviewed in this Icelandic study mentioned most was the importance of the face-to-face communication.

Findings – responses to the research questions

Introduction

The appendices provide an overview of the key findings presented in response to the original research questions of the evaluation and full underpinning data. A comprehensive overview of supporting evidence in empirical data is held in Appendices B-F.

The role and activities undertaken

A wide range of activities undertaken by CPs were reported and observed. These are difficult to homogenise as cross-site practice is largely variable and localised. Many CP tasks were focused on outcomes related to medicines optimisation.

Senior CPs time was split between clinical and leadership tasks with some of their time spent in patient facing work and the rest dedicated to scheme management and mentoring of less experienced pharmacists.

A small proportion of CPs (2%) reported only conducting non-patient facing roles, largely in audit positions similar to the established CCG pharmacist role. These have impact on medicines optimisation by linking the national agenda around medicines optimisation with local needs and practices.

Most CPs (98%) undertook patient facing work, focusing on complex medication reviews, in particular with patients with long term conditions (commonly diabetes, hypertension, asthma, COPD, mental health reviews and reconciliation following discharge from hospital) and polypharmacy. 38% reported undertake medication reviews in person every day and 30% several times per week. For 70% they classified this as a major part of their role.

There was evidence in many cases of this medication review involved deprescribing. *Betty* believes there is an optimisation and or safety intervention in 70% of her cases.

'In a medication review, chronic disease review, I would say most patients we see we make some sort of intervention. Be it very small to stop the meds, changing meds.' CP Betty

A large proportion of CPs were responsible for streamlining the discharge reconciliations process for patients; 63% doing discharge review every day and 21% several times per week. This was acknowledged by a wide range of participants as having a significant positive impact on patients and localised practice which potentially led to reducing hospital readmissions.

Several CPs were focused on working with patients with mental health needs with a specific agenda to reduce opiate prescribing. Several patients reported successful reduction in opiate use with support from the CP.

The external stakeholder SWOT analysis data showed that external stakeholders perceived 'active deprescribing' to be one of the key strengths of the scheme relating to impact on patients. There were several examples given in interview by practising pharmacists where patients appreciated having their number of tablets reduced. Several site leads reported that CPs were noted for their high quality work especially with respect to LTCs including significant work on deprescribing.

There was a strong feeling from some participants that with regard to medicines optimisation, it would be impossible to measure this, as primary care is very multidisciplinary and therefore inseparable from the work of other healthcare professionals in primary care such as GPs, nurses and CCG

pharmacists. Some site leads however suggested that deprescribing is measurable and could be a KPI, some CPs resist this as a KPI measurement as deprescribing may not always be in the patients' best interests.

Several sites reported locally focusing work on deprescribing in key areas such as elderly, specific conditions or mental health. Some sites have tracked deprescribing where linked to a specific area of work – for example one case study site provided evidence of a CP-led review of processes and better use of a prescription clerk leading to a 25% reduction in medicines management costs in 3 months.

A large proportion of CPs report giving lifestyle advice and this is reinforced by patients who agree that their appointment with a CP helps them to understand and adjust their healthy lifestyle behaviours. This advice can also support medicines optimisation. In one case study example a CP helped Patient L to improve his self-care through an improved diet, smoking cessation and gradual supported reduction in his opiate use which contributed to significant improvements in his diabetes.

The work of CPs is largely focused on their specialisms in medication and focusing on planned and long-term care over acute care. However, there is some evidence of role stratification into acute care according to localised demand.

Our study was not set up to evaluate quantitative changes in patients' health outcomes, however, from the data we have obtained there is evidence of a wide range of working practices which could impact on patient outcomes including the following:

- Improved (right person right time) appropriate care through improved workflow in general practice and specialized MDT
- Increased
 - patient access to appointments
 - access to both planned and urgent care (higher proportion planned than urgent)
 - access to complimentary care such as vaccinations and medication reviews
 - patient satisfaction with their healthcare
 - holistic care of patients, leading to improved outcomes
 - patient understanding of their long term conditions and medications
 - patient education on healthy lifestyles
 - patient lifestyle changes benefitting overall health and contributing to improvements in long term health conditions
 - increased adherence to medications, especially with LTCs (of particular note were hypertension, diabetes and mental health)
 - care home expertise and reduction in care home referrals including primary care and hospital admissions
 - management of link between prescribing and dispensing through good quality networks with community pharmacy
 - patient safety through error minimization and increased monitoring
 - medicines optimization
 - Reduced prescribing errors
 - Increased strategic prescribing
 - achievement of QOF targets
 - patient satisfaction with transitions between secondary and primary care
- Reduced
 - opioid use
 - prescribing errors
 - patient readmission post discharge
- Improved medication knowledge in wider clinical team leading to overall improvements in care related to medications

It seems clear that stakeholders believe that the biggest contribution CPs can make to primary care is in adding their expertise to the multi-disciplinary team by contributing to issues around managing medication, rather than being used as replacements for other clinicians.

'We aren't 'expensive nurses' or 'cheap doctors' we bring a wide array of unique knowledge and skills and a fresh perspective, valued by patients and allied professions'

Comment by CP in survey

Practice staff perspective and sustainability

Different colleagues in the pilot scheme perceive the role and the benefits differently. The evaluation explored the experience of the scheme from the perspectives of a range of professional groups. The following describes these different perspectives.

What is the general practitioner perspective on clinical pharmacists working in GP practices?

GP contributions to the scheme vary; there is often a lead GP at the lead site who positively influences other GPs and provides overall clinical guidance to the scheme. GPs acting in the lead role are innovators who are already convinced of the positive contribution that CPs can make to primary care.

There is evidence of mismatch in professional expectation as some GPs expect CPs to arrive in a state ready to conduct more patient facing work than they actually are. GPs have to provide significant early investment in the CP (in terms of clinical mentoring) to realise later returns and the level of this commitment is not always recognised in advance. GPs are often happy to provide clinical lead for a CP post but rely on the support of practice site leads and SCs to provide management support

GPs suggest that the CP role is expensive to the practice and financial benefits are not the main (or any real) motivation for the role development. GPs recognise that CPs can contribute to capacity but recognise that the demands of general practice are such that these benefits are difficult to realise especially until the post(s) become well established and evidencing this is challenging.

GPs see the role as a unique and vital contribution to the multidisciplinary skills mix. GPs recognise the benefits of the CP role primarily by their expertise than contribution to outcomes. GPs wish to localize the CP role according to the demands of the practice, and the specialisms of the CP.

GPs believe that key performance indicators for the scheme should be evidence based and localised.

GPs believe the role to be sustainable; most reported that they will keep the one they are working with after the funding expires. Many GPs expressed either through data collection, or to the CPs directly, that they noticed significantly when the CP was absent (for example for holiday or training) and general practice would now not wish to work without the contribution of a clinical pharmacist.

What is the site lead perspective on clinical pharmacists working in GP practices?

Site Leads (SLs) are responsible for operationalising the scheme locally. SL posts are held by a wide range of professional types, working for a wide range of organisational types including Private companies, CCGs, Federations and practices. SLs are usually known at CCG level for previous experience working closely aligned to the field. SLs benefit from support from CCGs, where it is offered, but this support is variable by area and at different times through the scheme. SLs' previous

experience benefits the implementation of the scheme. SLs take significant responsibility for management and implementation of the scheme at a local level.

SLs are the co-ordinating role for all others in the scheme – upwards to CCG level (and beyond) and across to GPs, SCPs, CPs and other practice team. SLs are often the team member who manages concerns and resolves issues locally. SLs are often the central co-ordinating point for administration of the scheme including HR, indemnity, and finance. SLs are sometimes responsible for delivering induction, training and mentoring for CPs, but more often support others delivering these tasks. SLs express frustrations with the costs of external training to the practice that were unclear at the outset of the pilot.

SLs are clearly focused on the sustainability of the scheme; many have actions in place to sustain the role beyond 36 months at the 24 months stage. SLs suggest that in order for their role to be sustainable (at 36 months) CPs should be working fully autonomously patient facing by 24 months. SLs recognise that the CP role will cause variance across the pilot sites and potentially gaps in the wider pharmacy workforce as CPs move to this new role.

What is the MDT perspective on clinical pharmacists working in GP practices?

Pharmacists reported working closely with other colleagues in primary care – in particular nurses, administrators and other pharmacists. There is some evidence of initial concerns and resistance in a small number of allied health professionals concerned about role overlap. However, on the whole the clinical pharmacists report positive experiences of working closely with a wide range of colleagues in the multi-disciplinary team (MDT). At most sites localised inductions include shadowing of a wide range of colleagues, building relationships, trust and understanding about the role boundaries. At some sites mentoring and training for CPs is provided by Senior Nursing staff and there are examples of two way learning between nurses and Clinical Pharmacists. There is evidence of a small amount of role overlap (between nurses and CPs in particular in provision of care for long term conditions) which practices find useful to support the wider staffing of the team and meet patient needs in the most timely and efficient way. There is also evidence of CPs working closely with healthcare staff in care homes.

Summary

Data collected from CPs and their colleagues in general practice demonstrate their satisfaction with their CP colleagues and the benefits they bring to practice. Some mismatches in expectations have been identified. Several sites, and GPs are emphatic about the benefits that CPs bring, however, this is mitigated by the likelihood of their status as innovators and early adopters. Overall the data collected suggests that the majority of sites, at a practice level, are seeking to employ their pharmacist when the pilot scheme funding ends.

'We see we can't survive without pharmacists, they are part of what we do.' GP Adam

Identify costs and effect of the Clinical Pharmacist role

This section considers the return on investment (ROI) for practices committing to the pilot scheme. In identifying the costs and effects of the posts, stakeholders can make informed judgment about the level of ROI.

Cost

The cost of the CP to the practice is 40% of salary in year 1, 60% in year 2 and 80% in year 3. (NHS England 2015) Salary for the CPs in General Practice is not specified '*as independent businesses general practices do not need to take account of agenda for change*', however it is broadly recommended that posts for CPs are level 7 (£31-£41k) and Senior CPs are level 8a (£40-£48k). (NHS Employers 2017)

Additional costs to the practice include the backfill time of the GP (or other experienced healthcare professional) to provide direct mentoring. While a contract exists to reimburse GPs for registrar training, there is no similar provision in relation to the CP post and this must therefore be borne as a cost to the practice (since this time could alternatively be spent in cost-generating activity).

As any effect of the role involves the time of the CP in practice, any reduction in this time is, in effect, a cost of the scheme. The total number of working days in one year averages 260, reduced by annual leave to 233. The amount of time spent by CPs at off-site training events in year 1 is identified by several sites as a minimum of 18 days for CPPE training (plus additional time for prescriber training (if not already qualified) therefore reducing working capacity of the full-time CP further by a minimum 7.7%. However, the time spent in training is not proportional to the job which may be held on a part time basis. Several small sites reported having a pharmacist working for only one day per week. In this case the cost of the overall working days and annual leave is pro-rata to the post but the cost of the training remains constant at 18 days which may rise further to account for up to 38% or more of the time spent by a CP in practice. Further the integration and induction in the pilot site is significantly hindered and there is evidence this has significant negative impact on the establishment of the role. This time reduces significantly after year one, but this points to a heavy cost to the practice in the first year, potentially disproportionately disadvantaging smaller practice sites.

Finally, there may be a cost to sites of managing the scheme locally (which may fall to a range of professionals) and may include time spent operationalising the role, leading on the role development and building networks, and conducting local research and reporting national KPIs.

Effect

The effects of the role are materialised through a wide range of benefits.

The CPs in role have conducted a large amount of medication reviews, data from the routinely collected service data suggests that medication reviews are the sole task of the pharmacist. Since each of these medication reviews would have been a consultation conducted by an alternative healthcare professional this represents an increase in capacity, largely for GPs and to a lesser extent nurses. Several case study sites reported specifically increasing GP capacity (Site A two appointments per GP session, Site B one hour of GP time per day) as a result of the CP role.

At many sites the release in capacity is realised through new divisions of work. CPs taking on medication related work releases GPs to focus on areas more appropriate to their expertise. At most sites there is evidence of basic prescription approval tasks (e.g. repeat prescription authorisation) and

queries that would take up to an hour of GP time each day being released (from their online tasks lists) by CPs in their non-appointment times.

Release of capacity increases patients' access to appointments. Several patients suggested that they enjoyed the (comparative) ease of access to an appointment with CP at a time where it is appreciated that access to General Practice can be limited. Furthermore, patients appreciated releasing GP appointments which might have been related to basic care of their long-term conditions to increase access for others to acute appointments.

Data shows that CPs offered variable appointment lengths to patients according to their time in post and to patient needs. Patient data showed that they appreciated these longer appointments that offered the opportunity for an in-depth high quality review. Several patients reported to the evaluation that as a result of longer appointment times they felt they had a better understanding of their medicines and health. Several examples were given (by all stakeholders) of increased medicines optimisation during the medication review – improving adherence, deprescribing, and error reductions.

At many sites there is evidence of CPs specialising on the care of long-term conditions. At Site B there is a new division of work between an acute care team led by the GPs and a planned care team managed by senior Nursing staff and including the CPs, and other allied health staff.

Practice stakeholders give several examples of where CPs improve the repeat prescribing process and quality. Data from site E shows a localised measure of the number of interventions made to synchronise patients repeat medication (improving patients care path) – 48 by the GP by comparison with 361 by the CP. Several sites report increases in safety and reduction in errors as key benefit of the CP role.

Patients who contributed to the evaluation spoke highly of the benefits of their appointments with CPs. All patients appreciated the longer appointment time the CP could offer and suggested that they benefitted from the opportunity to discuss multiple conditions or issues within one single appointment. CPs and patients reported that offering lifestyle advice was an important part of the appointment. Survey data shows that over 50% of CPs give lifestyle advice every day and 65% see this as a major part of their role. Several patients reported that during an appointment with a CP they discussed their healthy lifestyle choices and often made choices to improve their choices through simple changes suggested and encouraged by CPs. CPs suggested they used motivational interviewing techniques to encourage healthy lifestyle changes. Some patients reported an improvement in their overall health and long term conditions as a result of ongoing advice and support of a CP. These benefits are highly difficult to quantify.

The types of appointments a CP can undertake develop over time, according to a wide range of variables including their confidence, experience, mentoring and prescribing status. Site leads suggest that CPs need to work autonomously by the end of the second year to be sustainable.

While some of the above effects are quantifiable – such as numbers of appointments undertaken by CPs, each of these has limitations (for example it cannot be assumed that each CP appointment is in fact a direct release for a GP appointment, and in fact on occasion additional appointments are generated where referrals are made). Some of the benefits are far more difficult to measure as they are complex and entwined with a wide range of contextual factors. Nonetheless examples of all the benefits identified in this section were collected as evidence for this report and can be utilised as an outline of the role effect.

Return on investment

The costs identified are most significant in year 1, reducing in year 2 and again into year 3. This tapering matches the model of tapered funding to a certain extent. It could therefore be assumed that the funding is proportional to the cost or time investment required in the early stages of implementation, dependent on actual costs to sites in the first year.

Equally the effects of the role develop over time being limited in year 1, especially for those without independent prescribing competency, but increase over the second year to a point of autonomous work and self-sustainability in year 3.

Several sites report understanding of the tapered model and investment and time required to realise the return on investment. Some GPs showed a lack of full understanding of the costs of the scheme, or have unrealistic expectations about the time to realise the benefits of the scheme, and expect a faster return on investment than is possible.

Sites expect that in return for time spent collecting and returning KPIs for national evaluation they will be informed about how they compare to the national scheme in a timely manner. Sites who conduct localised research on their own key performance targets can produce local valuations on their return on investments. A range of localised measurements is reviewed in response to the next key evaluation research question.

Effects of the pharmacist role are materialised through a wide range of benefits outlined above. A key number of these benefits are difficult to measure quantitatively in a rigorous manner and subsequently evaluate economically as the comparator will vary widely. To achieve this with any degree of certainty requires a clearly defined set of parameters such as prescribing and hospital admissions without any potential confounders. One way to achieve this is to define key criteria and measure these over time following the intervention of deploying a pharmacist in the practice, perhaps using practice level data if individual patient level data is unavailable. This report utilises evidence of benefits realised experientially by stakeholders captured through qualitative investigation and while it is acknowledged there is legitimate appetite for the return on investment to be quantified, this can be complex where benefits are related to the qualitative.

*'Not innovative, just common sense that she should have been in role for years/decades.
Excellent value for money and improves patient medication care'*

GP Survey data, open comments

Developing and capturing cost and effect

Measuring the return on investment for Federation sites requires a measure of both income and expenditure as well as effectiveness in the form of quality indicators.

With respect to measuring costs each site keeps records of CP actual days worked and in training, salaries paid to CPs and additional costs such as training expenses. Some sites track time spent mentoring provided by SCPs or GPs, but others do not, due to the significant additional burden and lack of timely feedback. There will always be intangible costs caught up the scheme related to development and networking that will be impossible to record.

Measuring effects is more difficult as practice is so variable and localised that centralised national KPIs will always disadvantage sites working to alternative local priorities. Some key measurements such as numbers of appointments undertaken and medicines optimisation measures such as safety and deprescribing are the easiest to capture. However, there is some concern that these measures do not nearly give a clear measure of the actual benefits of the role.

Benefits which are far harder to measure are those such as impact on overall long term conditions, impact on lifestyle changes, impact on hospital readmissions and efficiencies gained through the social re-organisation of care delivery through the new role. While it is acknowledged that CPs can have a significant positive impact on these areas, other intertwined contextual factors render these measures invalid against a single role within the scope of this study. Further specific economic or health evaluations may take suitable methodological approaches appropriate to research this area specifically for establishing measurements of the impact of the CP role on these factors.

Furthermore, there are a wide range of benefits that are possible to capture and report but difficult to measure accurately from an economic perspective for example socially focussed benefits such as increasing MDT knowledge, time saved in routine queries and administration, time saved in working with others in community and hospital environments and changing the efficiency of local workflow. These benefits demand ongoing qualitative evaluations and reporting for sharing positive effects.

Localised data collection is practiced across a wide range of innovative pilot types. A key example of this is shown in appendix A. Utilising locally defined measures and a key member of staff to consolidate data allows sites to conduct valuable localised effect measurement to facilitate their local return on investment calculations. Clearly identified roles and targets at an early stage of the scheme are useful to facilitate later data collection measures. A national role collating and facilitating the sharing of this local innovation and expertise would be beneficial. Some of this work has already been conducted by other external stakeholders. (Primary Care Commissioning, 2017)

Currently localised data collection is often coordinated and conducted by SLs on behalf of multiple practices and as well as national key performance indicators they can report on local priorities. Some CPs have responsibility for local data collection and there is evidence of a growing understanding amongst CPs about the need to take responsibility for evidencing the benefits of their role.

Furthermore, practice sites (at a level lower than Federation sites) appreciate data returned against the individual and the practice, as well as broader level data to help drive continuous quality improvement. At some sites CPs track the effect of their role to discuss as part of their ongoing mentoring and individual appraisal.

A generic model of measuring cost and effect would therefore measure both costs and effects at a broad national level (including broad economic evaluations of numbers of appointments, interventions and safety) but also against specific locally derived targets. Staff activity should be tracked, both of the CPs and senior CPs but also against the work of other professionals where possible. Models of good practice in localised target setting and measurement and evaluation should be centrally supported, reported and shared. Evaluations should take place over the full 3 years of one full

scheme to evidence the implied later reducing costs and gains in effect. Evidence from evaluations should meaningfully inform the development of the scheme on a formative and summative basis.

Facilitators and barriers

What are the barriers preventing successful implementation of this role?

Support for pilot sites from NHS England centrally is limited (low numbers of centralised support staff) and at local area team level it is variable and unsupported (i.e. no funding for staff to support the scheme). Sites with limited previous experience have no base to build upon. Current participants are significantly experienced and likely to be innovators but this is likely to reduce over wider rollout of the scheme. Whilst this is not a barrier to the current scheme, it implies a potential barrier for future implementation as the pool of available pharmacists reduces and those recruited form mainstream rather than innovation positions.

Apparent lack of national, widely publicised competence assessment and capability frameworks for the CP roles leads to wide variance in ability, working practices and outcomes. This is mitigated to some extent by the training provided to CPs which acts as a facilitator to the scheme.

Indemnity can be problematic, time consuming and expensive for those with no previous experience of negotiating indemnity for pharmacists.

The significant majority of sites in the pilot wave have selected a ratio of pharmacists to list size of 1:15000 or less. Patient list size will limit the embeddedness of role and quality of service and limit application types. The ratio disadvantages smaller sites whose pharmacist's time will be proportionally less on site than at larger sites. Sites with pharmacists working less than full time take longer to realise benefits than those working full-time, meaning that it is likely to take longer to realise the benefits in smaller GP practices.

There is evidence that the role should be a minimum of two days per week at each site in order for the CP to be embedded in local practices and provide consistent patient service.

There is wide variance in the mentoring experienced by CPs. Ratio of higher than 1:4 SCP:CP will limit the quantity and quality of mentoring that can be provided by SCPs. There is evidence of great variance in localized training and induction and no financial support for localised training.

Currently training for CPs is externally commissioned by HEE on behalf of NHS England in a centralised model. The training has high opportunity cost as it is time intensive; this has benefits for CPs but often significant cost to practices. Training which is standardized and not personalized to different levels of CPs ability and experience can be ineffective. Within the operationalization of the pilot some early training was offered at very short notice, or too late in the scheme to be useful. There is a lack of independent prescriber pharmacists and therefore the CP role requires the time and investment to include prescriber training – a further time and cost implication to practice through backfill GP provision for mentoring time. There is a lack of direct contact with sites, especially Site Leads, to influence externally commissioned training as relevant to the developing role. There is currently no assessment or competency management associated with training which many stakeholders deem as vital to the role.

Site lead roles are creatively funded, short term and lack sustainability but are vital to the success of the scheme. Senior CP roles may appear less sustainable due to their significant workload in supporting the scheme over seeing patients. Other staff in primary care (especially nurses) may be initially resistant to the role and fearful of overlap, but often support the role and its benefits and learn from the expertise of the CP. There is evidence of a need for, and development of, a primary care MDT.

There are quite notable levels of turnover with 15 sites reporting turnover of 1 CP post and more than 1 CP post in 13 sites. Five sites reported turnover of 1 GP practice and 10 sites reporting turnover of more than 1 GP practice. In case study sites turnover averages at 1:7 for pharmacists and 1:8 for sites (Appendix E).

There is often a mismatch in GPs expectation of the CP and the scheme and therefore GPs make (sometimes unrealistic) assumptions about CP capability. GPs need guidance to be involved in CP recruitment.

GPs who are not site leads and do not mentor CPs take longer to understand the role and its benefits. GPs have to invest significant time in mentoring but are unlikely to realise the benefits until after the first year of the scheme once the CP is established in the post.

Terminology around the role of CP is unclear, especially for patients. Patients do not clearly understand the difference between a community pharmacist and one working in general practice. The CP term is controversial and not widely accepted. There is a clearly defined 'senior' role but a reluctance to also have a 'junior' role and a clear route of progression for the role.

The current focus of key performance indicators and evaluation is clinical skills and cost and value, not quality and medicines management. Centralised key performance indicators were not centrally collated and analyzed and there is no ongoing centralised analysis of the scheme outputs. This has disengaged some sites from collecting and returning data. There is significant limitation to the value of the current routine service data. There is limited support for localised evaluation and reporting and no coordinated analysis of localised scheme outputs. Localised practice according to demand means that some sites will meet key performance indicators because they are strategically nearer to the localised demand, not because they are necessarily operating more effectively.

Evaluation should inform future practice but later phases have been rolled out before this evaluation is complete. Externally commissioned training is not being independently evaluated.

What are the facilitators to ensure successful implementation of the CP role?

Strong clinical and business management at a local level is vital to the success of schemes. One site acts as a lead for others, often piloting new areas of work and development for CPs. The Site Lead role and the way it is implemented is very wide ranging but vital to the success of the operationalization of the scheme, especially from the bid stage to the end of the first year of the scheme. Sites report that a centralised approach to HR and business management can benefit operationalisation, especially in the first year. Close links between the site lead and the local area team at CCG level can also facilitate the implementation of the scheme.

At the early implementation stage a clear job description and boundaries for the role can facilitate implementation. Successful recruitment (choosing the right person for the role) is crucial to the success of the scheme and sites report that combined clinical and management recruitment approaches are beneficial. A clear job description and boundaries can facilitate early discussions round indemnity.

Sites report that they benefit from the ability to localise work activities depending on the needs of the practice and the abilities and interests of the CP. Good quality CP site level integration is vital to the success of the role. This can be achieved through:

- Maximising time spent on site as possible (at least two days per week per site)
- Shadowing key staff

-
- Time spent telephone triaging / on reception
 - Localized training including introduction to primary care broadly and locally

Good quality CP site level mentoring is vital to the success of the role

- Mentoring can be offered by GPs or Senior CPs or Site Leads , or combinations
- Best practice mentoring is offered by multiple staff
- Reduced scaffolding approach to mentoring, utilised for GP registrar training, is successful in building confidence
- Scaling tasks according to ability and confidence is important

Strong networking facilitates the development of the CP role.

The ongoing commitment to, and funding of, external training is a key facilitator of the role. Regular review and development of externally commissioned training is beneficial. Maximizing the beneficial impact of externally commissioned training and reducing the cost, time and stress implications for practice and CPs would be beneficial. Commitment displayed by several participants to the development of a national advanced practitioner in primary care role for pharmacists facilitates the long term development of the role.

Localised research of benefits facilitates the ongoing sustainability of the role and the scheme. Sharing good practice in localized research approaches facilitates learning across sites.

Centralised tracking and monitoring of sites, including centralised research management and analysis facilities, facilitate ongoing research and evaluation. Formative and summative evaluation can facilitate and inform the iterative development of later waves of the scheme.

Good communication by NHS England to both CCG level and directly to sites can facilitate clear understanding of the role. Ongoing communication should continue with a wide range of stakeholders including community pharmacy, pharmacy professional leadership bodies, patient groups, academics, and training providers. Stakeholders report that they benefit from sharing good practice – between sites, across sites, across areas, and nationally.

Collaborative working

There are strong links with community pharmacy through both day to day work and through networking opportunities. In several sites the pharmacist had experience of community pharmacy providing understanding of the challenges of cross-site working with General Practice. CPs report that the GP Pharmacist can provide a good and better link to General Practice for community pharmacists. There is evidence that community pharmacy and CPs can work together and learn together and examples of good practice and innovation could inspire developments in their sites. At site A there are monthly meetings between the CPs and local community pharmacies which has helped to improve services and resolve local challenges more expeditiously. At site C community pharmacists are regularly invited to practice meetings by the CP.

There are links with hospital pharmacy through both day to day work and some networking opportunities; on the whole these are less than links with community pharmacy. Discharge management is given as an example by several sites of needing to liaise closely with both hospital pharmacy and community pharmacy to ensure continuity of care for patients. There was an example

of medicines optimisation and improved patient care through the pharmacist intervening in the practice administrative processes around hospital discharge.

Each case study sites gives examples of working closely with their CCG, in particularly CCG pharmacists and medicines management teams, working closely on national agendas.

There is significant evidence of partnership working between CPs and care homes in a range of innovative models. In site area H care homes are aligned to a single practice and the practice MDT provides direct support for the local care home and the CP is integral to this.

Strengths and limitations of the work

The particular method chosen for this research (mixed methods with qualitative focus) is aimed at 'painting a picture of practice' and so enabled a rich description of the barriers and facilitators perceived by CPs, GPs, patients and colleagues who have experienced implementation of CPs in England. The participation of a range or different participants including patients provided opportunity to gain a deep insight into each of the case study sites.

Detailed quantitative data acquisition was limited due to time and resource available. The survey was made available widely to pharmacist participants producing good descriptive measures of activity, however this could be subject to self-reporting and participation biases. It was not possible to capture detailed independent measurements of activities, patient outcomes and associated costs. The data collected however provides useful insights into how further statistical and economic data might be collected. The sample for survey data is largely opportunistic and in the absence of overall cohort data makes no claim about generalisability.

This evaluation was restricted to a specific implementation context (i.e., UK pilot scheme), to which its results are directly relevant, further generalisability of findings may be difficult, but transferability of findings to future iterations of the scheme or other schemes is may be possible.

Conclusion

Taking a mixed methods approach allowed measurement of 'what' was happening in the scheme underpinned by understanding 'how' the scheme was experienced by key stakeholders.

CPs have made a unique and valuable contribution to the primary care skill mix. Pharmacists contribute significantly to patient safety, bring medicines and prescribing expertise, support with prescribing tasks, support for patients with long term conditions including support for healthy lifestyles. They have improved medication knowledge in the wider clinical team leading to the prospect of overall improvements in care related to medicines.

The introduction of pharmacists has led to increased capacity in practices. Although the role requires financial commitment from practices, GPs believe the role to be sustainable, most will keep the one they are working with after the funding expires.

Costs and effects of the role were outlined. There remains some mismatch between GPs' expectations of ROI and both the depth of cost and length of time for returns to be realised.

CPs integration and availability in practice is important for continuity of care. In order to be successful and feel part of the team, pharmacists need to be visible, communicate well and be flexible and innovative. CPs need to spend more than one day per week in post to feel a sense of belonging, and the more time spent in role the faster the level of integration. CPs need training and time for learning 'on-the job' to understand the way that primary care works. Training and mentoring is vital to the development of the scheme but at a cost to practices. Costs are highest in the first year of the scheme and time is needed to realise the benefits of the role. Senior clinical pharmacist roles vary and need to be further defined and evaluated for sustainability.

Site leads are clearly focused on the sustainability of the scheme, many have actions in place to sustain the role beyond 36 months at the 24 months stage and in order for their role to be sustainable (at 36 months) CPs should be working autonomously patient facing by 24 months.

The clinical pharmacist in general practice role is already causing variance and potentially gaps in the wider pharmacy workforce. Workforce planners need to take this into consideration.

Key performance indicators for the scheme should be evidence-based and localised. There has been limited value to the monthly return data collected so far, and no feedback, creating resistance from sites. Future national reporting should be limited to key information only and localized reporting should be encouraged and facilitated. Evaluation should actively inform future iterations of scheme developments.

If integration of pharmacists into general practice is to be successful there is a need to be flexible to develop their roles based on individual general practice needs whilst performing within a recognized competency framework. For continuing success there will be challenges to overcome, such as defining standards for these new roles, and acceptance of patient-facing pharmacists by existing GP team members and by patients. It is likely that the professional identity of pharmacists may change and general practice teams will need to find a new equilibrium. If these transitions can be facilitated, then CPs can increasingly provide a bridge between the patient and their medicines.

Summary of recommendations

As a result of the work carried out in this evaluation the project make the following recommendations:

- NHS England should direct and enhance effective two way communication
 - Maintain clear lines of two way communication between NHS England to Clinical Commissioning Group level and site level
 - Maintain ongoing communication about the scheme with a wide range of stakeholders
 - Maintain ongoing data collection with sites and ensure regular reporting and feedback
 - Further research to include Local Areas Teams and practice site leads as a significant stakeholder set
 - Organise and develop opportunities to share good practice
- NHS England should further manage expectations of all stakeholders through clear guidelines and communication
 - Manage GP expectations of the clinical pharmacist role capabilities and time for return on investment
 - Manage practice site leads expectations of cost and training commitments
 - Manage local level expectations of wrap around responsibilities for the clinical pharmacist role (i.e. clear guidance on senior clinical pharmacist mentoring, GP mentoring, Practice site lead and Local Areas team support)
- NHS England should facilitate internal communications
 - Support good quality local level communication to aid integration
 - Support local networks with external parties such as hospital and community pharmacy, CCG and wider allied health services
 - Share examples of good practice
- National, widely publicised competencies for the clinical pharmacist role should be developed to aid role development and progression and to facilitate interprofessional trust.
 - Competencies should be based on current and future national needs analysis through ongoing conversation and liaison with key stakeholders.
 - The steering group to develop national competencies for the clinical pharmacist role should include those working in primary care (Pharmacists, GPs, site leads and other allied health staff) as well as representative bodies (RPS and RCGP) and those responsible for regulating (GPhC) and funding national pharmacy education (Office for Students informed by NHS England).
- Long term workforce development and training plans should take consideration of the clinical pharmacist role as the third major career choice for pharmacists alongside hospital and community practice including due consideration of remuneration

-
- Impact of the CP role on the changing pharmacist workforce and hence undergraduate education is an important long-term consideration and area for further research

We also recommend that future evaluation work takes account of the following:

- **Measurement of the impact on General Practice**

- Capacity and workload
 - Requires detailed data about the function of the CP role. Some of this can be easily collated at site level and returned for wider evaluation
 - Requires comparative data about the functions and impact on other roles
- Medicines optimisation
 - Data about specific medicines optimisation initiatives, their desired outcomes, effectiveness and cost effectiveness
- Safety
 - Further evaluation may consider the impact of the CP role as an intervention to improve safer practice
 - Some actions reported and observed make significant impact on the discharge process. CP interventions are likely to have prevented emergency hospital readmissions, but this may be difficult to evidence. Further evidence may require detailed patient data to be collected and interactions analysed for potential long term effectiveness and cost effectiveness.
 - Case study data highlights that CPs have significant impact on prescribing psychotics and care home safety. These could prove useful opportunity for further evaluations. In addition to measurement of key performance metrics, qualitative data must be collected to underpin the understanding and interpretation of quantitative findings

Measurements of impact on pharmacists

- Job satisfaction, autonomy and working relationships
 - Annual survey
- Increase in clinical skills and evidence of learning
 - Collected by national training commissioner

Measurements of impact on patients

- Patient surveys / focus groups
- Measurements of health outcomes in patients with particular long-term conditions

References

- Adepu, R, Nagavi, B (2006) General practitioners' perceptions about the extended roles of the community pharmacists in the state of Karnataka: A study. *Indian Journal of Pharmaceutical Sciences*, 68, 36-40.
- Avery A (2017) Pharmacists working in general practice: can they help tackle the current workload crisis? (editorial) *British Journal of General Practice* 67,662,390- 391.
- Bajorek, B, Lemay, K, Gunn, K, Armour, C (2015)The potential role for a pharmacist in a multidisciplinary general practitioner super clinic. *Australasian Medical Journal*, 8, 52-63.
- Blondal AB, Almarsdotir AB, Jonsson JS, Gizuarson S (2017a) Pharmaceutical Care at the primary care clinic in Garðabær - number and type of drug therapy problems identified among elderly clients *Laeknabladid Nov*;103(11):481-486. doi: 10.17992/Ibl.2017.11.159.
- Blondal AB, Sporrang SK, Almarsdottir AB (2017b) Introducing Pharmaceutical Care to Primary Care in Iceland-An Action Research Study. *Pharmacy (Basel)*. 2017 Apr 26; 5(2). Epub 2017 Apr 26.
- Bruhn H, Bond CM, Elliott AM, et al.(2013) Pharmacist led management of chronic pain in primary care: results from a randomised controlled exploratory trial. *BMJ Open* 2013;3:e002361. doi:10.1136/bmjopen-2012- 002361
- Bush J, Langley CA, Jenkins D, Johal J, Huckerby C (2017) Clinical pharmacists in general practice: an initial evaluation of activity in one English primary care organisation. *International Journal of Pharmacy Practice* (in press) doi.org/10.1111/ijpp.12426
- Butterworth J, Sansom A, Simms L, Healy M, Kingsland E, Campbell J. (2017) Pharmacists' perceptions of their emerging general practice roles in UK primary care: a qualitative interview study *British Journal of General Practice* DOI: <https://doi.org/10.3399/bjgp17X691733>
- Chen, J, Britten, N. (2000) Strong medicine': An analysis of pharmacist consultations in primary care. *Family Practice*, 17, 480-483.
- Choe, HM., Mitrovich, S, Dubay, D, Hayward, R, Krein, S, Vijan, S (2005) Proactive case management of high-risk patients with type 2 diabetes mellitus by a clinical pharmacist: A randomized controlled trial. *American Journal of Managed Care*, 11, 253-260.
- Deloitte (2014). Under pressure: the funding of patient care in general practice. London: Deloitte. Available at: www.rcgp.org.uk/campaignhome/~/_media/Files/PPF/Deloitte%20Report_Under%20Pressure.ashx Accessed 31/1/18
- Farrell B, Pottie K, Haydt S, Kennie N, Sellors, C, Dolovich L (2008) Integrating into family practice: the experiences of pharmacists in Ontario, Canada *International Journal of Pharmacy Practice*, 16, 309-315.
- Farrell, B, Dolovich L , Austin,Z Sellors C (2010) Implementing a mentorship program for pharmacists integrating into family practice: practical experience from the IMPACT project team. *Can Pharmaceutical Journal*. 143, 1, 28-36.
- Freeman, C, Cottrell, WN, Kyle, G, Williams, ID, Nissen, L.(2012a) Pharmacists', general practitioners' and consumers' views on integrating pharmacists into general practice. *Journal of Pharmacy Practice and Research*, 42, 184-188.
- Freeman, C, Cottrell, WN, Kyle, G, Williams, ID, Nissen, L. (2012b) Does a primary care practice pharmacist improve the timeliness and completion of medication management reviews? *International Journal of Pharmacy Practice*, 20, 395-401.
- Freeman C, Cottrell WN, Kyle G, Williams ID , Nissen L. (2012c) Integrating a pharmacist into the general practice environment: opinions of pharmacist's, general practitioner's, health care consumer's, and practice manager's. *BMC Health Services Research* 2012: 12: 229

Freeman, C, Rigby, D, John, AAM, Williams, I. (2016) The practice pharmacist: A natural fit in the general practice team. *Australian Prescriber*, 39, 211-214.

GMC. (2016). The state of medical education and practice in the UK. Available at https://www.gmc-uk.org/SOMEPEP_2016_Full_Report_Lo_Res.pdf_68139324.pdf Accessed 31/1/18

Gerad, K, Tinelli, M, Latter, S, Blenkinsopp, A, Smith, A. (2012) Valuing the extended role of prescribing pharmacist in general practice: Results from a discrete choice experiment. *Value in Health*, 15, 699-707.

Gerada C, Riley B (2012) The 2022 GP: our profession, our patients, our future. *British Journal of General Practice*. 62(604):566-567

Goldman J, Meuser J, Rogers J, Lawrie L, Reeves S (2010) Interprofessional collaboration in family health teams. An Ontario-based study *Canadian Family Physician* 56, e368-74

Green H, Patel K, Patel N, Lau WM, Ryan K, Pinney H, Stretch G. (2016) Exploring Patients' experiences of pharmacists working within general practices *International Journal of Pharmacy Practice* 2 suppl 214, 68-69.

Hazen ACM, deBont AA, Boelman L, Zwart DLM, deGier JJ, deWit N, Bouby ML. (2017) The degree of integration of non-dispensing pharmacists in primary care practice and the impact on health outcomes: A systematic review. *Research in Social and Administrative Pharmacy*. (in press)

Helms, M. & Nixon, J. (2010). Exploring SWOT analysis – where are we now?: A review of academic research from the last decade. *Journal of Strategy and Management*, 3, 215-251.

Jackson, S. E., Joshi, A. & Erhardt, N. L. (2003). Recent research on team and organizational diversity: SWOT analysis and implications. *Journal of Management*, 29, 801-830.

Khachi, H. (2014) Impact of pharmacist-led asthma and COPD reviews in general practice. *Thorax*, 69, A98-A99.

Mann, C, Anderson, C, Waring, J, Avery, T, Boyd, MJ. "GP Pharmacy Transformation project": *Community Pharmacist Independent Prescribers (CPIPs) working in patient facing roles in Primary Care* <https://www.nottingham.ac.uk/pharmacy/research/divisions/pharmacy-practice-and-policy/research/pharmacists-in-patient-facing-roles-in-primary-care.aspx> Accessed 7/2/18

NHS England (2014) Five Year Forward View <https://www.england.nhs.uk/publication/nhs-five-year-forward-view/> Accessed 31/1/18

NHS England (2015a). Building the Workforce—the New Deal for General Practice. *Secondary Building the workforce: the new deal for general practice*. <https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/01/building-the-workforce-new-deal-gp.pdf> Accessed 31/1/18

NHS England (2015b) Clinical Pharmacists in General Practice Pilot FAQs (version 2.0) <https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2015/08/clin-pharm-gp-pilot-faqs-0815.pdf> Accessed 31/1/18

NHS England (2016) General Practice Forward View <https://www.england.nhs.uk/publication/general-practice-forward-view-gp-fv/> Accessed 31/1/18

NHS Employers (2017) Agenda for Change pay scales – Annual <http://www.nhsemployers.org/your-workforce/pay-and-reward/agenda-for-change/pay-scales/annual> Accessed 31/1/18

Petty, DR, Knapp, P, Raynor, DK, House, AO. (2003) Patients' views of a pharmacist-run medication review clinic in general practice. *British Journal of General Practice*, 53.

Pickton, D. W. & Wright, S. (1998). What's swot in strategic analysis? *Strategic change*, 7, 101-109.

Pottie K, Farrell B, Kennie N, Sellors C, Martin C, Dolovich L (2009) Pharmacist's identity development within multidisciplinary primary health care teams in Ontario; qualitative results from the IMPACT project *Research in Social and Administrative Pharmacy* 5, 319–326.

Primary Care Commissioning (2017) Clinical PHARMACISTS in General Practice https://www.pcc-cic.org.uk/sites/default/files/articles/attachments/clinical_pharmacist_july_2017_web.pdf Accessed 31/1/18

Sake, FTN, Wong, K, Bartlett, D J, Saini, B. (2018) Integrated primary care insomnia management in Australia. *Research in Social and Administrative Pharmacy* 14, 2 170-179

Saw, PS, Nissen, L, Freeman, C, Wong, PS & Mak, V. (2017) Exploring the role of pharmacists in private primary healthcare clinics in Malaysia: The views of general practitioners. *Journal of Pharmacy Practice and Research*, 47, 27-33.

Sharma, R. (2018) Pharmacists in General Practice Programme Update, presented at the Clinical Pharmacy Congress 28 April 2018

Smith, J, Picton, C, Dayan, M. (2013). *Now or Never: Shaping Pharmacy for the Future. The Report of the Commission on future models of care delivered through pharmacy.* Royal Pharmaceutical Society, London.

Snell R, Langran T, Sonyai P (2017) Patient views about polypharmacy medication review clinics run by clinical pharmacists in GP practices. *International Journal of Clinical Pharmacy* 39(6):1162-1165. doi: 10.1007/s11096-017-0538-z. Epub 2017 Oct 11.

Stone, MC, Williams, HC. (2015) Clinical pharmacists in general practice: Value for patients and the practice of a new role. *British Journal of General Practice*, 65, 262-263.

Tan, EC, Stewart, K, Elliott, RA, George, J. (2013) Pharmacist consultations in general practice clinics: the Pharmacists in Practice Study (PIPS). *Research in Social and Administrative Pharmacy*, 10, 623-32.

Tan, EC, Stewart, K, Elliott, RA, George, J. (2014a) Pharmacist services provided in general practice clinics: A systematic review and meta-analysis. *Research in Social and Administrative Pharmacy* 10, 608–622.

Tan, EC, Stewart, K, Elliott, RA, George, J. (2014b) Integration of pharmacists into general practice clinics in Australia: the views of general practitioners and pharmacists. *International Journal of Pharmacy Practice*, 22, 28-37.

Tinelli, M, Ryan, M, Bond, C. (2009) Patients' preferences for an increased pharmacist role in the management of drug therapy. *International Journal of Pharmacy Practice*, 17, 275-282.

Wilcock, M, Hughes, P. (2015) GPs' perceptions of pharmacists working in surgeries. *Prescriber*, 26, 29-31.

Zermansky, AG, Alldred, DP, Petty, DR, Raynor, DK, Freemantle, N, Eastaugh, J, Bowie, P. (2006) Clinical medication review by a pharmacist of elderly people living in care homes—randomised controlled trial. *Age and Ageing*, 35, 586-591.

Zermansky, AG, Alldred, DP, Petty, DR, Raynor, DK, Freemantle, N, Vail, A, Lowe, CJ. (2001) Randomised controlled trial of clinical medication review by a pharmacist of elderly patients receiving repeat prescriptions in general practice. *British Medical Journal*, 323, 1340-1340.

Appendix A – Example of local data collection by a pilot site

A number of sites have collected local key performance indicator data. An example of the data collected is provided below.

Intervention	Completed by GP	Completed by clinical pharmacist
Total documented medicine optimisation intervention in fiscal year	420	12253
No of Interventions to Synchronise patients repeat medication	48	361
No of interventions confirming patients drug monitoring is up to date	47	684
No of interventions where medications stopped on medical advice	48	134
No of interventions where medicines were proactively reconciled	105	880
No of care home medication reviews undertaken in fiscal year	186	987
No of interventions discussed with another HCP	27	102
No of interventions where medicines are discussed with consultant	39	187
No of interventions for advice to GP to change patient's medication	72	276
No of interventions identifying blood tests were due	109	417
No of interventions to alter a drug dosage schedule	172	382
No of interventions to GP to advise STOP patient's medications	70	421
No of interventions to GP to advise START of patient's medications	84	133
No of interventions to optimise drug dosage	48	282
No of interventions where drug changed to identified interactions	2	97
No of interventions where drug directions not adequate or appropriate	5	226
No of interventions where drug formulation inappropriate	3	93
No of interventions where drug changed to most cost-effective alternative	12	486
No of interventions where drug treatment was no longer needed	29	292
No of interventions where medicines changed to generic	0	694
No of interventions where medicines changed to branded	2	158
No of interventions where patient supplied with medication advice	31	448
No of interventions where new medicines were added	55	476
No of interventions where recall has been arranged	28	231
Care Management Plans proactively reviewed in relation to medicine management	5	121
Discharge summaries reviewed in relation to medicine changes following inpatient stay reviewed	408	690
Medication review completed at Level 3	22	2832
Hospital admissions avoided	11	89
Medication review completed at Level 2 without patient	231	1509
Medication review completed at Level 2 with patient	313	2185
Other Medication review complete	35	576
Post hospital discharge medicine related query with patient	30	51
Antipsychotic review proactively completed	3	26
Telephone encounter regarding medicine related query	252	1970
Patient with dementia – proactive medication review	17	118
Patient with learning disabilities - proactive medication review	1	13
Regular repeat prescription review at point of ordering or request	79	1599

Appendix B – Routine service data

Data collection

Routine service data was requested from pilot sites in the form of a monthly Microsoft Excel spreadsheet return by email. It was noted by the team that this created a significant administrative burden on the NHS England team managing the pilot, beyond that available, meaning that no central collation of data was possible.

The KPIs for the pilot scheme included overall baseline data per site and monthly returned data per post.


Baseline data for each site included:

- Number of appointments
- Number of medication reviews per annum (GP/CP split)
- Number of patients supported to develop care and support plan including self-management
- Total number of patients who have attended 15 appointments or more by age group
- Total number of patients with dementia or learning difficulties
- Total number of patients with dementia or learning difficulties prescribed anti-psychotics

Monthly submission data to be returned included:

- Number of posts at practice level (the level of return was not clearly defined and as such is inconsistent)
- Amount of time in post / Sick Leave / Annual leave / hours worked (not clear if this includes training)
- Number of appointment slots available/taken for each member of staff
- Number of medication reviews
- Speciality area / type of work

Examples of the submission forms are shown below

Practice:	Sample							
Practice OD Code:	12345							
Clinical Pharmacists in General Practice – Baseline Data								
<i>Please add figures to blue cells below</i>								
Total number of patient appointments (with GP, Practice Nurse, Clinical Pharmacist, Health Care Assistant and/or Advanced Nurse Practitioner) available between 1/4/15-31/3/16 (to include both face to face and telephone appts)	29975							
Average number of patient appointments available per month in 15/16 (between 1/4/15-31/3/16)	2497.92							
Total number of medication reviews undertaken between 1/4/15-31/3/16	3620							
Total number of medication reviews undertaken by a GP between 1/4/15-31/3/16	3194							
Percentage of the total number of medication reviews undertaken by a GP (between 1/4/15-31/3/16)	88.23%							
Total number of patients supported to develop care and support plans, including self-management plans (between 1/4/15-31/3/16)	370							
Total number of patients who have attended ≥15 appointments with a general practitioner in the period 1.04.14 to 31.03.16 in each of the following age groups as at 31.03.16. (e.g. patients registered with the practice aged 0-4 on 31.03.16)		0-9	10-19	20-39	40-59	60-69	70-89	90+
		505	254	1241	1323	664	1023	97
Total number of patients registered to practice with a diagnosis of dementia or learning disabilities (between 1/4/15-31/3/16)	63							
Total number of patients registered to practice with a diagnosis of dementia or learning disabilities prescribed anti-psychotic medications (between 1/4/15-31/3/16)	5							
Percentage of the total number of patients registered to practice with a diagnosis of dementia or learning disabilities prescribed anti-psychotic medications (between 1/4/15-31/3/16)	7.94%							

Sample practice baseline characteristic spreadsheet

Practice: Sample
Practice OD Code: 12345

NHS England

Clinical Pharmacists in General Practice – Monthly Activity Data Monitoring

Please complete 1 column for each Clinical Pharmacist or Senior Clinical Pharmacist working with your practice

Reporting Month: 01/11/2016

	Examples		Key Personnel 1	Key Personnel 2	Key Personnel 3	Key Personnel 4	Key Personnel 5	Key Personnel 6	Key Personnel 7	Key Personnel 8	Key Personnel 9	Totals
	SCP	CP										
Total number of Key Personnel (senior CPs and CPs)	1											0
Senior CP or CP?	SCP	CP										← Please indicate if SCP or CP
Non-Medical Prescriber (Y or N?)	Y	N										
Whole Time Equivalent (wte) of each CP / SCP (Number of hours contracted to work per week divided by number of hours if full time ie. 37.5, 35, 40 hours)	0.67	1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Number of hours contracted to work this month	75	150										0
Number of hours worked this month	56	147										0
Number of hours taken as annual leave this month	7.5	0										0
Number of hours taken as sick leave this month	1	0										0
Number of hours taken as other authorised leave this month	0	0										0
% of contracted hours worked this month excluding leave (above)	86%	98%	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Number of appointments available this month by each CP / SCP (to include telephone and face to face appts)	30	65										0
Number of appointments attended this month by each CP / SCP (to include telephone and face to face appts)	27	64										0
Number of medication reviews undertaken this month by each SCP/CP	15	34										0
Specialty Area / Type of work (i.e.diabetes, Frail elderly, CVD)	free text	free text										
Total number of attended patient appointments (with GP, Practice Nurse, Clinical Pharmacist, Health Care Assistant and/or Advanced Nurse Practitioner) this month (to include face to face and telephone appts)												→ Please complete this box
Baseline - average number of patient appointments per month (01.04.15 - 31.03.16)												2497.92
Percentage of total number of patients seen by a clinical pharmacist this month												#DIV/0!

Sample practice monthly return spreadsheet

Observations of the evaluation team with regard to routine service data

Data collection would need to be undertaken at multiple levels across the sites to provide this data. The required data collection by CPs, SCPs and SLs carries a significant time burden monthly.

The data entry return requires sites to state the practice name and ODS code rather than pilot site details. Whilst the return form allows returns for multiple pharmacists, it is likely this has caused confusion with reporting as many pilot sites have multiple pharmacists over several sites, who may have flexible working patterns across the sites practices. There is no mechanism to aggregate data cross-site centrally, and no resource to do so. Sites are given basic guidance to complete returns but each site must operationalise recording therefore data is inconsistent and poor quality. During case study data collection it emerged that sites are not acknowledged for returning data or pursued for not returning data; data is therefore sporadic and inconsistent. As a result the routine service is of limited value.

Summary of routine service data provided to evaluation team

NHS England provided data to the evaluation team on 9 practices (not federations) representing a very small amount of those in the pilot. It is not clear upon what criteria NHS England chose to share data from these sites. The tables that follow provide a summary of the data submitted by the 9 sites.

The sample data at the practice level (Table B-1) reports that the practices have a wide list size (7000-18000) and wide variation in the average available numbers of appoints per month (564-6948). This ten-fold variation in appointment availability is not proportional to the variation in list size.

The data captured suggests that a significant number of medicines reviews are being conducted by GPs which is counter to the expectation that Pharmacists will conduct many of them. It is clear from the submissions that many pharmacists are new in post; many may have been off-site for training and other related activities.

Individual pharmacist data (Table B-2) would suggest that most pharmacists are doing medication reviews (range 0-242%) however this is not directly linked to prescriber status. The reported figures would suggest that there are completion errors in the routine service data. It was not within the power or resource of the evaluation team to verify data supplied.

Pharmacists report a range of “specialisms” some are disease focused whilst others are task oriented.

	Practice												
	A	B	C	D*	D*	E	F	G	H	I	J	K	L
Practice characteristics													
List Size (nearest 1000)	9000	8000	10000	18000	18000	12000	10000	10000	8000	7000	7000	10000	11000
Clinical system	EMIS	EMIS	EMIS	EMIS	EMIS	EMIS	EMIS	EMIS	EMIS	EMIS	EMIS	EMIS	EMIS
Other non-pilot pharmacist	0	0	0	0	0	1	0	0	0	0	0	0	0
Total number of patient appts ¹ (all staff ²) available 15/16	29975	6767	51265	83377	83377	33218	51265	36668	7691	5278	21090	8034	8035
Average number of patient appts available per month 15/16	2497.9	563.9	4272.1	6948.1	6948.1	2768.2	4272.1	3055.7	640.9	439.8	1757.5	669.5	669.6
Medicines reviews													
Total number of med reviews undertaken between 15/16	3620	2780	3149	8270	8270	3884	3149	2479	3481	2686	1825	3536	3753
Total number of med reviews undertaken by a GP between 15/16	3194	2179	2606	7266	7266	1530	2606	2165	2421	1968	1813	2461	1919
Percentage of the total number of med reviews undertaken by a GP	88.2%	78.4%	82.8%	87.9%	87.9%	39.4%	82.8%	87.3%	69.5%	73.3%	99.3%	69.6%	51.1%
Total number of patients supported to develop care and support plans, inc. self-management plans 15/16	370	107	301	831	831	221	301	22	49	48	2791	148	160
Patients who have attended ≥15 appts with a GP in age group													
[0-9] years old ³	505	154	190	178	178	64	190	17	150	83	132	143	90
[10-19] years old ³	254	109	84	72	72	29	84	4	107	79	60	102	50
[20-39] years old ³	1241	506	504	543	543	210	504	76	737	425	372	644	461
[40-59] years old ³	1323	1048	615	656	656	351	615	88	1157	656	551	1177	599
[60-69] years old ³	664	620	224	300	300	212	224	57	649	487	258	660	409
[70-89] years old ³	1023	919	321	480	480	319	321	117	865	724	321	1177	749
[90+] years old ³	97	105	37	40	40	15	37	-	120	126	17	209	112
Patients registered to practice with a diagnosis of dementia or learning disabilities													
Total number in 15/16	63	48	85	158	158	64	85	53	24	16	8	35	12
Total number in 15/16 prescribed anti-psychotic meds	5	12	7	25	25	71	7	19	1	4	2	6	0
Percentage of the total prescribed anti-psychotic meds	8%	25%	8%	16%	16%	111%	8%	36%	4%	25%	25%	17%	0%

Table B-1. Summary of General Practice routine service data from 9 practices (A-L)

¹ Face to face and telephone appts; ² All staff includes with GP, Practice Nurse, Clinical Pharmacist, Health Care Assistant and/or Advanced Nurse Practitioner; ³ Total number of patients who have attended ≥15 appts with a general practitioner in the period 1.04.14 to 31.03.16 in age group [stated] as at 31.03.16; *Practice D has both a CP and an SCP. Reported practice data is aggregated across both roles; 15/16 refers to the reporting year 1/4/15 to 31/3/16

	Practice												
	A	B	C	D*	D*	E	F	G	H	I	J	K	L
Pharmacist Characteristics													
Pharmacist type	SCP	CP	CP	CP	SCP	CP	CP	CP	CP	CP	CP	CP	CP
Non-Medical Prescriber	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes	No	No	Yes	No
Whole Time Equivalent	0.7	0.4	0.6	1	0.1	0.6	0.6	1	0.2	0.4	1	0.4	0.6
Activity: latest reported month													
Number of appts ¹ available this month by each CP / SCP	199	96	217	90	48	121	351	159	38	43	214	87	69
Number of med reviews undertaken this month by each SCP/CP	117	44	46	0	25	65	68	43	6	85	16	39	71
Total number of attended patient appts (all staff ^{1,2})	2794	2071	3446	7446	7446	5969	3626	1775	2031	1500	1395	2115	1965
Baseline - average number of patient appts per month in 15/16	2498	564	4272	6948	6948	2768	4272	3056	641	440	1758	670	670
Percentage of total number of patients seen by a clinical pharmacist this month	7.1%	4.6%	6.3%	1.9%*	1.9%*	2.0%	9.7%	9.0%	1.9%	2.9%	15.3%	4.1%	3.5%
Activity: Total within reported period													
Number of appts ¹ available this month by each CP / SCP	1746	653	2117	1392	394	833	2117	905	270	277	939	769	366
Number of appts ¹ attended this month by each CP / SCP	1666	876	1565	755	197	817	1565	858	570	243	938	978	377
Number of med reviews undertaken this month by each SCP/CP	1426	268	561	0	181	439	561	208	45	589	148	280	487
No. Months data derived from	12	8	10	12	8	9	10	11	8	7	11	8	7
Average Med Reviews	118.8	33.5	56.1	0.0	22.6	48.8	56.1	18.9	5.6	84.1	13.5	35.0	69.6
% Med review	86%	31%	36%	0%	92%	54%	36%	24%	8%	242%	16%	29%	129%
Specialisms reported³													
Cardiovascular disease		✓				✓	✓						
Care plans								✓					
Diabetes											✓		
Discharge reviews								✓					
General queries/medicines management										✓	✓		✓
Mental health reviews								✓					
Minor illness	✓												
Polypharmacy clinics													✓
Respiratory	✓			✓									
Smoking cessation													✓
Telephone consultations										✓			✓
Travel health	✓												
Nothing stated		✓		✓		✓			✓			✓	

Table B-2. Summary of Pharmacist routine service data from 9 practices (A-L)

¹ Face to face and telephone appts; ² All staff includes with GP, Practice Nurse, Clinical Pharmacist, Health Care Assistant and/or Advanced Nurse Practitioner; ³ Sites return specialisms as a free-text response. An absence of a tick does not indicate that it is not conducted by a site; 15/16 refers to the reporting year 1/4/15 to 31/3/16

Summary

Routine service data collected during the pilot scheme was poor quality and cannot be rigorously analysed to provide any useful measure of the scheme at part of this evaluation.

The evaluation recommends the appointment of an independent analyst to collate all routine service data collected and returned by sites as part of the pilot scheme to date.

Future data collection should be modified to incorporate the following recommendations

- Pilot scheme sites should join with future wave sites to create consistent data returns
- Data should track the point at which the CP returning the data is in the scheme to differentiate (year 1/2/3/post)
- Sites should be allowed time, resource and support to conduct both local and national data collection
- Centralised on-line data collection through using standardised reporting templates, co-located within the clinical system
- Centralised dashboard of reported data to allow sites and individuals to compare their performance against others
- Iterative development of KPIs according to local specialisms

Appendix C – National survey of pilot sites

Audit data

The three month audit mapped the current sites in the pilot scheme and established up to date contact details for all sites.

Sites were mapped to cover a wide area of England. The map below (Figure C-1) shows the locations of the pilot sites and provides an indication of geographic spread.

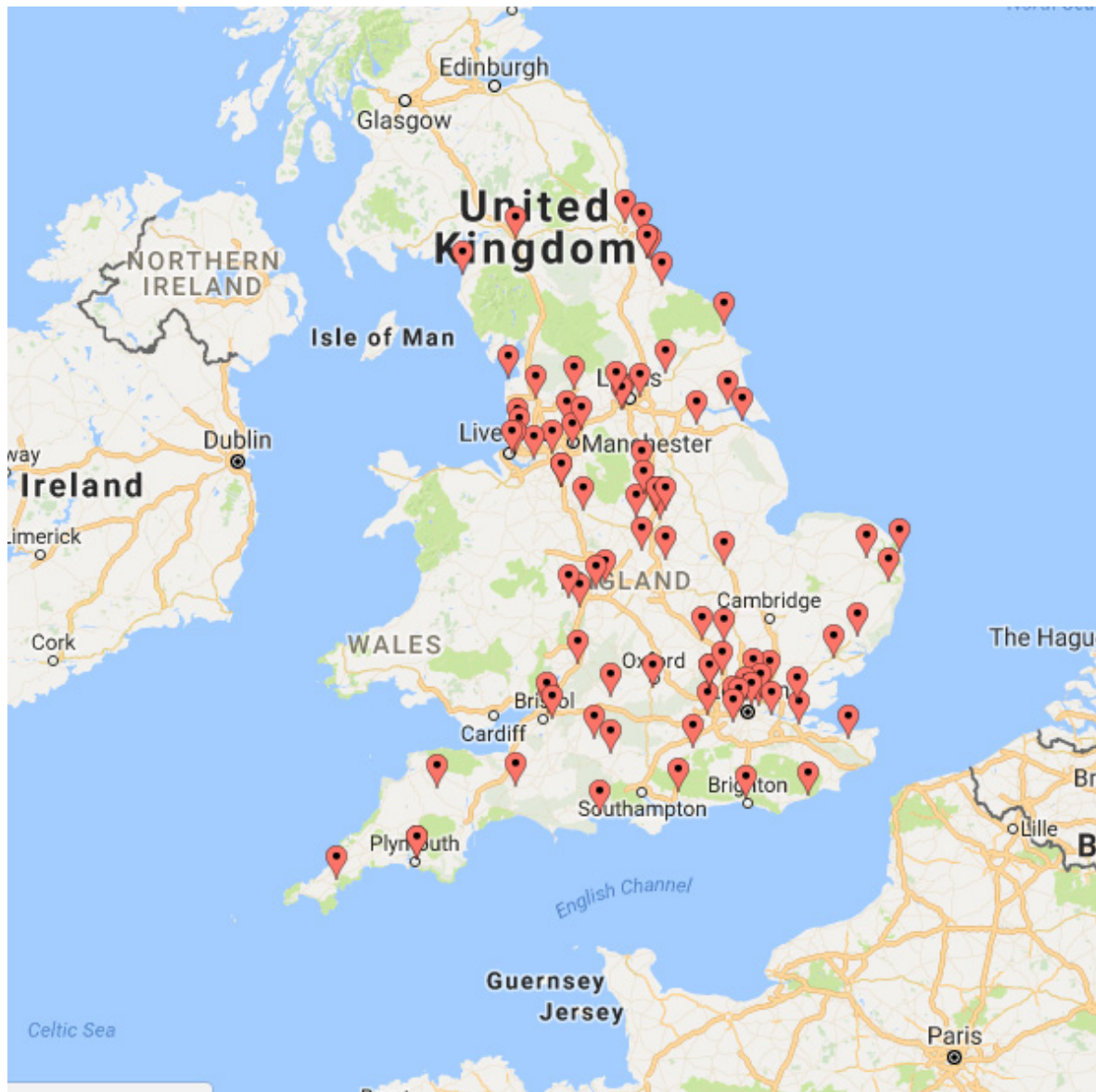


Figure C-1: Geomap of sites in pilot phase: Clinical Pharmacist in General Practice

NHS England were unable to provide the evaluation team with an up to date list of Clinical Pharmacists in post as this information was not routinely captured by NHS England, the only records being held at the level of the site that completed the initial application. The training provider CPPE was also not able to share an up to date list of Clinical Pharmacists as training was provided on an “Opt-in” basis. The current NHS data suggests that the scheme currently operates as follows (from the original application data and CPPE training registers).

- 89 application sites
- 451 Clinical Pharmacists WTE employed (491 posts)
- 658 GP practices acting as hosts to GP Pharmacists

Therefore in order to facilitate an online survey and track response rates it became vital to conduct an audit which could clarify the numbers of sites and employees and establish a line of online communication in order to facilitate an online survey.

An audit took place over June-September 2017. Each pilot application site was contacted by email and asked to confirm their participation in the pilot and provide the names and email addresses of the Clinical Pharmacists and the GP practices worked at. A first request for information was sent in June with follow up emails in July. In the event of non-response a telephone call to the site was placed to establish this information. Supportive emails from NHS England in August asking that sites participate in the evaluation were helpful.

Whilst the audit was being undertaken the research team collaboratively designed the content of the survey/s based on the original research questions submitted in the evaluation tender.

Whilst the original design had been to survey only Clinical Pharmacists and their colleagues in the practice, an important new category of participants emerged from conducting the audit. The pilot site leads who were contacted for the information about Clinical Pharmacists were sharing valuable information about the scheme and clearly played an important role in its implementation. It was therefore decided to iteratively develop a survey for this new category of colleagues who emerged as significant gatekeepers to the scheme, the clinical pharmacist and therefore the evaluation research.

Each iteration of the questionnaire was piloted both internally with the steering group, and externally with a local sample of Pharmacists. Adjustments were made over 5 rounds of amendments to incorporate changes to design and content validity.

The platform for the online survey was BOS, as this platform meets all data protection and local ethical requirements. Unfortunately the ethical requirements to use this platform were problematic since the platform was moved between providers (University of Bristol to JISC) during the period of the survey administration without prior knowledge to the team. This was raised as a complaint of service directly with the software supplier. This caused both a delay to the survey and a disruption during the survey period that may have had a negative impact on response rates.

The final version questionnaire was distributed by email on 27th September, remained open for three weeks and closed on 18th October. Two reminders were sent.

Survey responses were analysed descriptively using SPSS version 24, with cross tabulations where appropriate

Survey findings

Table C-1 Provides a summary of the number of sites successfully audited and the responses received to the survey

	Federation sites	Clinical Pharmacists
NHS England original data (origins unknown)	89	491
Audit data	77	379
Survey responses	52 (41*)	159
Survey response rate	68% (53%*)	42%

Table C-1. Overview of audit data and survey responses.

*Both site leads and clinical pharmacists were sent a unique survey completion link. Several site leads shared their link so data presented includes total responses and number of sites covered marked *

Clinical pharmacist participants

The findings from the survey give an overview of the early implementation of the scheme including an overview of site configurations, perspectives on induction, mentoring and training, relationships with other key staff and work tasks and prioritisation.

Demographics

Demographic information about participants suggests a diverse workforce of Clinical Pharmacists working in GP practices. (Table C-2)

There is wide variance in age, gender and ethnic background of staff these posts. Approximately 72% of posts are held by females, 63% are under the age of 40 and only 53% are White British.

	Frequency (Percent)
Gender	
Female	109 (71.2)
Male	43 (28.1)
Prefer not to say	1 (0.7)
<i>Total</i>	<i>153 (100)</i>
Age group	
25-29	26 (16.8)
30-34	35 (22.6)
35-39	36 (23.2)
40-44	18 (11.6)
45-49	21 (13.5)
50-54	12 (7.7)
55-59	5 (3.2)
60-64	1 (0.6)
65-69	1 (0.6)
<i>Total</i>	<i>155 (100)</i>
Ethnicity	
English / Welsh / Scottish / Northern Irish / British	81 (52.9)
Any other White background	8 (5.2)
White and Black African	3 (2)
White and Asian	2 (1.3)
Any other Mixed / Multiple ethnic background	2 (1.3)
Indian	26 (17)
Pakistani	10 (6.5)
Bangladeshi	2 (1.3)
Chinese	2 (1.3)
Any other Asian background	3 (2)
African	8 (5.2)
Any other Black / African / Caribbean background	2 (1.3)
Arab	1 (0.7)
Any other ethnic group	3 (2)
<i>Total</i>	<i>153 (100)</i>

Table C-2. Demographic overview of CP respondents

Site configuration

Data from the survey demonstrates a 'rolling recruitment programme'. 28% of CPs started their post on the pilot scheme in April 2016 with approx. another 10% coming on board each following month until October when it slowed down to 5% per month then 2% through to August 2017). 8% of respondents reported that their posts replaced previous CPs, potentially demonstrating a fairly high level of early role turnover. [13 people in the survey reported that they had been employed to replace another post. This is 8.2% of the overall number of CP survey respondents (149) and therefore equates to 3.4% of the overall number of CPs in the audit data (379). This equates to 3% of the overall number of CPs from NHS England data (451).]

There is great variance in the configuration of posts. There are a lot of both full time roles (37 - 42 hours) and also part time roles with wide variance from 8 hours per week to 33.75.

Nearly half of all CPs (46%) spread this work over 5 days but there are roles working 1-4 days per week with a steady increase in proportion from smaller to larger days worked. 59% work in one practice, 27% work across two practices, 6% work across three practices, 4% in 4 practices, 2% in 5 practices and with 2% reporting working in up to 6 practices. The most popular models show that majority of CPs are working 4-5 days over 1-2 sites.

Participants reported being registered as a pharmacist between 1978 and 2015. The majority registered more recently with several only registering 2015-2017 demonstrating that this scheme is clearly attractive to recent graduates.

74% of those in post are Independent Prescribers and a further 23% are currently working towards being Independent Prescribers. A large proportion achieved their qualification in recent years including a large number in 2017, suggesting this scheme is contributing to the upskilling of the profession.

Participants were asked to comment on their previous work history and while a large proportion has some background in community pharmacy, it is not a simple picture. Directly before taking up the CP role 20% were hospital pharmacists, 16% were already working in GP practices, 15% were CCG pharmacists and 15% were doing 'other' things which were very varied and included several working in industry or prisons.

There is evidence of both pre-existing partnerships between GPs and pharmacists being built upon, as well as new relationships being built. 25% had a relationship with the pilot site prior to the application but 12% had no relationship and moved over 50 miles to take up the post.

Clinical Pharmacists gave a wide range of reasons for participating in the National Pilot scheme including:

- New challenge personally
- New challenge professionally
- More suitable / flexible than current role (no weekend work often cited, part time possible, better for families)
- Frustrations un current roles (community, hospital, CCG)
- Maximise use of skills
- Had IP qualification but had lacked opportunity to use it
- Work more clinically
- Career progression and development
- To contribute to the development of the profession
- Improve patient care (including specific references to polypharmacy, mental health)
- Worried about community pharmacy as a working environment
- Some were already doing the job and this was natural progression or opportunity for them to develop (some into senior roles)

Perspectives on Induction, mentoring and training

Induction experiences were very varied with 13% having no induction period and 6% having a one day induction. The average was 4-5 days for 16% of people or 2 weeks for 31%. Inductions included a wide range of topics but most people did some shadowing and IT training. Only 1-2% reported inductions to local networks.

20% are line managed by a senior pharmacist and 20% by a GP but 30% by a practice manager. 8% have more than one line manager. (One pharmacist reports having 2 practice managers and 2 GPs). A large proportion of CPs report the triangular model of line management where business management and guidance is provided by the Practice (or federation) Manager and clinical management provided by a GP (or occasionally a Senior Pharmacist or Nurse).

GPs are reported as doing 78% of mentoring with Senior CPs only 16%. 4% of CPs says they don't have a mentor. 41% don't have formal time allocated for training and mentoring and for most CPs time allowed for training is variable. For 20% of people it is 1-2 hours per week. (Some participants talk about '28 days' allocated for training but it is not clear if this is the CPPE training only. Someone else described a training pathway of 18 days over 18 months.)

Comments about induction, training and mentoring suggest that

- Mentoring models aren't universal
- Senior CPs aren't as involved as they could be
- Existing relationships can speed up the process of learning
- Role outputs quickly take priority over mentoring
- Induction is important for belonging and integration – which suffers if this is not prioritised
- Where a formal induction is provided it is appreciated and provides a good grounding for future learning and relationships
- Expectations and assumptions about pharmacists knowledge of primary care can be detrimental to providing the support and training required
- Someone suggested buddying scheme / peer mentoring would be useful

Formal guidance on induction and mentoring could support the implementation of future iterations of the scheme:

'Although a GP supervisor was nominated a few months into my role, I did not receive structured support from the practice for the first 6-9 months due to lack of mentor engagement or commitment. This was attributed to business and various business priorities in the practice. While I appreciate the challenges presented in providing scheduled one-to one time, I feel this lack of in-house support has dented my confidence in this role and my place in the team, and impeded my integration and clinical growth. While I am able to perform my tasks effectively, it has been largely due to getting on with things on my own and networking with other pharmacists at events to gauge my next steps. Based on my personal experience, I feel it is imperative when starting a role that is not clearly defined or new to the practice that there is in place someone within the team who is enthusiastic and committed to working with the pharmacist to help them develop the skills required to contribute effectively to the practice's needs and embed their role, akin to a GP trainer and registrar relationship.'

When asked about the most useful training they had undertaken in relation to the role CPs reported a wide range of opportunities including: ‘

- *‘Local training (wide ranging and varied, often hosted by practices)*
- *‘IP training and mentoring’*
- *‘Anticoagulation’*
- *‘Acute illness in primary care (3 days) / Minor illness’*
- *‘Red Whale / Morph’*
- *‘Communities with other GP pharmacists’*
- *‘CPPE 4 day residential induction’*
- *‘GP mentoring’*
- *‘Local Universities specialised training’*

When asked how training could be improved, Clinical Pharmacists gave some useful insights that could contribute towards the development of future training including:

- *‘All learning to be undertaken in contact time – no time available for ‘additional’ or ‘preparatory’ learning’*
- *‘Should be taught by people who work in General Practice’*
- *‘Needs to be specific (e.g. how to conduct a review for a specific condition)’*
- *‘Should be clinically focused (less leadership more clinical comes up a lot) and lead to development of advanced clinical skills’*
- *‘Early residential should be clinical not form filling’*
- *‘Use OSCE assessments to monitor clinical training outcomes’*
- *‘Senior Pharmacists should be more involved’*
- *‘Streamline training so accessible to all – London not accessible to all’*
- *‘Induction pack’*
- *‘Train GPs and practices too / monitor local mentoring’*
- *‘Improve / offer practice software systems specialised training (coding, templates, consultations)’*
- *‘Training in NON patient facing tasks needed e.g. discharge, tests, stocks, letters’*
- *‘Change to shadow someone already in the role’*
- *‘Calendar of training events to be provided early to enable practices to plan cover / clearer planning, structure and rating of training ‘*
- *‘Set KPI targets for mentors’*
- *‘Link to RCGP training / more Red Whale’*
- *‘Develop a training hub (use pilots to inform)’*
- *‘Don’t try to do too much – the whole of AMR in a two hour session – impossible’*
- *‘A community of practice is vital ‘sharing experiences with other GP pharmacists has been the most valuable’*
- *‘Develop a set of competencies to work towards – one for GP Pharms and an advanced clinical and mentoring practitioner qualification for senior CPs’*

Work tasks and prioritisation

Work tasks are evenly managed with a third managing their own tasks, a third being directed by a GP and another third being directed by a PM. The rest were split. In some cases a team approach to the role, lots of people being steered by the CCG who are paying for the role, and a few directed by reception staff.

The amount of time spent facing patients in the role varies enormously from 1-100%. 2% report undertaking no patient facing role.

The largest proportion of respondents spent slightly less than half of their time in post patient facing.

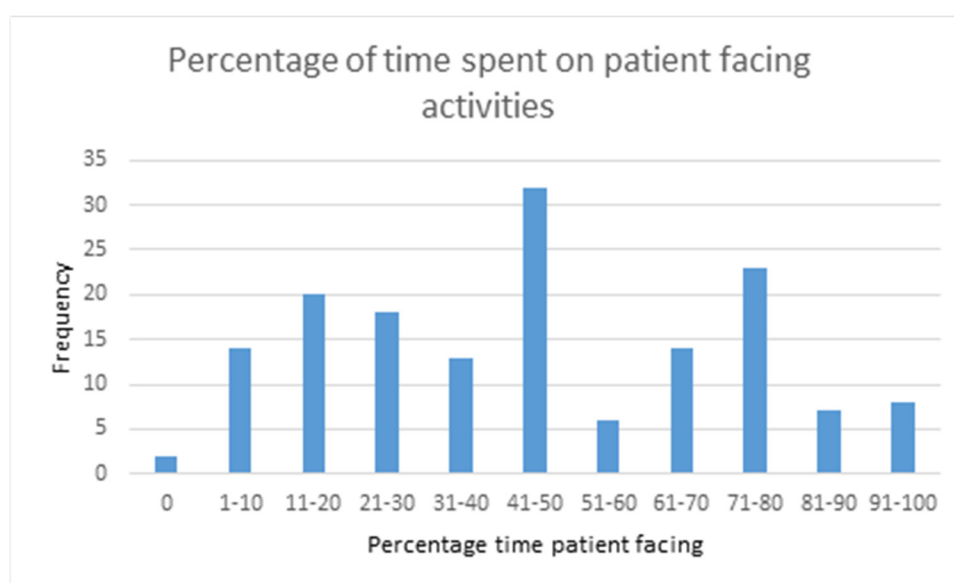


Figure C-2. Proportion of time spent in patient facing activity

13% started patient facing work within the first week, another 31% in the first month and another 33% in months 2 and 3 showing that the role can develop quickly into patient facing work.

This section of the data shows the pharmacists are mostly involved in a wide range of tasks

- 38% undertake medication reviews in person every day and 30% several times per week. Only 3.3% never undertake med reviews. For 70% this is a major part of their role
- 28% undertake medication reviews by phone every day and 27% several times per week. Only 6.5% never undertake telephone med reviews. For 49% this is a major part of the role
- 33% manage long term conditions every day and 28% several times per week.
- 10% are undertaking online consultations and 3.5% call this a major part of their work
- Over 50% give lifestyle advice every day and 65% see this as a major part of their role
- 50% never do home visits and another 20% rarely so this is an area that could be developed. There are similar data about care home visits
- 63% doing discharge review every day and 21% several times per week
- 80% dealing with prescription queries every day
- 75% responding to colleague queries every day
- 35% use the PINCER indicators to support their role
- Cost effective prescribing practiced by a lot of CPs

Lots of 'other' tasks including:

- Anticoagulation
- Telephone triaging
- Palliative care
- Audits
- Efficiency tasks
- DMARDS
- Training / MDT development
- Bloods (interpreting tests and acting on)

Longer and flexible appointment times are common. Patients are referred in to see the CP from a range of routes which can include a range of other staff referrals and usually includes reception triaging med reviews and prescription queries into the CP.

Pharmacists report the greatest benefits they perceive from working in Primary care to be:

- Medicines / prescribing safety / patient safety / reduced prescribing errors / reduced risk / reducing medications related admissions
- Releasing capacity for GPs (prescription queries and med reviews)
- Link between primary and secondary care
- Increased patient access to clinicians
- Stop no longer needed medicines / minimising waste / rationalising medicines use / reduction of benzodiazepine and opiate prescribing / focused deprescribing for certain groups e.g. the elderly
- Management of long term conditions /dealing with polypharmacy
- Improved medicines use and adherence / optimising therapy
- Better more specialised use of each professions skills
- Pharmacist expert advice in medication choice, use and review
- Improved patient outcomes
- Reduced hospital admissions
- Reduced prescribing spend
- Better patient care and follow up e.g. on patients prescribed antidepressants
- Longer patient consultations means more holistic care
- Public health education / Empowering patients to better self-care / lifestyle choices
- Better cohesive working between professions / Specialised medications support for the practice and colleagues
- Saving the NHS money with fewer doctors providing care
- Supporting public health / signposting to community pharmacy

Some examples of the comments given:

'Saves GP time. Greater meds safety. Identifying and monitoring risky prescribing and inappropriate prescribing. Drug safety re: monitoring. Better long term clinical care provision. Saving NHS money with fewer Drs providing the care. Better cohesive working between professions'

'More streamlined process for managing repeat prescription requests. Overall increased patient safety from medication by increasing awareness amongst colleagues of drug safety, eg DMARD monitoring etc. GPs feel their prescribing has improved both clinically and cost effectively since having a clinical pharmacist in post. Patients have another HCP to see who is able to focus predominantly on their medications, yet are highly skilled and able to advise on other aspects of their care and provide lifestyle advice'

'medicines safety/ optimisation/ cost efficiencies. NICE implementation; additional hcp delivering flu vaccinations; additional time to increase patient understanding/ adherence to treatments with ability to adjust in patient centred way. Formulary adherence. Revising script'

pathways for repeat prescribing efficiencies. Increase in ETP uptake. Bringing expertise across wide range of LTCs to support patient care & GP workload eg. respiratory reviews; hypertension; sexual health; medication queries.'

Relationships and Satisfaction

Pharmacists were asked to rate a series of statements relating to how they worked and relationships with others. The majority of pharmacists reported a very positive outlook on their role.

- 89% agree or strongly agree that they enjoy working in their role
- 89% agree or strongly agree that they work autonomously in their role
- 68% agree or strongly agree that they work innovatively in their role
- 87% agree or strongly agree that they can work flexibly in their role
- 87% agree or strongly agree that they work closely with others in the practice
- 89% agree or strongly agree that they are accepted by other professionals in the practice
- 70% agree or strongly agree that they work closely with others in community pharmacy
- 29% agree or strongly agree that they work closely with others in hospital pharmacy
- 69% agree or strongly agree that they work closely with pharmacists in other practices
- 66% agree or strongly agree that they work closely with CCG/MMT
- 39% agree or strongly agree that they work closely with other non GP care providers
- 65% agree or strongly agree that it is important for them to be actively researching as part of their role (only 10% disagree or strongly disagree)

What helped integration from the CP perspective:

- Positive attitude from practice staff especially practice managers
- Understanding practice priorities
- Previous experience with primary care / the practice / the local patients for pharmacists and with pharmacists for the practice
- Shadowing
- Sitting with colleagues in a main office / reception office
- Network with everyone
 - *"Bringing in chocolate cake 😊"*
- Time to learn
- Practice meetings and PLT sessions / CCG meetings / MDT meetings / PPG meetings
- A community of practice / networks with other pharms / sharing experiences with other CPs / regular meetings with others / help from peers / learning sets / WhatsApp group with other CPs
- Being proactive / using initiative
- Being honest about strengths and limitations
- Learning to say 'no'
- Leaflet for patients about the role / website showing CP at the practice / Newsletters
- Buy in from one or two GPs gives you the space to prove yourself to the others / GPs who are involved from the application stage
- Making suggestions that improve efficiency and safety
- High level support at induction e.g.
 - *'Colin Murray facilitated 4 sessions which really allowed the senior personnel across the practice to better understand my role and help to embed it. Creating a written 'paragraph' for frontline staff to use to describe my role to patients was valuable. Giving elevator pitch to all staff helped/ and what my role was in terms of their work navigation.'*

What hindered integration from the CP perspective:

- Clarity around the role e.g.
 - GPs and practice staff unsure of the role / benefits / the pilot scheme
 - A lack of clear role competencies
 - GP expectations of clinical capabilities / mentoring
 - GPs not being involved at bid stage so no plans for mentoring or work streams
 - People thinking I work in the pharmacy when called in for an appointment
 - Worries about litigation e.g. (one person not allowed to do flu jabs)
- Relationships e.g.
 - Lack of contact with a senior CP
 - Egos – people with their own agenda
 - Resistance to change from some staff
- Workplace culture
 - GPs and nurses work alone / in silos / in own rooms
 - Not being included in email lists e.g. for GPs or nurses
 - GPs time very limited for mentoring
 - Short hours in part time role means lack of continuity / time constraints of part time working
 - High volume of study days away from practice
 - More practices takes longer to integrate especially if less time spent in each (comment provided by a pharmacist who reported working across 5 sites)
 - Too busy for learning / reflection / time pressures / training feels imposed
 - Different pressures and ideas from different groups
 - The quality and safety of medicines has little financial value i.e. it's not in QOF
 - I'm on low pay but have high responsibility

Pilot site lead participants

Pilot site leads emerged as a group of stakeholders of significant importance since they act as gatekeepers to the Clinical Pharmacists and sites involved in the pilot scheme. The data collected from the pilot site leads reflects similar key categories to the data collected from Clinical Pharmacists to allow comparisons to be made. Data is presented in key areas as per the previous section – site configuration, induction mentoring and training, relationships and work tasks with additional categories of localised priorities and localised evaluations. Some site leads shared their survey link. It was not possible to identify a single response that could be taken to represent the multi-completion sites. Data were therefore taken as *prima facie* without exclusion.

Demographics

Demographic information (Table C-3) about participants suggests a less diverse workforce of pilot site leads than the Clinical Pharmacists working in GP practices.

There is wide range of variance in age, gender and ethnic background of staff these posts. Approximately 70% of posts are held by females (same as CPs).

Only one person managing a scheme is under the age of 35 – a significant difference from the CPs.

88% of pilot site leads are White British (while only 53% of CPs are White British).

	Frequency (Percent)
Gender	
Female	35 (71.4)
Male	13 (26.5)
Other	1 (2)
<i>Total</i>	<i>49 (100)</i>
Age Group	
Under 25	1 (2.1)
35-39	7 (14.6)
40-44	7 (14.6)
45-49	7 (14.6)
50-54	11 (22.9)
55-59	11 (22.9)
60-64	4 (8.3)
<i>Total</i>	<i>48 (100)</i>
Ethnicity	
English / Welsh / Scottish / Northern Irish / British	42 (87.5)
Irish	1 (2.1)
Any other White background	1 (2.1)
Indian	2 (4.2)
Pakistani	1 (2.1)
Chinese	1 (2.1)
<i>Total</i>	<i>48 (100)</i>

Table C-3. Demographic characteristics of site lead respondents

Site configuration

The role of managing the scheme locally falls to different professional groups with the majority being business managers (Table C-4)

	Frequency (Percent)
Business Manager / Director	25 (48.1)
Clinical Manager / Director	5 (9.6)
Senior Administrator	2 (3.8)
GP	3 (5.8)
Pharmacist	10 (19.2)
Practice Manager	2 (3.8)
Project Manager	3 (5.8)
Contract Manager	1 (1.9)
Head of Operations	1 (1.9)
<i>Total</i>	<i>52 (100)</i>

Table C-4. The professional background of pilot site leads

Half of the pilot site leads are employed at a practice with the others spread across various roles. (Table C-5)

	Frequency (Percent)
GP practice/s	28 (53.8)
CCG	2 (3.8)
Medical services company	2 (3.8)
Other company	13 (25.0)
Self-employed	1 (1.9)
Other	6 (11.5)
<i>Total</i>	<i>52 (100)</i>

Table C-5. Employing organisation of the site lead

Half of all pilot site lead respondents were involved in the scheme from the planning and submission of bids but half joined at a later stage. (Table C-6)

	Frequency (Percent)
Planning - I was involved from the planning and application stage	26 (50)
Recruitment - I was involved from a point after the application was submitted but before the CP(s) was in post	12 (23.1)
Operationalisation - I was involved after the CP was recruited but at an early stage in the scheme	3 (5.8)
Management - I became involved once the scheme was operationalised locally	8 (15.4)
Other	3 (5.8)
<i>Total</i>	<i>52 (100)</i>

Table C-6. Point at which site lead assumed responsibility for management of the pilot

There were a range of motivations for sites participating in the programme based on some of the difficulties in primary care and some of the potential of pharmacists (Table C-7)

	Frequency (Percent)
Difficulties in recruiting GPs	37 (71.2)
Difficulties in Primary Care recruitment generally	27 (51.9)
Difficulties meeting patient demand for appointments	32 (61.5)
Recognition of the benefits that CPs can bring to Primary Care	43 (82.7)
Recognition of the need for a specialist in medications	22 (42.3)

Table C-7. What were the driving factors behind your local application to the CP pilot scheme?

There is very wide variance in the number of GP practices included at each Federation site (Table C-8). The average number of GP practices at each site is 7.6 (although this is skewed by larger numbers and there were far more Federations comprising smaller numbers of practices). There was wide variance in the number of General Practices within each Federation pilot site. 14% of all sites included 1 practice, but 6% involved clusters of more than 20 practices.

No. of GP Practices	Frequency (Percent)
1	7 (14.3)
2	6 (12.2)
3	3 (6.1)
4	0 (0)
5	5 (12.2)
6	7 (14.3)
7	4 (8.2)
8	4 (8.2)
9	1 (2.0)
10	1 (2.0)
11	1 (2.0)
12	3 (6.1)
15	1 (2.0)
18	3 (6.1)
22	2 (4.1)
27	1 (2.0)

Table C-8. Number of GP practices that host CPs across the pilot site

Numbers of Clinical Pharmacist posts

There was equally wide variance in the number of Clinical Pharmacist posts recruited by each Federation pilot site (Table C-9). 27.5% of sites employed 1 pharmacist, while 15.7 % of sites employed 4 CPs and the same proportion employed 5 CPs. 2 sites employed 21 pharmacists.

No. of CPs	Frequency (Percent)
0	2 (3.9)
1	14 (27.5)
2	7 (13.7)
3	3 (5.9)
4	8 (15.7)
5	8 (15.7)
6	3 (5.9)
7	1 (2)
8	1 (2)
9	1 (2)
10	1 (2)
21	2 (3.9)

Table C-9. No of CP posts funded per pilot site.

No. of SCPs	Frequency (Percent)
0	6 (12)
1	32 (64)
2	5 (10)
3	2 (4)
4	1 (2)
6	3 (6)
14	1 (2)

Table C-10. No of SCP posts funded per pilot site.

64% of sites employed 1 senior CP (table C-10). 12% of sites reported employed no senior CPs (likely to be single CP sites)

When asked why this model of pharmacists, senior pharmacists and general practice sites was chosen, responses were wide ranging highlighting the diverse nature of the schemes in the pilot phase.

Many respondents suggested they used best estimates related to capacity and structures required. Often decisions were made based on population across sites and numbers of practices to be covered, as well as pharmacist availability.

Several respondents suggested financial motivations for their choice of model relating to making best of funding, affordability and participating practices willingness to pay.

Many respondents related models to the ratio of pharmacists to senior pharmacists and suggested using the guidance ratio provided by NHS England of 1:5. Others chosen alternative ratios related to their personal locations e.g. sites, 2 CPs, 1 SP / 2CPs: 1SP / 2 seniors to 5 juniors / 1:6x2 / 1:4. Only one respondent referred to ratio of CP: Patients and suggested they were aiming for 1:12-15000.

The evaluation acknowledges that the pilot scheme did not limit applicants to the 1:30000 (CP:Patient) ratio used in later iterations of the scheme. Table C-11 provides a breakdown of the CP FTE:Patient ratio. The numbers of patients reported across pilot sites varied enormously from 10,000 – 242,000. At the smallest end of scale 11 sites have a total number of patients less than 30,000, whereas at the largest end of the scale 6 sites have upwards of 100,000 patients. Figure C-3 graphically illustrates the ratios employed by sites. Within this pilot phase there is clear preference for a ratio of 15000 patients for each whole time equivalent.

Number of patients per FTE	Frequency
1000	1
9000	3
10000	3
11000	1
12000	4
13000	1
14000	3
15000	8
16000	6
17000	2
18000	3
19000	2
20000	1
21000	1
22000	1
23000	1
24000	1
26000	1
30000	1
37000	1

Table C-11. No of Patients per FTE of CP

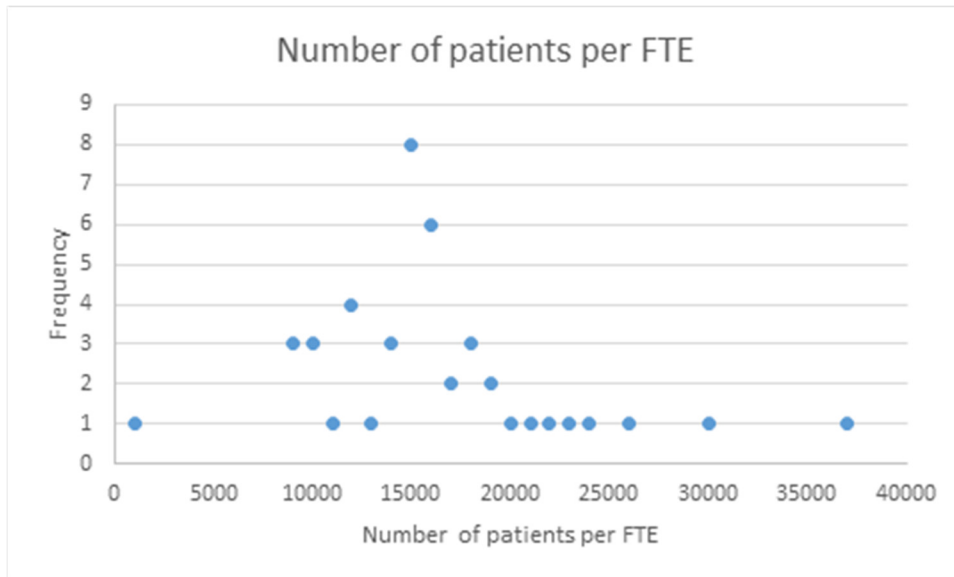


Figure C-3. Graphical representation of the number of patients per FTE of CP

Perspectives on Induction, mentoring and training

Recruitment

A variable number of applicants for each role, 30% of sites with 10 or more applicant, 35% of 5-9 applicants and 35% with 4 or less. (Table C-12)

	Frequency (Percent)
More than 25 applicants	2 (4.3)
10-24 applicants	12 (26.1)
5-9 applicants	16 (34.8)
2-4 applicants	14 (30.4)
1 applicant	1 (2.2)
Fewer than one applicant per role	1 (2.2)

Table C-12. No of applicants per role

The quality of applicants was also variable with 54% high or very high but 40% average and 6.6% below average. (Table C-13)

	Frequency (Percent)
Very high	4 (8.9)
High	20 (44.4)
Average	18 (40)
Low	2 (4.4)
Very low	1 (2.2)

Table C13. Quality of candidates applying for each role

There are quite high levels of turnover with 15 sites reporting turnover of at least 1 CP post, and 5 sites reporting turnover of 1 GP practice and 10 sites reporting turnover of more than 1 GP practice.

Comments on recruitment were wide ranging and made a number of recommendations. Several respondents suggested it would be helpful for consistency across sites, one suggesting a universal recruitment process facilitated with input from a senior CP. (Other respondents suggested that pharmacists should be involved in recruitment). One site reported successful central recruitment with practices involved in interviews. Several made comments that while the CP would be located at the practice it was often the Federation who was responsible for recruitment and therefore efforts should be made to involve practices in the process for early buy in. One respondent reflected on a high level of turnover impacting the potential impact of the scheme at his site.

Reflections on induction

Reflections on the induction process by pilot site leads offer useful insights for future planning:

- Sites often used the process applied to other staff
 - *'We used our usual induction process for non GP clinical staff'*
- Sites gave examples of components they felt it useful to include. These can provide useful guidance to others.
 - *'Should shadow a senior pharmacist, work in local pharmacy and work to a set induction scheme relevant to pharmacists'*
 - *'Important to be thorough'*
 - *'Communicate with practices and then communicate again - explain that this is a training/development role and that will take time to show benefit - the more input from practices the more they will get out - some do expect a fully developed service from the start'*
 - *'As an organisation we have our own structured induction process which we augmented by having a PIGP induction schedule. Working at scale across numerous practices has helped us develop that further'*
 - *'A lot of support has been necessary from all members of the primary care team , including GP time'*
 - *'It was useful to have the CP shadowing all members of staff and the clinical team in the practice so they fitted well into the team, understood what everyone's role was, who to go to for help etc. Also this gave each member of the practice team an idea about what the pharmacist would be doing'*
 - *'We rotated the CP for the first 2 weeks of induction around GP's & Nurses sitting in consultation with patient consent, they then sat in with the reception team discussing & assisting with prescription queries. Followed by spending time with the Practice Manager for an overview of how the practice works and with the QOF lead.'*
- Sites gave examples of experiences which had not been beneficial
 - *'The CPPE induction process was quite inflexible, which led to our first senior CP leaving her role early during the probationary period'*
 - *'The induction via CPPE & the pilot had not taken into account what would be the most appropriate workload that a CP would undertake (i.e. Practice Nurse/HCA tasks are inefficient to be completed by CP at 2-3 times the cost) also indemnity not in place for diagnosis'*
 - *'Given the pressure for the CPs to start to contribute to managing pressures in the practice , their induction was too short and insufficiently comprehensive''*
 - *'I think we could have introduced the CPs a little bit better so the whole team, clinical and non-clinical could recognise they [sic] skills sooner. Initially the induction process was around working closely with GP and therefore it became isolated'*

-
- Sites suggested guidance for consistency in induction would be beneficial
 - *'It is useful if they all have the same induction if they are working in one area, even if they are working for different practices'*
 - Some sites gave examples that showed the difficulty of allocating responsibility between the Federation, practices and other partners
 - *'The CCG had to use a federation as we were not allowed to bid, the federation were appalling at the induction and the CCG team had to step in to support the process to manage the initial expectations from practices.'*

Reflections on the training process

Pilot site leads gave some useful insights into their perspective on training with some areas for improvement and suggestions for developments

- Time consuming for pharmacists and practices / practices feel they spend too much time training
- Training provided not always beneficial / Needs to be tailored (especially for more experienced pharmacists)
- Duplication between provision (CPPE / IP)
- Lack of practical skills training outside practices

Pilot site leads suggest that based on their own experiences they feel the most important training needs for incoming pharmacists are;

- Understanding primary care (especially culture)
- Interacting with patients / consultation skills
- Independent prescribing
- Long term condition management
- Minor injuries / minor illness
- Time management
- Software training

When asked to reflect on their own training needs, many pilot site leads reported feeling suitably trained for their role. Some respondents recommended that a brief workshops might be useful for pilot site leads, and several topics were suggested as suitable for training workshops including;

- Broad introduction to the role / primary care demands / pharmacist competencies
- Shared experienced from other sites
- Insurance information
- Leading and managing in a clinical (primary care) context

When asked to reflect on the reporting process for routine service data, pilot site leads expressed that they were difficult to produce and there were some concerns that the KPIs were not appropriate or may not generate useful data. Several respondents reported being unwilling or unable to provide the routine service data. There was some frustrations expressed that the reporting process represented a one way line of communication with no feedback offered from NHS England in response to the data provided.

Relationships with other key staff

Line management

When allocating work tasks, line management varies significantly. 20% of CPs are fully autonomous and decide their own work, 25% have tasks decided by GP and the other half are split between Nurses, Practice Managers, Practice Management Groups, pilot site leads and others such as a CCG or steering group.

	Frequency (Percent)
The pharmacists themselves	33 (63.5)
Senior Pharmacist	25 (48.1)
GP	43 (82.7)
Nurse	7 (13.5)
Practice clinical management group	15 (28.8)
The pilot site lead	10 (19.2)
Other	4 (7.7)

Table C14. Who decides what tasks the CPs are expected to do as part of their role (n=52).

Multiple options may be selected so percentages reflect proportion of respondents

Work tasks and prioritisation

Pilot site leads demonstrate clear understanding of the day to day work of the CPs

- 86% of pilot site leads report that med reviews are an essential part of the CP role (this proportion is the same for both face to face and telephone reviews)
- 60% of pilot site leads report that LTC consultations are an essential part of the CP role
- 92% of pilot site leads report that lifestyle advice is a part of the CP role essential (53%) or optional (39%)
- 90% of pilot site leads report that discharge reviews is an essential part of the CP role
- 92% of pilot site leads report that prescription queries are an essential part of the CP role
- 98% of pilot site leads report that supporting colleagues is an essential part of the CP role
- Around a third (32%) of pilot site leads feel that care home visits are an essential part of the role but only 8% feel that home visits are an essential part of the role.

Pilot site leads suggest a wide list of other tasks that their CPs is involved in which include:

- Minor illness
- Vaccinations
- Monitoring high risk medications
- Training prescription clerks and GPs in meds management
- DMARDs (Disease modifying anti-rheumatic drugs)
- NOACs (New oral anticoagulants)
- CCG Prescribing
- Clinical audits

Pilot site leads report the greatest benefits they perceive from CPs working in Primary care to be:

- Prescribing
- Increasing patients' ,medicines understanding and adherence
- Addressing the supply-demand imbalance / capacity in Primary Care
- Offering a Quality (Better) service
- Patient safety
- Primary Care Team expertise and skill expansion

'All practices in our scheme would no longer do without him; he is a vital member of the team and greatly appreciated by all.'

When invited to suggest what outcome measures may be appropriate in relation to the pilot scheme, the pilot site leads suggested a wide range of data.

- GP time saved
- Other clinician time saved
- CP workload (and how that represents time saved for others)
- GP satisfaction
- Med reviews linked with outcomes
- Patient satisfaction survey
- Improved compliance
- Numbers of qualified IPs
- Adverse events avoided
- Avoidable admissions
- Reduction in waste
- Local needs priority
- Quantitative and qualitative
- No of times repeat prescriptions changed / optimised
- CP prescription work not involving GP
- Safety

Local priorities

Several pilot site leads used the survey to report on how they had personalised the development of the pilot scheme according to local priorities. These insights could provide useful examples to other areas of how to maximise the benefits of the scheme according to local, as well as national, strategies and priorities.

The survey offered the opportunity for pilot site leads to share examples of localised practice and research. There are a wide range of examples and this report would recommend time and investment to work with localised research agendas to maximise the localised research approaches, and to ensure that top level overview is given in order that localised data might be used for national benefit.

Some examples of localised targets being monitored included:

- Medication reviews
- Hypertension reviews
- Frailty medication reviews
- Diabetes clinic
- Asthma clinics
- NOAC management
- NHS England KPIs
- Flu clinics
- Patient surveys
- Reducing opiates on repeats
- Contribution to prescribing gain share
- Unplanned admissions
- Multiple combinations of the above criteria
- Patient responses to new roles
- Patient education

Impact on medicines optimisation and efficiency in clinical and administration processes around repeat prescription management

Over half of all sites (58%) reported conducting local research and evaluation. There should be further work done to explore, understand and support this localised approach to implementation and evaluation and ensure the opportunity exists for sites to share best practice approaches.

Some examples of localised research work outlined by pilot site managers include:

- Impact on care homes
- Safer prescribing in frailty
- SCP and polypharmacy in over 90s
- Audit of clinics
- Intervention log of work done mapped to salary grading to understand cost saving
- Breakdown of consultations and impact on other staff
- Report compiled
- Report available
- Feedback from practices and pharmacists
- Recorded CP workflow by type and volume
- Hypertension audit and review
- Overprescribing review
 - *'We even found patients selling their medicines on eBay'*
- IT tracking
 - *'We are using a Read code formulary so can analyse work themes done by pharmacists in practice'*

Innovative practice

We invited pilot site managers to describe any innovative practices occurring at their site and at least half responded to suggest that they felt the work undertaken at their site was innovative. Some suggestions of innovations in practice included:

- Site sharing
 - *'We have 3 pharmacists that work across 2 sites and split their time between the 2. This allows for sharing of ideas across the practices'*
- Localisation of model at practice level
 - *'We have a mix of models of employment. Larger practices employ a full time pharmacist themselves. Medium size practices share a pharmacist (employed by the practices) and the small practices have opted to use a local hospital trust to provide clinical pharmacists to them. Each model has advantages and disadvantages'*
 - Changing face to face to telephone reviews
 - DMARDs
- Tracking better meds management
 - *'complete review of processes and use of prescription clerk, leading to a 25% reduction in meds management costs in 3 months'*
- Partnerships / Working with others e.g.
 - Care Home Work
 - MDT work
 - Links to hospital
 - Domiciliary care / working with community

-
- Collaboration
 - *'We have a team based approach with leadership from a (non-pilot) experienced clinical pharmacist. We work collaboratively with the local CCG and hospital and are developing relationships with local community pharmacists'*
 - *'We use a daily 10 minute huddle for the primary care team to discuss patient safety issues as well as any other concerns'*

These innovations give a useful insight into the way sites are localising innovative practice. This evaluation affords the opportunity to explore and disseminate example of innovative practice. This aspect of the evaluation will be the focus of the final stage of the research.

65% of pilot site leads or 29 Federations are willing to engage with further research.

The final section of the questionnaire gave pilot site leads the opportunity to share practical feedback from their experience of the scheme implementation.

When asked to share things that hindered integration, the following themes emerged:

- Time
 - Lack of time for development / Intensity of initial training CPPE/IP
 - Not being here every day / insufficient time in practice / high ratio / patient population
- Conflicting agendas
 - Different agendas and expectations between CP and Practice
 - Practices who don't see potential / GP don't understand role
 - *'Level of clinical support & supervision required for CP to deliver on required tasks (increased rather than reduced workload for GPs)'*
- HR issues e.g.
 - *'Clinical pharmacist who had integrated well leaving for personal reasons Senior CP being dismissed following allegations of harassment'*
 - *'CP wishing to work in a manner which increases personal stress'*
 - *'CP conflict with another CP creating suspicion and competition rather than effective team working'*
 - *'Lack of clarity around level of supervision required to facilitate IP training and qualification'*
- NHS England
 - *'NHSE have been very poor in terms of communicating / monitoring KPIs / Agreement with NHS England that funding to support the practices needs to be reimbursed in the first month of the pilot (practices were outstanding monies for up to 5 months)'*
 - *'NHSE have only hindered the whole process and feel we don't need the middle man to facilitate the pilot and other schemes'*
 - *'Poor communications'*
 - *'Poor project management'*
 - *'Poor comms, data capture and lack of project management'*

When asked to share things that helped integration, the following themes emerged:

-
- Meetings
 - Being involved in meetings, training and being seen to engage with the team
 - Quarterly meetings with pharmacists and GP trainers
 - Attendance at practice meetings
 - Regular steering group meetings
 - Monthly meetings led by SCP for all CPs
 - Integration – range of methods
 - *‘I can't stress enough how important it is for the CP/SCP to be part of the practice team from the outset. Integration is key’*
 - Induction
 - Work shadowing
 - CP physically located in practice with clinical teams
 - Mentoring
 - Pharmacist consistent in practices
 - Planned investment time
 - *‘We invested 2 sessions of Lead GP time per month for 6 months at the start of the scheme. This allowed the GP and pharmacist to get systems set up and in place, training to take place, protocols to be reviewed, new schemes developed etc. e.g. Frailty Clinics for complex elderly which included pharmacist input’*
 - Practices committed to developing pharmacists
 - Locally supportive culture
 - *‘Good communication with the team and the expectations and limitations within the role. Our practice team really like our CP and want him to stay on permanently once the 3 years of the pilot has been completed’*
 - Pharmacist attitudes
 - Can do attitude
 - Willing to have a learn and adapt
 - Knowing own limits
 - Wider links and support
 - Links to and support from CCG MMT
 - Links to hospital pharmacy teams
 - Local networking and peer learning (outside CPPE)
 - Appointing a senior CP to coordinate at the highest level and liaise

“Colleagues” participants

CPs were invited to share a link with colleagues in their practice to complete a questionnaire. Responses were received from 63 primary care colleagues, 24 (39%) of whom were GPs

Disclaimer: While we have this data it is minimal, and therefore while descriptive statistics are possible, the relative importance of their findings should not be misinterpreted. The project steering committee were hesitant to publish this data in light of the limitations of such a small sample size. Qualitative comments from this dataset are likely to be most useful. Nonetheless the data set is represented, as requested by the commissioner.

Demographics

Table C15 shows the breakdown of the colleague respondents.

	Respondent role						Total
	GP	Trainee Doctor	Support team	Practice manager	Nurse	Other	
Gender							
Female	9	2	8	13	6	2	40
Male	15	1	0	3	0	1	20
Prefer not to say	0	0	0	1	1	0	2
<i>Total</i>	<i>24</i>	<i>3</i>	<i>8</i>	<i>17</i>	<i>7</i>	<i>3</i>	<i>62</i>
Age							
25-29	0	2	1	0	0	0	3
30-24	1	0	0	1	0	0	2
35-39	0	1	0	2	1	1	5
40-44	3	0	0	0	0	0	3
45-49	2	0	2	7	2	1	14
50-54	7	0	3	2	3	0	15
55-59	8	0	2	4	1	0	15
60-64	3	0	0	1	0	0	4
70-74	0	0	0	0	0	1	1
<i>Total</i>	<i>24</i>	<i>3</i>	<i>8</i>	<i>17</i>	<i>7</i>	<i>3</i>	<i>62</i>
Ethnicity							
English / Welsh / Scottish / Northern Irish / British	22	2	8	16	7	3	58
Irish	0	0	0	1	0	0	1
Any other White background	1	0	0	0	0	0	1
Bangladeshi	1	0	0	0	0	0	1
Chinese	0	1	0	0	0	0	1
<i>Total</i>	<i>24</i>	<i>3</i>	<i>8</i>	<i>17</i>	<i>7</i>	<i>3</i>	<i>62</i>

Table C-15. Demographic characteristics of colleague respondents

Induction, training and mentoring

Various colleagues reported being part of the CP induction process, however it would appear that the majority of induction was conducted by practice managers (Table C-16).

Respondent sub group	Did/ do you contribute to Clinical Pharmacist induction to the practice?	
	Yes	No
GP	10 (41.7)	14 (58.3)
Trainee Doctor	0 (0)	3 (100)
Support team	3 (33.3)	6 (66.7)
Practice manager	10 (58.8)	7 (41.2)
Nurse	1 (14.3)	6 (85.7)
Other	0 (0)	3 (100)

Table C-16. Colleague respondent contribution to CP induction

58% of GPs who responded to the survey did not contribute to induction. Those who did contribute were involved in a range of ways including:

- *Helping to plan induction*
- *Offered shadowing experiences*
- *Offered a mentoring introduction*
- *Directly supervised induction*

Respondent sub group	Did/do you contribute to Clinical Pharmacist mentoring?	
	Yes	No
GP	13 (54.2)	11 (45.8)
Trainee Doctor	0	3 (100)
Support team	0	9 (100)
Practice manager	2 (11.8)	15 (88.2)
Nurse	1 (14.3)	6 (85.7)
Other	0	3(100)

Table C-17. Colleague respondent contribution to CP mentoring

54% of GPs who responded to the survey contribute to mentoring (but 46% do not, Table C-17). A range of examples of mentoring practices were given including:

- *Regular weekly / daily updates*
- *Discussion of cases*
- *Patient role play*
- *No protected time but had her sit in with me*
- *I am part time so I contribute when I can*
- *Informal / ad-hoc*

Respondent sub group	Did/do you contribute to Clinical Pharmacist training?	
	Yes	No
GP	12 (50)	12 (50)
Trainee Doctor	0	3 (100)
Support team	0	9 (100)
Practice manager	2 (11.8)	15 (88.2)
Nurse	2 (28.6)	5 (71.4)
Other	0	3 (100)

Table C18. Colleague respondent contribution to CP training

50% of GPs who responded to the survey contribute to training (50% did not). (Table C-18)

What do GPs think are the most important training needs for CPs?

- Understanding primary care / GP practices / localised ways of working
 - *'Systems and processes of the practice'*
 - *'Understanding phenomenal workload of General practice'*
 - *'An understanding of how General Practice works day-to-day and how patients use it'*
 - *'Stepping back sometimes from what the patient requests, and what is actually correct management. Not always the same thing!'*
 - *'How the current systems work in specific practice'*
 - *'Understanding of practice script systems and CCG meds formulary'*
 - *'Understanding what a practice needs from the pharmacist'*
 - *'Knowing how the repeat prescribing is done'*
 - *'Learning the system, looking at prescriptions and how they are handled, learning searches'*
 - *'Integration of pharmacist role with those of other clinical staff e.g. triage nurse, COPD/Asthma nurse, Diabetes nurse) to ensure best use of each other's skills for patients' needs'*
 - *'Local understanding of CCG medicine management policy'*
 - *'An explanation of how we work in primary care, patients expectations of a "new" HCP in their practice, what other GPs and staff might use a pharmacist for, patient improvement'*
 - *'Regular contact with a GP Ability to contact a GP for ad hoc queries training in local computer use and policies (e.g. practice prescribing policies), introduction to the team and areas of expertise'*
 - *'How the individual practice systems work'*
 - *'practice systems - computer and general policies'*
 - *'Differences between community pharmacist and GP roles. Expectations on both sides'*
 - *'A clear understanding of what the practice needs are on the one hand and a clear understanding of the knowledge and skills that the clinical pharmacist can offer on the other'*
 - *'To help us in running the practice as a member of our team with regards medicines management'*
- Risk management
 - *'managing the high level of risk which we are used to in GP are probably the biggest challenge'*
 - *'Ensuring safety and support of the pharmacist's clinical decision making when seeing patients'*
 - *'ensuring that pharmacist has supervisory support for clinical work when it is needed'*
 - *'Balance of support & learning with safe service provision'*

- Developing skills
 - *Reviews of medicines/patients. audits to improve patient care'*
 - *'Minor illness work'*
 - *'Independent prescribing decisions'*
 - *'Non-medical prescribing.'*
 - *'Working at your competency level'*
 - *'establishing clinical education needs/training program early on (in conjunction with the CPPE pharmacist educational program)'*
 - *'Understanding the holistic approach to patient care'*
 - *'ensuring pharmacists focus on what they are best at medicines experts and do not try to take on too many new skills initially - understand QOF'*

Line management

Colleague respondents reported a wide range of line management structures (Table C-19)

Person managing CP	Respondent group					
	GP	Trainee Doctor	Support team	Practice manager	Nurse	Other
Senior pharmacist	6 (6.00)	1 (10.0)	0	2 (2.00)	1 (10.0)	0
GP	10 (58.8)	0	3 (17.6)	3 (17.6)	1 (5.8)	0
Practice manager	2 (16.7)	0	3 (25.0)	6 (50.0)	1 (8.3)	0
They don't have a line manager	0	0	1 (100.0)	0	0	0
They have more than one line manager	0	0	0	4 (80.0)	1 (20.0)	0
I don't know	4 (28.6)	2 (14.3)	2 (14.3)	0	3 (21.4)	3 (21.4)
Other	2 (50)	0	0	2 (50)	0	0

Table C-19. Line manager of CP

58.8% of GPs report that a GP line manages the CP, 15.8% did not know who the CP line manager was. Two respondents reported line management partnerships between the practice and the group of sites.

'Shared between managing partner and employer (local social enterprise)'

35% of GPs suggested that a GP decided what tasks the CP is expected to do as part of their role, where 11% suggested this decision was with the senior pharmacist, 19% with practice managers, 3% with a nurse and 25% suggested that Pharmacists decided on their own work tasks.

74% of GPs felt that the performance of the CP was monitored and 22% did not know if was monitored. A wide number of measures were suggested as being in use for monitoring the performance of the CP including:

- Defining who monitored the CP performance
 - *GP*
 - *'Mentor'*
 - *'Senior Pharmacist'*
 - *'A GP partner who is also a trainer'*
 - *'GP & Senior Pharmacist monitor at practice level. There is a [locality] wide group that looks at all the CPs' work & NHSE monitor KPIs'*
 - *'By the CP, our practice manager and the senior pharmacist'*
 - *'By us as GPs/our practice manager and her senior mentor.'*

- Defining the process for monitoring performance
 - 'PDPR
 - 'In-house appraisal'
 - 'Through regular scheduled review with practice Supervisor of his training at present, which will carry on after pharmacist completes his formal Prescribing Qualification and CPPE program. Also an annual staff appraisal will take place with practice manager and GP.'
- Defining clinical measures for monitoring performance
 - 'Weekly feedback, audit of number of medication reviews'
 - 'Templates recording activity'
 - 'He completed regular returns of his work'
 - 'Audits'
 - 'We look at our lists of tasks given to her and see how these have improved'

Pharmacists not mini-doctors

'We aren't 'expensive nurses' or 'cheap doctors' we bring a wide array of unique knowledge and skills and a fresh perspective, valued by patients and allied professions'
(Comment by CP in survey)

As demonstrated earlier 70% of CPs suggest that medication reviews are major part of role etc.

- Medicines management (cost effective)
 - 57.9% of GPs believe this should be a major part of the CP role
 - 42.1% of GPs believe this should be a minor part of the CP role
- Medicines optimisation (outcomes)
 - 84.2% of GPs believe this should be a major part of the CP role
 - 15.8% of GPs believe this should be a minor part of the CP role
 - 71% don't know how often their CP does this

Data shows that CPs believe that diagnosis remains the work of the GP. 99% believe that GPs make a major contribution to diagnosis but only 6.8 believe that CPs make major contribution and 18.5% believe that CPs make a minor contribution to diagnosis. GPs support this with 92% believing GPs make the major contribution to diagnosis and 0% believing this to be a major part of the CP role. By comparison 57% of CPs believe that their role make a major contribution to determining if new medication is needed, and 18% believe this to be a minor part of their role. GPs seems to concur with 27% believing this to be a major part of the CP role and 9% a minor part.

GPs were asked to describe the innovation the role brought to the practice(s) and made comments including:

- *'Excellent at driving cost effective prescribing and dealing with hospital discharges and pain clinic medications /epilepsy meds that need titrating/withdrawing'*
- *'Not innovative, just common sense, that she should have been in role for years/decades. excellent value for money and improves patient medication care +++++'*
- *'Should be really pushed. Excellent VFM'*
- *'Excellent scheme. Should be developed even further. I cannot be without CP anymore. Please don't stop the pilot'*
- *'Not sure that it saves money. e.g. more and more people 'qualifying' for ENSURE and food supplements.'*
- *'Only beginning to have impact'*
- *'I think having practice based pharmacists is really helpful. Probably they uncover a "can of worms' which needs sorting out but I think they make a valuable contribution to reducing side effects, reducing hospitalisations from drug side effects, improving concordance and changing patient's expectations of who is the correct person to see about their medications'*
- *Working well for us and our patients. Improving quality of care and cost effective prescribing.'*

It seems clear that both GPs and CPs believe that the biggest contribution CPs can make to primary care is in issues around managing medication, rather than being used as 'mini-doctors'.

		Respondent group						Total
		GP (n=24)	Trainee Doctor (n=3)	Support team (n=9)	Practice manager (n=17)	Nurse (n=7)	other (n=3)	
<i>CPs work autonomously in the role</i>	SD	1	0	1	0	1	0	3
	D	0	0	0	1	0	0	1
	NAND	3	1	2	2	0	0	8
	A	14	0	3	8	2	2	29
	SA	6	2	3	6	4	1	22
<i>CPs work innovatively in the role</i>	SD	0	0	1	0	1	0	2
	D	0	0	0	0	0	0	0
	NAND	3	0	0	3	0	0	6
	A	14	2	4	7	2	2	31
	SA	6	1	4	7	4	1	23
<i>CPs can work flexibly in the role</i>	SD	0	0	1	0	1	0	2
	D	0	0	0	0	0	0	0
	NAND	1	0	0	2	0	0	3
	A	14	2	3	6	2	1	28
	SA	9	0	5	9	4	2	29
<i>CPs work closely with others in the practice</i>	SD	0	0	1	0	1	0	2
	D	0	0	0	0	0	0	0
	NAND	0	1	1	1	1	0	4
	A	9	0	0	4	0	2	15
	SA	15	2	7	12	5	1	42
<i>CPs are accepted by the other professionals in my practice</i>	SD	0	0	1	0	1	0	2
	D	0	0	0	0	0	0	0
	NAND	0	0	0	1	0	0	1
	A	8	0	0	2	0	2	12
	SA	16	3	8	14	6	1	48
<i>CPs are accepted by patients as a healthcare professional</i>	SD	0	0	1	0	1	0	2
	D	0	0	0	0	0	0	0
	NAND	2	0	0	1	2	0	5
	A	16	0	2	7	1	2	28
	SA	6	3	6	9	3	1	28

Table C-20. Respondent perspective on various role and practice related aspects of the CP role.

SD – Strongly disagree, D- disagree, NAND – Neither agree nor disagree, A – agree, SA – strongly agree

		Respondent group						Total
		GP (n=24)	Trainee Doctor (n=3)	Support team (n=9)	Practice manager (n=17)	Nurse (n=7)	other (n=3)	
<i>CPs work closely with others in community pharmacy</i>	SD	0	0	1	0	0	0	1
	D	0	0	0	0	1	0	1
	NAND	6	0	3	5	1	1	16
	A	10	0	1	7	2	1	21
	SA	8	3	4	5	3	1	24
<i>CPs work closely with others in hospital pharmacy</i>	SD	0	0	0	0	1	0	1
	D	2	0	1	3	0	0	6
	NAND	10	1	4	7	5	2	29
	A	9	1	0	4	0	1	15
	SA	3	1	4	3	1	0	12
<i>CPs work closely with other practices</i>	SD	1	0	0	0	1	0	2
	D	4	0	1	1	0	0	6
	NAND	10	2	4	5	4	1	26
	A	3	0	0	8	1	2	14
	SA	5	1	4	3	1	0	14
<i>CPs work closely with other pharmacists in other practices</i>	SD	1	0	0	0	0	0	1
	D	3	0	1	0	0	0	4
	NAND	13	1	3	4	5	0	26
	A	6	1	0	7	2	2	18
	SA	1	1	5	6	0	1	14
<i>CPs work closely with other CCG or Medicines Management Team pharmacists</i>	SD	0	0	0	0	1	0	1
	D	1	0	1	0	0	0	2
	NAND	3	0	1	4	3	1	12
	A	16	1	4	6	1	1	29
	SA	4	2	3	7	2	1	19
<i>CPs work closely with other non-GP care providers</i>	SD	0	0	0	0	0	0	0
	D	5	0	1	1	0	0	7
	NAND	8	2	4	8	6	1	29
	A	9	0	1	7	1	1	19
	SA	2	1	3	1	0	1	8
<i>CPs work closely with allied health professionals (e.g. physiotherapists, dieticians)</i>	SD	1	0	0	1	0	0	2
	D	7	0	2	1	0	0	10
	NAND	10	1	3	11	4	1	30
	A	3	1	1	3	2	1	11
	SA	3	1	3	1	1	1	10
<i>It is important for CPs to be actively involved in researching the benefits of the role</i>	SD	0	0	0	0	1	0	1
	D	0	0	1	0	0	0	1
	NAND	6	1	1	3	1	0	12
	A	14	0	4	8	1	2	29
	SA	4	2	3	6	4	1	20

Table C-21. Respondent perspective on collaborative aspects of the CP role.

SD – Strongly disagree, D- disagree, NAND – Neither agree nor disagree, A – agree, SA – strongly agree

Summary

A significant number of respondents shared their views with the evaluation team. Responses suggest that there are a wide range of activities occurring in practice.

The background of pharmacists in the pilot is broad both from and age and ethnicity perspective.

The proportion of time pharmacists spend in patient facing roles is highly variable from nothing to almost full time.

Overall the training provided with the pilot has been useful, but timing and content had meant that individual pharmacists have not gained as much as might have been possible.

Most pharmacists recognise that they have good relationships with the MDT including colleagues in other areas of pharmacy.

Most pilot sites have opted for a ratio of CP FTE:patient far below the GPFV plan of 1:30 000, with the majority opting for 1:15 000 or less.

Appendix D – External stakeholder perspectives - Overview of SWOT data

Introduction

The research commissioned was to engage with stakeholders involved in the pilot phase of the 'Clinical Pharmacists' in general practice scheme. Data collection methods were both planned and emergent, in order to respond to arising circumstances.

The stakeholder day organised by CPPE and Health Education England (HEE) in May 2017 offered a unique opportunity for the research team to engage with key stakeholders from the pilot scheme and gather research data.

Stakeholders attending the day represented a wide range of geographic as well as job role and level diversity. Attendees (n=80) included both 'on the ground' roles such as CPs in the role, pharmacists in a range of wider roles, GPs and Pilot site leads, as well as representatives from more strategic roles representing organisations such as government, universities, RPS, CPPE, HEE, Royal College of General Practitioners (RCGP) and others.

Two key data collection methods were used to generate feedback from key stakeholders on the scheme so far. Both methods utilised a 'SWOT' analysis approach to ensure representation from all areas of the scheme including strengths, weaknesses, opportunities and threats. This is a technique utilised in a range of scenarios (Helms and Nixon, 2010, Jackson et al., 2003, Pickton and Wright, 1998)

The first method involved the completion of a paper based SWOT analysis, asking stakeholders to respond to these key areas relating to the scheme at three levels – patient, practice and policy. The paper based exercise was distributed to all stakeholders attending the event and collected at the end. Thirty three completed SWOT analysis were collected representing 40% of participants. Data was collected in a database, analysed thematically and top level findings are presented in this report.

The second method involved stakeholders attending focus group interviews facilitated by the research team to discuss stakeholder views on the SWOT of the pilot scheme. The total number of interview participants was 31, split into 4 groups each of 7-9-6 participants. Focus group participants included participants from both 'on the ground' and 'strategic' roles. Data was recorded and transcribed verbatim and analysed according to the SWOT framework. Current thematic analysis is in progress and will inform the final report.

The SWOT demonstrates that participants recognised a broad range of strengths of the scheme including the welcome of dedicated funding to support clinical development in primary care. Participants also recognised that the pilot had imperfections and these should be given consideration prior to further roll out.

The SWOT analysis is able to represent the key strengths, weaknesses, opportunities and threats of the scheme from stakeholder engagement at the interim point of the project.

Questionnaire data is represented at three levels in table D-1.

The interview data analysis forms the section of external stakeholder perspectives.

	Strengths	Weakness	Opportunities	Threats
<p>Policy</p> <p>Macro level developments Government Responsible bodies Strategic planning</p>	<ul style="list-style-type: none"> • Concept • Commitment through long term strategies • Multi-agency commitment • Funding • Training • Efficient use of existing expertise 	<ul style="list-style-type: none"> • GP Supervision • Staff and site turnover • Model / Lack of flexibility • Poor or no links to community pharmacy • Training • Short term planning • Communication • Funding • No evaluation data • Patient awareness/education 	<ul style="list-style-type: none"> • New ways of working • Learning • MDT • Practice level policies • Growth and development of Pharmacy Profession • Funding • Better patient care 	<ul style="list-style-type: none"> • Government and policy changes • Lack of learning • Operationalisation • Ratio • Finance
<p>Practice</p> <p>Micro level developments On the ground Operationalisation General Practice Clinicians</p>	<ul style="list-style-type: none"> • Capacity release • MDT enhanced skill mix • Expert medications knowledge • Patient benefits • Embedding pharmacists in general practice • Role flexibility • Relationships • Training 	<ul style="list-style-type: none"> • Missed opportunities for early learning • Develop GP supervision • Competencies unclear • Lack of role definition • Lack of community • Logistics • Motivations 	<ul style="list-style-type: none"> • Shared learning • Research and impact • Potential to improve patient access and patient care • Integration 	<ul style="list-style-type: none"> • Mismatch of expectations • Negative impact on team • Creating labour market tensions • External pressures • Finance • Sustainability
<p>Patients</p> <p>Outcome level developments Impact Service level</p>	<ul style="list-style-type: none"> • Longer appointments / more holistic care • Improved capacity / access • Medicines expertise • Safer prescribing • Active deprescribing • Better patient outcomes 	<ul style="list-style-type: none"> • Unclear KPIs • Patient understanding of primary care roles • Lack of existing knowledge • Lack of awareness of pharmacist skills • Inconsistency in clinical supervision • Lack of QA procedures 	<ul style="list-style-type: none"> • PPGs • Increased adherence • Increased optimisation • Better care for LTC • Better care on discharge • Reduced A&E admissions • Quality improvement • Better patient education and self-care • Better patient outcomes • Promote community pharmacy 	<ul style="list-style-type: none"> • Unclear role definition • Risk of error • Resistance to change (patients / practices) • Optimisation driven by cost agendas not patient care • How to demonstrate added value and cost effectiveness of post

Table D-1: Summary Top level analysis of paper based SWOT analysis with pilot phase stakeholders

External stakeholders

Strengths

Policy level strengths

Stakeholders generally viewed the scheme positively and it was part of the GP Forward View it was forward looking, legitimate, recognised, and patient focussed and fully funded including the training. The multi-agency approach has worked well.

'There is government representation around medicine optimisation and agenda, to describe that, where they want to be, what they want it to look like. I think 10 years ago they might have struggled to describe it ...' (CCG representative)

'So in terms of strengths I think this does integrate with the policies which is great, but also I think it has a patient service focus. It's not every innovation or policy initiative which is actually focused on enhancing patient service.' (GP with CCG workforce role)

'I think at the time of dismal view in the community pharmacy sector particularly, I think it has been a really positive drive/push towards using skills' (CCG representative)

Training

The CPPE pathway was seen by some as a very positive development although there was some debate about summative assessment and whether there should be a certificate on completion.

'we have had somebody taken on a journey to get to where we are now, where we have never been before, I think is still an amazing achievement' (Pharmacist)

'I think this is the first time that I can recognise that there is actually a reasonable infrastructure been put in place, supervision of pharmacists in training in primary care and I think that is great. We don't want to let that go. The HEE quality framework, we need to use that as a mechanism to try and bed this in so that anything else, you know we have always done pharmacy training on the cheap, people say we got this from CPPE, divide that by the number of pharmacists and technicians, it's peanuts. For once somebody is paying for a bit of infrastructure and I think that is great.' (Professional body representative)

Practice strengths

Practices had in general adapted very well to having pharmacists and valued having pharmacists as part of the team. They were saving GP time.

'At the practice level, I think actually one of the strengths is around practice employment element because it gives practice employment ownership and responsibility. Then you would envisage that within the 4 years they would begin to see enough value in the role that they would then want to employ them full time themselves.' (Academic)

'Pharmacists are saving GP's time, better skilled work and it is not just about parachuting pharmacists into practice, it is about governance and utilising each member of the multi professional team in the best way. That seems to be happening as these roles start to embed.' (Pharmacist)

GP workload

There was a positive impact on the GP workforce and there was a feeling that caseloads were more manageable and that people were working in an environment that is functioning.

'if it relieves pressure on other professionals within the practice, or makes working generally more harmonious or different, those kind of improving peoples working lives, then actually that may mean that the GP that was going to retire in the next 12 months says actually I will stay on another couple of years, or that type of thing can start to happen.' (CCG representative)

'I had a conversation with a GP and his ambition about having a pharmacist in his practice was going home at 7pm at night opposed to 8pm.' (CCG representative)

'We all know that everyone fire fights but just to feel like you are doing a better job as a team, taking care of your patients, I completely A that feeling at the end of the week. As someone said today that feeling of satisfaction, less a degree lower of stress that is a huge improvement if that were to happen, it is not to be belittled.' (CCG representative)

Pharmacists who were in one practice every day were able to have a huge impact by making incremental changes every day. Compared with those who dropped in for half a day.

It had worked well when pharmacists are already independent prescribers and can have a patient case load. Otherwise they have often taken on medicines management duties until they became IPS.

Participants warned against criticising the project at this time as it will take time for the pharmacists to become embed in general practice. They gave examples of pharmacists who had worked in practices for years, who were part of the furniture and made a massive difference to patient lives.

There was a perception that the project had wider influence outside of General Practice for example as 60% came from community pharmacy there was a better understanding of challenges and opportunities to providing the best primary care possible. Practice relationships within CCG had changed those who had a pharmacist now had something in common, the pharmacists, had made them talk to each other more.

Patient strengths

Patients were happy to consult pharmacists once they knew what they were capable of. They liked the extra time and they were also liked consultations with independent prescribers.

'They like the extra time, I think it is making a difference as we have heard to the outcome of using their medicines correctly, it is helping to reduce wastage. I haven't heard any negative apart from at the beginning when patients were uncertain as to what pharmacist could do I think the lessons to learn for the new wave, is to do that engagement with the patients before the service starts' (CCG pharmacist)

'It is not just sort of saving peoples' lives, there must be lives that are better' (Education and training commissioner regional representative)

Weaknesses

Policy level weakness

There was concern expressed that the pharmacists had the potential to be the second highest or highest paid individual in a practice. There will need to be discussion about finding whether better to leave it to individual practices or standardising contracts.

Some felt that a big weakness was lack of engagement with community pharmacies in the process although 60% of the pharmacists were said to have come from community positions.

Others were concerned that the uptake by practices had been particularly poor in some areas probably due to all the conditions that had to be met.

One of the big weaknesses was pharmacists only working very part time

'I am actually working half a day in 5 different practices. Where is your own professional continuity? By the time you get in, how's your week, that sort of thing, you have to log on, reset your password, set up your emails again on a different computer' (Pharmacist)

I think you have to be in the practice long enough to form a relationship because that all just 'comes from trust A – if you do half a day, I mean that would take you a year, more than a year to gain that complete confidence. K - I don't know where 1 per 30,000 came from, P - nobody knows that exactly.' (Pharmacist)

'Let's be realistic 1 to 30,000 is nowhere near as good as 1 in 15,000. That is a policy decision I think we will learn to regret. ...So there is that trick around policy ratios but the fundamental is less patients will get cared for, less integration will happen, less outcomes will be delivered in a 1 to 30,000 ratio.' (Pharmacist)

It was said that a lot of practices have actually bypassed going for phase two funding and invested in GP pharmacists without going for the funding because they don't meet the 30,000 patient criteria.

There was some discussion about the money and effort that went into training GP registrars and that practices got £6k extra for a trainer. They would like to get more money to be able to train their pharmacists.

'Well I am not sure it is the lack of talking, it is just it is all about just sweating the assets basically. If they wanted to put in the funding that GP's training gets, to train pharmacists, they could decide to do that tomorrow'. (Pharmacist)

There was also a suggestion that the GMC capability framework was adopted by the project.

There was some discussion about more flexibility around the 1 in 30,000 going forward as it really depends on the area and the demographics may be fine if younger population but not if lots of older people.

There was a feeling that the evaluation was almost too early and that the pharmacists were often yet to be embedded in to the practices and fully trained as IPs etc. Yet phase two was rolling out without the results of the phase one evaluation. It would take a long time to see patient outcomes and real result.

'If you look at the evidence based for example, the effectiveness of medication reviews, the intervention of a general practice pharmacist, it is very broad, different people do different things, so it is very difficult to measure that in a single outcome. Very very difficult to share change in a single outcome in a short space of time, you need a long period of time; you need a range of outcomes to measure otherwise...' (NHS England clinical pharmacist)

There was a feeling that some of the CPPE training and requirements were being developed iteratively and that this was driving the policy rather than the other way around. There was also a feeling that the CPPE training was not always at the right level especially for more experienced pharmacists. IT was seen as a good thing that it was being made more flexible to meet individual learning needs in phase two.

Regarding the training pathway concerns were expressed about having a proper career pathway for the pharmacists.

'The pathway is great except that you come off on the right road and they get to the end of it, hopefully they are an independent prescriber and they have completed the pathway and registered with the RPS, but they could potentially, do nothing for the next 20 years. So it is thinking about the next steps isn't it, the whole career structure for a pharmacist up to an advanced practitioner perhaps or consultant level.' (Pharmacist)

It was clear that different practices have different needs and that the role needs to be more flexible

'One thing I saw today which is a little bit of a conflict that is coming up, a lot of what people have presented in terms of what they are doing, the fact that the role is flexible and people have fitted the role to suit the practice, coming from people doing the role, and then I suppose the picture of the role policy level, is going this must be patient facing. But actually there is a whole range of things that pharmacist are doing and I just wonder might there be a bit of a mismatch between the bigger picture of what the role is versus what actually happens?'(Pharmacist)

Communication had not always been good and practices did not always know what was expected of them.

Practice weaknesses

There had been a variety of different expectations as some GPs had expected the pharmacists to do more administrative, medicines management duties and others that the band 7 pharmacists would be ready to go into patient facing roles straight away. Unrealistic expectations on behalf of the practices had been demotivating for some of the pharmacists.

'GP practices expect pharmacists to be able to do more than they could, because they employed pharmacists at band 7 who had no experience, but they expected them to be able to prescribe and to be able to do all these things on day one, which they couldn't.'
(Pharmacist)

Participants had differing views on whether or not pharmacists would deskill other team members.

'One of the issues for the practices is deskilling of other practitioners. So there are GP's and practice nurses who are concerned about losing their expertise and medicines in prescribing because the pharmacist takes it all on.' (Pharmacy Academic)

'There is too much work to go around. I don't think that's a problem. Deskilling I would have thought the pharmacist would have been a focus for evidence based' (NHSE Clinical Pharmacist)

'Medicine in the practice but wouldn't replace the other clinicians, but would in fact enhance the other clinicians' (CCG representative)

Funding was still considered to be a major issue even though there is 50% funding there is still a worry in practices about where money will come from to continue the scheme after three years. The fact that CCGs had provided pharmacists free albeit in a more administrative, rather than patient facing role, was also considered to be a barrier to now having to fund them.

The lack of trained independent prescribers had slowed down the process of getting pharmacists into patient facing roles. However, when they do have independent prescribers it was seen to work well.

There was no additional money for individual practices to train their pharmacists unlike for nurses and GP trainees.

'So we have asked our GP's to take a session every 2 months to help do continual professional development with the pharmacists. They said where we are going to have that time; we are already paying for the pharmacist. Unlike the GP trainee's, where there is definitely an incentive and a need for nurses which is definitely an incentive, there isn't one. I know money shouldn't drive but it does.' (Training provider)

'but there is so much investment and infrastructure goes into making GP registrar's, a good quality and safe learning environment and then GP tutors are good enough to be able to do it. None of that has been considered effectively.' (Education and training commissioner)

Another weakness was communication with community pharmacists they needed to have access to the records systems.

Patients weaknesses

There was a feeling that more could be done to promote practice pharmacists to patients, as many patients were still reluctant to see pharmacists. It was necessary to go to patient groups, get the reception staff on board as they were booking the appointments with the pharmacists.

'But I think there is a lot more that can be done because I think patients are reluctant. It is a health care professional even though they have never seen them, it took so long for nurses to get to that point where patients actually want to go and see a nurse. Often they do, they would rather see a nurse than a doctor.' (Professional body representative)

Opportunities

Policy level opportunities

There was a strong feeling that the scheme had not been sold to community pharmacy and that there was huge unrealised potential.

The scheme was seen as a massive opportunity for breaking down barriers in terms of different sectors of pharmacy and address all the major issues around medicines and transfer of care.

'I think it is actually linking them, linking community pharmacists, linking medicine management teams, and linking pharmacists in secondary care to actually work as a collaborative.' (Manager of NHS England clinical pharmacists)

There was now an opportunity to be much more flexible around the community pharmacy contract.

'Local interpretation of the contractual framework to allow a bit of flexibility to enhance patient care....So I think in terms of if we are talking about de-siloing and integrating a medicine service you have got to have local interpretation of the contractual framework.' (Academic)

The medicine value programme leading to better targeting of medicines was seen as a massive opportunity. As was the need to collect good outcomes measures,

'I think what has got to come is a bit more objective data on what has really changed. We have had some very nice examples there, saw this patient, saw they were on an antiplatelet and an anticoagulant and I managed to stop that, and that is absolutely fantastic, that is important to that patient. It shows that people can make those interventions, but I suppose at a policy level, when do we get the data in to show that, that's public health at that level....., flu vaccination rates are up, ?polypharmacy rates are down... '

There was also an opportunity to do more promotion the participants suggested that minister should have been promoting it on day time TV and that people needed to be made much more aware of what pharmacists could do.

Participants thought that the pharmacists should get more accreditation a bit like MRCGP and suggested that the RPS faculty would be ideal for this. This was an opportunity to recognise advanced practice as the profession has been slow to do this compared with other professions.

Practice opportunities

Broader workforce

Some GPs saw having a pharmacist opportunity and had employed pharmacists outside of the scheme. Others were more sceptical of its value

'Some of the GP's have contacted the commissioner, to say that with pharmacy and general practice that surely this role is of more financial beneficial to the commissioner than it is to general practice? This is a patient facing role so the question about how valuable is your patient's health for you; the reality is how valuable their time is to them and their business. So that has been really interesting, I have been asked so many times for a cost impact model. If you put a pharmacist in, how much do you get return for them? We don't have that so I ask well have you got it for the nurse? No-one has that, we probably really should, but it is a really tricky.' (Education and training commissioner)

Others had grasped the opportunity

'So if there are practices that aren't already training GP's or nurses or whatever, and they are bringing in somebody, a clinical pharmacist that is on this education package, providing supervision and having the clinical mentoring and educational supervisors and so on, I think that in itself creating a learning environment within a general practice brings its own benefits to the practice.' (CCG representative)

Others saw it as an opportunity for community pharmacy to have better links of communication with GP practices

'I think community pharmacists though are, I mean they may feel a little bit left behind but they must be appreciative of the fact that they no longer have to call the GP practice and speak to a random GP. They now have hopefully, a designated peer to speak to about one of their issues in the community pharmacy. So it is an extra link but I appreciate they might feel a little bit all the interesting work is going to be done by this colleague of mine in the GP practice but at least the communication, you know, pathways are open.' (Education and training commissioner regional representative)

Patient opportunities

There was an opportunity to engage with patients before the next wave starts - one of the biggest issues patients always highlight in surveys is lack of understanding of medicines so need to build on this

'So there will be some segments of the patient practice list which will be very receptive to this, and as we get more experience, we will know which ones they are.' (Professional body representative)

'I would just like to say that it is time for patients to be educated about the roles of the different pharmacists. I mean we are all pharmacists and GP's talking about what we are doing ourselves, but it is patients who need to know that there is something new now for patients.' (Pharmacist)

Threats

Policy level threats

There was a perception that all the best people had applied for the first wave and that the quality of applicants would decline over time some participants thought that the numbers of applicants were dropping and wondered if it would be sustainable.

There was a worry that some of the community pharmacists applying for the second wave were not so clinically aware. Not all agreed with this though and thought different skills would be needed depending on the practice.

'my point was to challenge the assertion that we have taken the cream of the crop of community pharmacists, I don't think that might not necessarily be the case, we have taken pharmacists with a certain skill level who have been attracted to a role with a certain skill level, but it may be that some areas want more of those community pharmacists' skills.'
(Pharmacist)

A major threat was if GP practices failed to fund their pharmacists at the end of the scheme

'At the end of the day, the expectations that GP's will continue to employ their pharmacist, that is a threat as well. I think if we don't deliver then that is a potential threat.'

Practice threats

A participant was worried that if we focussed on clinical skills but failed to acknowledge pharmacists' excellent IT and medicines management skills we would miss something. Perhaps we needed both

There was also a worry about the costs and the value of the pharmacists:

'Because actually they question the value, what is the benefit to them in terms of costs that they are inputting? After those 3 years, what happens? They have to fund it' (CCG pharmacist)

However, we have to deal with this threat as one participant stated

'I know we have an issue about clinical, but I think that is the elephant in the room. The way I see it, there are different shaped holes ok, there is a hospital shaped hole, there is a community shaped hole and there is a general practice shaped hole. What we are trying to do, we are taking pharmacists and we are trying to fit them into holes that doesn't quite fit so there is going to be some uncomfortableness, there is going to be a hell of a lot of learning, and that boils down to the pharmacist. How much do they really want the job and how much are they prepared to learn?' (Training Provider)

Summary

There was wide recognition for the potential of the scheme in producing meaningful benefit for both patients and professionals. There was also recognition that this was a significant investment in Pharmacy with both training infrastructure and finance to support roll-out of the scheme.

Concerns were raised about the speed of scheme roll out including a lack of role definition. Additionally concerns were raised about the continuity with existing pharmacy provision.

Many stakeholders saw significant potential for new ways of working and the associated learning, but also expressed hesitation about potential mismatches in expectation and financial sustainability.

NHS England local area teams are potentially a key partner in successful representative body liaison and coordination of research and evaluation locally.

Appendix E - Case studies

Case Study Overview

This section presents case study data from three sites reporting on site level experiences. They serve as an introduction to the cross cutting qualitative thematic analysis. They are prepared for audiences to reflect on similarities and differences across sites.

A total of seven case study sites were identified. Three case study sites were sampled opportunistically and are presented as individual case studies. Data from the other 4 sites, however due to time constraints at the time of reporting is incomplete and cannot be presented as case studies in their own right. The views of these participants are however incorporated into those cross cutting thematic analysis.

The model at Site A is a (relatively) small operational site and does not cover the whole Federation. The model uses 5 pharmacist roles working across 7 GP practices. The pharmacist roles include 3 CPs and 2 senior CPs (4.56 WTE).

The model at Site B is a (relatively) small site. The model uses 9 pharmacist roles working across 8 GP practices. The pharmacist roles include 7 CPs and 2 senior CPs (8.6 WTE)

The model at Site C covers 3 practice sites and the model at this site uses 4 junior CPs and 1 senior CP, alongside the SCP who has been in post before the pilot scheme.

The following visuals demonstrate the similarities and differences between the case studies in terms of management structures and operationalisation.

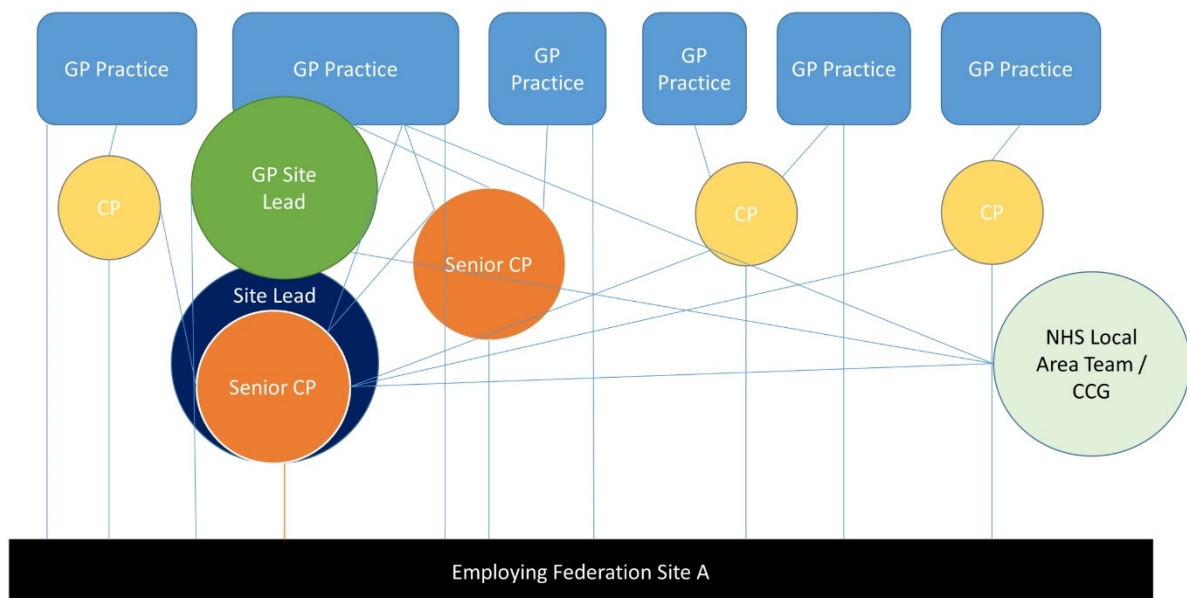


Figure E-1. Graphical representation of the organisational structure of Case Study site A

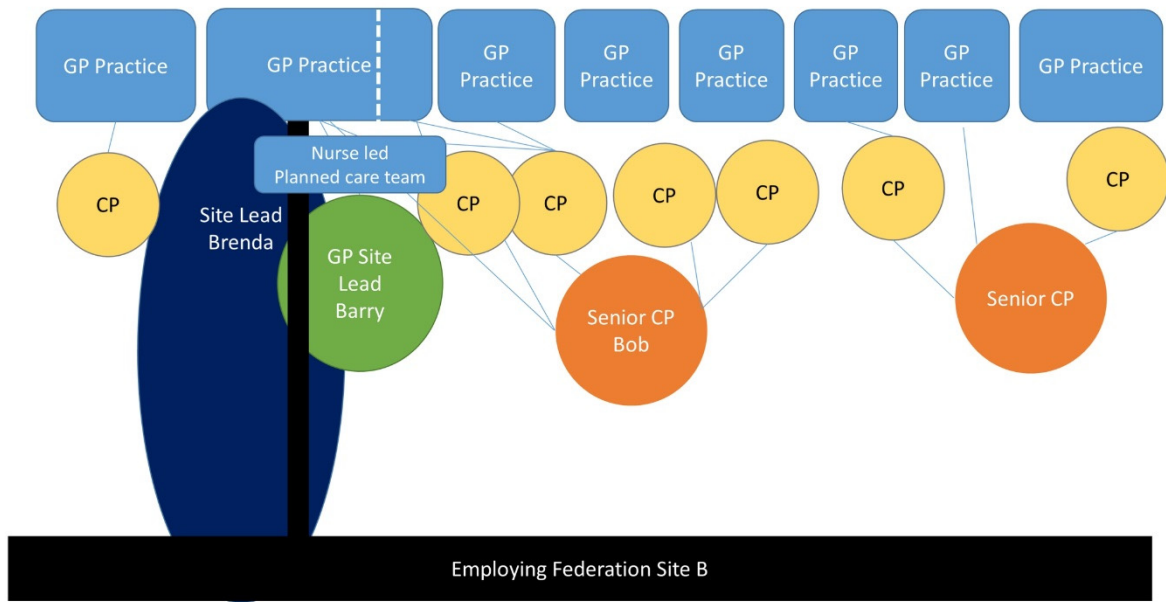


Figure E-2. Graphical representation of the organisational structure of Case Study Site B

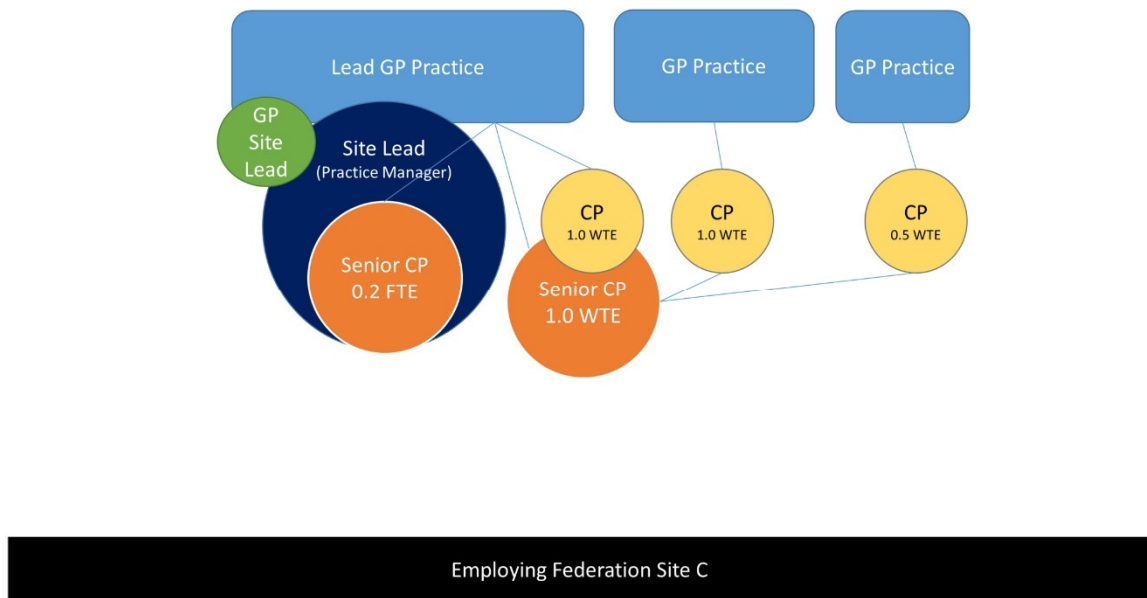


Figure E-3. Graphical representation of the organisational structure of Case Study Site C

Case Study A

Background (Site and Staff)

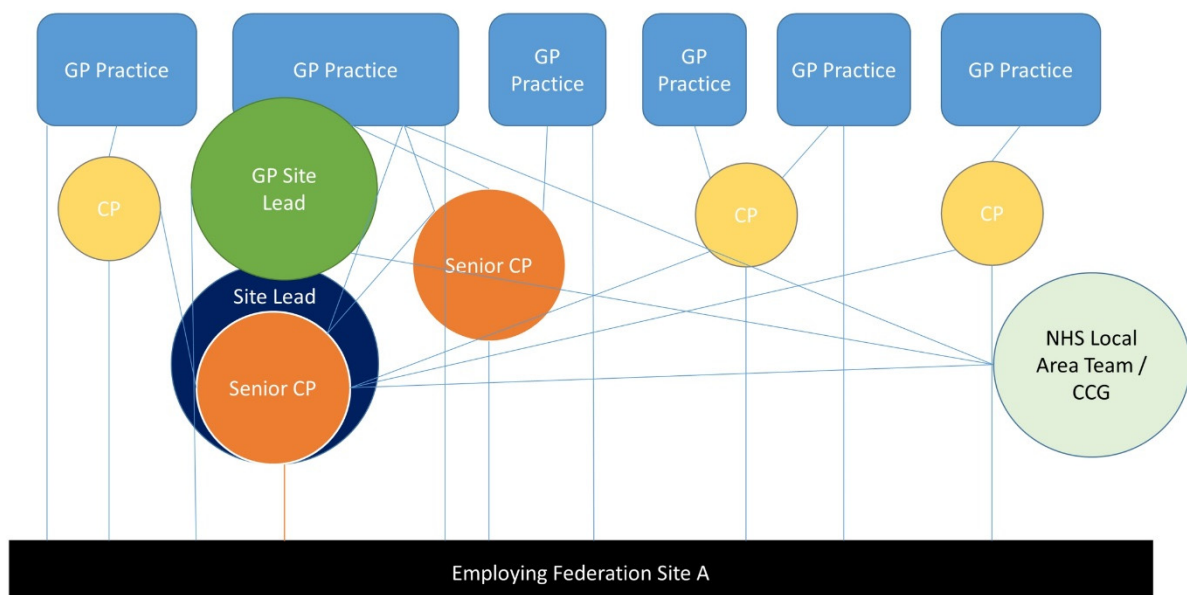
Site A is a Federation of over 30 GP practices in one geographical area. The organisation is a non-profit limited company and the only shareholders are the GP Practices. The federation organises a range of services linked to primary care with the aim of patient benefit. These services include practice support (such as centralised HR, risk and governance sharing, and shared communication including cross practice Wi-Fi, intranet and mobile working), and patient services (such as domiciliary phlebotomy). Most members of staff at the Federation hold dual roles also working within the practices. The Federation is the organisation which applied for the scheme and holds the contract for the Clinical Pharmacists' employment. The Federation site is an individual CIC business entity. The site is unique as it employs pharmacists directly and invoices the GP practices for the pharmacists' time.

The model at Site A is a (relatively) small operational site and does not cover the whole Federation. The model uses 5 pharmacist roles working across 7 GP practices. The pharmacist roles include 3 CPs and 2 senior CPs (4.56 WTE).

Anna* as well as taking the site lead role also works as a senior CP in Practice A2. Anna also acts as a clinical mentor for CPPE offering mentoring to other senior CPs on the national scheme. Anna is employed directly by the Federation (as Head of Clinical Pharmacy) and was involved in the project since the planning and application stage. Her background is as a pharmacist with experience working in hospital and for the CCG, in a similar role working across GP Practices.

Adam* is a partner at practice 1, which is a training practice. He is also a Director of the Federation.

Alice is a senior Clinical Pharmacist working 36 hours over 4 days across 2 GP Practices, 3 days at the first practice and 1 day (hours) at the second.



A site visit was conducted to practice A1 where Adam, Anna and Alice are based for most of their time. It is the largest practice in the site group. Site A1 has c10000 patients and staff include a management team 9 GPs, 4 nurses (including 1 nurse partner who is also Lead Primary Care Nurse

for Alpha* Clinical Commissioning Group), 3 HCAS and a wraparound healthcare team. Site A2 small practice with c3000 patients and 3 GPs, 1 practice nurse and 1 HCA.

Conceptualisation

This section covers the conceptualisation for involvement in the scheme, from planning and motivation through the application process, ratios used and any turnover at the site to date.

Planning / Application

Site A received 5-9 applications per post and the quality of the applicants was considered 'average'. Site A lead felt while centralised recruitment across the site worked well, practice involvement in the recruitment process was really important as *'team fit needs to be considered'* and practices were involved in interviews.

Motivation

The driving factors for the program for the practice included

- Difficulties in primary care recruitment
- Difficulties in meeting patient demand for appointments
- Recognition of the benefits that CPs can bring to primary care
- Recognition of the need for a specialist in medications
- Difficulties in recruiting GPs

Ratios

The application site has an overall approximate 72k patient list resulting in a ratio of 1:12/15k.

The ratio for senior to non-senior CPs was restricted at a maximum 2:1 *'to allow mentoring and training. Most CPs come from a non-clinical background and so have significant learning needs.'*

Turnover

Within the first year of the scheme one GP practice left the scheme (due to an inability or unwillingness to commit to offer the mentoring required) and one CP left their post.

Implementation

This section relates to the local implementation of the pharmacist role and considers their induction, training and mentoring.

Induction

At site A they had access to an established senior CP, in the Practice Lead role, who had worked previously both with practices and with the CCG 'who was able to support with induction and training.'

Anna recognises that early mentoring and supervision opportunities with GPs is crucial to integration of the pharmacist. 'Practices not engaging with education and training needs of the pharmacist' has hindered integration at this site.

Anna suggests that the attitude of the pharmacist is crucial to their integration and the role requires 'a can-do attitude and knowing your own limits while being willing to learn and adapt'

Training

Site A reports that CPPE training is 'good but frustratingly short notice.' Site A recognises the need for localised training within the pharmacy community and has set up a learning community with pilot pharmacists, other practice pharmacists and local CCG pharmacists.

Anna suggests that training for pilot site leads would be useful, to include:

- Mentorship training
- Leadership training
- Performance management

Alice suggests that she now takes responsibility for her own learning, both with support from Anna and more autonomously.

'I have said I want to know a little bit more about pain management, well here is someone you can get in contact with. Like seeing if I can sit in a pain clinic. But then there have been others I haven't gone to, doing work about HRT, just finding who the lead is and say can I come and sit in your clinic.'

Mentoring

Alice is mentored by both GPs (including Adam when he is available, but other GPs when he is not) and the Senior CP/Anna. Alice has a debrief meeting after every clinic as part of her mentoring and development. Initially the debrief would review all cases

'When I first started it was this is who I have seen, anything where I thought this needs to be initiated because obviously I wasn't qualified to do that. So this is my thought process, these are the guidelines and evidence that I have based that upon, this is the patient's input on that and this is what I think.'

Over time the debrief has developed to be pharmacist led and query based

'Now it is more like if I have got a query or don't know where to go from here or actually I have said the patient need to come back for GP input, felt they needed a diagnostic or examination assessment, sometimes it is just re-assurance that that is the right thing to do. So that is getting less and less, like today I just had one query.'

Operationalisation

Activities

There is limited awareness amongst patients about the service. The practice has advertised the role through posters and on their website but none of the patients we spoke to were aware of this. One patient suggested that a message on the automated system might reach a wide audience. Several had their appointments offered to them by reception but were not aware it was with a pharmacist. A couple of people were referred by the GP and understood they were seeing an expert in medicines. At this site there is some overall confusion about the difference between a pharmacist in the GP practice, and the one in the community pharmacy, even amongst patients who have experienced both services.

Anna reports that pharmacists are working to local targets including fall and frailty reviews and post discharge reviews for those on 8 or more medications.

Alice suggests that her work varies across the 2 practices she works at. At the smaller practice site A1 the pharmacists' work focuses primarily on audit work and writing protocols. She runs a morning clinic and sees patients but is not involved in tasks and has less patient facing work generated from the practice.

'I think just because the distribution has been between 3 GP's, they are just used to working in their own way.' CP Alice

Alice has to be proactive at this practice to show the GPs her capabilities. This has included contraceptive reviews and targeting QOF measures.

Anna support this and suggests that the dynamics of the GP practices in terms of approaching change in working practices is quite different.

'She has to be very proactive at the other practice to lead them the way we want them to go whereas this practice is quite forward thinking, as soon as you mention something the change has happened. Sometimes too quick here, you haven't got time to think whereas the other one is just a bit more cautious isn't it?'

Practice A2 is at a time of change with 2 out of 3 GPs retiring and a new practice nurse being recruited. Alice is optimistic that her post can support the impending changes and the development of new multidisciplinary ways of working.

'Maybe another GP will embrace it a bit more and will refer many more patients my way. And because they haven't really had a practice nurse, they have just recruited someone new so we need to form new relationships to see how we can work together, to help with the management of the long term conditions'

Alice hopes that her experiences will benefit new approaches in the GP practices 'I think I am able to share best practice.' This is supported by Anna 'There are plans afoot to work more collaboratively.'

At Practice A1, Alice works for 3 days a week and reports that she has a regular daily routine. Upon arrival she checks blood results, and any paperwork such as referrals, care home contacts, prescription requests and medication queries. This helps practice 1 meet its' target of 24 hour turnaround on any medication queries. Alice runs a patient facing morning clinical from 9-11 where she conducts mostly face to face consultations, supported by some telephone consultations. Alice spent 30 minutes on face to face consultations when she started this role, but this has reduced over the first year to 15 minutes. This time is reduced by half for telephone consultations. Alice conducts appointments at patient homes if they are requested by the patient or the GP but this only happens 'from time to time'.

Patient appointments can be booked face to face, by telephone but also online and patients reported enjoying the use of the online booking system. Some patients also now use the online system for ordering their repeat prescriptions. Most patients became aware of the pharmacist in the GP practice when they were invited for a medication appointment and were told it would be with the pharmacist.

'They were talking about changing the pill for me for blood pressure and they gave me this one and it was no good for me, I had to come and have a meeting with the pharmacist. So that is how I knew about it.'

Throughout the morning as they arise medication tasks are distributed to the GPs through the online system. These tasks include prescription queries, online queries, urgent medical queries, amber drugs, discharge letters, and reviews from hospital discharges if patients are on more medication. Anna suggests that practice A2 receives around 100 prescription requests per day and around 10% of these will be 'urgent' for medications about to run out imminently.

At midday when her morning clinical ends Alice goes into those doctors task pots and works through those tasks, reducing the numbers for each GP. Alice reports that GPs appreciate this and often send messages of thanks through the online system or the practice WhatsApp group.

On occasion it is these medication tasks which can be very time consuming for the clinician dealing with it. Alice gives an example:

'A patient in a care home now needed to have medication covertly. So we were talking of a repeat template like 15 medications, first can they had to be dissolved, stability and then it was all around ok do we have covert administration form, the legalities around it, does the patient have capacity, what are we doing as a practice to follow that up?'

Anna reports that the other SCP on the scheme spends a significant amount of her time conducting patient facing consultations while the junior CPs are taking the prescribing course and have just started to see patients for 30 minute appointment slots. The site has one newly recruited CP who has replaced someone who left the role and as a result their education is slightly behind the others but they are seeing patients. Anna suggests that it is easier for the junior who is working at the site alongside Alice as she has already developed the preparedness of the site.

The evidence shows that at each independent site, and with each GP, it takes time to develop trust in the role and in the individual in the role and to establish the boundaries of the role.

As well as the patient facing tasks listed, PL-1 suggests that CPs can use their expertise to contribute significantly to other work including audit, support with CQC requirements, policy writing and staff education around medicines.

Networks

There is a wide range of networking meetings reported for the pharmacists which act as shared learning opportunities.

Alice attends regular meetings including the practice meeting that happens at 7.30am on a Friday, and other meetings often take place during lunch times. There are weekly lunchtime meetings with prescription clerks *'just to see how things are working, our processes are in place, any specific queries.'*

Anna co-ordinates monthly 'peer review' meetings for all the pharmacists at the Federation *'so that we have got a chance to resolve any issues, talk about any global things that we need to do'*. Directly after their meeting they are joined by CCG pharmacists for a joint sessions with a clinical focus.

'So it might be a CPPE learning at lunch, we have had mental health pharmacists come out and do a session on how to switch anti-depressants. We have had HIV pharmacist come to talk about drug interactions, just to raise awareness.'

While Site A invests a lot of time into networking, the time available is limited and meetings often take place as 'working lunch' meetings as there is no other time available *'it is trying to fit everything in the day.'*

Anna is also working building networks with local care homes. There are 6-7 care homes local to the 2 practices covered by Alice. Anna visits one local 40 bed care home monthly and works with the regular nurses there. They also work closely with 2 local larger care homes (100-200 beds) and say this is challenging, not least of all because of the high rate of turnover of staff in the care sector *'one of the managers I met with, she had only been in place for 2 days, and the other one had only been there for 2-3 months'*. Early meetings afforded the opportunity for Alice to support the care home staff *'support them to solve some of their procedural issues and some of the things they face around ordering, ordering on time, interims, urgent prescriptions'*. Currently time restraints prohibit clinical work in the care home. However, recognising the importance of developing this area the site are evaluating the opportunity to participate in the CHIPS study and release some capacity to have a presence in the care home.

Practice A1 has a contract with a 37 bed intermediate care home (patients who are obviously not quite well enough to go home, but are well enough not to be in hospital) and Alice supports this work. Each SCP has 3 slots per day allocated for discharge and medication reviews with these clients who require urgent and fast turnaround.

Anna also reports strong links with local hospitals.

'Well from my perspective, it is around advice and guidance so I would get in contact with the consultant pharmacist within the hospital and work with them. It is mainly through medicines information, I am looking at [clinical system], if there is any queries or issues on discharge, or I feel that there have been changes that have occurred and not been quite well communicated, just that transition when patients are going back into community, I think is huge.'

Anna has acted on behalf of the Federation in partnership with the CGG to co-ordinate an event to bring together pharmacists in the ALPHA area working in different roles. It was held at the hospital and funded by the hospital education training budget. The aim of the event was to share experiences and good practice.

'So there was a table around what is was like to be a GP pharmacist that I lead, there was another one about what CCG pharmacists do, there was one about medicines information and what it can do for you and they rotated around these different tables to learn more about what goes on in hospital, what goes on in primary care, what goes on here so we have got more of an understanding about what the barriers were'

The event was a success and there are plans to repeat it annually. Anna reports the importance of online networks as a community.

'We have a practice pharmacist WhatsApp group, we have one for the federation where we can ask anything, nothing to do with patient details, then I have got a bigger one which includes all of the practice pharmacists in (county), however they are employed. Also there is a few randoms from (other local areas outside the county) because I am the clinical mentor for CPPE.'

Alice also reports using an email list to communicate with her CPPE group from the local area. Anna clearly has a large impact on the networking aspect of the scheme implementation.

'Partly because I am a busybody and partly because I have worked at the hospital and I have worked at the CCG, I have got really good networks, that helps that I know people everywhere.'

This demonstrates the importance of a locally recognised, respected and well networked leader for scheme impact.

Role Development

Anna reports that less experienced pharmacists start with more restricted areas such as hypertension and vitamin D deficiency and expand as their competence and confidence grows.

Alice works across 2 completely different practices. Her experiences show the benefits of the CP role to groups of practices working together where they can work more collaboratively together, and share good practice between sites. As practices experiences changes in the workforce and the demand from patients they can develop new ways of working in a MDT to benefit patients, especially those with long term conditions and other polypharmacy across care homes, mental health and contraceptive fields.

Alice reports satisfaction in the role as it provides a challenge, every day is different, and she is learning.

'even though there is continuity in the types of work that I am doing, you are faced with different queries and you are learning all the time and that is what I am really enjoying actually, just learning new things.' CP Alice

Other Emergent Areas

Anna suggests that the scheme has identified a need for a national scheme of access to evidenced based medication practical information for primary care. The experience of seeking support for the care home patient on 15 medications who needed to be administered covertly highlighted to the practice the need for a centralised information service.

'We can ring [area1] if it is a specific query about a patient under the care of [area1] but for some reason, [area2] hold our contract. But we have no access to x which is the book that would tell us about.... So to find out this information we have to put phone calls through to meds information, we could be doing this quickly ourselves. No we haven't got access to that. SPS, we need Stockley [drug interaction book] but we haven't got access to Stockley. Also we can get through the library, it needs sorting out...'

Anna suggests that Scotland has all of these things commissioned centrally and nationally and this would be a good example for England to follow.

Outcomes

Capacity

Anna and Alice both A that the biggest benefit of the role is its impact on primary care capacity and therefore access for patients to appointments.

'It is improving access for patients, the fact that we are freeing up GP's time, I think that is huge.' CP Anna

Site A reports that the CP role releases approximately 1 hour of GP time per day.

Patients A:

'It's a bit like is it going to free up all our appointments, are you going to be able to get an appointment easier? That would be good because I think that is what we need definitely.' Patient AC

I think maybe nowadays we rely on pharmacists a lot more because the doctors are so busy, the practices are so big, sometimes it is easier to see the pharmacist' Patient AC.' Patient Focus Group, Site A

Quality

Patients felt they had holistic and in-depth appointments with the pharmacist.

'I think treating you as an individual, not somebody that is oh high blood pressure or diabetic, actually having the heart to care as well.' Patient AR

Alice reports that CPPE have encouraged CPs to collect patient satisfaction data. Her data shows 100% satisfaction.

Alice is able to report on examples where she undertaken reviews that might not have been undertaken previously but were necessary therefore significantly improving the quality procedures in the practices. Alice suggests that her impact on safety is appreciated by the practice team.

'I think the GP's and the practice manager here really appreciated that because this practice wants to be the best it can, but time and pressures mean things just have to get done quickly so to have eyes that are properly looking at things, they really appreciate that, the improvement in quality that we have achieved. We have done a lot of work around these amber drugs, they thought they were doing it brilliantly quite understandably, but then actually we found there were still some improvements that could be made, that have really appreciated all that sort of thing.'

Anna reports that flexibility in the role enables the pharmacist to follow up patients more than GPs and provide more holistic and wrap around care.

'I think we have got a little bit of luxury of time to some extent because we have those afternoons where we are doing admin, if we run over or we have to do an extra bit of leg work for somebody, it is not quite the same as the GP's who have got block after block after block. Pressure on them all day long so I think they want to do what you did, they haven't got the capacity to do it. If you talk to them all they all want to provide the best care they possibly can but they are under that much pressure in terms of ridiculous numbers of people sat waiting to see them, it is really difficult.'

Uniquity

Anna reports clear differentiation between the GP and CP roles. GP is seen as the major contributor to diagnosis, while CP and Nurse make some contribution to diagnosis. However, in other areas the GP and CP both make major contributions- these areas include determining if new medication is needed, selecting the best medication, selecting the best regimen. In these areas, the nurse makes a minor or some contribution. In some areas, largely administrative. However, in some areas the CP is seen as the major contributor and the GP makes a smaller contribution – these areas include monitoring adherence, repeat prescriptions and medication reviews.

Patient A1 had suffered with intractable long standing neuropathic pain ongoing over several years and was on repeat prescriptions for high doses of pregabalin. He was regularly seen at the GP

practice, was admitted to hospital several times per year and was under the pain clinic. He was referred to the pharmacist for a medication review and she was able to explore his concerns about other medications (drowsiness while working as forklift operator). The pharmacist was able to work with the patient over several appointments, and take advice from hospital pharmacist colleagues to develop an alternative prescribing regime. Her suggestion was one which had been previously made by the pain clinic but he had been unwilling to try at that time due to his concerns.

Patient A2 was referred to the pharmacist with a rare condition and side effects from medication injections from the hospital. The patient revealed during the consultation with the pharmacist that he was feeling depressed and suffering from night terrors. He was reluctant to take a prescription as he had previously taken anti-depressants for the problem but that it had caused erectile dysfunction. Over the course of six appointments the pharmacist was able to resolve his reactions to the hospital medication through changing the type and dosage and prescribe something to eliminate both night terrors and erectile dysfunction problems.

Safety

Alice also reports that improved safety with medications is a significant impact of her work further benefits of the role include improved prescribing quality which can lead to cost saving. Anna reports regularly reviewing repeat prescriptions and querying medications that others might reissue without question. She admits that prescription reviews take longer for pharmacists than GPs but that they are more in-depth and regularly result in deprescribing and cost saving on the overall prescription budget.

Anna collect data locally using a Read code formulary so that they '*can analyse work themes done by pharmacists in practice*'.

Anna suggests that suitable outcomes measures and KPIs for the scheme would include:

- Number of appointments
- Number of medication reviews
- Patient satisfaction
- Practice staff and GP satisfaction
- Clinical pharmacist satisfaction

KPIs

Site A reports frustrations with the NHS England reporting and tracking process.

'We were not contacted to provide this information. It has taken nearly a year to get the correct spreadsheet (in the end from another pilot site, not NHSE) and so we are now trying to retrospectively complete which is very time consuming'

Anna co-ordinates the data collection for the Federation practice sites centrally. Anna suggests that the reporting is very time consuming and unlikely to generate good quality data (due to differences in read coding and report writing). Anna suggests that an online portal would be more efficient for reporting and a reminder to submit the report each month, as well as an acknowledgement of completion, would be useful. Anna feels that sites would benefit from feedback and data analysis from the country as a whole.

Case Study B

Background (site and staff)

Site B is a Federation of GP practices in one geographical area in the North of the UK. The area is in the 1% of most deprived areas of the country (deprivation index) and around 20% of working age people in the area are receiving some sort of out of work benefit. It is one of the least ethnically diverse areas where 97% of people are White British. More than 15% of the working age population have no educational qualifications at all and this year the local authority became the first in the country to cease to offer A level education in the area.

The Federation site was constructed specifically for the purposes of the GP Pharmacist project. The Federation activity is managed by a separate independent company. The company is a small consultancy which was set up by two people who had been employed by the PCT/CCG and saw a need for management consultancy in health to develop General Practice. This company offers a range of management services in Primary Care including Practice Management and Strategic planning for one of the large GP practices involved in the Federation. The Federation applying for the bid also included University B as a partner on the bid to ensure they could evaluate their scheme and prove the benefits. The independent evaluation of the scheme involved undergraduate students conducting interviews with practice staff on site. On the advice of the local area team, one third of costs in the application were 'on-costs' designed to cover the costs of managing the scheme using not for profit management consultancy.

The Federation was planned between the lead GP and the two management consultants, from recognition of the benefits that CPs can bring to Primary Care. The GP suggests that the CCG 'invited' them to apply for the scheme based on previous experiences of the practice working with pharmacists (in a different scheme where pharmacists were commissioned through the local CCG and employed directly by the GP Practice). These lead staff brought another three partners on board to support the bid. The model at Site B is a (relatively) small site. The model uses 9 pharmacist roles working across 8 GP practices. The pharmacist roles include 7 CPs and 2 senior CPs (8.6 WTE).

Beverly* as well as taking the site lead role is also Business Manager for Practice B1. Her background is as a Primary Care HR specialist with experience working in the CCG and offering management consultancy to general practice. She runs her own company which is commissioned to provide management service for practice B1 which includes support for the pharmacists.

The following were interviewed for the qualitative data collection:

Barry* is a partner at Practice B1, which is a training practice, and works across several sites. Barry is specialist diabetes GP and an innovator in Primary Care practice. He is a lecturer on the CPPE training courses for CPs.

Beverly* as above.

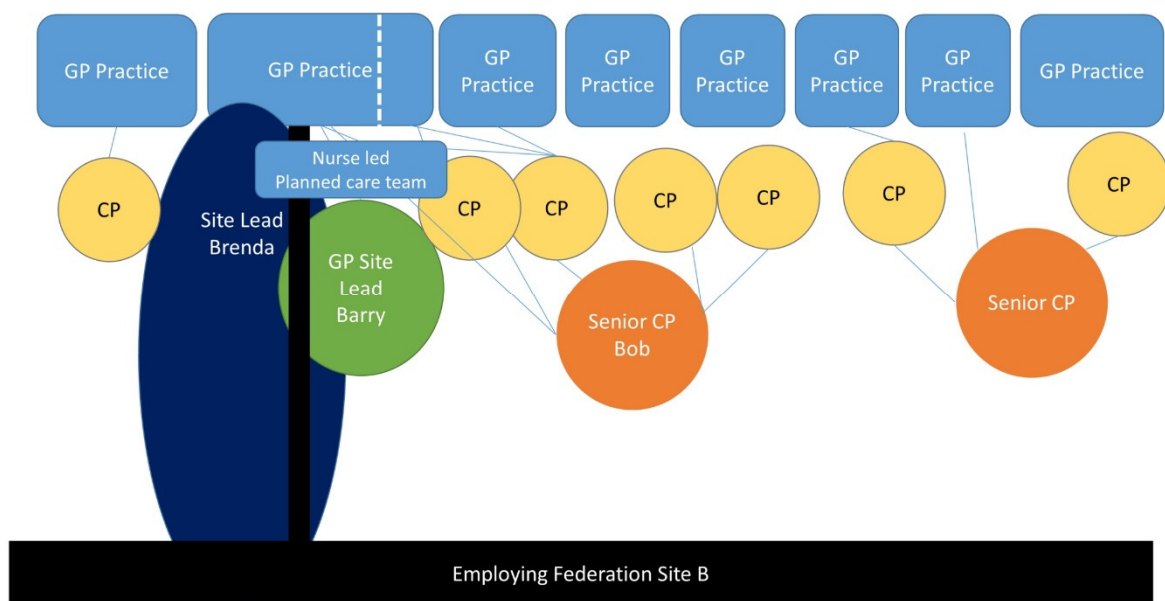
Bob* is a senior CP who has worked full time as a senior CP on the scheme for almost 2 years. Bob spend 20 years in community pharmacy before selling his practice when training as a prescriber to take a (conflict free) role in general practice. He has been a prescriber since 2009 and worked as a prescribing pharmacist for a GHP practice prior to this role. His role includes mentoring other CPs as well as his own patient facing work. He also works for NHS England in a pharmacy role. He works as a mentor across all the sites in the Federation as well as working at site B in a consulting role for two afternoons per week.

Betty* is a CP who works full time and is mentored by Bob. She works across one practice based on two sites. Betty worked as a pharmacist for the practice for five years before the pilot.

Bernadette* is a CP who works full time and was mentored by Bob, but is now mentored by a senior nurse. She has been in post for 18 months and works 3 days per week across 2 practices

Practice B1 is split site some of the work takes place at the location of the site visit, but there is another larger site and staff may work across both sites. Site B1a has c11000 patients and staff include 3 GPs and 2 nurses at its primary site. Site B1b is a large Primary Care Resource Centre with 8 GPs, 2 nurses, 2 HCAs, 2 phlebotomists and other management staff, A site visit was conducted to practice B1 where Beverly, Barry and several of the pharmacists are based for most of their time and this site is located in a building which used to be a school and is located next to a new build school.

The site is at the end of year 2 of the pilot scheme and is now looking forward to how the scheme can be sustainable.



Conceptualisation

This section covers the conceptualisation for involvement in the scheme, from planning and motivation through the application process, ratios used and any turnover at the site to date.

Planning / Application

The CCG invited applications from local sites and Beverly decided to apply based on her previous expertise of working in this area, and in partnership with Barry and the Federation of practices. Beverly worked with the local area team to develop their application.

The scheme is run under a localised management model where all pharmacists become employees of the main medical centre Practice B1. Beverly is commissioned by practice B1, through her company, as a self-employed Business Manager. Beverly's organisation (her Business partner) manages finance on the scheme and invoices the other GP practices for the time of the CPs allocated to them. This is the most problematic aspect of the scheme and some of the practices have not paid

for the last 12-18 month of services. In this role for Practice B1 Beverly is responsible for centralised HR services for the CPs including managing contracts, insurance, annual leave, training, policies and procedures.

'So even though they are our staff in other practices they adhere to how [Practice B1] works.'

Beverly suggests this model works well for ensuring consistency in procedures such as training and mentoring for CPs across different sites.

The roles were put out to advert and interviews were conducted by a panel which included the GP and a local academic. Barry admits that he found the recruitment process difficult.

'I found it difficult to interview Pharmacist when you only have experience of one you have.... I only have our pharmacist and they weren't interviewed they were commissioned. So I ended up interviewing a group of people that I have no idea about their level of expectation that I should have as an interviewer. I interview Nurses all the time, I interview for the CCG. I have never interviewed Pharmacists before'

Barry reports that interviewees were *wide ranging in ability, though often academically ahead of Nurse interviews.*

Management is key

'I personally don't think the pilot would be anywhere near as successful if you didn't have strong managers. Barry is very strong clinically and has a lot of respect from his peers. That's a biggie. Because there was another practice that bid and was told to go away and write one like ours and they might consider it. So clinically it's good. Managerially Barry and I are strong managers and if it's not written down it's not in the process you don't do it.' Site Lead Beverly

Combination of clinical and business management is crucial.

Beverly confirms this approach fits with the safety culture of the practices in the Federation

'Clinician's protection is key so for us it was all about indemnity, working to the job description and not outside that. And that is just the way [Practice 1] functions. We are a very safe performing practise, that is one of the most important things to the partners.'

Beverly confirms that the job description is a working document under development as the role changes during each year of the pilot and linked to the training undertaken as well as experience in the role.

'I'm going to have a conversation from 1st April that we need to review the job descriptions, the indemnity around it, what we do with that, what we're looking to do with the Pharmacists now their CPPE isn't taking up as much time. So we need to look at what we're going to do with their training in the next 12 months.'

There were some tensions between the original dictate that advertised posts must be permanent, and the fact that the funding was only for 3 years; NHS team advised that local sites should manage this risk. Beverly's site rejected this and offered 3 year fixed term posts to mitigate the risk of redundancies (and associated costs) and to motivate incoming staff to take a sustainable approach to their work.

Beverly is already in talks with all GP sites at 24 months to discuss sustainability of posts through local direct employment models.

Liability / Indemnity

Beverley suggests that the centralised HR approach also ensures consistency in boundaries and responsibilities. Beverly suggests that this approach has mitigated issues in indemnifying CPs which have caused issues for other sites.

'We are very consistent in what is expected of those employees within the pilot. There's a job description and that's all they're indemnified against. So if you choose to ask them to do something that's not in that job description they are not indemnified and we will not take the risk for that. And you'd be amazed, as soon as you say that - people stick to job descriptions. Because indemnity was the biggest problem that everybody else had in the pilot. We didn't have that at all because they're our employees so we indemnified them all.'

Site Lead Beverley

Barry confirms that indemnity was not a problem for the scheme, not least of all because of an existing relationship with an insurer for a pharmacist working in the practice and negotiations were underway at the planning stage to avoid problems.

'No because we thought about that first so we had all that sorted before bidding. We knew after they were going to indemnify us, so found out what the prescriptions would be before the bid went in. So I wanted that sorted before, because we couldn't indemnify people but we had an advantage as we already had indemnity with a Pharmacist already. It was a transfer over to now we're going to employ 7 over and the job descriptions are going to change. It was more that discussion. It did change from the MDU group scheme for the practice cause the MDU wouldn't touch it first of all. They are now taken it back. Beverly will be able to tell you more as she did the negotiations. But basically we were on the phone and we said this what we need, this is what is coming and if you don't adapt to yourselves to manage what we want then somebody else will and you will miss a massive earning on indemnity' GP Barry

Motivation

The driving factors for involvement in the scheme was an ongoing commitment to, and recognition of, the benefits that CPs can bring to Primary Care. The lead GP / practice had previously employed a pharmacist directly. The lead GP recognises the value both that the pharmacist can add to the primary care mix, and the value that primary care can add to the pharmacy profession.

'Long term I thought Pharmacists could have a really important role in patient management always and that what we we're doing in [our area]. The problem about that for us here the demand in work of our acute prescriptions, discharges and hospital letters, that's a full time job in its self. I also thought that was quite a rubbish job [for], Pharmacists [so it's important that is not all they do]. That also meant you didn't get the best of them as a team member. I'm absolutely completely devoted to a multi discipline team in primary health care and I totally think that Pharmacist have a huge role to play.' GP Barry

Barry suggests that other sites became involved either for recruitment or development reasons.

'There are two practices that did it because of staffing issues. All the other practices are training practices and they were sort of sold on that. They knew what they were doing already and they were...hold on a minute we can see that' GP Barry

Ratios

The ratio for senior to non-senior CPs was designed to allow for 1 session of pharmacist time per week per whole time equivalent.

The list size for site B1 is 11,000 patients but it is unclear what the full patient list size is for this federation site and therefore difficult to comment on the full federation level pharmacist: patient ratio.

There is some negative feedback from participants about the ratio.

'I don't see how much of an impact you can have or it really work on that number of patients. To do it properly and to do it well.' Betty CP

Turnover

Within the first year of the scheme one CP left their post. Beverly feels that the site were offered little support, in terms of time or funding by the local area team after the planning stage and operationalisation became localised.

'Because of local politics we weren't perhaps being supported as well as we could have been so we were very much on our own.' Site Lead Beverly

The site has had turnover of both pharmacists and sites.

'We've lost people throughout the pilot and practices have not wanted to come back on board' Site Lead Beverly

Beverly believes that a mismatch in expectation caused one of the sites to pull out.

'At the beginning of the pilot a lot of people who said they had buy in, changed their minds.'

One of the pharmacists was offered a role in another GP practice not on the national scheme earning £10k more than the national scheme was offering. This role had no support or training and a fixed limited role offering little chance of development but the person moved due to the attractive salary being offered.

'She had completed up to December so she was 18 months in to the pilot so she'd had most of it and she was good. One of our better Pharmacists. She was very good. Very proactive. And my only concern would be the practice she's gone to she won't be as well utilised as she was in the pilot but that's her choice.' Site Lead Beverly

Implementation

This section relates to the local implementation of the pharmacist role and considers their induction, training and mentoring.

Induction

There are some initial set up costs in patient facing work that Beverly had not planned for.

'We have a lot more costs because we have Pharmacists that see patients so we've had to order blood pressure machines, stethoscopes, since we've gone online with the pilot we've employed an extra 6 staff, that's around 2.7 full time equivalents but the additional work that the Pharmacists create, the patient demand. So while you would say that's a benefit because

the patient is getting service, they're all hidden costs that people don't think about. Our phone cost have probably gone through the roof. We've had to buy them mobile phones because they're out so its lone working stuff. Sharps boxes have gone up because they go out with sharps boxes'

These are useful lessons to learn to provide guidance to future schemes.

Training

Beverly feels that the amount of training required off site including CPPE and prescriber training takes the pharmacist away from working in the practice. There are 18 days of off-site CPPE training for pharmacists in the first year, which is a high cost relative to the role. Furthermore, due a lack of availability of local training many pharmacists have had to travel significant distances and on occasion stay in hotels to access training. There is no additional financial support for this and therefore that cost has to be borne by the practices, as the employing sites. Beverly gives the example of two CPs on the scheme who had to attend a course in London (despite being located in the North of the country) and only being given 3 days' notice – this cost the practices £700. On another occasion all 5 pharmacists had to attend training in Newcastle. This is because of a lack of locally available training in some areas. So although training is funded, it is not at no-cost to practices, it is a hidden cost. Beverly expresses some frustration with training that she suggests was not offered but had to be sought and which are often more costly than convenient.

Betty feels some of CPPE training was helpful

'Some are really good, excellent, some of the hands on stuff, the respiratory, cardiovascular, the hands on' CP Betty

But not all. Because there was no needs assessment for the training, it was uniformly delivered to all CPs regardless of experience.

'There were people with loads of years and years and years of more experience than I have. We were all doing the same thing as people that have never worked in a GP practice before.' CP Betty

GP Barry feels that Pharmacists, and other primary care health professionals, should be working towards a set of national competencies and is working nationally to lead the agenda on this.

Bernadette reports that the CPs are auditing their role to provide up to date evidence-based training for their reception and admin staff about the pharmacist role and appropriate tasks and triaging.

'They are doing an audit actually this week but that is more about stuff coming to us that shouldn't be coming to us. We have got to flag those ones and make a list of them. I think it is mainly because they need better training in reception for where they should be sent to.' CP Bernadette

Mentoring

Mentoring is offered to the senior by the GP. Mentoring of the juniors is done by the senior/s. Pharmacist mentoring uses same model of reduced scaffolding to build confidence. It took 6 months for juniors to achieve autonomy in patient facing work.

'Depending on the skills of the individual between 2-6 months. Round about 6 months I would say I managed to extract myself. As they got better, their workload has increased because the practice is giving them more work because they can do it much quicker.' SCP Bob

GPs had a mismatch in expectations which impacted on mentoring.

'You just make assumptions of what people can do...that they are used to seeing patients and that's something they would have done on their undergraduate course. My first mistake was when I called a meeting a year last January my jaw dropped....I realised because I had a lot to do when I train, so I understand the educational process. The cliff edge of touching a patient.' GP Barry

As a result of this the GP designed an in-house training course, of very basic patient care, led by Nurse Colleagues.

'She's actually a Nurse by background and she's been instrumental really in helping plan with the nursing team and training people how to do blood pressure and taking weights.'

Has a plan of how the role develops through basic practice and confidence building into specialising in the third year.

Operationalisation

The Day Job / Activities

Bob works in consultations at site B1 for two afternoons per week and spends the rest of his time mentoring. He runs clinics including long term conditions (LTC), respiratory and a pain clinic on Wednesday afternoons. Bob has a laptop with access to both the CCG and the practice (via EMIS). He finds this useful both for remote consulting but also for remote mentoring, as he travels across sites mentoring others for a significant proportion of his time.

'most of them were initially were chaotic so all the practices now, all the pharmacists now have got specific, their sessions are very specific so they do certain things in certain sessions, some of them are face to face. I agreed with the practice how many minutes they should have for each appointment or each interaction should be, so it if was something, just a quick review, it is 5 or 6 or 10 minute based on the skill set I have at that practice. Then face to face could be anything from 10 minutes to even 30 minutes.' SCP Bob,

The senior role also provides useful continuation to the scheme.

'So sometimes if they have had a day off or holiday and there work has piled up, so I will help them to clear some of their workload when I go for half a day.'

Bob's clinical work focuses on specific areas. He focuses on opiate management in pain clinics.

Betty works full time at one practice (across two practice sites) 1.5 days per week are spent on anti-coagulation clinics with 0.5 of this time spent on home visits. For the other 3.5 days per week Betty works on a range of medication tasks in the practice.

'So we can be doing tasks, managing acute requests, patient queries, pharmacy queries, GP queries, anything there that relates to medication. So usually that involves some phone calls. Then face to face medication reviews, patients just come in if they have got a query about something to do with their medication. We do long term condition management, anybody with COPD, asthma, chronic kidney disease, hypertension, AF, coronary heart disease, rheumatoid arthritis.'

Betty is allowed, and might spend, up to half an hour on a comprehensive LTC review.

'Yes we would be expected to do all the base line ops, blood pressures, pulses, heights and weights, then do a bit of diet, lifestyle. We would then do specific condition management, so

inhaler techniques, things like that if they are COPD, asthma. Just review their symptoms, how they are getting on, and then medication review on top of that.'

Bernadette works for three days per week; she spends two days per week at one practice in a largely patient facing role and the other day is spent at a smaller practice in a more medicines management focused role.

Around a quarter to half of Bernadette's time is in managing LTCs. Her patient facing tasks are similar to Betty.

'I am only here 2 days and at the moment usually one of those mornings or sometimes a morning and afternoon I end up doing CDM reviews, patients with long term medical conditions. Doing a review of their condition but also doing a medication review at the same time. There is quite a few tasks here like people are ordering stuff on the acutes that just making sure they can have it again, any queries about it. Processing the medicine reconciliation on discharge...'

Betty would conduct home visits on an ad-hoc basis as required by the patient.

At this site the pharmacists are all trained to do B12s.

'Then this year we have been involved in the vaccinations, primarily the flu vaccination. Yes and then that has led on to being able to do the B12's, shingles, pneumonia, meningitis, so we can do all of those as well so they can be slotted in to our day.' Betty

Bernadette:

'Then we have been doing the immunisations, quite a lot of that, the hepatitis vaccines and also doing the B12's.'

Beverly checked this with NHSE local area team and their response was.

'Do what you want, they're your employees, as long as they're trained you take the risk '

This seemed to be a good use of an existing appointment slot, then evolved into a regular duty according to (seasonal) demand. Betty explains

'If you are only seeing somebody for a medication review and you do the flu jab, we would obviously ask them at the same time. That was initially why we got involved with it. So I have seen patients for an INR check but couldn't give them their flu jab at the same time. So it made sense, when they were in getting one thing done, they didn't then have to go and see somebody else. That is where it evolved from really. But we did have specific flu clinics.' Betty CP

Discharge management is a crucial aspect of the pharmacist role.

'We have what is called a 'doc-man' session, at the end of every pharmacists session, we have a doc-man session. They go through discharge letters and they get shared out.' SCP Bob

'All the documents are scanned on every day in the practice, our doctor has got a document session so they have got either a morning or an afternoon to do the clinic letters. They have got allocated time to do the changes if they can do them, it just depends on how many they have I think. But we always get the discharges. So they look at them first and then they come to us.' CP Betty

'Yes so the GP's review all the documents and letters so anything that comes from an outside source, then they will be distributed to us. We get those on a daily basis. They can be anything from clinic letters, so when they have had a change of medication, or somebody

needs to start new medication, Vitamin D's we tend to get. It could be things like appliance requests, or discharge, we get all those.' CP Bernadette

Bob, senior CP behaving autonomously at 18 months in the pilot, decided to focus his work on pain management as he noticed the need arising from the way the practice management repeat prescriptions of pain medication.

'I have been doing them off my own back but we haven't actually been calling them pain clinics. I have been having sessions, I have been picking up all the ones I see poorly managed and people are just giving them more and more morphine, now and again they request come across my desk because one of the other things I do is urgent requests, prescriptions for repeat, this practice for example, for whatever reason, they don't put up any of their pain relief medication on the repeat.'

This is a good example of work driven by the needs of both the patients and practice, but also by the national agenda.

Colleagues / Relationships

There is a tight network between the pharmacists.

'We have all got quite close actually. I just tend to speak to the guys here.' Betty CP

They stick together in training and have created their own local community.

'Like there is a few of us here in this practice, because there is a few of us in the pilot, our little pilot would stick together.' Betty CP

Beverly has experienced tensions between pharmacists due to overlap in responsibilities. She feels strongly that management should be provided from both business and clinical and not solely clinical.

'My view on how it should have been managed was that Senior Clinical Pharmacist no. 1 should be responsible for that Senior Clinical Pharmacist no. 2 should be accountable for that. They are managed by the Clinical Lead because they are clinical. That didn't work. All management I believe in the pilot should go to a manager not a clinical. Because clinicians are not managers. I think that would be one area where I would say we failed massively in the pilot.'

Networks

The lead GP offers a tutorial that the CPs cross-federation can come to once a month. These centre on specific areas, such as hypertension, and are case based.

Other meetings include:

'We have mental health do case reviews, we have safe-guarding meetings with wider disciplinary, health visitors, everyone comes. Everyone can write up their stuff, it's all fantastic learning and learning together... And then everyone learns. They probably haven't been this involved, they are now getting much more involved. We have a nice guy who speaks every month as well'

Community Pharmacy

Bernadette spends a lot of time dealing with prescription queries from community pharmacy

'I think most of the queries I have are from community pharmacy, they come through us so I am in contact with quite a lot of the community pharmacies. It is probably, nearly every day really. I can speak to someone on a Friday 3 times a day.'

Relationships with community pharmacy are important. Bob gives an example:

'They can pick the phone up for me, I can pick the phone up for them, they never refuse if I make any changes. For example, I always have a good conversation with the pharmacist so they understand what we are doing so they expect it. Sometimes I might do them in batches so I explain to them. For example there is a patient in [a nearby area], one of the other practices I see, and who was on daily prescriptions because of his chaotic life. Every morning, they got a call from the patient, they had to arrange for a prescription, send it electronically to the pharmacy etc. and it was very labour intensive for the practice. It was very awkward for the pharmacy and it was very bad for the patient because the patient had to go there, he had to ring, he had to hang around, you didn't want this type of character hanging around all day. So what I did I arranged for repeat dispensing, made a deal with the patient, made a deal with the community pharmacy, went and trained the community pharmacy staff how to manage this patient, organised daily from Monday to Thursday and a 3 day prescription on a Friday, then batches of 3 weeks at a time. So the patient would get a quick review, 5 minutes.'

Hospital pharmacy

Bob is working on a scheme for the NHS linking closely to hospital pharmacists.

I have a very good relationship with hospital pharmacists. As my other role as [NHS role], I literally, every pharmacist in [local area] knows me. I have no difficulty accessing chief pharmacist or any of the pharmacists in the local hospitals, I know them all. At the moment I am implementing through my role at NHS England, I am doing electronic transfer of care to community pharmacy so all the hospitals and hospital pharmacists on discharge, send a copy of the discharge to community pharmacies.

There are some administrative difficulties with working closely with hospitals and results but the pharmacist can still contribute to improving GP capacity. Bob gives an example where he can make a referral for testes but he can't get the result until he has done an imaging course, besides which he isn't in every day, so he gets a GP to authorise the referral, secretary to make and the results come back to the GP. This saves the GP a lot of time as it is the referral letter which is the time consuming part of the process.

CCG

The site works closely with the CCG medicines management team on safety issues.

'I have actually just done a big piece of work for the CCG, we had 24 searches to run on high risk medicines. So we went through all of those, patients on ACEs with no renal functions, patients on ACE and an ARB, patients on fluoxetine and clopidogrel and interactions, anti-psychotics, meds that increased QT's, we have done quite a big piece of work recently. But that all forms part of working with the meds management team at the CCG so we work with them.'

Role Development

Barry sees the role developing like the nurse to be an advanced practitioner in primary care.

'That's when I put in the bid. That you would have Pharmacists that would be light advanced practitioners in a similar model to Nurses. Nurse Patients, Nurse Practitioners, The whole range, from assistant practitioners, health care assistants. The whole range of staff goes through and be trained through here.'

Changes in Primary Care Practice

Practice B1 plans to divide its planned and acute care management. A nurse is employed as a Planned Care Manager and works closely with the pharmacists who are slowly developing specialisms to enable them to manage much of the planned care. This is through for example pain management, diabetes care as well as other LTCs. Betty works closely with the planned care team.

'I suppose it depends on the issue and what the query is. We work obviously very closely with the nursing team because we are part of the, it is not really a nursing team as such, it is a planned, so the chronic disease reviews and things, come under planned care team. We fall under that umbrella so that includes the phlebotomists, the nurses and the pharmacists and health care assistants; we all work together as a team. It depends on the issue as to who it would go to, I will speak to everybody.' CP Betty

Barry considers the role vital to the skill mix and as a result is considering replacing a Nurse role with a pharmacist

'We have one full time pharmacist but we're not going to employ another Nurse so we will have 2 Pharmacists... We're not going to replace a Nurse. We have to recognise that practice Nursing is a challenge and actually it's a conscious decision that we need a different skill set...'

Patient R now sees the pharmacist every 6 weeks to review his blood pressure and medication. This is saving GP time in care for LTC. Patient L, and several others at site B, would rather see a Pharmacist consistently than a range of unfamiliar GPs

'I would rather go to him' Patient L, Site B

Outcomes

Capacity

Patients are aware that times are changing and the system is no longer as it once was.

'If you could get the same doctor and I think everyone would say the same, and they knew my whole family, brothers, mum, dad and everything, but this day and age you are not going to get it are you?' Patient R, Site B

At Site B Patient R approached the practice for an appointment and an appointment was available with a CP before a GP and he was happy to accept this.

'I have had no problem; it was easier which is brilliant.'

Access is improved for people with LTCs but through the pharmacists there is also wider access to flu jabs.

'Yes book it in if we have time. I think that is why we have done that because everybody should be able to do it, there is no reason why we can't do it, and if we are here and we have got time, just do it. You have got the patient standing there; it is easier for the patient isn't it? They can come up to the reception and they can get to see somebody.' CP Betty

At Site B patients compare the service, very favourably, compared with GP appointments as they air frustrations with inconsistency of GPs (seeing different ones, getting different advice) and of limited appointment lengths as a result of the increased pressure on primary care services. Patients reflected on the positive experience of longer appointments tailored to need. They also suggested that while appointment length is important, so is the approach.

Patient P – ‘She explained about my warfarin, my bloods up and down, and I am here basically every fortnight. She takes an interest in you; she treats you like a person... I know they haven’t got the time, you are basically getting dictated to by the GP, you do this, you do that, and everything will be fine. Whereas the pharmacist, they say it differently. Sometimes you can’t wait to get out of GP surgery. Whereas the pharmacist you can sit there and you feel at ease.’

Patient R – ‘Exactly the same’

Patient L – ‘I was excited to see him the 2nd time because I felt that good.’

Patient Focus Group Discussion, Site B

The SCP is aware that the CP approach combined with longer appointments benefits the patient experience.

‘I think the thing is with me people talk to me because I ask them about themselves. I have had a few of the reception people saying to me that woman has just said how wonderful you are. But it has been more because I have sat and listened to her talk about her diet and things like that.’ SCP Bob

CPs are aware that they are improving capacity for the GPs while benefitting patients with LTCs.

‘I suppose it has enabled them to get on top of all those people with the chronic diseases, a lot of them weren’t coming, it has given them a lot more clinic time for them to be seen, I think we deal with queries that normally other surgeries, the doctors deal with them. I have not worked in any other surgeries but it is hard to see how GP’s could function without a pharmacist now because we deal with stuff that would take them time to do. They could be seeing patients so it is good for them, and me.’ CP Bernadette

Bernadette includes mental health as a chronic disease and reports how pharmacists can provide the follow up for these patients, saving time for GPs in this area too.

‘So people who have started on anti-depressants and need a review with the GP, after 4 weeks. The reception put it on my list but they have got to be done by a GP. We can do the 6 and 12 month reviews but not those ones’ CP Bernadette

Quality

Betty is allowed, and might spend, up to half an hour on a comprehensive LTC review.

‘Yes we would be expected to do all the base line ops, blood pressures, pulses, heights and weights, then do a bit of diet, lifestyle. We would then do specific condition management, so inhaler techniques, things like that if they are COPD, asthma. Just review their symptoms, how they are getting on, then medication review on top of that.’ CP Betty

Bernadette too and longer if necessary and feels this has benefits for holistic care.

‘Yes we do have longer appointments of 30 minutes, I think that lady, I was with her for about an hour. I was waiting for some results as I needed something so I was messaging people but

while I was doing that I was talking to her..... The things that I am probably picking up that need doing that might make a difference is like people who should be on alendronic acid. There is quite a few that I pick up that I refer for DEXAs. I don't know if that has made a difference to anybody but one that I was speaking to, she seemed, I said I am going to do this because your FRAC score is a bit high, we should give you DEXA scan. And she said I have been having all these aches and pains I think that is what I need. Whether or not it was but ...?' CP Bernadette

At site B the pharmacist conducted a medication review at home for patient R who struggles with mobility and had recently suffered a heart attack.

'Especially when he came to the house, he was there for a good half an hour. He explained everything. So it was mainly the warfarin, what it is, what it does, and the other one was aspirin. There was other tablets and he said that is because of that. I asked, because I never suffered with blood pressure, but when I had the heart attack they put me on them and he explained why. I said I had never suffered with that but he said but now you have got to have them. Because I asked he explained why, because you have got to be lower than a normal person now.' Patient R, Site B

At site B, Patient L also reports on a holistic appointment which led to his better understanding of his conditions and medications.

'I thought he was a doctor to tell you the truth but the one thing I will say, he had got the time. He told me all about the medication I was on and the side effects that they were giving me. When you are with the doctor, you see that many different doctors, you are in and they want you out straight away. He saw me for 15-20 minutes and discussed all the medication, why it was given, why it must be done, and he was saying the medication I was on so he took me off that and put me on something else.' Patient L, Site B

Patient PN agrees that the longer appointments lead to enhanced medication understanding and increased self-care.

'They spend time to explain things to you and basically, us as patients that is what we need. If you are on a lot of medication, you want to understand what your medication is doing to you, any side effects, things like this. They are an absolute asset here.' Patient Pn, Site B

Patient P agrees and suggests that an appointment with the pharmacist was the first time his use of asthma medication had been reviewed and that support and advice led to improved medicines optimisation.

'I have been on salbutamol since I was a kid and I have only just had the spacer. I used to take it in my bag and just take it, I felt it was easier. But he taught me to use it without the spacer and he was telling me how I should feel in my chest as I am taking it. The doctor, he doesn't necessarily explain how I will feel when I am taking that. He showed me how long to hold it for until it feels right. Then he told me to start breathing out sort of thing, yes. Everything that he said was right, and I don't need to use it as often as I had been.'

At site B the CP fixed a series of ongoing long term problems for patient L and contributed to the improvement of his long term condition and overall health through self-care.

'My diabetes was a bit, he explained to me about that, my diet and stuff like that, that's how I packed up smoking, I will take my hat off to him. The so called professors and doctors that I have been under and it was like saying the lights not working, the first thing you would do is check the bulb wouldn't you? He just said what are your symptoms and I told him. He said that looks like it is a bit to in deep? You have had tests for everything else, hepatitis, HIV, it was just something like that so common and I have been 3 years on 8 tramadol a day with pain in my legs and joints. But then he was more concerned about me being addicted to the tablets

then. I have got to try and get you off them now because I have been on them 3 years, sort of like a junkie now.' Patient L, Site B

Patients discussed how the CPs had given them lifestyle advice and helped them to improve their diet, exercise and to stop smoking.

'He is looking at the picture, yes. He said to me that was causing the diabetes because the tablets that I was one was making me tired, so then I was taking energy drinks so it was a vicious circle. He said that needs to be packed in, just drink water, we have got to try and get you off those tablets.' Patient R, Site B

Patient L suggest that he is not usually receptive to advice but followed specific CP help and advice to control his diet. Several patients discussed smoking and said that they felt judged by a GP and guilty for smoking, especially with chest related conditions, but that motivational interviewing by the CP enabled them to stop smoking or start working towards this.

Uniquity

Betty suggests that holistic care and use of unique skills in medication lead to safer Primary care.

'It is patient safety, patient care probably. Just the fact that we can offer that time to patients to look at medications, that maybe the GP's don't really have time to do.' CP Betty

SCP Bob agrees that safety is significant area where pharmacists improve primary care and this should be an evaluation measure to evidence the benefits of the role.

'To some degree medicine safety incidences, if anybody could measure the number of medicine safety incidences or prescribing errors, in GP practices before the pilot, before and after the pharmacist, is there any change?' SCP Bob

Betty suggests that she it is likely her actions have prevented emergency hospital readmissions though planned care, but feels that this would be difficult to evidence

'She came in to see me for hypertension and med review, her pulse was really off, she was tachycardic, it was 140, clammy, sweaty.. I did her pulse twice because I thought I will leave it and check it again at the end and even the doctor, when she checked it, it felt like it was a regular pulse but then it would miss so it was really odd but it was racing. We sent her in and she got diagnosed then with AF and she was treated for that.' CP Betty

SCP Bob gives examples of actively improving safety in the discharge process. GP Barry believes that now pharmacists handle all discharges this reduces error therefore improving safety, service and efficiency.

'So every single discharge goes through a pharmacist. It's already been to the nurse so if they need to follow up that admission it's done. We wouldn't have done that before; we would have just checked the drugs made sure that they were wrong, cause we made so many mistakes it was untrue, created more work' GP Barry

The future

Site B is in its second year and working towards a sustainable future for the pharmacists working across the Federation. Sites report to Beverly that they think the posts are expensive and potentially not value for money. The invoice costs for a pharmacist include an on cost for senior pharmacist mentoring time. Practices also report being unhappy at paying for time when a pharmacist is training, especially as this is such a significant amount of time away from practice within the first two years of

the scheme, and this is not relative to the post (i.e. a 0.1 WTE and 1.0 FTE have the same overall training costs). They are working towards a future lower cost model than the pilot as training and mentoring will be significantly reduced.

'The way we are selling it to them is it won't be as high as they are currently because within those costs there are 30% on-cost. What we've done at [Site B2] with [CP Brian] is we've negotiated you can have him at that cost but you will have no senior cover. Because if you're going to have him for an additional day, he doesn't need the senior cover at year 2 of the pilot however the cover that we will provide in the on-costs are the training, the mentoring and everything like that. So our work in this next financial year is to convince the practices this is a viable option. This is what you've paid to date and this is why you've paid this. However, this is what your costs are going to be once you've employed them. The only thing with that is Pharmacists are not cheap.' GP Barry

Barry fully expects all pharmacists from the scheme to be employed directly by their practices after the pilot. He suggests that they have become embedded and this is particularly evident when they are absent from their day job for annual leave or training.

'Bob wasn't here over Christmas and everybody was falling apart.'

Case Study C

Background (site and staff)

Site C is a Federation of GP practices across one southern area of the UK.

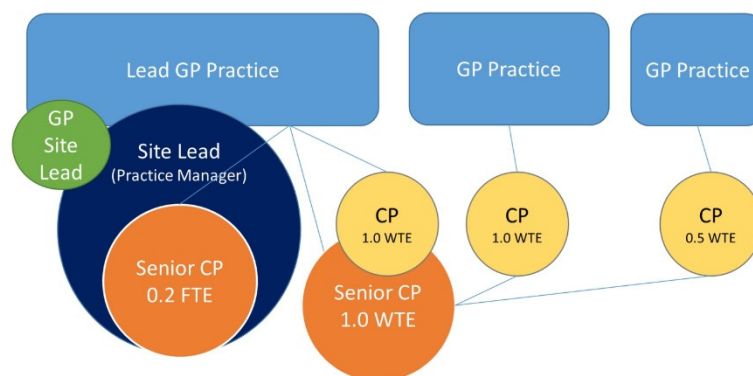
The federation covers 3 practice sites and the model at this site uses 4 junior CPs and 1 senior CP, alongside the SCP who has been in post before the pilot scheme.

Practice C1 is a small practice.

Christine is the practice manager at site C1 and the Federation lead for the scheme.

Charles is the senior Clinical Pharmacist at site C1 and has a dual role working for NHS England. Charles is 5 years post qualifying and has experience in community pharmacy. He worked as a GP pharmacist before the scheme.

Chloe is the CP at site C1.



Employing Federation Site C

Application / Recruitment

For the pilot scheme the group of 3 practices came together to meet the application guidelines and share the expertise of the exiting practice site lead and pharmacist. Christine feels strongly there is a set of pre-requisites for the Clinical Pharmacist post that she looks for in applicants.

'Open minded, your door is always open to anyone, doesn't matter who it is, senior, junior, anyone. You should be customer service focused so you need to have that ability that I want to help the patient. Knowledge. Now knowledge, obviously if you have got the ability, they have got the ability because they have gone far. So they have got that clinical knowledge and the ability to do the job but you want to do it, and also do you want to work it out, outside that scope, and find out how you can do that? That is the kind of things that we looked at in the interview from a practice managers' point of view. So we weren't aiming at the clinical side, we know that you have got the ability to do the job, but would you actually work outside the box. Say the patient comes in, drops down, what are you going to do? Are you going to leave them with a clinician to deal with or are you going to assist and help? Leave your patients in the room and come out and help? That's the kind of people we need and this is what general practice is about, it is how much are you going to interact with the environment, how much are you going to speak to people, are you going to build a wall when it comes to a foot check? Are you going to say no I am not going to do that? Questions like that, these are the things that we looked for.' Site Lead Christine

Site C recruited 4 applicants to junior positions and had 40-50 applicants. They sifted this down to 20 candidates to interview. Interviews were conducted by the PMs at the site primarily then followed up with clinical interviews with GPs. Christine recognises this was an intensive process but felt this important to get right or suffer consequences later.

'You can recruit people and then in 2 months' time you are thinking this is not going to work. I have actually been through that before and I didn't want that to happen. So it had to be the right candidate that we got, eager ones that wanted to learn and to do the job.'

Several of the applicants were from wide national areas including Birmingham. Junior Chloe moved across the country to take her post.

Ratios

Across the 8 GP practices there is a combined total of approximately 90,000 meaning a ratio of 1:11,000.

The SCP:CP ratio is 1:4.

These are lower than the levels recommended for the national wave 1 pilot.

Implementation

Induction

Christine arranged for SCP to spend his first two months on reception to familiarise him with the primary care environment, as this had worked for her, Charles agreed this was a useful experience. Christine feels this was a successful approach and uses this as the induction process for her other pharmacists. She starts with a period on reception then shadowing not only GPs but HCAs, observing clinics of interest

'It helped with them being able to refer the patients on so if they see a patient, it means that the patient comes back to them for a blood pressure check, they will be able to pass that patient on to probably health care assistant so that kind of knowledge and who to actually ...'

The initial induction period and training needs to help CPs to shift their professional identity and mind-set.

'So for the first 3 to 6 months it was literally me understanding how general practices are. I come from a community pharmacist's background, pre-reg, so all I really knew was that as well. And also for the first few months of practise I was a Community Pharmacist by in large.'
SCP Charles

To develop a professional identity you need to understand the context you are working in. Charles suggests this includes some basic principles of Primary Care including:

- *the processes in general practices*
- *who's in general practice*
- *What are the roles of doctors, nurses, health care professionals, and health care assistants*
- *how do they access mental health*
- *where are the trusts*
- *how the computer system works*
- *how to write consultations*
- *how to clinically code*

Training

Site Lead Christine organised local training (to accompany triaging and shadowing during the induction period.) This training included a short sessions in the practice delivered by the site lead to CPs about understanding QOF, how contracts work, who does what and who to go for support and help.

This is in addition to the numerous external training courses provided.

'They have done quite a lot from asthma to diabetes, COPD and they are still actually doing courses'

While this is good for the CPs development, Christine does not feel this always benefits the practice and includes relevant things

'It is going good for them, not for me, I have got my objections. I don't think it is fit for a pharmacist in primary care. Probably in community but not in primary care. Probably needs a bit more of the insight of what is going to happen hands on here and what they need to do in practice. That is my thoughts on that.' Site Lead Christine

Christine also feels there are some gaps in the externally provided CP training

'You have got the contraception, it's not there at all... There is a couple of other things....'

Mentoring

The juniors are matched to a GP to gain their independent prescribing qualification and this GP acts as their mentor. The senior CP can use anyone as their mentor. Charles had a GP mentor who had never worked with a pharmacist before and was close to retirement. That mentor trained Charlie in the same way as she would a registrar and offered shadowing and review sessions. Charles found his mentor really supportive in developing his specialisms and areas of interest.

'So it was a lot about looking at competencies, my own competency framework and agreeing it with her.' SCP Charles

Operationalisation

Appointment arrangements

Patient CA booked an appointment with a GP about a LTC and was advised to see the pharmacist instead. Patient CL also sought an urgent appointment and was offered the pharmacist.

'I came in one day, I can't remember what the problem was, but my husband phoned up to see if there was an appointment and they said there is in the pharmacist surgery. I thought whatever the problem was, yes I would be happy to do that. So I was given the choice.'
Patient CL

Patient CD had a new prescription dispensed by the community pharmacist who advised her to go and made an appointment with the CP to understand her meds.

Patient CA was diverted to the pharmacist for services that had previously been delivered by a nurse.

'She used to do my feet, I think it was once every 6 months, she used to take my weight which was about the same, and make sure when I had an eye test in line with diabetes. That was down here then the nurse was changed after about 2 years, somebody came in, the pharmacist came in and took over.' Patient CA

Patient CJ was annoyed because he did need to see the doctor and thought he was but saw the pharmacist and then still had to make an appointment see the GP.

The day job / activities

At 3-6 months Charles was conducting medication reviews with patients.

'I started off with 15 minute appointments which gave me enough time to do what I needed to get done and in complex cases I would get 30 minute appointments for like 20 medicine patients, those with multi morbidities who were really complex or had language barriers for instance. So I started off with clinical medicines use and being able to do that as well.'

This was occasionally shadowed by the GPs part of the mentoring process. He suggests a steep learning curve during this period.

'I understood how to clinically code then, I knew how general practices work, I knew how to check pathology, request pathology, look at different scans and I had obviously been learning a lot in my own time at home and reading lots of Pharmacology books, A&P and really getting my knowledge to a level where if anyone asked be about diabetes I could sufficiently answer in good detail without having to go and check.'

By 12 months he had established a set procedure for managing clinical consultations.

'So the way I structure my consultation is I ask public health indicators when patients come in so I take their blood pressure, I take their BMI, alcohol status and from this stimulate conversation about giving up smoking or alcohol or you can tell if they need support and you can recommend healthy living advice as a great starting point when you're looking at someone's diabetes for example or blood pressure and how you can manage it. Those are the red flags and I think what I did was go through consultation, do they want to look at anything else.'

The role developed according to needs of the practice.

'You are not helping me there, medication reviews, it is not helping me. I need access so I need more and he started on immunisation courses, minor illness courses, and diabetic

courses so it expanded. There was a lot of, more scope, then he took on things trying to do them by himself.’ Site Lead Christine

Then as he understood the needs of the practice Charles was able to develop the role according to his own interests.

‘So he actually looked into it himself he knew what he wanted and what I wanted and the expectation of a primary care pharmacist so he expanded the role of how he wanted to be. He did his homework, which was good. He really wanted it to work, he looked at what we needed to do in practice to make it work. Where demands were, spoke to people, attended meetings so he gave that bit extra to actually make this primary care pharmacist role work.’

Christine confirms that from arrival to working independently took around one year.

Colleagues / Relationships

Christine feels that communicating the role to colleagues across the practice is vital.

‘Then we had to educate the staff as to what the pharmacists can do. Which was a bit tricky at the beginning because I had people who were just starting off so it is more of what can they do to start with, they can review all medication, if it is anything more than that don’t book it in with them. It gradually started off like that. So it was more communicating to the staff what they can do and that was a regular update.’ Site Lead Christine

Charlie thinks there is may be an early perception from colleagues in primary care that pharmacists are not trained as clinicians.

‘I think the perception is that we are not trained to be Clinicians. I went to University for 5 years to be trained as a Clinician, not to be anything else but that. It’s all about care’

Christine feels it was hard to get the GPs on board and Charles agrees that it can take time for GPs to develop trust.

‘I think it’s a trust thing, about developing trust and actually showing that I was able to contribute quite effectively.’ SCP Charles

At site C some nurses had initial resistance and fear about the role. During the time of the CP scheme the practice has lost several nursing staff. Christine attributes this to changes in primary care workforce nationally. Charlie currently works closely with the nurses and believes in the benefit of the MDT working for both colleagues and the practice.

Over time feedback from colleagues is positive about having expertise in medications in house.

‘They love it, they love having the pharmacist here to be able to go to and speak to them about prescriptions because that is the main thing. Personally, me and other managers downstairs, we are more confident on the information coming back from the pharmacist than from the GP with regards to medication. Because they know what they are talking about.’ Site Lead Christine

Networking

In house

The Federation CPs meet up weekly

‘And that is an opportunity for us to have a chat, talk about things that are going well, talk about things that aren’t going well. I’m very keen that where we have some stuff to talk about that everyone has an opportunity to talk about it whether it be good but also [inaudible]’

haven't been around this week and can we come and tell us a bit more and I'm keen to have that conversation. I want them to feel comfortable with especially me being a Senior Pharmacist to come and ask me anything. I don't want them to ever worry loads about it.' SCP Charles

They also have a virtual support group between themselves and this format is vital to the role.

'We also have a WhatsApp group as well where any queries can go to that especially if we're all working at different sites across the federation it's really useful.' SCP Charles

Community pharmacy

Community pharmacy were initially resistant.

'In the beginning it did, because they thought we were going to take things away from them. It also actually reduced the medication going out so obviously their payment coming in is going to be lowered so you had that kind of shaky ground. But we got over it at the end of the day because at the end of the day it is about patient care, it is not about your pocket.' SCP Charles

Now they have built a strong relationship. Charles feels it is important to build a two way relationship with community pharmacy.

'Yes I service them a lot and will go and see them, new medicine service, new COPD patients, MUR review, blood pressure checks and stuff so making sure that.'

Links to community are important, face to face interaction is important, and community pharmacy a good lead to care in the community.

'I would just walk across over there, go and have a chat with him if there was anything that came up. Equally, they could just come in to the practice and say 'can you give this to [Charlie] to change and if he could change it by the end of the day' it would just be done. But also bringing them in to the general practice team so there was a lot of high risk patients that were bed bound and community pharmacists delivering the medicine to their homes. And had a good repertoire with their families as well. And a really invaluable resource to bring in to general practice because they interact with these patients, their families, their carers as much as we do if not more. And I thought that was a really valuable resource to have as part of the general practice for joint decision making and part of the direct [inaudible] service a couple of years ago was avoidable admission day. And they impacted on how medicines were being supplied to patients was really important so we got them involved in that area of general practice in particular.'

Patients being mistaken about their appointments caused a link as well.

'But we also spoke to the pharmacy over the road saying please if you are, because they knew we had these people in house, and we are actually starting the role because they are involved in the Practice Meeting. So they knew that this was going to happen and we were actually involved in the pilot. We are now doing medication reviews over here so if patients do come, send them over.'

Hospital pharmacy

Charles suggest positive working relationships with hospital pharmacy teams.

'Hospital pharmacy teams again I think we worked really well with the medicine information units in hospital and I loved working with the Pharmacists that were part of those teams as well because they were extremely knowledgeable around what combination of medicines to

prescribe, whether it's evidence-based medicine as well and actually around discharge was really invaluable. With certain discrepancies and they wanted to speak to a specialist Pharmacist, they were there on hand.'

CCG

And again working really well with CCGs all of our prescribing targets every year I think and making massive efficiencies on prescribing budgets. We also got shortlisted for a HSJ [Health Service Journal] award for our work around prescribing as well and working with CCG. It was around an introduction of Pharmacists into general practice. I used a lot of prescribing data to evidence about the impacts we were making. I led on a lot of the medicines management in general practice. It's an important area particularly when it's focused on clinical outcome basis, evidence based, you know, not just to cut prescribing costs. It's about joint decision making to balance part evidence we use to advocate the business model of having Pharmacists working in general practice.

Role Development

Christine would like the role to develop to cover minor illness. The CPs have done the basic external training in this area but Christine feels this needs a six month focused training program

'Yes it needs to be one of those intensive 6 month course that actually develops her' SCP Christine

There are courses at University level that Christine has looked into to cover this, targeting Primary Care Pharmacists in [local area]

Chronic disease management should become more streamlined, but at the almost 2 year mark it is not because the CPs are still having to refer on to the GP for a lot of the wraparound care for chronic diseases.

'Do you remember they are with all your chronic disease patients so if they were viewing a patient and the patient comes in with x y z, they should be able to confidently deal with it rather than passing it on to a GP or referencing it to a GP, look I just checked the patient, she has got x y z, I want to do x y z, are you happy with that?'

Changes in primary care practice

Shared learning leads to MDT capability and improved care.

'I trained the nurse on how to do a good medication review so when she was doing diabetes clinic, they are very good at diabetes nursing and also respiratory they were able to tag a med review with it as well because they knew the medicine they were prescribing, there was no point sending a patient on a wild goose chase. Go and see a nurse for that and then. Just a one-stop shop we were trying to aim for.' SCP Charles

Patients noticed the difference and feel the pharmacist is replacing nurse and don't like admin staff doing triaging (especially if they live locally).

Outcomes

Patients

Patients report satisfaction to the PM.

'We have got a lot of patients who are very positive about it, who are very happy but it depends on how you promote it.'

Capacity

Access is definitely an issue. Patients don't like being triaged by a non-clinician. Some patients book their appointments online.

Christine thinks benefits for patients and GPs in having a positive impact on capacity and therefore access.

'Better care. Better management of their medication especially because lots of medication in somebody's house, they shouldn't have, this is going to be managed properly by the pharmacist. The GP's are going to become more confident in doing things knowing that I can rely on my pharmacist to actually deal with the medication side of things. And there is going to be more ease doing their work day in day out. The environment is going to be happier really and that is what we are looking at.'

At site C the CP role developed specifically to increase patients' access to services.

'I need access so I need more and he started on immunisation courses, minor illness courses, diabetic courses (gentleman enters the room) so it expanded. There was a lot of, more scope, then he took on things trying to do them by himself.'

Christine believes this is a big benefit as the role moves into managing minor illness.

'This is what primary care needs, we need more access, and we need more people to be able to do things like that.'

Improved access and capacity often leads to improved quality of life for GPs too.

'You can see from an access perspective on that and also working perspective. So people could go home at 6 o'clock, before that they were going home at 8 o'clock. Having a better work / life balance for them by having Pharmacists as part of the team and a lot of admin work was streamlined'

Quality

Patients report good advice about their medications from the CP which leads to better adherence and minimises side effects.

'Because I am border line diabetic and I have just been put on one tablet, early in the morning I have to take it, but what I was doing, I was having that tablet after my breakfast and it just about gave me time to get to the toilet (laughing). So I came back and spoke to [Chloe] she said you could be having a problem there. I don't want to take you off the tablet as soon as this, so what I recommend you do, instead of taking it at 8 o'clock in the morning, wait until you have had your lunch and take it after your lunch. I must admit it seems to have worked.'
Patient CA

'It has been explained to me because we weren't actually told what they do, how they work, when to take them. The doctor doesn't tell you that.' Patient CA

Holistic care

Patients reported personalised appointment lengths which led to holistic care.

'Patient CAW: I think it is a good idea I mean I have only seen [Chloe] the once but she spent a lot of time with me, I was in there for 20 minutes. I was impressed with that. I have never had that level of service in this surgery.'

Patient L – 'Definitely, as this gentleman just said, she saw me for about 20 minutes, she has done the same with me. Then she said any questions and I said well I have been here and she said I will always book you a double appointment because there are different things going on but it is nice to know that you have got GP's, sometimes you feel a bit rushed, because of the pressure of the workload. I am sure if [Chloe] felt that a GP ought to be drawn into the issue, she would phone through to the GP and say I think you should see this individual. I am sure she would personally.'

Patient CAW: 'Just hopefully the standards will keep up. I'm sick of bouncing around the services. And if we have been through the mill, we have been to the hospital, we have been to the doctors, by the time you get to see somebody you are very frustrated. That is what happened a couple of weeks ago I was really frustrated, I sat down with [Chloe] and when I came out of there I felt more relaxed, felt like something had happened.' Patient Focus Group Discussion, Site C

The CP role can contribute to better management of long term conditions through holistic care.

'Actually all long term conditions associated generally with medicines or therapeutic intervention, a Pharmacist is really well placed to contribute to that and be able to increase the medicine or change if the patient isn't enjoying the medicine or the HbA_{1c} has not reduced in the last 6 months so why are we still prescribing something like that's probably going to cause them more harm than good and challenging that and having a constructive conversation in a constructive way not to say "oh this prescribing is terrible, we need to change it instantly" but saying "do you think it's appropriate to do this? What do you think about this? I had a look at this evidence base is really good" so I think it was about changing the system and way of doing things in general practice, engaging with doctors about how Pharmacists can contribute, engaging with nurses – this is not about stepping on anyone's toes or taking anyone's job. And also about engaging with our patients and saying you're going to be seen by a new health care professional that is a prescriber and that is going to be talking to you about your medicine and maybe even changing some of them and are you comfortable with that?' SCP Charles

Better medicines adherence can lead to improved quality of life.

Patient CAW – 'yes I had ? and she was asking me when I take them. I told her and we have changed it round, I have it 20 minutes before a meal now and my bloods, I can keep them about 7.5 all through the day now whereas before I always got spikes. It would never go lower than 7.5 but I used to go to 13.5 in the afternoon some days. So now we have changed that round, that has helped, and this new tablet as well. So that has been a good thing for me'

Lifestyle advice

Patients describe holistic care which includes lifestyle advice.

'But I have found [Chloe] really helpful, she gives good advice, I have got to come again in a couple of weeks, bring a diet sheet to see if we can work things out. So having a pharmacist here to talk to I think is good' Patient CAW

CJF – ‘I am diabetic and I had to go to [Chloe] and I am on 500mg metformin a day. She put it on a sheet and I had to write everything down like what I ate in 2 weeks. So when I went back to her there were these big red circles (laughing) you shouldn’t be eating that. I have took notice of it and tried to cut down a bit (laughing). She said you will be surprised how much sugar is in them. When she explained it to me, because I thought cereal bars they seem healthy, she said no. (laughing) I thought I was being good but obviously not, they have got more sugar in than if you just have the cereals.’

CAW – ‘they are always reminding me about smoking (laughing)’

CL – ‘I have cut down to 10-12 a day’

AW – ‘that’s good’

L – ‘I said to [Chloe] oh egg and chips tonight, she said not too many chips Lynne. Well I like chips. At the end of the day you can’t live your life eating things that you don’t like. Plus I am vegetarian.’

AW – ‘I found that really helpful, it sort of puts you on the straight and narrow and does make you think before you pick up a bottle of Lucozade, because I was drinking 4 bottles of them a day. Lucozade has the most sugar, everything, more than coca cola. I wasn’t told, I was on the tools, working all day.’

Patients acknowledge that the CP roiled is not a replacement for a GP.

‘So I think if you can see a pharmacist, [Chloe] didn’t make a decision until she had spoken to the GP. They don’t take over from the doctor, they are prescribing pharmacists so they can issue prescriptions and deal with that. From what I have seen they always consult back with the doctor.’ (Lynne’s husband)

Uniquity

Safety

Charles believes his work right from the early days contributes to positive patient safety.

‘I understood where errors were going on and with due respect, they are improved to help efficiency but also to help improve patient safety. And being someone who knows those medicines really well, I understand that you can’t re-authorise a prescription for 2 months without an appropriate up to date INR and counsel of the patient is pretty necessary. And putting safeguards in place that protects the general practice public high risk monitoring, repeat prescriptions efficiency and safety. So we did 6 prescribing pharmacists across 6 GP surgeries when I first started outside of the pilot program and we base lined the repeat prescribing process and how repeats were being done and maybe led by administrative teams and not identifying what we found were key medicine prescribing interventions that could be done by a skilled professional or at least identify occasions of those errors.’

‘We then put 6 prescribing pharmacists in and trained them up and we got them to do the repeat prescribing process for a period of 2 years and we were able to identify over 30% of prescribing errors that addressed and identified by Pharmacists working in general practice and that’s come from a number of things. And prescribing can be repeat prescribing, it can be prescribing, changing formulation, changing strength, changing packet sizing of medicines as well but in terms of prescribing errors, we were really looking at changing of dose, looking at renal function, looking at side effect profiles, looking at low blood pressure levels in patients who are elderly and are on 3 hypertension drugs and actually saying this patient is hypotensive let’s call them in, let’s have a chat with them and deprescribing them down to 1 in some instances or just having them on 1 blood pressure medicine to manage them effectively.’

'Looking at patients who are mental health and haven't been coming in to the surgery often, really erratic with their medicine, having relapses quite often, again no-one is chasing up on non-adherence and no-one is looking at why this patient is relapsing or ending up in A&E every week or being sectioned by the Police every week and actually they have no-one to go and speak to in the practice because we are so busy. So they're a couple of examples.'

KPIs

KPIs are collated locally at the site and it is clear that some KPIs used by innovators would be useful to share with others.

'I did it across the whole federation so I set up a data reporting system for all the Pharmacists and we all captured our own data and compiled it together. This was a federation so you must remember you have the finance person in the federation, you have to demonstrate your work. And so I was very keen that I was in an innovative place, no-one's doing this kind of data capture that I can see. There are a few trail blazers now, I appreciate that' SCP Charles

SCP Charles suggests that each CP should take responsibility for collating and reporting their own KPIs and a climate of research should be encouraged amongst CPs.

The Future

Site C expects CPs to be employed directly at the end of the scheme but appreciates that research and cost will be vital to sustainability.

Summary

These case studies were opportunistically collected and not intended to be generalisable; they show a wide and varied perspective of the models of care, the conceptualisation, implantation and operationalisation in each site.

It is hoped that these case studies will inform the development of other sites around the country

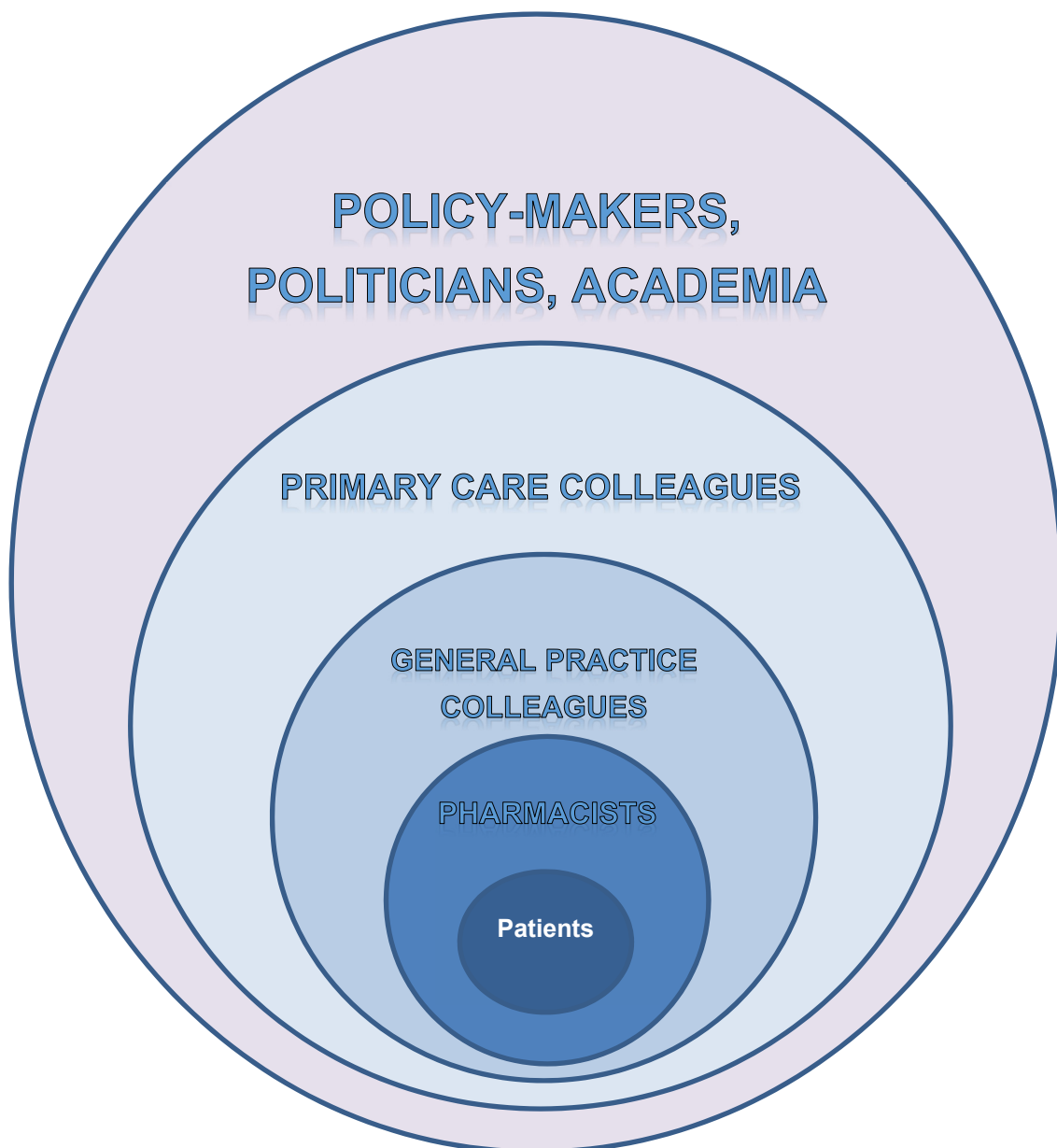
Appendix F –Qualitative thematic analysis

Introduction

This section provides an overview of the sites and roles and an introduction to the wider qualitative data set.

Overview

The research was undertaken from a multi stakeholder perspective. The stakeholders involved in the scheme are demonstrated in the following diagram:



Participants

Summary table of participants for in-depth interviews

In order to preserve anonymity, aliases are used when referencing sites and participants. Each site is allocated a letter and each participant at that site is allocated a first name beginning with that letter. Table F-1 shows the full list of participants who were interviewed for this evaluation.

Site code	Site Lead Code Name	Roles
A	Adam	GP
A	Anna	SL/SCP
A	Alice	CP
B	Barry	GP
B	Brenda	SL
B	Bob	SCP
B	Bernadette	CP
B	Betty	CP
C	Christine	SL
C	Charles	SCP
C	Chloe	CP
D	David	SL
E	Emma	SL
F	Fred	SL
G	Gemma	GP
H	Harry	GP / SL

Table F-1: Qualitative data collection interview participants (NOT real names)

Site Leads

The only tracking data held by NHSE for the pilot scheme was a list of application sites which listed the original pilot site lead contact. This lead was therefore the gatekeeper of site level data and it was necessary to contact all site leads for the audit required to make contact with sites. The audit results are presented in the previous section relating to questionnaire data.

It became evident that practice site leads played a significant role in the operationalisation and they were included in both the quantitative (survey) data collection and qualitative data interviews. This section identifies key emergent themes from solely data collected directly from practice site leads working on the pilot scheme.

This significant group of participants contains the most variance as it does not belong to a singular professional group or require a specific background save familiarity with primary care.

Site code	Site Lead Code Name	Roles (in addition to Site Lead responsibility)
A	Anna	0.4 SCP and CPPE tutor
B	Beverly	s/e Business Manager
C	Christine	FT Practice Manager
D	David	CCG Pharmacist
E	Emma	Lecturer at University School of Pharmacy
F	Fred	Work f/t for CIC as business development manager

Table F-2. Practice Site Leads

The Practice Site Lead (SL) role is held by people who hold a range of roles in the Federation. Furthermore a significant number of Site Leads had multiple roles running a site alongside a role for example as a CCG Pharmacist, or an educator.

The employing organisation of the Site Lead varies significantly, while 54% are employed at a practice level, 4% are employed by their local CCG, 4% by a medical services company and 36% by another type of company.

Some SLs run their own companies (Site B and F) and 2% overall (questionnaire data) are self-employed.

SLs often have a range of clinical experience (either as a GP or Pharmacist) or business experience (within health, often as practice managers or in posts for the CCG) and sometimes have both. This fits with work in the East Midlands (Mann et al 2018) that showed the importance of having both clinical and business management.

There is no money attached to the role and it therefore has to either be performed by someone already working in a (funded) role closely aligned to the scheme. Alternatively, there is funding for on-costs and these are often used to pay for the management role and the successful operationalisation of the scheme. It would be useful to advise later waves of how to fund the management role, to build on successful models. There is some evidence of existing 'management companies' or 'consultancies' successfully taking over other failed sites and applying for later waves of the scheme as expansions on earlier work.

Previous experience of site leads in primary care development and specifically working with pharmacists in primary care can be beneficial. For example, Christine feels lucky to have had a GP pharmacist working with her before the pilot scheme to prepare her what to expect and recognises that others may not have that benefit which may initially limit the role.

'A lot of these pilot programmes haven't got a practice manager like me. Who has actually done it? Luckily, having Charles with me, which is good, but a lot of practice managers now, when the pharmacists go in to the pilots, they are just sitting in a room and doing prescriptions. Which is not the job really, they need to be able to do much more than that. So that is the downfall of it. Bearing in mind I have got that knowledge behind me, I know what I want.' Christine SL Interview

There are many examples of where practice site leads build on their existing relationships (for example with CCGs, and Federation networks) being built on and this seems to be crucial to success.

Site Lead Emma had strong links working for the CCG before the pilot.

'The opportunity of the pilot came along. So it was quite instrumental from there from the forming of the bid really so I think helped them gain a bit of momentum and traction together. I think it was using a strength that was already in practice to accelerate an opportunity really.' Site Lead Emma

Site Lead Emma worked in community pharmacy for over 20 year before taking a role at the CCG working on care home pharmacy. Emma now works full time for the Federation but her workload on the project is variable according the demands of the scheme as it developed, initially working full time for several months to develop the bid and then working on other projects until the funding was awarded.

'I then did 13 weeks at full time and really that was just around developing, central resourcing that the GP practices could use so we went out to central advert, we had a central job description, we did central facilitated interviews. So I worked for 13 weeks to get those pharmacists actually into post and then once the pharmacists were in post, I would probably say about 20 hours per week from then until about 2 weeks ago actually, that I have been working 15-20 hours on inducting them, training them, mentoring them, working with CPPE, making sure their NHS England KTI's are all centrally co-ordinated and submitted. So really sort of to take the day to day workload off the GP practices.' Site Lead Emma

Fred is employed by a local CIC as a business development manager for pharmacy. He spend 25-50% of his full time role managing two local schemes There seems to be a tendency in the pilot for CCG local area teams to build on existing relationships. While this is logical, there are implications for future rollout of the scheme which may need to be targeted differently by local area teams to go beyond early adopters and into the mainstream Primary Care population.

GPs

GPs are clearly a significant category of participants. GPs may operate within the scheme in a number of ways from being heavily involved from concept through to delivery, through to supporting involvement as a mentor, through to only being involved at arm's length by working in a practice where a GP is located. The role of the GP in relation to the scheme tends to reflect their appreciation and understanding of the scheme. For example those heavily involved from the earliest stages tend to need little persuasion to do so, being already motivated to participate through appreciating the potential benefits of the scheme. GP mentors tend to recognise the benefits of the scheme but also have to contribute a significant amount in order to see returns on mentoring investments. Relationships and trust develop over time. GPs working in sites with GPs are usually the furthest distanced from, and most resistant to, the CP role and need time to develop their understanding and appreciate of the role.

GPs were included in both the quantitative data collection and qualitative data interviews but unsurprisingly GPs had the lowest response rate of the professional groups. The evaluation recognises and appreciates the limited time of GPs working in the incredibly busy primary care context. As such their participation in the evaluation to any extent is hugely appreciated.

The GPs who volunteered to participate in research interviews held multiple roles and were often leads on the scheme at a local (Federation level). It is important to recognise that the GPs participating in the pilot scheme, and in the initial evaluation, are likely to be innovators and early adopters. While this is a limitation of the data, it may provide useful inspirational examples for later adopting sites.

Site code	Site Lead Code Name	Roles / Specialisms
A	Adam	GP Partner GP Federation Lead (and Federation partner)
B	Barry	GP Partner GP Federation Lead (and Federation partner) GPwSI Diabetes Specialist
G	Gemma	GP Partner
H	Harry	Salaried GP Employed by a company Clinical Leadership / System Redesign

Table F-3. GP Leads

Pharmacists

Pharmacists were keen to participate in the research. 379 individual named Clinical Pharmacists were identified from the audit and invited to participate in the research by completing the online survey. 159 Clinical Pharmacists completed the survey representing a response rate of 40%. From the 159 survey respondents, 75 people (50%) volunteered to participate in qualitative interviews.

This project did not have capacity to interview such a wide number of participants, although their willingness to participate is noted and this report recommends further qualitative interviews, in particular with CPs and SCPs.

CPs and SCPs were contacted and invited to interview as part of case study site visits and interview participants are listed below along with further details about their roles.

Site code	CP Code Name	CP / SCP & Other Roles / Specialisms	Days worked	Hours worked	Practices worked at
A	Anna	SCP Site lead CPPE tutor			
A	Alice	CP	4	36	2 (3 days A1; 1 day A2)
B	Bob	SCP (Mentoring); SCP (Patient facing); Chair of NHS England LPN for Pharmacy; CPPE Lecturer	3 1		6 1
B	Betty	CP	5	37	1 (2 sites)
B	Bernadette	CP	3	21	2
C	Charles	SCP NHS England Clinical Leadership	1	8	1
C	Chloe	CP	5	37	2

Table F-4. Pharmacists

Other key colleagues from sites D-H also provided useful information about the work of their CPs and SCPs locally. These demonstrate the wide variance in roles, and the interesting model of CPs holding multiple roles relating to their professions.

At site D there is an innovative model of employment for several of the posts. Several of the CPs at site D are hospital pharmacists who have 1 day per week 'buy out' from their full time post to spend in General Practice.

'I think I was very excited about it at first, it has quite a lot of advantages but from the pharmacists' point of view, they have obviously got a kind of stable employer, they have a permanent contract in place, they have more support that comes by being employed with the hospital trust. From the practice point of view the pharmacist come with a better background of clinical knowledge, probably more experience of consultation styles' (David, Site Lead Interview)

While this model has advantages, its underlying motivation leads to some barriers.

'So the reason why they went for that is they are smaller, they have got less free cash, they thought it was less risk for them so they weren't left with a pharmacist on their books if it didn't

work out that they would still have to pay for. So a lower risk for them. What it has meant though is the practices feel less ownership of that individual so they actually invest less of their time in supporting the pharmacist. So the pharmacist doesn't integrate so well into the practice... they are only there a day a week in each practice so it just limits the kind of roles you can do. Harder to follow up problems or to sort things out.' (David, Site Lead Interview)

Most of the CPs at site H previously worked in community pharmacy and several hold dual roles still working in community pharmacy alongside their CP post. GP Harry acknowledges that CPs wear a number of different hats, which is different to other clinicians.

'I think one of the other things that came out from the interviews, was that unlike clinicians, pharmacists have often got fingers in a lot of pies. I can only do 3 days a week because I am running my own business one day, a locum another day, and I just found that fascinating. A completely different way of working to the sole commitment that a clinician has.' GP Harry

Some CPs need to change and develop their professional identity as a CP.

'So for the first 3 to 6 months it was literally me understanding how general practices are. I come from a community pharmacist background pre-reg so all I really knew was that as well. And also for the first few months of practise I was a Community Pharmacist by and large.' SCP Charles

The senior Clinical pharmacist role is, in the most part, significantly different to that of the (non-senior) Clinical Pharmacist role. This is true where the two roles exist alongside one another in a Federation.

Some sites make all CP appointments at a senior level. Site D has 14 pharmacists (6 FTE) all employed as seniors.

'Yes it was two things. Here everyone wanted prescribers, and wanted them to be working at the highest level that they could be. Also the practices didn't want any kind of management structure or anything like that so they wanted it to be a flat structure so every practice was getting the same kind of service and they were a prescriber.' (David, Site Lead Interview)

Site Lead Fred expresses some concerns over the responsibilities of the SCP role.

'The senior clinical pharmacist is a clinical pharmacist in their own rights so apart from asking them to be paid a bit more, how do you facilitate the time and effort that is needed to support the other pharmacists? There is no additional budget. Its ok, in your role, you have got 10 sessions, 9 of them can be patient facing, you can have 1 to actually go and network with your clinic pharmacists. It is not defined in that pilot, there is an expectation that they do it, but it not really defined and that is certainly not in place for the national roll out.' (Fred, Site Lead Interview)

At site B the SCP has some serious concerns about the sustainability of the SCP role since so much of the role is in developing others, rather than patient facing consultation work.

Patients

Data analysed for this section of the report includes data from 3 patient focus groups held at the case study sites ($n_{\text{total}} = 17$, Tables 5a-c).

Further patient data was not sought due to the limited time of the evaluation and also due to participant saturation. During the course of the evaluation it emerged that CPs were collecting data, on the advice of external trainers, sampling 30-40 patients with a brief feedback questionnaire. It is unclear whether the central training provider is collating this data, but it is recommended that this data be collated and reported to NSHE to form part of the overall evaluation of the satisfaction of the service. This gives a useful example of the way that localised data collection can inform evaluation data if collated.

Patient	No of medications	Appointments with CP	Notes
AJ	7	Yes	Statin
AR	3	No	MH
AG	7	Yes	Statin
AC	15	No	COPD

Table F-5a. Patient interviews at Site A (n=4)

Patient	No of medications	Appointments with CP	Notes
BR	Not stated	Yes	Warfarin
BJ	Not stated	Yes as carer	BRs wife and carer
BPn	Not stated	Yes	Partially sighted, needs carer support
BT	Not stated	Yes as carer	BPn's husband and carer
BP	Not stated	Yes	
BL	Not stated	Yes	Diabetes Long term pain

Table F-5b. Patient interviews at Site B (n=6)

Patient	No of medications	Appointments with CP	Notes
CA	3	Yes	Borderline diabetic
CJ	Not stated	Yes as carer	CA's wife and carer Member of the PPG group
CD	2	yes	High blood pressure and asthma
CJF	2	Yes	Diabetes, fibromyalgia, rheumatoid arthritis
CAW	5	Yes	Blood pressure, statin, diabetes
CL	5-9		Diabetic hypo
CG	5-9		CLs husband and diabetic

Table F-5c. Patient interviews at Site A (n=7)

Many of the patient participants expressed their happiness at being invited to participate in the research and have their views represented. Several patients learned more about the scheme and the role of the CP through the focus group discussions.

Some patients were PPG representatives and were keen to impact.

'I will take this back to the discussion groups because the doctors do listen to what we say and they are asking us more to get involved in ideas and things like that.'

Patient CJ

It is therefore likely that engaging patients in research will spread a positive message about the scheme back to other patients and to practices.

'But I wouldn't have thought it until I came here today. What I have heard, it has made me realise it is the way forward.'

Patient CT

Terminology

Terminology is a significant defining feature of any culture. It is therefore interesting, and useful to note, references to terminology around the role, as they emerge as significant.

There is no uniform terminology around the Practice Site Lead role which means they are often referred to by the 'other' hat i.e. pharmacist or business manager. This does not acknowledge the importance of being the scheme manager locally.

No Practice Site Leads expressed any objection to the title of 'Clinical Pharmacist' although some used it interchangeably with 'GP Pharmacist' and in general this was shorted to 'the pharmacist'. There was clear differentiation in terminology between the pharmacist in the practice and one working in a local pharmacy who are called 'community pharmacists'.

There was limited awareness and understanding of the role of the 'Clinical Pharmacist' amongst patients. No patient used the term 'Clinical Pharmacist' and all simply used the term pharmacist. At each site at least one patient had not been aware that the professional that they had seen was in fact a pharmacist and not a nurse or doctor.

'I thought he was a doctor to tell you the truth ' Patient BL

At site A there is limited awareness amongst patients about the service. The practice has advertised the role through posters and on their website but none of the patients we spoke to were aware of this. Several had their appointments offered to them by reception but were not aware it was with a pharmacist. A couple of people were referred by the GP and understood they were seeing an expert in medicines. At this site there is some overall confusion about the difference between a pharmacist in the GP practice, and the one in the community pharmacy, even amongst patients who have experienced both services.

At all sites there was some confusion about the difference between a community pharmacist and a clinical pharmacist. There was evidence that site leads working in practice are aware of the problem for patients of being told they have an appointment with a pharmacist and the need to highlight that this person will not be in the pharmacy.

'We had to explain to them that you have booked the appointment, you will see the primary care pharmacist in the surgery. Don't go to the pharmacy, come here. But we also spoke to

the pharmacy over the road. So they knew that this was going to happen and we were actually involved in the pilot. "We are now doing medication reviews over here so if patients do come, send them over."

There was some significant confusion about the difference between the community pharmacist and clinical pharmacist roles. Some patients believe that community pharmacists have access to electronic patient records. Within the focus group at one site the Practice Site Lead / SCP had to clarify this difference to the patient participants.

'The pharmacist in Boots is different to the pharmacist here. Our pharmacist has the same notes as the doctor does, she can read everything on system the same as the doctor. The other thing to know is that both our pharmacists, they work here in the practice, we can prescribe like the doctors can. So we can start new medicines, stop medicines.'

Patients suggested they would prefer clear different names for the pharmacist roles.

'So I think we could do with 2 different words' Patient Focus Group A

No Clinical Pharmacist objected to the title of 'Clinical Pharmacist' and in fact some, especially those from community backgrounds, enjoyed the description and felt it befitting of the more clinical role they were undertaking. There was no shortening of the role to the CP moniker, shortening the description involved simply calling the role 'the pharmacist'. Some CPs distinguished their role on the pilot from previous work in the practice by calling an admin / CCG role 'the GP pharmacist' and indicating it to be different from 'the clinical pharmacist' role, implying the former to be more administrative and the latter more patient facing. This distinction was observed by pharmacists across multiple sites.

When discussing the 'Senior Clinical Pharmacist' role it was often shorted to 'senior' or 'the seniors'. Despite neither the official NHS scheme nor the evaluation describing the (non senior) Clinical Pharmacist as such, several of the pharmacists described the alternative to the senior as 'the junior clinical pharmacist' or 'the junior'. Some participants, especially SCPs, avoided the use of the term 'junior' in case it was perceived negatively.

It is interesting to note however that some sites did not observe the recommended models of senior and junior pharmacists for example one site employed all CPs at a senior level. At this site they were simply known as 'Clinical Pharmacists' and not referred to as any level of seniority.

Patients had no awareness of any differentiation between senior and non-senior pharmacists.

Conceptualisation

This section covers the conceptualisation for involvement in the scheme, from planning and motivation through the application process, ratios used and any turnover at the site to date.

Planning and application

Site Models and Management

A wide range of management models was seen at Federation sites, often with a management company (CIC) in the middle. There is wide variance in size and location of practice sites. Some sites utilise third party managers or consultants building these costs into their initial bid, whereas others did not and struggled with having limited resource to manage the scheme. The person taking the site lead role and how they are funded has an impact on how the scheme is operationalised. A streamlined consistent approach and centralised advice from NHS England should be provided to the Site Lead role or management of the scheme and associated costs advertised or recommended.

The model at site A took part of an existing Federation CIC to pilot the scheme. The Site Lead is employed by the Federation, and also acts as a SCP (and also acts as a consultant for an external training provider commissioned by NHS England as part of this scheme).

Federation site B was constructed specifically for the purposes of the GP Pharmacist project; The Federation activity is managed by a separate independent consultancy company. The lead GP practice is the lead applicant on the scheme and employs all the pharmacists and sub contracts to the Consultancy Company who oversee the financial and HR management of the scheme. The benefit of this approach is consistency in training, mentoring, boundaries and responsibilities. The disadvantage is that money can be slow to be paid by practices, especially at the start of the scheme before benefits are realised. Overall centralised HR for federation can have benefits for operationalisation. Federation B site suggests that on the advice of the local area team, one third of costs in the application were 'on-costs' designed to cover the costs of managing the scheme using not for profit management consultancy.

At site B there were some tensions between the original dictate that advertised posts must be permanent, and the fact that the funding was only for 3 years; NHS team advised that local sites should manage this risk. Site B rejected this and offered 3 year fixed term posts to mitigate the risk of redundancies (and associated costs) and to motivate incoming staff to take a sustainable approach to their work. However they do expect all sites to employ their pharmacists at the end of the scheme.

At site C the Clinical Pharmacist role had previously been piloted and, as such, the bid was locally led and managed by a Practice Manager with previous experience.

At Site D, David co-ordinates the scheme from his role as a CCG pharmacist and is not paid by the scheme. As such he is hands-off on the day to day management of the scheme.

'I tried to kind of co-ordinate and support a bit but in reality, it is the practices that very much do the management and the guiding of the work. I am not a part of the pilot although I am kind of like a contact and try and help out with a bit of problem solving and supporting people a bit.'

David's involvement at the start of the scheme from planning to implementation was time intensive but reduced after this.

'That has reduced because obviously when it was very new and we were going through recruitment, it was fairly time consuming. Once people got settled into the practices it has kind of ticked over itself.'

Site E has 27 pharmacists working across 22 practice sites. The model at site E is incredibly complex and organised and managed strategically at CCG level.

'At that time we had 32 GP practices in [CCG area] and it was a formal sort of expression of interest from 29 of them. Then we sort of worked on a model whereby 22 of us eventually went out for employment on contracts and the other, well 5 of them 1 of them is me, work on a facilitated care home sort of fixed term 3 year service development role that we have been working at. Then obviously the equal access for those 4 clinical pharmacists across 32 GP practices work at interface, with the care home pharmacist as well. So we work 2 slightly different models under the 1 pilot. But in the GP federation, we hold the bid but the actual practices employ the pharmacists.' Site Lead Emma

Site E conducted some strategic planning with partner sites across the Federation in advance of the bid to gain their buy in.

'When we were looking at putting the bid together, what we did was a little bit of work. We put the practice managers and their leads to become partners together as part of the GP federation to actually do a little bit facilitated planning together to look at anticipated retirement, maternity covers, really just a cross model exercise to get an early buy in for an opportunity for them to consider a clinical pharmacist.' Site Lead Emma

Site Lead E suggests their CCG led model is successful, well recognised and appreciated and others have indicated a desire to replicate it.

In Site F1 all CPs are employed by the CIC. This site has 5 CPs (3.6 WTE) working across 6 practices. Fred is the local manager for 2 sites (Site F1 and site F2) which applied for the scheme independent of one another. Site F2 had been managed by a GP Provider organisation but after that organisation discontinued after 6 months the work was picked up by the CIC which was also running a site. The Site Lead is employed full time by the CIC, and manages this scheme for these two sites but also manages other projects within his role.

At site G the scheme is led by a GP who is also the local prescribing lead.

At Site H a private company holds the contract with the CCG. GP Harry is also the site lead; He employed by the private company and provides clinical leadership for 2-3 practice sites. CPS works across 11 GP practices.

Site H planned intensively for the scheme launch

'I think it was built on the fact that prior to the role starting in this practice, we had done quite a lot of preparatory work for all of the staff, both the clinicians and for the receptionists' GP Harry

Practice Site Leads recognise the need for a combination of clinical and business management as crucial to the success of the scheme.

'I personally don't think the pilot would be anywhere near as successful if you didn't have strong managers. [Barry] is very strong clinically and has a lot of respect from his peers.. That's a biggie. Because there was another practice that bid and was told to go away and write one like ours and they might consider it. So clinically it's good. Managerially [Business partner] and I are strong managers and if it's not written down it's not in the process you don't do it.' Site Lead Jane'

This reinforces findings from previous research in this field.

Sites interviewed tended to meet the criteria for 'innovators' and 'early adopters'. There is recognition from Practice Site Leads that their site is likely to be the example to the other sites in the Federation for the operationalisation of their schemes, but that practice will be, and will need to be, localised.

'[Practice B1] is further along than the other practices are. What we've realised throughout the pilot is at the beginning the plan was "here you go, this is how you'll do it folks" but that wasn't going to work and obvious in the first few months so we had to stand back and let the practices do what they wanted to do with the Pharmacists to a certain degree. They've come round to our way of thinking it would be fair to say within the last 18 months however nobody is as far on as we are. So the plan to sell the model is to advice the practices this is what they need to do. At the end of the day they're independent contractors, if they're their employees they can do as they wish.' Site Lead Brenda

Site Lead Fred suggests that mid-level support and new companies or support for Federations are an essential component of the design of the overall scheme.

'This whole programme, in terms of the bigger role out, is premised on an at scale solution of practices generally are not in a position to undertake at scale solutions. So it needs something else to be able to enable that. So for example, in [local area], [CIC] has worked with the practices compiling a bid to cover 35 practices. That is 9 whole time equivalent pharmacists. Now if we had not got involved in that that would not have happened.' Site Lead Fred

The research did not acknowledge the significant role played by local area teams at CCG level and include them as participants; As such this report cannot comment on the types of the commitment of time given or support offered by the team to sites or by NHS England to the team, but can acknowledge that the data from other participants points to their commitment to the scheme as significant and future research should include this group as participants.

Applications and Interviewing

At site A centralised recruitment across the site worked well, practice involvement in the recruitment process was really important as *'team fit needs to be considered'* and practices were involved in interviews.

At site B interviews were conducted by a panel including GP, Site lead and a local academic. The GP found the interview process difficult as he had no experience of interviewing pharmacists or realistic expectations of their ability.

At site C interviews were conducted firstly by practice managers, then by Clinicians.

'From a practice managers point of view, we needed to interview to see if we can work with this individual, because we needed to know that you are not only going to come in just on a basis of community, because the GP's have no knowledge on what a pharmacist is going to be within primary care. So my colleague and I, because we worked in London before, and we worked with [a pharmacist], we knew what his ability was and this is what we expect to do. So once they passed that level, ticked the boxes for the practice manager, we then moved it on to the partners. You interview on a clinical side, are you happy with the candidate?'

Christine recognises this was an intensive process but felt this important to get right or suffer consequences later.

At Site D the site lead, who is a pharmacist, was heavily involved in the planning and application stage as an employee of the CCG. The site had 5-9 applications per role but the standard was 'average' and David feels this is related to the salary offered.

'The salary recommended by NHS England is too low to attract the required level of expertise. The majority of applicants are relatively newly qualified and coming from community pharmacy. To attract people out of hospitals requires a higher salary and better terms and conditions' David, Site Lead Interview

At site D all pharmacists are employed at the senior level, and all are prescribing pharmacists.

At site E a lot of work was put into the planning of the scheme at the application stage, working closely with practice sites to facilitate early buy-in. At site E the Federation made a significant investment in the management of the scheme.

'They decided to cut me in full time to suit, to actually develop the bid, get the bid proposal written, do a little bit of scouting, mocking up and play setting. So I was working full time at that point then really came off the project until the bid was awarded. The bid was awarded and I then did 13 weeks at full time and really that was just around developing, central resourcing that the GP practices could use so we went out to central advert, we had a central job description, we did central facilitated interviews. So I worked for 13 weeks to get those pharmacists actually into post and then once the pharmacists were in post, I would probably say about 20 hours per week from then until about 2 weeks ago actually, that I have been working 15-20 hours on inducting them, training them, mentoring them, working with CPPE, making sure their NHS England KPI's are all centrally co-ordinated and submitted. So really sort of to take the day to day workload off the GP practices.' (Emma, Site Lead Interview)

At site E there were 10-24 applicants per role and the quality was considered high.

At Site F there were 5-6 applicants per role and the quality was considered high.

Liability and Indemnity

Many site leads expressed frustrations in dealing with indemnity issues at the onset of the scheme.

One site suggested that they found the resolution to indemnity issues through a well-defined job description with clear boundaries. At site B indemnity was not a problem for the scheme, not least of all because of an existing relationship with an insurer for a pharmacist working in the practice and negotiations were underway at the planning stage to avoid problems. This suggests that early negotiations at the planning stage can overcome any potential barriers with indemnity. Furthermore creating and utilising opportunities to build on existing relationships between sites and insurers could benefit future applicants.

'We are very consistent in what is expected of those employees within the pilot. There's a job description and that's all they're indemnified against. So if you choose to ask them to do something that's not in that job description they are not indemnified and we will not take the risk for that. And you'd be amazed, as soon as you say that people stick to job descriptions. Because indemnity was the biggest problem that everybody else had in the pilot. We didn't have that at all because they're our employees so we indemnified them all.' (Brenda, Site Lead interview)

Example job descriptions are available for junior and senior posts from a range of sites and could be shared as examples of good practice for overcoming obstacles with indemnity issues.

Ratios

Patient Population: CP ratio

There are strong feelings across sites about the patient population: CP ratio of 1:30,000 proposed for rollouts after the pilot phase.

At site A there is approximate 72k patient list resulting in a ratio of 1:12/15k. This was deliberately chosen *'as we felt this would make the most impact and enable integration into the practice team'*.

The site feels 'inundated' working at this ratio but able to be embedded in patient care. Both Anna and Alice suggest that working at a higher ratio would have a significant negative impact on both pharmacist integration and patient care.

'So if you were looking after a much bigger number, I don't know how much input you would have.' SCP Alice

Anna suggests that the integration of the pharmacists into the primary care team is helped by

'being present daily in the practice, becoming a member of the team and attending practice meetings'

While this can be achieved in small sites where pharmacists spend regular time, it will be more difficult to achieve in larger or more disparate sites, or with larger ratios, or where pharmacists spend limited time across multiple sites.

At site B the ratio is unclear but the lead site patient population is 11,000 and this site is supported by 1 SCP for 1 session plus 1.5 WTE CPs (2 posts). This implies a much lower ratio than the suggested 1:30,000. There is some negative feedback from participants about the ratio.

'I don't see how much of an impact you can have or it really work on that number of patients. To do it properly and to do it well.' Betty CP

At site C across the 8 GP practices there is a combined total of 90,000 meaning a ratio of 1:11,000.

At site D the ratio is 6 FTE pharmacists to 143,000, an approximate ratio of 1:24000.

At site E the ratio is 17.2 FTE pharmacists to 242,000, an approximate ratio of 1:14,000.

At Site F1 patient ratio is 3.6 FTE pharmacists to 55,000, an approximate ratio of 1:15,000. Site Lead Fred feels this is 'much more appropriate in terms of realistic pharmacy time per patient. So I think it is a much more realistic ratio'. Site Lead Fred implies that the ratio disadvantages the opportunity for CPs to be integrated within smaller practices.

'Under the NHS England programme, the current, the big roll out programme, a practice with a size of 5-6,000 only gets the equivalent of one session subsidised and it is just not enough.' Site Lead Fred

Site Lead Fred gives an example of a CP working 1 day per week in a practice and the practice becoming frustrated that the scheme was not generating pace fast enough until the working hours were increased until 2 days per week. Site Lead Fred questions the motivation behind the ratio.

'This population cover is woefully inadequate. In actual fact it won't happen at that kind of level, you are just diluting down the effectiveness of the programme. Where is the evidence base for that? I think it is fair to say there is no evidence base, it has just been done on that is all we can afford to do. I think that is fine, but don't role it out across the whole country. Don't pretend to have full population cover with clinical pharmacists because you haven't really got it. So I think there is a bit of a political motivation behind this which I think is misplaced, I think it is wrong.'

Senior CP: CP ratio

The rollout phases of the Clinical Pharmacist in General Practice scheme specify a ratio for sites to employ senior and non-senior CPs as follows:

- There will be one full-time senior clinical pharmacist to five (total number not WTE) clinical pharmacists. There is an expectation that all clinical pharmacists and senior clinical pharmacists will be in full time post at minimum of 0.8 WTE.
- Each clinical pharmacist will receive a minimum of one supervision session per month by the senior clinical pharmacist;

Whilst this ratio was not enforced in the pilot phase, several sites reflected on the ratio:

At site A the ratio for senior to non-senior CPs was restricted at a maximum 2:1 *'to allow mentoring and training. Most CPs come from a non-clinical background and so have significant learning needs.'*

At site B The ratio for senior to non-senior CPs was designed to allow for 0.1 session of pharmacist time per week per WTE.

At site C The ratio is 1:4 SCP:CP

At site D ALL clinical pharmacists were employed at the senior level, therefore no ratio exists

At site E the ratio is 6:22 SCP:CP (1:3.5)

At site F the ratio is 1:4

Turnover

Most sites have experienced turnover of both pharmacists and general practice sites.

At site A within the first year of the scheme one GP practice left the scheme (due to an inability or unwillingness to commit to offer the mentoring required) and one CP left their post.

At site B they have experienced turnover of 1/7 practice sites and 1/4 pharmacists

At site C they have experienced turnover of 1/8 practice sites and 1/9 pharmacists.

At site D they have experienced turnover of 2/14 pharmacists.

Site Lead David suggests that no one has left the role because they did not enjoying doing it. Site D reports movement of pharmacists across Federation sites

'We have had a bit of shuffling around of people as well, moving round from one practice to another within the same few practices because they felt perhaps a personality clash or they don't like supporting one practice and they wanted to support another. So a bit of shuffling around within the practices.'

At Site F1 has had turnover of 1 CP post (1/5)

Sites recognise that there is a high investment in the first 3 months of the post.

It is important to monitor turnover as there is a significant start-up cost to the scheme in terms of set-up, management and training. If on average 1 in 8 posts turns over in the first year of the scheme this represents an economic loss of 1/8th of year 1 costs. Steps should be taken to understand and minimise these high levels of turnover in the initial stages of the scheme.

Conceptualisation summary

There are a wide range of findings from qualitative data in relation to the conceptualisation of the scheme. Findings include the following:

- A range of sizes and models can work
- Pilot scheme sites participants largely led by ‘innovators’
- Planning stage often not managed by the same people who manage implementation (where it is there are advantages)
- Previous experience of working with pharmacists leads to faster integration
- Federations often don’t work well together – diseconomies of scale, needs to have a strong leadership model which is funded
- Schemes needs strong committed leadership – both business and clinical
- Centralised HR for federation can have benefits for operationalisation
- A decision should be taken as to the on-costs available to sites and promoted consistently through local area teams with support for entrepreneurial development and growth of existing successful sites
- Consistent communication and support for local area teams, further research should include these as participants
- Creating and utilising opportunities to build on existing relationships between sites and insurers could benefit future applicants
- Early negotiations at the planning stage can overcome any potential barriers with indemnity
- Interviewing advice for GPs and teams would be useful
- Recommended ratio of CP:patient population (1:30,000) is massively rejected by sites in favour of quality of patient care which is recommended to be max 1:10,000 or less
- Recommended ratio of Senior CP:CP (1:5) is largely rejected in favour of other models such as 1: 3 or replaced with specific time for mentoring (0.1 per CP to a max 0.4SCP)
- Turnover is reported at a rate of up to 20% of sites and up to 20% of CPs which has a significant cost to the overall rate of scheme implementation and should be both minimised and explored in further research

Implementation

This section relates to the local implementation of the pharmacist role and considers their induction, training and mentoring.

GP Expectations and assumptions

The research identified some mismatch in GP expectations about what pharmacists will be ready, willing and able to do safely at the start of the role and are trained to do on their UG course in terms of patient contact. These assumptions impact on all aspects of implementation and are therefore highlighted here.

At site A the GP had experience of working with a medicines management pharmacist from the CCG and saw this role as a continuation of that role.

At site B the GP clearly explored his assumptions and the impact of them.

Barry: 'you just make assumptions of what people can do'

Interviewer: 'Absolutely so what are some of the assumptions you made?'

Barry:..' that they are used to seeing patients and that's something they would have done on their undergraduate course - my first mistake. I called a meeting a year last January and my jaw dropped.'

Interviewer: 'When you realized that wasn't the case?'

Barry: 'I realised because I had a lot to do when I trained, so I understand the educational process. The cliff edge of touching a patient. '

There is a suggestion that GP expectations of the pharmacists need to be lowered.

'So given my experience. I couldn't understand when I was out on visits and people needed blood pressure why the Pharmacist would find it difficult. It wasn't difficult because they didn't know what to do, it's difficult because they are not used to it. So once I realised that, we then took, and this is partly why we had a... See I couldn't understand, I was expecting that the Pharmacist would come in and I'm quite an (Inaudible) individual and I was expecting them to partly drive it, they had loads of time, space and drive it and nothing happened. There're feeling a bit lost and I'm feeling a bit lost. I'm neutral. You can't get managers to do it because they really know what they have to do. It was in that meeting that I was like Oh my god, I'm expecting far too much from my Pharmacists. When you start breaking down this, if there is an expectation beyond what the individual thinks they can deliver then there is a mismatch and if you strip that back and say it's OK and start from scratch, your skills are in this, we know what your skills are but you just need to do this. Then actually people start relaxing.' GP Barry

At Site B the GP suggest that the scheme highlights some important implications for developing undergraduate pharmacy education in a clinical direction. Barry thinks of pharmacists on an equivalent level to himself, and above that of a nurse.

'The calibre of people who do Pharmacy is now higher than people who do Nursing, which is much broader. So in general you should expect, which was my view going into the interview, in general pharmacy should interview and should be much closer to me. Me and [A N Other pharmacist] have no different intellect. So he's no better than me and that's what I should be expecting. I'm looking for equivalent professional as well.'

However he recognises the difference, from a training perspective, in terms of preparation to deliver patient care.

'Doctors are a different breed to pharmacists. This isn't about professional hierarchy, but you can't replace the fact that I sat on a ward for 3 years taking blood, doing things, talking to people every single day, being exposed to clinical journeys every single day before I could make any kind of decision and I did that for 3 years. I presented patients to people. You used to be on calls the 3rd year students and you had to present to...'

This has obvious implications for undergraduate pharmacy education. It can only benefit this course to emphasise and improve basic patient skills and clinical care and hands on experiences.

At Site D not all relationships have been positive and show that site level buy in and investment are necessary for successful outcomes.

'There is in our area practices where it just hasn't clicked really, so they would say that they don't think that they are getting much out of having a pharmacist. That really comes down to the commitment or investment of time given by the practice, there is one particular practice where they haven't really supported the pharmacist enough themselves in terms of giving training, direction, so both parties feel a bit dissatisfied with the job role.' (David, Site Lead Interview)

Practice Site Lead D suggests that site level integration is crucial to the success of the role

'Yes and the message I would give is where the pharmacist does properly become part of the practice, then there are virtually no negatives in terms of the role. So once you get over that hurdle of really getting the pharmacists working in the practice as part of the team then it works. It is just getting over that first hurdle.' (David, Site Lead Interview)

Several sites report variance in GP expectation, within and between practices. Many sites report that the first year is significant to build trust and awareness between GPs and Clinical Pharmacists about the boundaries and development of the role.

Induction

Whilst the evaluation acknowledges that CPPE offer an 'induction' event, this section reports on induction activities provided for CPs at their local sites by their practice or Federations. There was great variance in localised inductions across sites.

At site A they had access to an established senior CP, in the Practice Lead role, who had worked previously both with practices and with the CCG *'who was able to support with induction and training.'*

At site B a GP designed / nurse led induction and training program (including blood pressure and weighing) helped CPs to develop confidence in becoming patient facing.

At site B there were some additional unplanned costs to setting up pharmacists for patient facing work

'We have a lot more costs because we have Pharmacists that see patients so we've had to order blood pressure machines, stethoscopes, since we've gone online with the pilot we've employed an extra 6 staff, that's around 2.7 full time equivalents but the additional work that the Pharmacists create, the patient demand. So while you would say that's a benefit because the patient is getting service, they're all hidden costs that people don't think about. Our phone costs have probably gone through the roof. We've had to buy them mobile phones because they're out so its lone working stuff. Sharps boxes have gone up because they go out with sharps boxes.'

At site C the site lead decided that the pharmacist induction should include spending the first few months working on the reception desk

'I stuck him on the front desk. I said the only way you can do this is from ground bottom because what I did as a practice manager, I came in, and I wanted to start from the bottom. So I thought ok if he got stuck on the front desk with another member of staff, he would know the ailments of patients coming in. So he sat there. You need to see the type of things that we get at the front desk. It helps, especially from the pharmacist side, to see what demands that we get, what type of patients we deal with, especially coming from community into primary care. So I felt that really helped his development that is why he is so good' Christine Site Lead

This was accompanied by a period of shadowing a full range of practice staff

'It helped with them being able to refer the patients on so if they see a patient, it means that the patient comes back to them for a blood pressure check, they will be able to pass that patient on to probably health care assistant so that kind of knowledge and who to actually doing what...' Site Lead Christine

In Site H the CP spent time working on reception in the induction period. GP Harry suggests this had the unanticipated benefit of helping admin staff to learn how to deal with patients

'Yes and you know, a question might come in about could they have this and because she was there, and is very open about being asked questions, and the screens were all up and running, so she was then able to give them an immediate answer or show them the sorts of questions or the sorts of methods that could be used to help elucidate the information.' GP Harry

This site copied this good practice examples shared from Site C. These are useful lessons to learn to provide guidance to future schemes. There could be a pack of shared examples of good practice inductions and checklists for future incoming sites to utilise locally.

Mentoring

Mentoring models vary, however not significantly. A reduced scaffolding model of mentoring (which is traditionally used as the model of clinical mentoring for registrars) is usually used and can work equally well for a pharmacist or GP. Sites benefit where existing staff, usually senior CPs, have experience in the general practice environment and can share their experiences with others.

At site A the junior CP is mentored by both GPs and the Senior CP/Anna.

At site B mentoring is offered to the senior by the GP. Mentoring of the juniors is done by the senior/s.

At site C the juniors are matched to a GP to gain their independent prescribing qualification and this GP acts as their mentor. The senior CP can use anyone as their mentor.

At site D, while the majority of clinical mentoring is provided by GPs, David finds himself drawn into both clinical and management queries.

'They do come with medicine queries or queries about prescribing. But more about how do we properly get set up on the clinical system, they had a bit of a problem with it, IT wise, or what are the rules around study time, study leave, I can be a bit of a mediator sometimes between the GP employer and the pharmacist themselves, if they are having a bit of a disagreement about time off or something like that.'

This highlights the need for an independent alternative to the localised clinical management.

Alice has a debrief meeting after every clinic as part of her mentoring and development. Initially the debrief would review all cases.

'When I first started it was this is who I have seen, anything where I thought this needs to be initiated because obviously I wasn't qualified to do that. So this is my thought process, these are the guidelines and evidence that I have based that upon, this is the patient's input on that and this is what I think.'

CP Alice

Over time the debrief has developed to be pharmacist led and query based.

'Now it is more like if I have got a query or don't know where to go from here or actually I have said the patient need to come back for GP input, felt they needed a diagnostic or examination assessment, sometimes it is just re-assurance that that is the right thing to do. So that is getting less and less, like today I just had one query.'

CP Alice

A similar model is used to support CPs by the SCP at Site B.

'Support them as they are going through their workload, if there is a prescription query, medication review, then gradually as they started seeing patients and the up-levelled their skills, supported their skills. As we started seeing the patients, I would see the patients they would observe, and then gradually we would swap round and they started seeing patients and I would observe. We would have a feedback after that session, and then gradually, once they had the confidence, I would move to a separate room so they had their own normal clinic. I would be in the other room and then once a week when I go there, any queries they have, little tips on how to do things, if they have issues, if they have got a more complex patient that they didn't have the full confidence to deal with themselves, show them how I probably would have done it. A safety net like.' CP Bob

At site B juniors achieved patient facing autonomy at around 6 months and prescribing autonomy within the first 18 months. Senior CPs were specialising at 18 months.

GP Barry gives an example of working closely with Bob, one of the senior CPs towards the end of his second year in practice, to develop him as an autonomous specialist.

'So Bob will start to do evening clinic with me now; his aim then is to become a 'Pain Specialist Pharmacist'. So this is about opiate management, to a certain degree. So he's going to unpick our complex patients as a part of our extended access, because that's the planned patients. He will see and start to manage our patients on opiates.'

SCPs can take the lead in their own development. At site C Charlie gives an example of how he specialised in diabetes.

'So I was really keen on doing diabetes and foot checks for instance because I thought I could do it quite well. I shadowed an endocrinologist in hospital during a few diabetes clinics. I had competency frameworks for type 1 and type 2 diabetes and the doctor, my Lead GP again, went over the competencies and I realised I was able to demonstrate 10 appointments in front of her, 10 appointments on my own and was able to say I was confident within this and they were signed off. And I went on a couple of CPD days and I did an assessment and diagnostic course as well' SCP Charles

Site Lead Fred suggests building early relationships through mentoring is crucial to the success of the scheme.

'I think the supervision is critical, particularly in the early months. The pharmacists are very safe clinicians, they are trained to be safe because basically, they are administering things that are potentially toxic to people so they have this kind of safety aura about them in everything that they do. They don't want to do anything that might even come close to harming someone. So one of the things that they really need is a senior clinical support mechanism that gives them the confidence to be able to do things, change things, and help people. So those first 3-6 months I think are really critical in terms of building up relationships and confidence. If that relationship isn't there, you just get a disconnect. We have seen that in some of these pilots where it just hasn't been there and hasn't been followed up. We know there are lots of reasons why these things don't get done, everyone is busy. But actually for something like this, that is just not good enough.'

Some Site leads see mentoring as a responsibility of their role and others see this as the sole responsibility of the GP/SCP.

Christine arranged the local mentoring and development model at her site despite being the PM she did this based on her own experiences of integrating in primary care. It included time spent on reception and shadowing junior staff through to basic appointments through to developing specialisms and autonomous working.

SCPs spend a significant proportion of their time mentoring junior CPs. In addition to the mentoring provided by GPs, at Site B this is 0.1 days per week per person commitment for the SCP.

Mentoring by SCPs uses similar models to those used by GPs. An example is given:

'Support them as they are going through their workload, if there is a prescription query, medication review, then gradually as they started seeing patients and the up-levelled their skills, supported their skills. As we started seeing the patients, I would see the patients they would observe, and then gradually we would swap round and they started seeing patients and I would observe. We would have a feedback after that session, and then gradually, once they had the confidence, I would move to a separate room so they had their own normal clinic. I would be in the other room and then once a week when I go there, any queries they have, little tips on how to do things, if they have issues, if they have got a more complex patient that they didn't have the full confidence to deal with themselves, show them how I probably would have done it. A safety net like.' SCP Bob

Autonomy was achieved by 6 months at some sites but not until 18 months at others.

'Depending on the skills of the individual between 2-6 months. Round about 6 months I would say I managed to extract myself. As they got better, their workload has increased because the practice is giving them more work because they can do it much quicker.' CP Bob

Pace of autonomy depended on a number of factors depending on the individuals themselves, the mentoring provided and the intensity of work.

The senior role conducts mentoring which is pastoral and professional as well as clinical

'I think it depends upon how confident the Pharmacist feels and how motivated they are. It's not just about your clinical skills but also about your leadership skills. How confident you feel in different settings, how much do you want to do. I like to have a very open based relationship with my junior – well I don't call them junior because they're Pharmacists you know, the younger Pharmacists or people with lesser experience, I think everyone has different levels and I think it's about talking with them openly and asking what's your continual professional development plan? What area do you want to go to? What excites you? What doesn't excite you? And having a good balance of it all and seeing where they want to be in a year's time and sort of helping them on that journey.' SCP Charles

The SCP mentor may experience some tensions between being a friend, colleague and a mentor

'It's about having that balance between being too friendly but also being able to support them in an environment where it can be challenging but also being able to challenge their practices and say "I think you can do this and I think you should go into that area" or if there's been an issue around performance, you can have that open discussion. And I think we've got that balance quite well where they know that if there's something that needs to be discussed around a consultation or something that I've picked up that I think 'oh guys I think this needs to be done a bit better' for instance the clinical coding or consult hasn't been that detailed I'll be like 'guys you've got to make sure consultations are good, this is how we structure them'. And if it's a consistent problem, I'm happy to do a presentation, they can come and shadow me. We've got that quite open relationship where they can come and see my appointment list and say '[Charlie] I know you're doing a combined on contraceptive today, do you mind if I sit in and learn how you do it?'. By all means as long as the patients are alright with it and comfortable they're more than welcome to. So I think we've got a good relationship where it's open but also have the ability to challenge each other and also the ability to support each other. And I think that's a really key part of working as a team.'

Training

This independent evaluation of the scheme does not purport to include a full evaluation of the training provision within the scheme. However where the training needs of CPs arose as a significant area of research it is included here.

Training is externally commissioned, funded by NHS England and offered to all CPs on the national scheme. This includes CP training by CPPE, prescriber training (often delivered by local HEIs), integration training and localised support. This training is vital to the integration of the CPs in the role. Although training was reviewed broadly in the evaluation, this evaluation does not seek to claim an evaluation of any individual component of training. A key recommendation is that all commissioned training paid for as part of the scheme is independently evaluated.

Sites report that some localised training is necessary in the induction period when the pharmacist first arrives in the practice to begin work.

Site A suggests that the most important training needs for pharmacists coming into primary care are:

- How primary care works
- Local prescribing guidance
- Clinical Pharmacy Skills
- Consultation Skills
- Blood results – when to request and interpreting results
- Clinical examination skills (although this can happen later)

SCP at site C also recognises the need for localised induction training

Charles talks about the induction and training needing to move professional identity.

‘So for the first 3 to 6 months it was literally me understanding how general practices are. I come from a community pharmacist’s background pre-reg so all I really knew was that as well. And also for the first few months of practise I was a Community Pharmacist by large.’

To develop a professional identity you need to understand the context you are working in:

‘So understanding the processes in general practices, who’s in general practice, what are the roles of doctors, nurses, health care professionals, health care assistants. For instance how do they access mental health where are the trusts, who the local community pharmacy networks, all that type of stuff. And understanding how the computer system works, how to write consultations, how to clinically code’

Short sessions were delivered for the CPs by the Site Lead in the practice about key areas of primary care locally including understanding QOF, including how contracts work, who does what and who to go for support and help.

The SWOT analysis recognises that free training for pharmacists is a key benefit of the scheme. Research on site identified that while free training is a benefit of the scheme, training has a hidden cost to sites. There are 18 days of off-site CPPE training for pharmacists in the first year, which is a high cost relative to the role. Furthermore due a lack of availability of local training many pharmacists have had to travel and on occasion stay in hotels to access training and there is no additional financial support for this and therefore that cost has to be borne by the practices, as the employing sites.

Site A reports that CPPE training is *‘good but frustratingly short notice.’*

Site Lead Beverly gives the example of two CPs on the scheme who had to attend a course in London (despite being located in the North of the country) and only being given 3 days’ notice – this cost the practices £700. On another occasion all 5 pharmacists had to attend training in Newcastle.

This is because of a lack of locally available training in some areas. So although training is funded, it is not at no-cost to practice, it is a hidden cost.

'The only way you can book CPPE is at short notice which means we have massive travel claims. It's now in the second year it's become a bit more flexible because there's a choice on what they can and can't attend. However a lot of the Leeds and Manchester go really quick so we end up sending them to Newcastle, London, Bristol.' Site Lead Beverly

Site Lead Christine suggests that external training benefits the pharmacist more than the practices.

Some CPs report the benefits of hands-on training for their personal and professional development.

CP feedback suggests that training needs to be personalised, as uniform 'one size fits all' offers too much training to people with existing experience of primary care and prescribing.

'Some of the other stuff has just been a bit of a waste of time really. I think they didn't really pitch it right for everybody and I know it is difficult, but we are all at very different levels. I think that is something that could probably be improved because I was with people and they were pitching things to me that I have been doing for years. I was already a prescriber before the pilot. You would be pitched as a group as a whole, rather than looking at, so there was quite a few of us on some of the study days, that have been prescribing for 10 years....I just think they could have maybe split the learning into people that had come from primary care and people who hadn't.' CP Betty

'I just think sometimes they were teaching us how to suck eggs basically. Some of the stuff we had done, and done, and done, and done.' CP Betty

Site Lead Fred suggests that some externally commissioned training was delivered too late in the scheme to be useful.

'But the PCC proposition originally was to help to orientate the practices into how they could use the pharmacist which is a great idea but it is no good if they come in for the 1st visits a year after the pilot has started.' Site Lead Fred

Several sites have CPs are at variable stages of their development. Practice Site E requires all CPs to achieve their IP status by the funded mid-point of the scheme (18 months).

Site Lead Emma suggests that there economies of scale at large sites, especially in developing prescriber training

'I think working at that sort of scale and having somebody like myself in place that has allowed me to work with people like Health Education West Midlands and make sure that work is commissioned, and work with the 3 universities that were offering the places' Site Lead Emma

Site Lead Emma suggests that the site lead can contribute to the development of wider education programs including undergraduate pharmacy and postgraduate prescribing courses.

All Site Leads expressed some level of frustration at the disjoint between the external training offered to CPs and their day to day practice. It might be useful for external training providers to conduct some two-way research and communication work with site leads in order for them to understand the training which the pharmacist will undertake and how it can contribute to their role development.

Sites recognised the need for ongoing training of the wider community of healthcare staff in relation to the role. Site A recognises the need for localised training within the pharmacy community and Anna has set up a learning community with pilot pharmacists, other practice pharmacists and local CCG pharmacists. At site B the CPs are auditing their role to provide up to date evidence-based training for their reception and admin staff about the pharmacist role and appropriate tasks and triaging. Site C

also feels that it is important to keep all staff updated about the capabilities of the pharmacists for triaging.

Education

Whilst earlier sections have presented findings in relation to the mentoring and training of clinical pharmacists, there is a wider set of findings in relation to the implications of this role on the broader education of pharmacists, and in particular in developing a niche specialist role for Clinical Pharmacists.

Some sites suggested that the training and development provided should link to the development of qualifications and associated identification of competencies.

Barry thinks the Royal College of General Practitioners needs to do more, and there should be more networking and awareness raising about the benefits of the role at the profession level.

'Long term I thought Pharmacists could have a really important role in patient management always and that's what we we're doing in [BETA]. The problem about that for us here the demand in work of our acute prescriptions, discharges and hospital letters, that's a full time job in its self. I also thought that was quite a rubbish job, Pharmacists. That also meant you didn't get the best of them as a team member. I'm absolutely completely devoted to a multi discipline team in primary health care and I totally think that Pharmacist have a huge role to play.'

Christine feels there is not a clear enough link between training and the establishment of competency which is causing variance in practice across sites.

'The CPPE course don't actually give that sign out to say you are competent to actually go into general practice and do that, and that is my main concern. Probably yes, other practices are doing that, where they go to the CPPE course and do an asthma qualification or certificate, come back and start seeing asthma patients. I am not happy with that. They need to actually sit in to a clinic and see patients for at least 3 times and do 1 on your own before you actually sign off on competency. That is how I work within this practice.'

GP Barry feels that Pharmacists, and other primary care health professionals, should be working towards a set of national competencies and is working nationally to lead the agenda on this.

'At the Royal College Conference in Liverpool few weeks ago, I stood up in a Nursing stream and said what you talking about Nurses for? This is a multi-disciplinary team. I'm now working with the college about company frame works and NHS England and locally. These aren't nurse competencies these are professional competencies' GP Barry

Site E suggests that the CP role can equate to a primary care advanced practitioner.

'We are struggling to recruit GP's locally and there is a bit of recognition that clinical pharmacists, now they have done their health assessment and independent prescribing, are almost being considered on par. Why does the job advert say an ANP when actually that can just be a clinical practitioner?' Site Lead Emma

GP Harry suggests that the model of pharmacy education is changing.

'One of the interesting things that came out from the interviewing process was one of the older applicants, we were asking a set of standard questions, one of them was about any particular drugs you didn't feel safe in prescribing them? It turned out when this gentleman trained, he was told not to make a diagnosis, and not to initiate a prescription. We are now asking you in a see and treat model to make a diagnosis and to initiate prescribing. So we

found that that was something we were then able to help reflect back to other candidates.’
GP Harry

GP Harry discusses a willingness to train pre-ref Pharmacy students if guidance was offered.

‘From a practices point of view, it will be really helpful to have a day in the life of a pre-registration pharmacist within a practice to then be able to see what areas they could become involved with that the practice would feel confident’ GP Harry.

Implementation summary

There are a wide range of findings from qualitative data in relation to the implementation of the scheme. Findings include the following:

- GPs can have unrealistic expectations of pharmacists based on assumptions; expectations should be explored at the conceptualisation stage or early implementation
- Localised inductions are important to the CP integration in the role
- Good induction practice should be shared
- Centralised inductions can be supplemented by localised inductions
- Different models of mentoring can be successful
- GPs base their mentoring on experience of registrar training; training practices can be successful host sites
- GPs are getting nothing back for their mentoring time
- Senior Pharmacist mentoring is more variable than GP and can be pastoral as well as clinical
Best practice of support when reduced scaffolding clinical mentoring model used
- Mentoring can be withdrawn or transferred after 18 months
- Free training is a benefit of the scheme
- Training does have a hidden cost to practices
- CPs report significant benefits from training for their personal and professional development
- CPs need training personalised according to their previous experience
- All training should be subject to independent evaluation
- The scheme, and participants of it, are contributing to the national development of a set of professional competencies for primary care
- There is overlap between training and research and this could be maximised for learning

Operationalisation (The Day Job)

This section on operationalisation refers to the way that the CP role is undertaken on a day to day basis. This includes activities, relationships with colleagues and wider networks. It also related to the way to the role is operationalised over time and so includes role development and changes in primary care practice.

Activities

This section reviews the data on the work activities of the CPs. CPs are involved in a wide range of activities and these are scaled and developed over time.

The first year activities are largely developmental and part of a closely scaffolded mentoring process. Early responsibilities for the CP may include:

- Triaging
- Audit and non-patient facing work
- Vitamin D
- Hypertension

At one year into the pilot scheme there is evidence at all case study sites (A, B, C) of independent autonomous practice by CPs including:

- Medication reviews
- Discharge management
- LTC appointments
- Some acute and urgent care

Part of the development process is achieving the prescribing qualification which leads to more autonomous practice. This autonomous work has a focus based on local needs and interest.

Practice is localised at site D. Of the 14 pharmacists working at Site D only 1 is working on acute appointments and 1 works at care homes. 1 has a focus on mental health according to the needs of the practice and her specialism.

At Practice Site E there is clear guidance about the day to day role.

'We have got 2 streams that are most important, most of them have a very clear defined job description, that right from the offset it was pushing them to be clinically facing. So they tend to be 50% clinically facing, 50% non-clinical facing. The clinical facing role, most of them are on long term conditions, management clinics. I think we have got 2 pharmacists who actually do their 50% face to face in triage, so they do a key triage presentation. They tend to be really with the more, older sort of style of GP practices that were really walk in centres, sort of left with that residual acute presentation. Very newly formed GP practices who have probably younger sort of patient lists and not so much long term management there, but we have 2 who are acute triage.' Site Lead Emma

Most CPs at site E are only just achieving their IP status and their workloads are beginning to change and develop accordingly.

'We haven't had any opportunity, they have got to do their clinically enhanced health assessment IP, what we have found they have actually got a very unique skill mix now that they can take on the long term condition and acute presentation. So what we are getting now is a lot of interest in the other GP practices about how they can facilitate that. So I think that will increase dramatically in the next 6 months' Site Lead Emma

Development of CP work

Evidence shows that it takes time to develop confidence and therefore variance and increased complexity in CP activities.

Anna reports that at site A, less experienced pharmacists start with more restricted areas such as hypertension and vitamin D deficiency and expand as their competence and confidence grows.

Barry has been actively involved for a long period in considering the ways that CPs can integrate into Primary Care and the kinds of activities they could undertake and how the role might progress.

'I was already at the situation where we wrote a spec about 10 years ago about the source of work we thought a Pharmacist could do. Then we had the inspirational spec, but part we already had that. Then we had the KPI around that. This was around discharger, acute prescriptions, CCG work, QOF work, medication reviews. All that we were already doing. We weren't necessarily doing it that well. In the initial bid I had the idea that people had to know basic clinical skills. So what I said in the first two years people should be able to do basic hypertension checks, diabetes checks and then in the 3rd year people should... This was before CPPE ... So once people have got their legs got their stripes just with basic stuff. I will expect people to start choosing various... to start specialising'

These models based on years of experience and derived from a GP would be useful to share with others unsure about the kinds of work that CPs can do.

GP Barry explains that he had to reduce the specification to allow for his assumptions about pharmacists confidence with patients.

'I realise there is a bit of a gap you need to keep moving people forward so I started to look at areas of clinical medicine that didn't necessarily involve actually touching patients. So where we're up to with that is ... I'm not the best person to explain the workflow works. But we looked at areas where people were confident. We already do our own walk-in and INR service... Then you need to choose things they can gain confidence in. So we did a load of stuff on vitamin D, so all our vitamin D goes through the pharmacists. Osteoporosis, apart from signing off, goes to the Pharmacist. We had real issue with acute depression prescriptions. So I have few links mental health team as I've been here a long time; so we got them to come in and do some suicide training, depression training. So they don't assess the need for people with depression but they review all the people who are on anti-depressants. They do the reviews they've been trained how to assess the reviews and then they do one of 3 things. They start taking people off anti-depressants, they repeat the 6-month prescription or ask the doctor to review it'

At site A at 18 months into the pilot scheme Anna reports that the SCPs on the scheme spend significant proportions of their time conducting variable length patient facing consultations while the junior CPs are taking the prescribing course and have just started to see patients for 30 minute appointment slots.

Alice reports significantly differing workloads at the two different practices she works across. There is evidence that it takes time for GPs to build trust and understanding in the pharmacist role.

'Because Alice has been in those practices she has established the relationships and what we can do, it has been easier for her to come in because they have an expectation and understanding already. Whereas these other 2 juniors have had to really build that up and convince them that they are safe hands.' Site Lead Anna

Alice agrees and reports that as part of her role she updates GPs about her capabilities and proactively suggests tasks that she can be involved in that will benefit the practice.

At site B the senior CP has a connected laptop which he finds invaluable working across multiple sites.

At site B the juniors focus on key areas identified above while senior CP offers specialist clinics and mentoring.

At site B all pharmacists are trained in B12s.

At Site C Christine feels that her role as practice site lead is to decide what the CPs do in relation to the needs of the practice. The development model for the first CP at site C was:

- Reception duties, shadowing and half a day a week on prescriptions as well as rewriting policies
- Medication reviews and identifying specific needs
- Practice workload – Specific disease, B12s and audit work
- Pharmacist workload – Independently created workload

At Site E early work was strategically planned for CPs by the CCG focusing on medicines optimisation

'The clinical pharmacists were gaining confidence in their patient facing role, their actual day to day would be the meds optimisation role so for the first 12 months we did an awful lot of medication reviews, triage reconciliation. I would say not patient facing but there was a degree of patient element facing to it but it probably wasn't, that wasn't the predominant focus. I think we calculated they had about 468,000 cost saving, this was actually based on generally housekeeping, records taking off the medication, making sure they were using cost saving switches, so they had an awful lot of generic, proving their worth which I think again, with a facilitated and co-ordinated approach with the CCG to make sure that the early recognition was made as a valuable skill set we could bring in to general practices. There was an awful lot of doubters at the early age.'

CPs are expected to achieve IP status and begin working autonomously by 18 months into the role.

At site E Federation sites work closely with the CCG to develop work strategies for the CPs

'So we have been using recent opportunities for the CCG to look at local commission services and GP practices about future services that the pharmacist could be involved in... Sort of STP, cancellation planning, funding for diabetes, we have got real recruitment issues with our diabetologist. In secondary care, we have done a little bit about scoping how much clinical pharmacists can be looking at complex care maintenance clinics in GP practice with a bit of up-skilling, so we are working on an education programme to use some STP funding hopefully within the next 12-18 months about developing that, so that is the next sort of phase we are doing with these clinical pharmacists.' Site Lead Emma

An example of one year data across Federation Site E is presented at Appendix A

Appointment lengths

As reported from the Patient perspective, longer appointment lengths were generally offered by CPs and appreciated by patients as personalised care.

'I agree with the practice how many minutes they should have for each appointment or each interaction should be, so it if was something, just a quick review, it is 5 or 6 or 10 minute based on the skill set I have at that practice. Then face to face could be anything from 10 minutes to even 30 minutes.' Bob, Senior CP, Site B

At site H there are some many queries for the CP as the role develops they have to limited to appointment slots.

'As things get going, then we found that there was a ..., well we didn't know what the limit was for number of tasks. So we then assessed that and said look it is ridiculous to have more than I don't know, 20 tasks, they are all booked in. I think it is done that they are all booked in in an appointment slot so we have got a way of assessing the workload.' GP Harry

There is also a mechanism for dealing with additional tasks.

'Let's say they added somebody on, having appreciated that she had fulfilled her slots, I think they would probably then say, Mrs Smith, please see task ... that gives her the opportunity to then forward it on to somebody else if she doesn't have the resource to be able to handle it ' GP Harry

Patient access and awareness

Awareness and understanding of the CP role is not yet fully established.

Patients are usually invited for appointments by the pharmacist, or referred to the pharmacist with a medication or LTC through triage. Occasionally acute appointments are triaged to the CP depending on practice capacity.

Case study examples show the range of methods used for patient appointments with CPs.

At site A there is limited awareness amongst patients about the service. The practice has advertised the role through posters and on their website but none of the patients we spoke to were aware of this. One patient suggested that a message on the automated system might reach a wide audience. Several had their appointments offered to them by reception but were not aware it was with a pharmacist. A couple of people were referred by the GP and understood they were seeing an expert in medicines. At this site there is some overall confusion about the difference between a pharmacist in the GP practice, and the one in the community pharmacy, even amongst patients who have experienced both services.

At Site B patient L thought they had seen a doctor not a pharmacist. Patient P (younger person) had also seen a pharmacist but didn't know. At Site B, Patients R and T approached the practice for an appointment and were offered the CP.

'They turned round and said do you mind if you see this lady here, she is a pharmacist. I said no not a problem so that was it.' Patient R

Patient BPn came for a repeat prescription and was advised to make an appointment with the pharmacist. Patient P was contacted proactively and invited in to review his inhaler use with the pharmacist. Patient L was called by the pharmacist about his medications and invited in for an appointment.

At Site C Patient CA booked an appointment with a GP about a LTC and was advised to see the pharmacist instead. Patient CL also sought an urgent appointment and was offered the pharmacist. Patient CD had a new prescription dispensed by the community pharm who advised her to go and made an appointment with CP to understand her meds. Patient CA was diverted to the pharmacist for services that had previously been delivered by a nurse.

Only one negative experience was reported by a patient about their appointment being arranged with a pharmacist. Patient CJ was annoyed because he did need to see the doctor and thought he was but saw the pharmacist and then still had to make an appointment see the GP.

'No I needed to see a doctor. This is what I don't understand' Patient CJ

At Site C several patients were confused between the GP pharmacist and the pharmacist in the onsite pharmacy.

'The thing is it was explained to them if it was a medication review, it is no longer being done by the GP, it is being done by a primary care pharmacist. It was a bit tricky because some of them went over to the pharmacy. We had to explain to them that you have booked the appointment, you will see the primary care pharmacist in the surgery. Don't go to the pharmacy, come here. But we also spoke to the pharmacy over the road saying please if you are, because they knew we had these people in house... they knew that this was going to happen and we were actually involved in the pilot. We are now doing medication reviews over here so if patients do come, send them over.' Site Lead Christine

Colleagues and relationships

There is general acceptance of the role by all Primary Care colleagues and little resistance reported. Any resistance to the role reduced as trust developed (in both the role, and the individual).

GPs are the largest body of professionals likely to have early concerns about the role.

'It was very difficult to convince the GP's at the beginning and Charles knows that. Because I had several conversations around everything, it was really hard to convince them that I want a pharmacist in primary care.' Site Lead Christine

Christine suggests there is some initial resistance and fear from the nursing staff that can impact on integration.

'in the beginning they think their jobs are at risk and I can tell you from the past, when we started up with Charles, there were a lot of nurses who were 'you know what my job is at risk' and it was very difficult for the pharmacist to actually fit in.' Site Lead Christine

Practice Site Leads work closely with GPs and feel that part of the role is bringing GPs on board.

'It was very difficult to convince the GP's at the beginning. Because I had several conversations around everything, it was really hard to convince them that I want a pharmacist in primary care.' Site Lead Christine

Practice Site Leads often had to manage GP concerns.

'What they can do, it is a waste of money, I don't think they can see patients, we are going to have an influx of patients coming to me.' Site Lead Brenda

Practice site leads had to manage GP expectations.

'GP's have no knowledge on what a pharmacist is going to be within primary care.'

Site Lead Fred suggests that GPs should be clearly informed of the return on investment process of the scheme.

'If you invest a day today, you will get 2 days back tomorrow. That is really key and some people don't quite get that and unless you are there to support that process to happen, in many cases it won't happen.' Site Lead Fred

As a result of this practice site leads felt it important that applications, interviewing and mentoring should have both clinical but also business management support.

Site Leads suggest that managing responsibilities and boundaries is significant to ensure positive working relationships.

'There's a personality clash between the two seniors so they don't speak to each other and has caused massive issues. My view on how it should have been managed was that Senior Clinical Pharmacist no. 1 should be responsible for that Senior Clinical Pharmacist no. 2 should be accountable for that. They are managed by the Clinical Lead because they are clinical. That didn't work. All management I believe in the pilot should go to manager not a clinical. Because clinicians are not managers. I think that would be one area where I would say we failed massively in the pilot.'

Site Lead Fred feels that without the site lead role the scheme lacks vital management support.

'The pharmacists have lacked support, lacked direction, they have not had the network of people to talk with, they got no support with challenges if they have got issues with the work they are doing, and there is all things like that. No appraisals were done, no kind of additional training has been done, no networking events. The other thing for me is there has been very little accountability because some of the sites have been doing the data collection, stuff for [NHS England], and some quite frankly, haven't. There has been no rigour in terms of the management of things like that that should have happened from day one.'

'One is the scheme does not provide for any kind of management support which I think is really short sighted.'

GPs see the role as complimentary to the nursing role rather than competitive.

'When a nurse is on annual leave you have another skilled person that can cover. So it's all about productivity in general practice. It's important that you have a multi skilled workforce able to help each other. It is about utilising the multi skills of a multi-disciplinary to help get the patient seen by the right health care professional at the right time. Before that, GPs would see all the patients. All medications would be done by a GP. All long term conditions apart from respiratory and diabetes would be seen by a GP.'

GP Harry feels that integration of the CP and communication of their capabilities is vital to the success of the scheme

'I think if you are going to make this project successful, or to improve the success, I think it is 'understanding what their role could be and it is getting a communication strategy that means that everybody sees everybody else. She is one of these people who has actually become part of the team both outside work so when they go out for a meal or drink, she is included and sometimes drives that' GP Harry

Most sites have some kind of Federation network for colleagues which is often supported by a virtual WhatsApp group for off-site communication.

Practice Site Leads reported a range of relationships with their local area teams. All sites were assessed by NHS England local area team at the application stage, and where sites were not successful feedback was offered. Some sites felt that any support beyond the initial application stage was limited, but others found their local area teams very supportive to developing the scheme locally.

Colleagues

Local and internal networks

There are wide ranging examples of localised Federation level networks.

At site A there are monthly peer review sessions for pharmacists as well as joint monthly meetings with CCG pharmacists. There are also ad-hoc events to bring together pharmacists from different professions which the Site Lead helps to co-ordinate.

At site B the GP offers monthly case based tutorials for CPs. They also have wider meetings with the healthcare team on issues such as safeguarding.

The CPPE mentoring groups act as a local network, or online network, for some CPs.

At site C the Federation CPs meet up weekly and use a WhatsApp group to communicate remotely.

At Site D the CPs, who met at centrally organised induction events, have formed a network. They meet in the evening once per month for 'educational talk'.

Site E reports localised learning networks.

'what again we have found very locally to try and bridge some of those relationships, is to look at some of, what we have in common, and certain time of commissioning at the moment, is education so we have been doing a lot of shared education events to actually drive the relationships at a local level between community pharmacy and the clinical pharmacists.'

CCGs can offer great support for cross practice networking but the range of support offered is locally highly variable.

Site Lead D suggests that the CCGs could and should take a more active involvement in supporting sites through networking activities.

'I think we feel, the CCG initially kind of, we were kind of warned off being involved by NHS England which I think probably, in my mind, was a mistake. It was probably political more than anything else. That is exactly the kind of thing we would have liked to do, set up a better network not just involving the clinical pharmacists from the programme but from other sectors.'

Site E suggests that the CCG co-ordinated approach facilitates development of local networks.

'There have been several stake holder meetings where we have gone clinical pharmacists, LPC, acute care pharmacist, intermediate care, providers and alliance representation to look at but I think the key to that is the CCG, they have the commissioning power to almost release a bit of a domino effect that looks at a commissioned service that really reaps and sows the relationship and I think the difficulty comes down to funding.'

Site F organises networking events several times per year to share good practice

'in the past we have done the stakeholder events as you will be aware, usually every 3-4 months at which they can showcase what they are doing, talk to each other and share ideas. So if someone is doing a particular piece of work, they can directly network with one of their peers, to talk about the details of that. A really good example was the DMARD monitoring that was done originally by [CP] at [Site B3] and that was then picked up by [CP] at [Site B4]' Site Lead Fred

Site Lead Fred expresses some frustrations at the lack of networking and learning at a national level across and between pilot sites.

'I would say it is pretty appalling in fact I would say it is non-existent. I know pretty much zero about the other pilots apart from questions that I have asked. So I have got a little bit of information, there are 2 pilots in [location] but I have not had a chance to go and see them, see how they are doing. There doesn't appear to be any kind of communication on a regular basis about progress of those pilots. Apart from the work you are doing there doesn't appear to be any evaluation. There is no feedback on data and activity. I think the communication of the programme on a bigger level has been appalling.' Site Lead Fred

GP Harry has seen local support for networking withdrawn

'I think that it is up and running and she is also involved in other meetings within the practice. She attends the MDT meeting. You know how it is everything changes. We used to have an MDT that related to the admissions avoidance and for safeguarding. These would involve the community matrons coming in to the MDT, and that worked very well. Then of course, they pulled the plug on it. So now the community staff say they haven't got the resource to do that. Another opportunity for communication disappeared.' GP Harry

In area H, GP Harry suggests links between practice staff and community are limited

'Sometimes the community staff don't have a practice presence except when they bring a blood test in or a blood sample or something like that.' GP Harry

Evidence of developing networks through community pharmacy

There are strong links with community pharmacy through both day to day work and through networking opportunities.

Several sites reports experience as a community pharmacist and understanding the difficulties of working closely with General Practice.

CP Bernadette speaks to community pharmacy every day (and several times on a Friday!)

At site C there are strong links with community pharmacy. There is a two way relationship. The local community pharmacy provide support to the CP

'I must admit that the pharmacy next door, were fantastic, very very good and I think they are clinically sound. You know there is a few you find, they are good. They help you with drug tariff, they help you with cost effective prescribing as well particularly if you are switching alendronic acid over to risendronate. What is the cost to the NHS they are quite plugged in.' SCP Charles

Equally he feels that he can help community pharmacists and the GP Pharmacist can provide a good and better link to General Practice for community pharmacists

'Community pharmacy, particularly prescribing, you have to call the doctor, sometimes they'll get through, it gets left with the receptionist and sometimes you have to wait until the end of the day, 6 o'clock before you get a response and it might not be the response that we need. So I thought it was a great opportunity to start off very basic, this is my role, I'm here to help, let me know how I can help, this is my direct number, this is my mobile number. And that started working really well.' SCP Charles

There is evidence that community pharmacy and CPs can work together and learn together and examples of good practice and innovation could inspire developments in their sites.

Anna and Alice also invite local pharmacies to attend meetings at the practice monthly. There are approximately 10-12 local community pharmacies who serving the majority of patient at the 2 local practices where Alice works. Meetings were beneficial to resolve a range of issues.

- Supply and alternatives
 - *'We discussed a lot around "manufacturers can't supply" medication, and alternative items. How we communicate that, how they can communicate that with us.'*
- Care Homes
- Patient prescriptions 'in sync'
 - *'when we are issuing prescriptions how we can get things in line so patients aren't getting out of sync with their medication because we still get quite a number of patients, even though we have got different services now, technicians in the community, we can get them to go and help with the medication and such. We still get queries, a lot of our tasks and prescription queries, things that have fallen out of line, so that was another area.'*
- MURS/NMS
 - *'How we can work together and communicate better. How they can again communicate with us, so it is just those messages of where we want community pharmacists to do reviews with those patients, how do we communicate better with them? If they highlight something that needs reviewing how does that get back to us?'*

Alice also mentioned the benefits of regular meetings with community pharmacies to build networks and working relationships *'face to a name as well, I think that really helps, it improves your relationship.'* Site A reports that this network has had positive outcomes and acted as a vehicle for problem solving and improving relationships to improve the patient experience.

'We have had a lot of informal meetings with [Name] community pharmacy, it has got a lot of our patients attached to it, they have gone through a bit of organisational changes so they were struggling at one point, so we have had a lot of meetings with them. So that has massively improved, our relationship with them and also how they request and how we respond, you know the problem is never just one sided so we have had a lot there. There is just other pharmacies that we need to do a bit more relationship building with but obviously time is quite tricky.'

At site C Charles thinks they have made some good links.

'community pharmacy worked very well integrated with our practice in particular and what we started to do was have a point on the agenda at a practise meeting to come and talk to the GPs about what could be prescribed alternatively, any referrals for NMS, how we could streamline things and we added a triage system from the GP surgery for labour optimisation and stuff so I started working on that. We did some really cool work'

Although Charlie thinks that community pharmacy could do their bit and so maybe there is something about education and shared learning in this.

'We were close to the, the LPC network and the local community pharmacy. I wanted them to also engage with us but it takes two to tango. I think it's always the practice pharmacist helping with that sort of role and it's also important that the community pharmacy team also reciprocate that and want to get involved as well, rather than me trying on my own and not getting very far. I think there's a really good relationship and I know [Chloe} called up our local community pharmacist to see if I was actually saying what I did and they said very positive things about me'

CPs, especially those with a background in community pharmacy, feel it is an important part of their role to build good links with community pharmacy

'I have a very good relationship with all the community pharmacies.....'

Several examples are given in case studies and general analysis of ways in which CPs are working closely with community pharmacy both in their day to day activities and in building networks.

'[I talk to the community pharmacy] every day (laughing). Patient queries, medicine queries, stock issues, supply issues, blister packs, new medicine service.' CP Betty

Betty feels her role means better links to CP.

'I think so because they have got a point of contact. They can phone through and speak to one of us, quicker than I expect they could speak to a GP. 9 times out of 10 we can answer the query. Sometimes it is a case of just a bit of advice. As well if they have spotted something, if it is an error or they want to check something, they can get through to somebody quickly and get an answer quickly. If there is a fax for the attention of the pharmacist, it comes to me. It has come from the community pharmacy so here locally, anybody that is on a blister pack, if they have been in hospital, the community pharmacy will get the blister pack, gets a copy of the discharge as well. Sometimes they can get it before we get it. So this will have been the pharmacy getting the copy of the discharge, they have noticed med changes and things. So we work together like that.'

Site G1 benefits from the CP experience in community pharmacy.

'I think he is probably at times a lot more efficient in that he knows a lot more about how community pharmacies work so he will often do things a bit differently to how we would do them and it makes it easier for the staff to..' GP Gemma

These links provide better services to patients.

Evidence of working in partnership with hospital pharmacy for patient benefit

There are links with hospital pharmacy through both day to day work and some networking opportunities; on the whole these are less than links with community.

Discharge management is given as an example by several sites of needing to liaise closely with both hospital pharmacy and community pharmacy to ensure continuity of care for patients.

'...Like last week, somebody was discharged from hospital so the pharmacy wanted to see if there were any changes. I had it in my pile to process the medications but I hadn't yet so I had to explain whether they could give that. What we did because they had all been made up, just gave the extra drugs on top because it was only one thing. It is just about making sure things are running smoothly.' CP Bernadette

Pharmacists can improve the discharge process. The following is an example of medicines optimisation and improved patient care through the pharmacist intervening in the practice administration around hospital discharge.

'So some of the discharges were scanning to the system and to the notes as discharge date and some were put in as the admission date. The problem was that the last discharge was done as admission date which had gone behind the queue so when the patient had requested the medication, the GP had prescribed the old one. The whole medication had changed. It just happened to come across my desk for some odd reason, the prescription wasn't really the issue to be honest. So what I did it just didn't sound right to me, the list of medications that was on that prescription, at first glance to me just didn't seem right. So the conversation I had was that the patient had said to the receptionist, there is my prescription, I got discharged 2 days ago. I looked on the system and said your other prescription was done this morning, it must be at the chemist. Then I noticed that the list of medications seems to be the same medicines as previous, looked at the discharge letter and that matched but then I looked properly into that and noticed the date of the discharge was months ago, a couple of weeks

ago or something. I then looked for all the discharges and noticed that they were put in the system with the wrong date. I had a word with everybody at the admin here, got the practice policy changed to make sure that no admin staff ever, the date that they have to use is the date of the actual discharge.' SCP Bob

Other partnerships

Each case study sites gives examples of working closely with their CCG, in particularly CCG pharmacists and medicines management teams.

At site G1 the CP is the main link for CCG meds management work

'He does liaise closely with, we have a medicine management team that is part of the CCG, and as a county they initiate prescribing initiative schemes. That has been going for years. It includes all kinds of things. It hasn't changed in the last 2 years because that is just the way it is, there is still a lot of work to do. He is very much an integral part of getting that work done which I think he enjoys doing, he is very quick at it. '

In site area H care homes are aligned to a single practice. The practice MDT provides support for the local care home and the CP is integral to this.

'The clinical pharmacist has actually been really helpful. What we did is we went in to the care homes as a team of Practice Manager, Deputy Practice Manager, Clinical Pharmacist, Advanced Nurse Practitioner and myself and that worked very well. Because actually, one of the issues the care home had was interaction with the local chemists and vice versa. It was quite interesting to see what a very light touch on a situation was able to provide a relief and answer some of the homes questions about safety and so on. ' GP Harry

At site G1 the CP is the first point of contact at the practice for local care homes.

'He doesn't do routine or regular rounds with the care homes, but when he joined he was quite keen to make contact with them, introduce himself, so now he is their point of contact when they have medication issues or queries. They try to go through him first. In fact that has been really successful, they now see him as a resource rather than if the GP is not there, I will ask, they go to him first.'

GP Harry outlines some local work to support carers in care homes (secure hospital) to do basic triaging instead of taking time to visit the practice.

'If the patient says to one of the staff at the hospital I have got this pain, they will use one of the online tools which will then either offer them the NHS choices information or will put all their symptoms that they have collected and send it to the practice. So we can then triage that and offer support for the carer rather than automatically take one of the people out of the hospital who have to come because they are on section 3, with the patient to the practice. So that is something that the hospital are very keen on. They said if this could work we could look at that across other hospitals within our organisation. She was very good, she went through quite a lot of areas of symptomatology and put together some ideas like say for pain, a sheet that says, could you ask about how long it has been, what the severity is, have they already taken anything, are they prescribed anything, what impact is it having on daily living? So the carer would actually start to become more knowledgeable about how to respond to that presentation of oh I have got a pain in my leg. Well it doesn't seem to be stopping you walking and rather than immediately phoning us up. They would then perhaps say let us try with say ibuprofen if appropriate and so on. ' GP Harry

GP Harry suggests that carers have untapped potential to positively impact self-care.

'It is almost by proxy because each of these patients has a carer. We are in quite a strong position to say right this is some guidance. They can then implement it. ' GP Harry

GPs are aware that it is important to share knowledge and examples of good practice. GP Barry talks about a GP he knows through his specialist network who has a pharmacist who is known to his brother. From awareness of their scheme he recognises there are differences.

'But they do it slightly different to us, something's well beyond us and some things they haven't thought about' GP Barry

It is important to develop national awareness of what is happening to develop the role.

'It would be very interesting to find out what's happening in Nottingham and Sheffield and see where they're at. I've got all the stuff from Sheffield and their work with the multi-disciplinary competency framework. All this takes time to simulate so other people going to do that for me. Jackie will do that for me, in-house. But we will use what they've got because that's the pilot nationally. So we'll use that. Obviously I've give you a flavour of what's happening here and where we see things, but what's happening elsewhere, have you been elsewhere?' GP Adam

Role development

After the 12-18 months when autonomy is achieved, the role can develop and become specialised.

At site B they are keen to lead nationally on developing the potential for the role.

'That's when I put in the bid. That you would have Pharmacists that would be light advanced practitioners in a similar model to Nurses. Nurse Patients, Nurse Practitioners, The whole range, from assistant practitioners, health care assistants. The whole range of staff goes through and be trained through here.' GP Barry

Christine would like the role to develop to cover minor illness. The CPs have done the basic external training in this area but Christine feels this needs a six month focused training program.

'Yes it needs to be one of those intensive 6 month course that actually develops her' SCP Christine

There are courses at University level that Christine has looked into to cover this, targeting Primary Care Pharmacists in [local area]

Site Lead Emma reports that several (n=6) CPs at her site have taken an active role in their practice PPG to help understand local needs.

'That is quite interesting because they are scoping opportunities based on patient needs within that GP practice. So we have got a clinical pharmacist over in the [local] area, he is doing some COPD breathe easy training and well-being and contribution to their support for COPD. That is almost practice by practice whereby the need has been identified.'

Emma expects the role to continue to develop.

'We have done a little bit about scoping how much clinical pharmacists can be looking at complex care maintenance clinics in GP practice with a bit of up-skilling, so we are working on an education programme to use some STP funding hopefully within the next 12-18 months about developing that, so that is the next sort of phase we are doing with these clinical pharmacists.' Site Lead Emma

Site Lead Fred suggests that there should be a regular and localised tracking mechanism for CP activity including their development as a mechanism for localised management and engagement at a pharmacist level.

'Absolutely and are they getting the mentoring that they should be getting as part of the deal? Are there any issues arising from mentoring? So a simple template we've got was an opportunity for the pharmacists each month to reflect on what has happened in the previous month, and to let us know through that report. Clearly, if there was an important issue, they would get in touch anyway. But you have got that regular contact, they could say actually I have had a bit of a problem with blood results for example, coming back from the hospital and being able to request them. So we become aware of what the issues are so that we can actually help support the practice, get the issue resolved. But the other thing I used to make a point of was someone sent me a report, I would make a point, not to just say thanks for the report, I would always ask a question. Even if I made one up. Because it tells the person who is doing the report that I have looked at it.' Site Lead Fred

At Site H, most patient contact is over the telephone. GP Harry felt it was unfair to expect CPs to be faced by patients who may not understand why they were seeing the CP not the GP.

'We felt it was slightly unfair to have somebody in the room because we know what they are like, I wonder why I am here?' GP Harry

At Site H queries are triaged at site level.

'Well they would probably be filtered at the reception level first, if it was something that the pharmacist, having had that close experience of working with her, would be the right person to deal with. She would then deal with them from there. It is quite interesting, she is really very central in that whole process.' GP Harry

At Site H all CPs work from a central location rather than directly in the practice in a patient facing role.

'Yes so that might be done from Head Office, but there would certainly be, if you like, their own list, you know a screen of appointments. They could be picked off from somebody working across the practices. But it tends to be paired up, it tends to be somebody is linked to a practice and obviously, there is a lot of traffic going on via tasks rather than phone calls, but the phone is obviously available as well.' GP Harry

GP Harry talks about some strategic local work on the mental health agenda and improving prescribing related to psychotics.

'We have a very odd situation where we have a 30 bedded rehabilitation centre for people on section 3 of the mental health act. Again we took that whole practice team into, it's a private hospital essentially, they provide the psychiatric input, psychologists, counsellors and behavioural things and a gym and a dietician, but we provide the medical support. So because the psychiatry arm was able to order directly from is it [Name]?, it is a drug that has to have monitoring, because they ordered that directly we found that there were other psychiatric drugs that we had no record of in the patients notes. Because they weren't being prescribed. She has been very concerned about that, and we have had a number of meetings which we have chased that down and tried to have a much better safety organisation. So if you are doing a blood test for this particular drug, then we need to somehow get that blood result back but in a way that we feel we don't have to make an action on it because you are making the action GP Harry

There is a risk that the SCP role adds less value to the practice and more to the scheme which limits its sustainability.

'For myself, technically I will be out of a job when the pilot is finished because I have actually not created myself a job. (laughing) I am hardly in any of the practices, I make sure they are running smoothly and the pharmacists are doing their job, achieving what they are supposed to achieve, but I have not been doing anything to benefit myself.'

Changes in primary care practice

Practice B1 plans to divide its planned and acute care management and the new pharmacist role is a vital part of this. A nurse is employed as a Planned Care Manager and works closely with the pharmacists who are slowly developing specialisms to enable them to manage much of the planned care. This is through for example pain management, diabetes care as well as other LTCs. The planned care team also includes a range of allied health professions that includes phlebotomists, nurses, pharmacists and HCAs working as a team and with the expert support of the GP on hand where required. The pharmacists can also provide support to the GP with acute care in times of high demand.

Practice B1 has lost a nurse post and is looking to replace it with a pharmacist for two reasons – practice nursing is a challenge, and the practice needs a different skill set.

Site C is also working to build the MDT team and separate out responsibilities. Charles spent the first 3 months shadowing and dealing with basic prescription queries. He learned a lot from triaging and thinks this is an important area of work for all HCPS and can lead to stronger MDTs.

'I would, on the phone, be talking to patients and taking down all their symptoms and be like ok I think you have this and so you need to see this. But triage can also be I see a blood test, got high cholesterol and high triglyceride level and actually that doesn't need to be seen by a Doctor, that can equally be seen by a prescribing Pharmacist or a prescribing nurse or just a normal Pharmacist or Nurse. Either for counselling, if cardiovascular risk or maybe requiring an appropriate statin therapy and I don't think that really requires that much of a level of GP input. But there are some instances where you've got someone who's got absolute kidney failure that's just been identified and has a polypharmacy case that needed a joint multi-disciplinary approach to dealing with their care. So you know that, as a Pharmacist, I need to triage this person to a one stop shop multi screening clinic which has a GP, nurse, myself in and let's discuss this patient or take it further. So I think when it comes to acute conditions a GP's led on that triage. When it's a long term condition or chronic condition I think the Nurses, Pharmacists and GPs contributed effectively to that mechanism of triage as well.'
SCP Charles

There are changes in the way sites plan to manage care as a result of having the specialist skills of the pharmacist in the MDT and shared specialisms.

'I trained the nurse on how to do a good medication review so when she was doing diabetes clinic, they are very good at diabetes nursing and also respiratory they were able to tag a med review with it as well because they knew the medicine they were prescribing, there was no point sending a patient on a wild goose chase. Go and see a nurse for that and then. Just a one-stop shop we were trying to aim for.' SCP Charles

Site Lead Emma suggests that she sees an integrated future for CPs.

'I think we are just going to be an integrated part of general practice.'

At site G now the role I established the CP is in demand.

'It is becoming more of a role that patients are ringing up going I want to see the pharmacist which is great.' GP Gemma

In the (local area) H has a low number of people on repeat dispensing and the CP role is helping with that.

'I do know there are some people on repeat dispensing but I was at a meeting with the NHS medicines optimisation team yesterday and that was one of the things they were promoting...I was just asking them about how would they go about making a change? They said look at the people on 2-3 medications that are well compliant, and actually stop trying to do it all'

yourself. Go and visit the pharmacist and say right, could you give us a list of stable people'
GP Harry.

GP Harry suggests that increasing repeat dispensing is more complex with multiple pharmacies attached to the practices and patients

The multi-disciplinary team mix

GPs largely recognise the benefits of a mixed skill MDT.

GP Barry is keen to develop the notion of an advanced primary care practitioner and associated competencies from a range of backgrounds including nursing and pharmacy.

'That's when I put in the bid. That you would have Pharmacists that would be light advanced practitioners in a similar model to Nurses. Practice Nurses, Nurse Practitioners, The whole range, from assistant practitioners, health care assistants. The whole range of staff goes through and be trained through here.'

The framework would eradicate any mismatch in expectations and prevent problems that have arisen before.

'We employed a senior Nurse with this idea that they could do stuff, and then found oh my god actually no they can't.'

GPs feel it is important to add to the skill mix. Barry considers the CP role vital to this primary care skill mix and as a result is considering replacing a Nurse role with a pharmacist.

'We have one full time pharmacist but we're not going to employ another Nurse so we will have 2 Pharmacists... We're not going to replace a Nurse. We have to recognise that practice Nursing is a challenge and actually it's a conscious decision that we need a different skill set...'

Barry would rather use professional competencies as a key measure than KPIs, then sites can localise that competency according to need (that's a boom line that needs to go somewhere higher level!)

'But I think the KPI's should grow around competency assessment.' GP Barry

Barry has been actively involved for a long period in considering the ways that CPs can integrate into Primary Care and the kinds of activities they could undertake and how the role might progress.

'I was already at the situation where we wrote a spec about 10 years ago about the source of work we thought a Pharmacist could do. Then we had the inspirational spec, but part we already had that. Then we had the KPI around that. This was around discharger, acute prescriptions, CCG work, QOF work, medication reviews. All that we were already doing. We weren't necessarily doing it that well. In the initial bid I had the idea that people had to know basic clinical skills. So what I said in the first two years people should be able to do basic hypertension checks, diabetes checks and then in the 3rd year people should... This was before CPPE... So once people have got their legs got their stripes just with basic stuff. I will expect people to start choosing various... to start specialising '

These models based on years of experience and derived from a GP would be useful to share with others unsure about the kinds of work that CPs can do.

'So part of this is we have properly outlined professional mentorship, preceptorship, competency based work, portfolio based learning and that's what we need to do with all our professionals. What I'm trying to do is embryonic cause I don't really have the mandate to do

any of this, but with NHS England, and with the CCG, and I'm on the establishment board of our Federation and the only reason I am there is to start bringing in proper competency based work and portfolio learning to help professionals in primary health care.'

GPs recognise funding at undergraduate level is an issue and undergraduate education (including pre-reg opportunities) need to develop based on the developing role for pharmacists in Primary Care.

'That's the point, the amount of money a medical school gets for a student compared to a pharmacy school for pharmacy student, that is the gap. So I'm in negotiations with [local area] and we will offer placements to pharmacy students. Student rotations starting in a couple of week. [Bob] will tell you more about it, he's co-coordinating it. It's just as trial we going to get 4 students but we don't get paid for that and they don't get any extra money for doing it. But we just have to do it. So the give is we will give them projects to do and part of the course of the assessment is projects we need doing... It's only very small, but in time we can say this is our primary care medicine merging premium. We need to do an audit on AF, we need to this that and the other, so we won't necessarily expect payment, but as a result of your resource coming in, it's a win, win. Initially they will only be here for 2 weeks but part of the deal is we will put them through a registrar induction, so they can then get exposure to GP, Consultants, Reception, District Nurses, they'll get exposure because they just can't get their foot in. We will also expect them to take some histories.... I was aghast. Oh yeah our pharmacy students have a project to do where they go and talk to their Grandma's about their medication.' GP Barry

Innovative GPs recognise that they will need to contribute to the professional development of the CP role.

'We'd be open for any of that because we need to have well-trained, motivated pharmacists who can come into primary care, which means that we can start to choose really good people to work with our patients, rather than just because there isn't enough people. So I don't have to take a practice nurse who's been around 10 practices, just basically ticking a box. I want to have a young pharmacist who's going to come in and do stuff'

These developmental ideas for the pharmacy profession led by GPs at the earliest onset of the scheme should be supported and developed as new educational initiatives, by both the University sector and by NHS England, RCGP and external training providers.

'NHS England need to think about multi-disciplinary competency frame works and how we learn and they need to fund it and the rest will take care of itself. If you've competent clinicians. Spend your money on that and not physician assistants in primary care. They may work in secondary care because they are in a very close safe environment - in primary care you need far more experience in order to be able to do it. Why not spend the money on people who already have a skill set than thinking you can start from scratch because I'm not sure you can.'

GPs recognise that clear boundaries and skill sets would benefit the whole of Primary Care and make indemnity easier

'At the moment, there is a crisis in the NHS. The quickest way in which we can safely start addressing some of those staffing issues would be in the pharmacy cohort, that's where I'd spend the money. Yeah in postgraduate. It wouldn't just be on.... If you get the competency right the rest just follows. If you think you can just put a pharmacist in here and that will solve it, for me that doesn't work as we work as a team. I think we have to very careful where the clinical responsibility lies. Because the whole indemnity stuff, that has to sit in with that framework'

Pharmacy Workforce Issues

Some Site Leads have dual roles including managing the scheme, being a CP, acting as a senior CP mentor, acting as a CPPE mentor, working for the CCG, working for the NHS – and there is a clear overlap between roles.

There is some competition developing in the Primary Care environment between sites employing pharmacists on the national scheme and others employing directly. At Site B one of the pharmacists was offered a role directly employed in another GP practice (not on the national scheme) and was offered a salary earning £10k more than their role on the national scheme.

Some Site Leads are aware of tensions between this role and the community pharmacy context and the need to sensitively navigate in this context

'In the beginning it did, because they thought we were going to take things away from them. It also actually reduced the medication going out so obviously their payment coming in is going to be lowered so you had that kind of shaky ground. But we got over it at the end of the day because at the end of the day it is about patient care, it is not about your pocket.' Site Lead Brenda

Site Lead Fred suggests that movement into CP roles will leave other gaps in the pharmacy profession.

'There is recognition in terms of all the new roles that are coming up that there are quite a few CCG pharmacists interested in the posts. So one has to be conscious that you may be robbing Peter to pay Paul. You have got the same thing actually with community pharmacy as well, there is a lot of interest from those individuals, because they want to get into a more clinical post rather than being stuck behind a pharmacy counter. I have met with these senior pharmacists at local hospital s, just too sort of say look we are going to be recruiting. We kept in touch on the role and the timescales and the scale of everything because again, we are aware that hospitals, secondary care are under pressure to recruit. They are struggling to recruit and actually if we go into the market and ask for another 9 pharmacists then potentially that could make it a bigger problem for secondary care.' Site Lead Fred

Operationalisation summary

Activities

- Inexperienced CPs can begin with basic work to build confidence
 - *'walk-in and INR service'*
 - *'vitamin D'*
 - *'Osteoporosis'*
 - *'Mental health reviews'*
 - *'People with depression on anti-depressants'*
 - *They start taking people off anti-depressants, they repeat the 6-month prescription or ask the doctor to review it.*
- As confidence builds tasks can progress to autonomous patient reviews of polypharmacy and LTC (usually 6 months+ from prescribing)
- Some sites train all pharmacists in B12s
- GPs are likely to assume pharmacists will arrive at the 12+ months stage and often do not realise the steep learning and confidence curve in year 1

Colleagues and relationships

- Management responsibilities should be explicit to avoid conflicts
- Combination of clinical and business management is beneficial
- GPs can have mismatch in expectation about pharmacist ability and return on investment
- Nurses can feel threatened by the role
- Primary Care colleagues are largely supportive of the role
- Colleagues (especially GPs) develop trust in CPs over the first 12-18 months of the role

Networks

- Strong relationships with community pharmacy, hospital pharmacy, CCG pharmacists and care homes maximise the positive impact of the role on patient care
- Federation level networks exist at varying levels – examples of good practice should be shared
- Some wider networks exist – usually localised
- WhatsApp is vital for remote networking and used by all sites as well to support (geographically disperse) Federation networks

Role development

- As per the local can hit the ground running with fundamental tasks
- Some are not in patient facing roles but adding value in admin roles as per CCG work
- Some issues with trust and liability contributes to tasks allowed
- Role develops from supported to autonomous over first two years

Changes in primary care practice

- Split of urgent and planned care is working at some sites
- Triaging is a highly skilled and important part of the process – admin do it, pharmacists use it as training, patients don't like it

Outcomes

Capacity

Patients at all sites reported problems of accessing appointments in primary care, for both urgent cases and for management of long term conditions.

Patient J 'Try again at 8.00am tomorrow morning. I like pre-bookable if possible.'

Patients do not like the inconsistency of GP appointments.

Patient BL – 'I was going to send a letter in to be honest with you, I was disgusted. Because I go to my doctors and never see the same doctor twice.'

Patient BR – 'I don't even know who they are do you?'

Patient BPn – 'it is always a different one isn't it?'

Patient BL – 'You just get in and go over your notes, by the time that is up, it is just like carry on taking your tablets, come and see us in another 2 weeks.' Patients Focus Group Discussion, Site B

Patients do not like telephone triaging, especially where conducted by administrative staff.

Patient CAW – 'well it is. Personally, other than that, they should employ people in reception that don't live in the area. (laughing)'

Patient CJ – 'you have to tell everything that is wrong with you to actually get an appointment'

Patient CAW – 'I know, which is wrong'

Patient CJ – 'and when they are going to ring you back, sods law you are sitting on the loo. You don't know when they are going to ring, then you miss it and all the appointments are gone'

At least one patient at each site reported that they booked appointments online, and at least one patient at each site reported that they did not know how to book appointment online. Some patients reported fully utilising online services including repeat prescription ordering. One person suggested an app would be useful to manage their personal health.

Patients report frustrations moving between services.

Patient CAW 'We have been through the mill, we have been to the hospital, we have been to the doctors, by the time you get to see somebody you are very frustrated. That is what happened a couple of weeks ago I was really frustrated, I sat down with [Chloe] and when I came out of there I felt more relaxed, felt like something had happened.'

Patients prefer care in the community over hospital based care.

Patient CA – 'I thought how great it was I was being looked after here instead of going to the hospital.'

Site A reports that the CP role releases approximately 1 hour of GP time per day.

Site B reports that the CP role releases 3 appointments slots per clinic.

Access to appointments is particularly improved for people with LTCs at sites offering appointments with clinical pharmacists.

At site B through the pharmacists' role there is increased access and therefore increased uptake of vaccinations including flu jabs.

Changes in responsibilities within the MDT increases the capacity of the GP.

Capacity improvements are difficult to measure quantitatively due to contextual factors. GP Barry confirms that while there is a clear impact on his workload this is difficult to see in the continually challenging context of primary care.

'Yes, but because everybody has got busier no one ever feels less busy' GP Barry

He can see, however, see the difference in variance in his work tasks.

'Put it this way, I used to do full surgery and when you're on call would do 30-50 acute prescription requests. Well because of Christmas it's been really busy, but now I do about 4.. If we had done that before I would also have had to all those vitamin D follow ups, but I'd have to find time for that as it couldn't be an appointment because I just never have any appointments.' GP Barry

The GP suggests that the scheme adds the benefits of an additional 3 patient consultations per session that the practice previously would not have had the capacity to carry.

'Before we would have been dealing with 15 patients and now we're dealing with at least 18 on routine basis, but our triage means we deal with a lot more than that.' GP Barry

At site A GPs appreciate that the CP reduces GP medication related tasks (allocated through their online system) and GPs often send messages of thanks to the CP for this relief in their workload through the online system or the practice WhatsApp group.

Many site are using the CP to working to improve capacity by targeting QOF and generating practice income.

'Can I help the QOF at all, calling the patients, let's try and get your QOF levels up, maybe I can review some of those whatever.' CP Alice

At Site B pharmacists are managing the majority of LTCs and contributing strategically to other areas saving GP time including mental health reviews. They are also increasing nurse capacity by sharing some duties such as B12s.

At site C CPs being autonomous clinicians adds lots of value for the workflow improving capacity.

'You had another health care professional who was taking over their accessibility burden but also the paperwork and administrative burden in a general practice which I think is really important particularly from a process perspective. Also being able to reduce the number of contacts they make in a day in terms of patient facing because you have another member of staff who could deal with it quite effectively and not having to then the patient coming to see you and saying oh no you've got to go and see a doctor. Because I was trying to that Clinician that didn't put extra work in to the doctor. I was able to try and see if I could manage that patient's care on my own. And whether I was out of my scope of practice I would go and ask them that. That's the beauty about working in the practice; you can go and knock on their door. SCP Charles

At site C, Chloe is aware that she is improving capacity for GPs suggests this benefit is realised for them in terms of an adjustments to the types of work undertaken.

'they've seen a big difference but what happens is as soon as GPs free up time in terms of prescriptions or something else, they get given something else to do' CP Chloe

At Site D, David confirms that the CP adds capacity and expertise to the MDT.

'Generally it is great to have any additional clinical resource of any kind, but specifically that the pharmacists do bring something extra in terms of sorting medication issues for patients and the practice. Improving long term condition management and being flexible in terms of the role they are willing to play in the practice.' Site Lead D

Site Lead Fred recognises significant benefits of the role for primary care.

I think there is a multitude of benefits, it creates additional capacity'

Fred recognises the benefit of improved capacity on the GP quality of life.

'It has definitely impacted on workload and we know that 2 GP's in 2 of the sites that I have worked with, have been able to get a better quality of life out of it, that is just 2 that have said so. I think there is probably more than 2 that would say that, one has commented that he gets to go home at 7pm rather than 9pm. Another has commented that he now for the first time in 5 years has been able to take a Thursday off during the week. So there is some quality of life things happening, they just feel a little bit less stressed' Site Lead Fred

At site G GP Gemma confirms that she feels a key benefit of the role is the change in her workload release in her capacity.

'It has enormously helped our GP workload I think and it has also improved, although I don't have proof yet, our efficiency' Gemma

At site G the CP is improving capacity for the GP.

'That was one of our key requirements, the reason for hiring him. Yes there has been a really significant change in the amount of prescribing work GP's have to do on a day to day basis. The number of non-routine issues each day with prescriptions has dropped. I don't really know what the exact proportion was but as an example every day the duty doctor has to electronically process between 100-150 prescriptions, that has taken the majority of them, it used to be paper but it is now ETP. Of those I would say there is probably now between 10-20, sometimes as high as 30 so maybe up to a third on an unusual day. Our prescriptions that the doctor needs to spend a bit of time on, that has dropped from 40-50%.' GP Gemma

At site G the CP is changing the workload of the GP.

'The same happens with hospital discharge summaries, when there are medication changes needed, it doesn't go to the GP, unless the GP has other things that needed their attention, so if it is simply a medication change it goes straight to the pharmacist.' GP Gemma

GP Harry suggests that people with drug seeking behaviours are learning how to manipulate online systems.

'It is all part of the online consultation thing that the NHS is now rolling out. We have discussed in meetings with them and have got a pilot due to start when they can send somebody out to train us all, is when one of these clients, because they are often people with drug seeking behaviour, some of them aren't the brightest. I wouldn't say they have learning difficulties, but they are sometimes either related to a history of medication or background. You will find that one patient will ring up and ask for an appointment to re-assess their back pain, essentially they want some more medication' GP Harry.

Quality

Some patients expressed concern that the Pharmacist had different capabilities to the GP and one patient expressed frustration that he had to be referred to the GP by the CP (when he had originally requested a GP appointment). However on the whole patients reported an appreciation of the professional boundaries and relationship between the CP and GP.

One patient gave an example of the pharmacist referring to the GP where necessary.

'I think they are brilliant, as this man said, he spends more time explaining things to you, this is what patients want. If you have got this this and this, they want it explaining how it is going to affect them. I had flu last year and immediately she got up and went and told the doctor, obviously being on warfarin it is important, I thought I might have a bleed on my head, I just can't fault them. To me they are an asset to the surgery.'

Overall patients agreed unanimously that their appointments with CPs were of high quality. Site Lead Fred recognises the range of benefits of the role for patient care.

*'it definitely creates additional expertise within the practice, it provides an opportunity for patients to get a much greater understanding of what medicines they are on, why they are on it, how to take them. It has additional benefits of **quality, safety**, reducing waste. It is a very cost effective way of having a clinician as part of the work force, at a time when the practices are struggling to recruit GP's and nurses.'*

The benefits of holistic care are clearly linked to the variable appointment lengths offered according to the need of the patient.

At site A patients reported longer appointments and holistic care – the opportunity to discuss the patient and all their medications and conditions as a whole.

'She explained things and spent time with me. It was at least 20 minutes; she went through everything with me and made sure everything was alright with me. Very informative.' Patient AJ, Site A

At site B pharmacists regularly spend 30 minutes or longer on comprehensive LTC reviews.

'One of the key things that springs to mind is that medication reviews are now being done probably for the first time properly.' Site Lead Fred

At Site B patients compare the service, very favourably, compared with GP appointments as they air frustrations with inconsistency of GPs (seeing different ones, getting different advice) and of limited appointment lengths. Patients reflected on the positive experience of longer appointments tailored to need. They also suggested that while appointment length is important, so is the approach.

'Patient P – She explained about my warfarin, my bloods up and down, and I am here basically every fortnight. She takes an interest in you, she treats you like a person... I know they haven't got the time, you are basically getting dictated to by the GP, you do this, you do that, and everything will be fine. Whereas the pharmacist, they say it differently. Sometimes you can't wait to get out of GP surgery. Whereas the pharmacist you can sit there and you feel at ease.'

Patient R – Exactly the same

'Patient L – I was excited to see him the 2nd time because I felt that good.' Patient Focus Group Discussion, Site B

At site B the pharmacist conducted a medication review at home for patient R who struggles with mobility and had recently suffered a heart attack. Patient B and Patient L also reported on holistic

appointments which led to their better understanding of his conditions and medications and improvements in their long term conditions. The CP helped Patient L to improve his diet, stop smoking and reduce his opiate use which contributed to significant improvements in his diabetes.

Patient's report that the outcomes of holistic care are increased understanding of their health conditions and medications, and advice about how to improve their overall health through self-care. This inevitably leads to improvements in conditions and is highly likely to significantly impact on overall cost of care and hospital readmissions (can we say that?)

At site B Patient BPn understand their medicines in a way they never have, Patient L has improved his diabetes and overall health, Patient P had his asthma medication reviewed for the first time in his life which led to improvements in his condition.

At site D David feels that high quality medications reviews conducted by CPs lead to medicines optimisation.

'You can say that by seeing people with long term conditions and making sure they are on the medication that suits them, then that is medicine optimisation. By doing high quality medication reviews' Site Lead D

At Site G the GP recognises that the CP is offering good quality appointments because they are actively sought by the patients.

'It is becoming more of a role that patients are ringing up going I want to see the pharmacist which is great.' GP Gemma

Site Lead Fred reports the benefits of longer appointments.

'The other key thing I think we found is that generally speaking, the pharmacist gets a bit more time with the patient than a GP and that again I think is critical. I think GPs, some GP's have said to me if I had 20 minutes to see a patient I could do a better job. That I think is a really valid comment but the problem is, GPs haven't got 20 minutes. Unless they book it as a double appointment which tends to lead to things like medicine issues.' Site Lead Fred

'A complex medication issue could take a GP quite a long time to resolve and they love the idea of just saying look I've got this problem can you have a look at it for me please? The pharmacist can deal with those queries much quicker, much more effectively, much more comprehensively than a GP that is scratching his head thinking where do I go to find out about this one? So I think there is some real benefits.' Site Lead Fred

At site C patients prefer longer appointments

Patient CJF – 'I think they are just giving you more time.'

Patient CL – 'Yes I would agree with that lady'

Patient CAW – 'yes the time is brilliant and better advice than the doctor I think, especially about taking your pills and everything, what is in them, what they do to you so yes time.'

Patient CL – 'I agree' Patient Focus Group Discussion, Site C'

Patients explained they understood their medicines better which led to increased adherence and quality of life.

All patients who had seen the CP reported that they enjoyed the longer appointment length tailored to their needs and delivering holistic care

'I think it is a good idea I mean I have only seen [Chloe] the once but she spent a lot of time with me, I was in there for 20 minutes. I was impressed with that. I have never had that level of service in this surgery.' Patient CAW

'Definitely, as this gentleman just said, she saw me for about 20 minutes, she has done the same with me. Then she said any questions and I said well I have been here and she said I will always book you a double appointment because there are different things going on but it is nice to know that you have got GP's, sometimes you feel a bit rushed, because of the pressure of the workload. I am sure if [Chloe] felt that a GP ought to be drawn into the issue, she would phone through to the GP and say I think you should see this individual. I am sure she would personally.' Patient CL

'She was very helpful, she gave me another tablet to take for my blood pressure because my blood pressure was raised, and they were trying to get it down. They were making a note of all my blood pressure readings, and I had to come back in a month's time. They made me an appointment and I didn't know who it was going to be and it was the pharmacists to check on the tablets I was taking, just seeing how I was going on with it. She explained things and spent time with me....It was at least 20 minutes, she went through everything with me and made sure everything was alright with me. Very informative.' Patient BJ

While patients reported this as a major benefit there were some concerns that this might not be a lasting benefit of the scheme.

'It is just going to be the same again isn't it because they have got flooded with that much work, eventually he will only get 7 minutes to see each one, isn't that just doing the same thing as the doctors are doing? Where now he is giving quality time, he is just going to be similar to the doctor in the end, isn't he?' Patient BR

The location of the pharmacist in the GP practice and their consistent availability for regular appointments is important to patients.

'They get to know you better than if you just went to a chemist, if you have got one here, it is like you being a doctor really. I know who I am going to see and you know me, you recognise me.'

Consistency is important in times of high turnover'

'I look online and I think well there is only 2 doctors that I have heard of before. When you have got a lot of things wrong with you I don't always want to see somebody new that doesn't know me because you are 10 minutes explaining all that you have wrong with you.'

Patients reported holistic care making them feel as though they were being treated as a whole person rather than a condition.

'I think treating you as an individual, not somebody that is oh high blood pressure or diabetic, actually having the heart to care as well.' Patient BR

Patients report that the care given by the pharmacist is more holistic than the care received from any other clinician.

'That he just turned round and explained everything better basically than the doctor.' Patient BL

'As that gentleman said there, you go to the doctors, I love the doctors they are fantastic but they go yes, yes yes, you might need this, you might get a letter saying come for blood, and away. Whereas he explained everything and so did the lady, goes in to more detail with everything they tell you. Instead of just going bang bang, I love the doctors, but I think they seem to have more time for you. The doctor has got to see you, you and you by 10am'
Patient BR

One patient reports that she will utilise the holistic care of the pharmacist in future.

'That's why I decided to avoid the doctor because I think, I have got quite a few symptoms but if I go to the doctors I don't know which to talk about. So you usually end up going out with anti-depressants but I could have come in for my back or something else. So am I better off booking an appointment with the pharmacist then and talking about all the symptoms? Because I am not sure if some symptoms are linked to other symptoms if you get what I mean.' Patient BPn

Deprescribing

There were several examples given where patients appreciated having their tablets reduced. At site B patient L had his medications reduced by 4 tablets per day

Patient AC – 'so if I come to see [CP], it is just one tablet particularly that I don't know, would you be able to take me off that one?'

SL – '1 yes she would be able to look at it, she might not automatically take you off it.'

Patient AC – 'all the tablets I have been put on have been from specialists, so you start going forever, I daren't just stop taking them.'

Other patients who had not been aware of the service previously wanted to have their medications reduce showing a patient driven demand for a deprescribing support service in primary care.

'I don't often go the doctors to say "I take 15 tablets a day" I don't go that much. If I had a chest infection they would probably put me in hospital so I am careful where I am going and who I am mixing with, my resistance is so low. So I don't often go to my doctors but I do know what I am taking on my tablets, sometimes I think that some of them, they could take me off them. All that I am taking have mainly been given me by the hospital. All the doctors do is repeat, repeat. Sometimes I think I am sure I don't need to take that any more but I daren't stop taking it. I don't want to go to the doctors just to say do I still need this tablet? He has got better things to do with his time. I don't feel that that is worthy of an appointment. Would a pharmacist be able to help me that way?' Patient AC

Improved adherence

Patients report that as a result of longer appointments and good quality advice they understand their medicines more.

Several patients reported increased understanding of their medicines leading to improved usage and adherence.

'They spend time to explain things to you and basically, us as patients that is what we need. If you are on a lot of medication, you want to understand what your medication is doing to you, any side effects, things like this. They are an absolute asset here.' Patient BPn

At site B the pharmacist conducted a medication review at home for a patient who struggles with mobility and had recently suffered a heart attack.

'When he came to the house, he was there for a good half an hour. He explained everything. So it was mainly the warfarin, what it is, what it does, and the other one was aspirin. There was other tablets and he said that is because of that. I asked, because I never suffered with blood pressure, but when I had the heart attack they put me on them and he explained why. I said I had never suffered with that but he said but now you have got to have them. Because I asked he explained why, because you have got to be lower than a normal person now.'
Patient BR

'But the one thing I will say, he had got the time. He told me all about the medication I was on and the side effects that they were giving me. When you are with the doctor, you see that many different doctors, you are in and they want you out straight away. He saw me for 15-20 minutes and discussed all the medication, why it was given, why it must be done, and he was saying the medication I was on so he took me off that and put me on something else.' Patient BL

The benefits of improved adherence were improvements in their long term conditions as well as their overall health.

'Because I am borderline diabetic and I have just been put on one tablet, early in the morning I have to take it, but what I was doing, I was having that tablet after my breakfast and it just about gave me time to get to the toilet (laughing). So I came back and spoke to [Chloe] she said you could be having a problem there. I don't want to take you off the tablet as soon as this, so what I recommend you do, instead of taking it at 8 o'clock in the morning, wait until you have had your lunch and take it after your lunch. I must admit it seems to have worked.' Patient BP

Patient BP gives the example of an appointment with the CP, which was the first time his use of asthma medication had been reviewed (since childhood) and that support and advice led to improved medicines optimisation and an improvement in his condition.

'I have been on salbutamol since I was a kid and I have only just had the spacer. I used to take it in my bag and just take it, I felt it was easier. But he taught me to use it without the spacer and he was telling me how I should feel in my chest as I am taking it. The doctor, he doesn't necessarily explain how I will feel when I am taking that. He showed me how long to hold it for until it feels right. Then he told me to start breathing out sort of thing, yes. Everything that he said was right, and I don't need to use it as often as I had been.' Patient BP

Lifestyle advice

CPs gave patients lifestyle advice linked to their healthcare. This covers a range of areas including smoking cessation, improving drinking water, reducing drinking sugary drinks and energy drinks, limiting alcohol use, improving diet and exercise.

'He is looking at the picture, yes. He said to me that was causing the diabetes because the tablets that I was one was making me tired, so then I was taking energy drinks so it was a vicious circle. He said that needs to be packed in, just drink water, we have got to try and get you off those tablets' Patient BR

Lifestyle advice is a significant feature of CP appointments and is linked to holistic care. Patients at site B reported that lifestyle advice delivered in holistic appointments with motivational interviewing by CPs was successful in improving their self-care and overall health.

Patient R – 'He did tell me to lose weight, first thing they do is ask me do you smoke? Do you drink and you are overweight. Over and above that they just say you should pack in smoking, or lose weight.'

Patient L – 'The advice was a bit better from the pharmacist.'

Patient R – 'Just that he explained as we have said, you understand what they tell you.'

Patient P – 'They take the time, they go out of their way.'

Patient L – 'They treat you like a person'

'Patient BPN – in my case though it is the doctor will say, you have got to stop smoking. But the pharmacist says if you come back I will help you stop smoking. The doctor hasn't got the time to help me, so many patients to see. But the pharmacist said if you come back I will help you stop smoking.' Patient Focus Group Discussion, Site B

Bob confirms that he thinks taking a motivational approach patient interviewing in relation to changing medication behaviours is vital and explains how he puts this into practice.

'Basically, what I do with the patient, I make a deal with them, it is a partnership I establish with the patient, my interview technique. So I put them in charge of their own health, and I am there to help them achieve their goal. When you do it that way, patients are more compliant with the changes, I put them in charge of their own decisions, but I help them to make that next step decision if that makes sense. So it is always their decision, but guided by me. So we go through all the steps, gradually. Because if you try to force changes the patient what happens is they rebel against it.' SCP Bob

CPs practice longer appointments giving the space to listen.

'I think the thing is with me people talk to me because I ask them about themselves.' CP Bernadette

CPs (especially SCPs) give examples of their use of motivational interviewing with CPs to change their medicines usage and improve their lifestyle choices such as diet, exercise, and smoking. An example is given.

'Basically, what I do with the patient, I make a deal with them, it is a partnership I establish with the patient, my interview technique. So I put them in charge of their own health, and I am there to help them achieve their goal. When you do it that way, patients are more compliant with the changes, I put them in charge of their own decisions, but I help them to make that next step decision if that makes sense. So it is always their decision, but guided by me. So we go through all the steps, gradually. Because if you try to force changes the patient what happens is they rebel against it.'

Patients give examples of how basic lifestyle advice delivered through motivational interviewing and ongoing monitoring can impact on their health.

'I am diabetic and I had to go to [Chloe] and I am on 500ml metformin a day. She put it on a sheet and I had to write everything down like what I ate in 2 weeks. So when I went back to her there were these big red circles (laughing) you shouldn't be eating that. I have took notice of it and tried to cut down a bit (laughing). She said you will be surprised how much sugar is in them. When she explained it to me, because I thought cereal bars they seem healthy, she said no. (laughing) I thought I was being good but obviously not, they have got more sugar in than if you just have the cereals.' Patient CJ

'I said to [Chloe], oh egg and chips tonight, she said not too many chips L. Well I like chips. At the end of the day you can't live your life eating things that you don't like. Plus I am vegetarian.' Patient L

'I found that really helpful, it sort of puts you on the straight and narrow and does make you think before you pick up a bottle of Lucozade, because I was drinking 4 bottles of them a day. Lucozade has the most sugar, everything, more than coca cola. I wasn't told, I was on the tools, working all day.' Patient CAW

'They are always reminding me about smoking' Patient CAW

'I have cut down to 10-12 a day' Patient L

Patients liked having someone to talk to.

'I have found [Chloe] really helpful, she gives good advice, I have got to come again in a couple of weeks, bring a diet sheet to see if we can work things out. So having a pharmacist here to talk to I think is good' Patient CAW

Patient BPN suggests she wants to stop smoking but needs help and now as her awareness is raised of the role she will seek out this support from the CP.

CPs believe that they can offer the best advice and build relationships when seeing patients face to face.

'One of those patients I told you, she was actually domiciliary visits. Some of these very severe pain patients are sometimes housebound or not very mobile. If I can make an agreement with them, I don't like to make that over the phone, because if you are going to make a drastic change in somebody's medication, you just want to see what the patient feels like. When you see a patient it is different to on the phone, you get a different impression of them.' SCP Bob

'We probably have more of an impact in the face to face ones I think, when you actually see somebody face to face.' CP Betty

Uniquity

At Site C Chloe feels her work with patients to improve their healthy behaviours and medication adherence is a unique service in primary care.

'So I sat with her and gave all the dietary advice and made her fill in a food diary and exercise diary and it was quite unique because she'd never done those sort of things before. I spoke to her about her medication because she was very non-compliant.' Chloe CP

Site Lead Emma suggests that the breadth of the innovative work that utilises the unique skills of the CPs is not captured.

'Still I am still astounded by some of the work that they are participating in and delivering. I think that sends alarm bells higher up that has not been essentially captured and I am sure that is representative across the country. Some of the tick box and the cost savings, you can see, quantitative data to be capturing and auditing, but actually I think the true magic is some of the qualitative stuff that has actually been done. I wouldn't have known about this homeless project, we have got one pharmacist now sat doing acute triaging over at one of the university campuses, we have got another clinical pharmacist who has now taken on the vice chair of the PCPA, committee representation. We have got 3 representations on central England care home development policy, one is the NHS lead with the PCPA on the new care home committee group that they are looking at developing with regard to specifically care home work. I think all of that unspoken, or unrecognised work that has actually happened, that doesn't get captured with the way that we are currently using those NHS KPI's.'

Site Lead Fred acknowledges that a key benefit of the CP role is its uniqueness.

'I think we need to be really clear, this role is not a junior doctor role. It very much supports the activities of the practice. It provides a different level of expertise in terms of medicines. We have even got GP's who have gone on record to say that they thought they knew a lot about medicines until they had met the pharmacist. Some of these guys, it is a pretty hard ask to get them to admit that. So they do recognise that actually these individuals know more about medicines, know more about alternatives if there is a supply problem, quite often they understand the community pharmacists side of things so they can help bridge gaps and build relationships.'

GP Gemma believes pharmacists add unique expertise to the MDT that can particularly benefit patients with long term conditions.

'So for example, the diabetes management is a tricky very specialised area in terms of medication. I think that is an area that pharmacists can..., there is no pathway because every GP practice is going to be different. I think in the future primary care pharmacist role will cross a locality for example, make a huge impact in something like diabetes care.'

GP Harry rates the medicines expertise of the CP.

'Yes because he sees things with different eyes to ourselves and would be helpful for spotting prescribing errors like the penicilamine. Because it was in SystmOne just below penicillin. Conversely, when he has something that isn't on the shelf but it is 5 o'clock and we know the patient, could we adjust the script? So there would be traffic backwards and forwards that way and he would pick up on some of the changes of generic, some of the sort of formulary type of changes, CCG formats.' GP Harry

GP Harry suggests the CP role allows practices to strengthen the MDT.

'I think it is that it creates a stronger team. It is the old story, if there is a doctor on the premises, the staff feel confident about clinical queries. If there is a pharmacist present in the practice, or contactable by messaging, they know they don't have to contact the pharmacist on everything at that point in time, they can park it and say look you will be in tomorrow so we will add it to the tasks and she will then feed you back the results. That gives a level of confidence in that prescribing which is often where much traffic comes into the practice. Not only from outside from patients, but hospital discharge letters, where they don't make sense, and also from other clinical staff. What is the current policy on the prescribing of this type of medication?' GP Harry

GP Harry works for a company that is very supportive of the MDT concept.

'Our company, if you like, so we have physician associates, clinical pharmacists, if we could get hold of them we would love paramedics involved in the practice team and we do a lot of work with the advanced nurse practitioners increasing their skill set and role, so it really has fitted in very well with that team expansion' GP Harry.

A further benefit of the unique skills of hot pharmacist is the ability to contribute to specific agendas in medicines optimisation. There is national (indeed global) agenda to reduce opiate use and dependency and pharmacists can contribute positively towards this.

'A lot of the pain patients I see, they have already been through the system, they just seem to be stuck in a rut of getting the same tramadol or morphine or whatever. It is really educating patients, find out first what the patient is doing for pain relief, are there any parameters there, have they really explored them. I found that nobody has done their vitamin D levels for ever. When I first did their vitamin D levels they were through the floor, they were that low. So that would actually explain why they have got generalised fatigue and aches and pains etc. so I started them on vitamin D and they have improved drastically. Quite a few of them gradually helped them to come off, one patient here had been ratcheted up on Zomorph to over 600mg daily. By the time I actually finished with him he was on less than 100mg daily. I have got another patient who was on the equivalent of 240mg of morphine daily, she is completely off morphine. She is in no worse pain position than she was, she is actually slightly better.' SCP Bob

At site H diagnosis is clearly the domain the of the GP and not other staff.

'We also see it in the practice nurses and advanced nurse practitioners. This wasn't a role that they were perhaps initially wanted to go into. It starts at the front of desk, front of house, the house navigator role. We picked this up, some people say they don't feel comfortable giving an option for advice that somebody might go with and it not be correct. That's not quite understanding that they are not having to diagnose or whatever but if that is what they feel,

that is one of the things we felt in training has to be covered so that it is a safe service. Not just for safety but what you feel comfortable doing.’ GP Harry

GP Harry believes a safe approach is one of the key unique features of the CP role, and this can impact on the culture of the MDT.

‘I would say that because of the pharmaceutical aspect of knowledge in their cases, she is able to be safer with them than the GP who might say well we know we aren’t going to be able to do anything with this, yes let them have the medication. I think she is able and I think the other impact on the staff is able to provide a much tighter boundary to the behaviours. GP Harry

CPs believe that one of the major benefits they can bring to the role is their unique skills in medicines optimisation.

Betty believes there is an optimisation and or safety intervention in 70% of her cases.

‘In a medication review, chronic disease review, I would say most patients we see we make some sort of intervention. Be it very small to stop the meds, changing meds.’ CP Betty

SCPs can drive strategic agendas such as the national work to reduce opiate use through regular and sustained patient contact

‘I see them probably once every 1-2 months, because each step, depending what it is, I probably have a 5 minute telephone conversation with them every 2 weeks. I put them on 2 weekly prescriptions, generally their steps are either 2 weekly or 4 weekly so that I can review that what we have done has been effective. It is just a telephone call, it is not face to face, and it doesn’t take too much time. So probably for example, that first one who was on all that morphine, I probably only saw him within 4-5 month period, about 3 times, but I have conversations with him every 2 weeks for 5 minutes.’

Several CPs specialise in medicines optimisation work focused on mental health according to local needs

‘We have got 1 practice, actually we have 2 practices that pharmacists have specialised in their independent prescribing in mental health, so we have 1 pharmacist that has been stationed strategically in place in the prize pocket of city of [local area] and she does 30 minute mental health reviews that is her specialism. The other pharmacist again works in a deprived city practice that was one of the walk in centres, actually holds the tender contract for the homeless. And there is an [Name] clinic, the actual homeless centre for mental health, substance abuse and alcohol.’ Site Lead Emma

Safety

Medicines optimisation is clearly linked to improved safety, another aspect that CPs see as an important part of their role

‘It is patient safety, patient care probably. Just the fact that we can offer that time to patients to look at medications, that maybe the GP’s don’t really have time to do.’ CP Betty

CPs are aware of the contribution they make to improved safety in primary care. Alice reports that improved safety in prescribing is a significant impact of her work.

‘As pharmacists we are really thorough and a lot of the stuff we do around discharge, like the polypharmacy review, we are often going back into patients notes, seeing where the communication is, we are ringing those patients so I think that is huge in terms of safety’ CP Alice

Betty suggests that holistic care offered by CPs in medication reviews using the unique skills and medicines specialisation of pharmacists leads to safer care.

'It is patient safety, patient care probably. Just the fact that we can offer that time to patients to look at medications, that maybe the GP's don't really have time to do.' CP Betty

Pharmacists also provide safer care through error management and risk minimisation

'Errors on discharges, things like that we have spotted. Patients on incorrect doses of n? We have done work on that.' CP Bernadette

Increased prescribing quality, as well as having safety benefits has cost-saving benefits.

One patient who had not been aware of the pharmacist role outlined ways the role could benefit her from a safety and cost saving perspective.

'I don't often go the doctors to say I take 15 tablets a day I don't go that much. If I had a chest infection they would probably put me in hospital so I am careful where I am going and who I am mixing with, my resistance is so low. So I don't often go to my doctors but I do know what I am taking on my tablets, sometimes I think that some of them, they could take me off them. All that I am taking have mainly been given me by the hospital. All the doctors do is repeat, repeat. Sometimes I think I am sure I don't need to take that any more but I daren't stop taking it. I don't want to go to the doctors just to say do I still need this tablet? He has got better things to do with his time. I don't feel that that is worthy of a doctor's appointment.' Patient AC

At site C safety has been a key benefit of the CP role.

'We made interventions in 30% of prescriptions across 2 years a large number of repeat prescribe as you can imagine over a 2 year period across 6 GP practices and yet we were able to identify and rectify repeat prescriptions where there were errors. We defined errors quite broadly but I think anyone would count that as an error on issue that needs to be addressed quite quickly.' SCP Charles

At Site F, safety is also considered a key specialism, of the role.

'The pharmacists are very safe clinicians, they are trained to be safe because basically, they are administering things that are potentially toxic to people so they have this kind of safety aura about them in everything that they do.' Site Lead Fred Interview

Site Lead Emma suggests that safety is 'a niche that is now expected of the clinical pharmacists.'

GP Gemma suggests that the CP role has helped the practice to develop safer prescribing.

'Although I don't have proof yet, our efficiency and safety prescribing. We have learned a lot from {CP} already, because he is a lot more knowledgeable on details of medications, if not the practicalities of prescribing. But the detail and the safety of it, when a new drug comes along, the best focus to use it so that sort of thing. Our general knowledge has increased especially in new medications.' GP Gemma

GP Gemma gives an example of how the CP uses his unique expertise to benefit medication safety in the practice.

'He has, off his own back, he instigated some safety searches relating to anti-coagulants because that is another area that he is particularly interested in. There wasn't a harm to the patient but I remember him identifying people on the wrong doses of anti-coagulants, not having had a check of their (medicine), that sort of thing. So he is pretty hot on knowing when drugs have to be monitored, a new drug that maybe we don't remember, certainly haven't been doing in a routine way.' GP Gemma

GP Harry gives an example of the way CPs can positively impact on safety by consistent monitoring of psychotic.

'The other thing she has done, I must say, has been very vigilant on some of the potential interactions. So NSAID's, some of these drugs, and renal function, she has tightened up for this particular group who are quite challenging, they are on multiple medications and a lot of psychotropic, she has been very helpful in terms of making sure the correct tests and requesting of them is in place.' GP Harry

GP Harry suggests that CPs are ideally suited to work with the type of patients in his practice.

'The practice when it was set up was a Primary Care Trust practice and it was populated by patients that other people didn't want. So we have a number of people who are demanding and misusing their medication. As more of a generalisation I would say that because of the pharmaceutical aspect of knowledge in their cases, she is able to be safer with them than the GP who might say well we know we aren't going to be able to do anything with this, yes let them have the medication. I think she is able and I think the other impact on the staff is able to provide a much tighter boundary to the behaviours' GP Harry.

Preventing hospital admissions is difficult to measure independently of contextual factors but likely to be an outcome of improving medication safety.

'Because we don't know if that medicine would have ended up resulting in a hospital admission it's a bit woolly. But I think there are some that probably would have reduced an admission to hospital clinical if that Pharmacist had been involved in it evidence has shown 30% over the age of 65 end up in hospital due to medication related issues. And I think we probably have prevented a number of hospital admissions just from efficiencies within the thorough clinical medications, home visits, care home visits, domiciliary stuff as well. And being able to reduce ... I've seen patients on 28 medicines and you're thinking you don't need half of these. With repeat prescribing the formula is you take off 2 and added 1 but there is some of this stuff that is just crazy. You've got people on senna for years and have now got hyperaemic and no-one think anything about it. And you're thinking why are they hyperkalaemic and it's because they're taking too much senna in a blister pack. Taking 2 in the morning and 2 in the evening but don't need to take it. Do they have constipation? I don't think so. Why don't we take it off them then? It's some stuff like that which probably would have ended up in a hospital admission, pretty likely with hyperkalaemia would have ended up on an infusion to try and rectify it and then patient that's elderly could have ended up in cardiovascular arrest. But you can't measure that from a single handed Pharmacist because there are so many interventions along the way that could probably contribute to that as well. So I would love to see some study done on that to see if there was any possibility of capturing that evidence more effectively and actually defining what it means to prevent or reduce hospital admission.' SCP Charles

At site E CPs across all Federation sites work on a centrally coordinated discharge management process.

'When patients coming out of hospital pharmacists have been tasked with making sure that there is accurate discharge reconciliation, we have been doing a little bit of work with the community pharmacists around the CP on a little bit of a project where the patient comes out with a green envelope, presented to community pharmacy and the community pharmacy have been reaching to the clinical pharmacist in general practice, just to make sure there is a bit of a safety net check there'

Practice site lead Emma believes that CPs active safety work partnerships between CPs and care homes prevents hospital readmission.

'The biggest impact we have actually had in reducing hospital re-admissions at the moment is the contingencies on care homes that our pharmacists do, they are scouting every day 6 care homes, 2500 residents, to actually look at transfer of care. They are tasked to get into the

care home within 10 days of any resident presenting acute care, being discharged from hospital, being transferred from one care home to another, the pharmacists are tasked to actually go in and they tend to be at least a weekly clinic in there which then gives the opportunity for patients and the patients families to come in and actually access the skills of the clinical pharmacist in the care home. That tends to be where we have got the biggest impact'

GP Harry suggests the CP improves the discharge process which can lead to reduced hospital readmission.

'She sees all of the discharge letters where there is a list of medication. Some A&E things come out and the patient isn't on any medication. So she is making sure the patients understand their medication, have you heard of the patient activation measures that NHS England rolled out? It is an insignia product in the states and the 13 questions are things like, do you feel responsible for your care, do you understand your medication, what will you do if you are stressed, what happens if you forget stuff? So 13 answers get put into a spread sheet and insignia provide a score, a PAM score and a PAM level. Improving the score and the level improves the number of attendances at A&E and the number of re-admissions within 30 days... The other interesting thing is improving your score by one level actually is supposed to reduce the HbA_{1c} by 1.8% which compared to the impact of many of the drugs, is pretty outstanding... It has been taken up across the country in different ways so the coast at [Area], they are now doing this for any A&E attendance and any patient prior to discharge. So if there is an issue, they then send a health trainer around to see the patient. I think what we would say is that some of those issues which are picked up by the patients activation measure, we are actually covering by analysis of the discharge letter and making sure the patient has an understanding of their medication.' GP Harry

At Site D, David agrees that safety can impact on reducing hospital admissions by avoiding adverse effects.

'You have got medication reviews which again you would expect the six week appointment to be checking for, which has adverse effects and can lead to admission. A lot of pharmacists do, do the post discharge reconciliation documentation which would have a fairly clear link to preventing re-admission.' Site Lead David

KPIs

Current KPIs

There is a clear need for the KPIs for the scheme to be iteratively developed in partnership with sites, and especially GPs.

'My view on their KPI's shouldn't they come and talk to people like me like me before they do KPI's because the people who wrote them... When I read the case studies for the bid, there wasn't nothing that their case studies were doing that we weren't doing for ages' GP Barry

Site leads suggest that the method of collection of KPIs needs to be improved from the pilot scheme.

At site A co-ordinates the data collection for the Federation practice sites centrally. Anna suggests that the reporting is very time consuming and unlikely to generate good quality data (due to differences in read coding and report writing). Anna suggests that an online portal would be more efficient for reporting and a reminder to submit the report each month, as well as an acknowledgement of completion, would be useful. Anna feels that sites would benefit from feedback and data analysis from the country as a whole.

'I would like those reports to be written centrally by somebody, then they could be published across the country and consistency because I can't imagine that we are all getting the same results because we are all writing our own reports and pulling out our own interpretation'

KPIs are important to sites. Site C expects CPs to be employed directly at the end of the scheme but appreciates that research and cost will be vital to sustainability. SCP Charles is able to cite basic KPI statistics about his monthly activities.

'This month I have seen nearly 900 patients and out of those 900 patients, 700 were clinical medication reviews, 150 were long term conditions, 50 were medication reviews, medicine queries, medicine reconciliation, and home visits maybe.'

Site Lead David has concerns about KPIs

'I do think the national data collection, the numbers that we have been submitting, I can't see it is going to show, well it might show something amazing but I can't see it is going to show much impact because I don't think it is the right numbers to be collecting.'

Site Lead David is particularly sceptical about KPIs simply measuring numbers of appointments

'Just collecting numbers of appointments, say you have got some pharmacists doing entirely different things in those appointments and some may only see 10 in a day and some may see 30, there is no measure really about what that impact is. The 10 appointments may be more valuable than the 30 but again there is no way of knowing that in the data that is being collected.'

Site Lead David wishes that he had collected and analysed localised data.

'I think we were kind of put off that because it was going to be a national data collection but yes I wish I had done.'

Site E collects local data systematically and could provide a good example to other sites.

'We centrally collate and return the NHS data, that is co-ordinated by a couple of the admin team in the federation so we collate that. Actually just before the pilot bid had launched, we did an internal clinical sort of template that all the clinical pharmacists used to record any of the interventions and I think that was very key to us and an early opportunity' Site Lead Emma

An example of one year data across Federation Site E is presented at Appendix A.

Site Lead Emma suggests that some of the innovative work of the pilot CPs should have been captured at the earliest opportunity to share with others.

'I think we have missed an opportunity with some degree of the qualitative interaction with the individual pharmacist. Every day I am having conversations with the clinical pharmacists going you should speak louder about some of the work you are doing. If I am working with them on a week by week basis, almost as though I sort of peer mentor and yet still I am still astounded by some of the work that they are participating in and delivering. I think that sends alarm bells higher up that has not been essentially captured and I am sure that is representative across the country. Some of the tick box and the cost savings, you can easily capture quantitative data to be capturing and auditing, but actually I think the true magic is some of the qualitative stuff that has actually been done'

Site Lead Emma suggests that the current KPIs cannot measure innovative practice.

'I think the true magic is some of the qualitative stuff that has actually been done. I wouldn't have known about this homeless project, we have got one pharmacist now sat doing acute triaging over at one of the university campuses, we have got another clinical pharmacist who has now taken on the vice chair of the PCPA, committee representation. We have got 3

representations on central England care home development policy, one is the NHS lead with the PCPA on the new care home committee group that they are looking at developing with regard to specifically care home work. I think all of that unspoken, or unrecognised work that has actually happened, that doesn't get captured with the way that we are currently using those NHS KPI's. I mean I A with the NHS KPI's but there was no base line, we had no period of recording what happened prior to the pharmacists actually being in post and that is going to be really hard to measure what progress has actually been.'

Site lead Fred suggests that the current KPIs are ineffective.

'I would also say that the data that has been collected is probably not very appropriate either. There is something about collecting data and collecting data that is meaningful and useful. It was part of the requirements of the pilots to provide data, that hasn't been robustly managed, which I think is poor. But I would question what they are collecting and how useful it is.'

Site Lead Fred suggests the site is frustrated to return KPIs with no centralised acknowledgement or feedback.

'The other thing is that where pilots have submitted data like Sarah has been fantastic in Ashfield and she religiously sends the data monthly, she never gets an acknowledgement for the fact that the data has been sent and there is nothing coming back to say this is what your data is telling us. So actually if Sarah stopped doing that tomorrow, what would happen, absolutely nothing. She would just be joining one of the numerous pilots that didn't bother sending the stuff anyway. So the fact that there is no feedback to the pilots about what the kind of data picture is, how useful it is, means that many people are going to be saying I am just not going to bother sending this because nothing is going to happen if I stop sending it.'
Site Lead Fred

Site Lead Fred questions the purpose of the scaled rollout scheme where it is not allowing time for learning from evaluation.

'Why is the wave 1 pilot being done? What is the next step? Well the next step has happened without a proper evaluation. The next step is asking for an at scale solution without a mechanism to easily provide it.'

GP Harry suggests that site H set out to monitor KPIs and built this into the role from the onset

'What we found with the admission avoidance that had its KPI's was that when we set up the system for working that, we started at the end point and said right what are the KPI's that are going to be measured, how can we set up a service that actually incorporates those so we don't scurry about'

Future KPIs

Anna feels that some of the KPIs are not relevant to the CP role and others should be developed, including the ones that she tracks locally.

'I think we should be collecting more detail on the types of work that is being done, that is the reports we run off, the federation, so I run off a report on a monthly basis for all the pharmacists, it tells us how many medication requests they have actioned, whether they are acute or repeat ones, how many blood tests they have ordered, how many blood tests they have interpreted, how many patients they have seen face to face, how many phone reviews they have done, how many level 1 2 or 3 med reviews they have done, just to give me an idea. Because that is actually telling the practice, that is to actually show the practices who we want to get on board, look this is the work pharmacists do.'

Nationally the scheme would benefit from a centralised tracking database and by sharing good practice in data collection.

Charles suggests that capacity is a key KPI and is measurable.

'Do you replace appointments that could have been offered by a doctor because it's more cost effective to have a Pharmacist there? If you think about all clinical med reviews went to a doctor in our practice. Not one of them would go to anyone else because the GP would be the person responsible. So having a Pharmacist there seeing 40 patients a day for clinical med reviews, extrapolate that over 5 days, you've got yourself a really good accessible appointment. I know it's very high level but at the end of the day that's the way it was.' SCP Charlies

Site Lead David suggests that national data collection is very difficult due to localised differences in practice and targets.

'The problem is we have got roles so varied. To do it on a national level is so hard because of that reason. Even within our practices they are all doing slightly different roles. What I would have done if it was me, I know 3 of the practices the pharmacists are doing diabetes clinics so I would have, for those practices, put a comparison of patient outcomes with the pharmacists doing the clinics against the practices that haven't got the pharmacists doing the clinics. Because then you can see a real difference. Like I say you can't do that on a national basis, it would be really difficult and really time consuming to collect all that data.'

Site Lead David suggests that the key impact of the role at Site D was in working with patients with LTCs.

'That is where the role has been most successful. So lots of ideas in the first place about how they would use the pharmacist and they have all dabbled in different roles and tried different things, but the majority have ended up spending the majority of their time now doing long term condition reviews. So if I was doing it I would tailor some kind of evaluation around the impact of long term condition control.'

Site Lead David suggests that CPs high quality work with LTCs includes significant work on deprescribing which is measurable.

At site G the CP is so focused on one specific condition (diabetes) that the GP suggests this would be an easy target to measure.

'It could be measured because it certainly, it is still a QOF indicator even though the QOF targets aren't ideal they are there, so we could see what impact it could have on the diabetes control target.'

Site Lead David suggests that while CPs contribute to medicines optimisation it would be impossible to measure this as inseparable from the work of other healthcare professionals such as CCG pharmacists. He also suggests that the work of CPs in managing discharge has clear safety and system implications.

'A lot of pharmacists do do the post discharge reconciliation documentation which would have a fairly clear link to preventing re-admission.'

Site Lead Fred suggests that data collection of KPIs should be systematic.

'I do think systematic collection data extraction is appropriate from my own experience, we know if people are manually doing it, it can be quite an onerous task. But if you don't know what people are doing how can you possibly evaluate a programme? It might be painful for some people to collect the stuff but if you haven't got an automated system to collect it, sorry, you have to collect it manually. Otherwise you just don't know what you are doing and actually that is what has been happening, some of these pilots, people haven't got a clue what the benefits are, what the activity is, there has been no patient surveys that have gone out, there is no qualitative and quantitative data on patient feedback.'

Several CPs suggested patient focused measures should be the focus of KPIs.

'Patient care and patient satisfaction I think.' CP Betty

CPPE are encouraging CPs to undertake simple patient satisfaction surveys.

Safety, suggested as a key benefit of the scheme, was proposed as a measurable KPI.

'To some degree medicine safety incidences, if anybody could measure the number of medicine safety incidences or prescribing errors, in GP practices before the pilot, before and after the pharmacist, is there any change?' GP Barry

'I think reducing prescribing errors we reduce admissions in to hospital particularly some of the prescribing errors we picked up on are very common prescribing errors which could end up in the patient having hypoglycaemia and could end up falling if a high risk patient over 65 and that could potentially reduce a hospital admission or unidentified hypertension in 65 year olds as well.' SCP Charles

Whilst it is recognised that there will need to be some cost level analysis of the scheme, participants are reluctant for this to be used as a sole measure of the scheme for a number of reasons.

'It's very hard to put a quantitative price on. If you looked probably at what we have done on a daily basis, you might not save any money as such, ... but possibly prevented a stroke.' CP Betty

SCPs suggest measures should be practice focused.

'I think if the GP's are valuing it, the practices are valuing it, not how many patients they have seen. Has the practice found that the workload, the quality of the life in the practice because the pharmacist is there. If the practice doesn't think that, then it is not good. If the practice says you know what, when the pharmacist is on holiday, we really struggle so then they realise the pharmacist is doing a lot of work. (laughing) So in your absence, if people don't notice you are missing, then there is no value of you being there.' SCP Bob

SCP Charles suggests that each CP should take responsibility for collating and reporting their own KLPIs and a climate of research should be encouraged amongst CPs.

'I think every Pharmacist in any pharmacy profession including my pharmacy tech college should be actively involved in research. I think there's a really unique opportunity now within the next 20 years whether you've got Pharmacists going into general practice, care homes and urgent care, there's a real need for us to collect good data and we're not good at that generally. I'm really keen that if we can create essentially a database which everyone can contribute to over the next 2 – 3 years, we could really demonstrate some of the benefits from a number of perspectives. It may not be full economic analysis but I think it can give us a core database to say in the last 6 months, 490 Pharmacists have seen 10,000 clinical med reviews. And that type of evidence from anyone's perspective is really valuable.'

Charles thinks this shouldn't be limited to the senior's role.

'And if your senior hasn't done it, it doesn't mean you have to wait for them to do it, go and do it yourself and suggest ideas to your team. I'm not saying do it in a silo, I'm saying speak to your Senior Pharmacist. I'm sure GPs would love it because actually it would help with their re-validation, at pharmacy re-validation we need to demonstrate our work in different areas, what are we doing actively, what are we contributing and it's good for all of us. So I don't think we need to wait for an opportunity, I'm always keen that if you see an opportunity, grab it with both hands. So I would tell any younger Pharmacist I mentor that data is valuable, data is key. In the world that we're living in with digital medicine and everything, data will be really important.'

GP Harry suggests that a 360 degree feedback exercise would be useful for the CPs and could help to measure their integration and impact into the team

'You know how now clinicians all have a revalidation and appraisal, I think the 360 degree, that assessment, I would say not by selected members of the team because you tend to pick people you know but by the team as a whole, both the clinical and the administrative team.'
GP Harry

Sustainability

Feedback from GPs implies that they would like to keep the CP they have been working with. Several GPs suggest that once the practice has had a CP, it cannot cope without them

'We see we can't survive without pharmacists, they are part of what we do.' GP Adam

GPs are less concerned about evidencing benefits of CP role through reporting and are more concerned with witnessing and experiencing those benefits in their own professional practice

Practice Site Leads are focused on the financial sustainability of the scheme. Practice Site Leads often have to persuade others of the economic benefits of the scheme

'The way we are selling it to them is it won't be as high as they are currently because within those costs there are 30% on-cost. What we've done at [another site] with [another CP] is we've negotiated you can have him at that cost but you will have no senior cover. Because if you're going to have him for an additional day, he doesn't need the senior cover at year 2 of the pilot however the cover that we will provide in the on-costs are the training, the mentoring and everything like that. So our work in this next financial year is to convince the practices this is a viable option. This is what you've paid to date and this is why you've paid this. However, this is what your costs are going to be once you've employed them. The only thing with that is Pharmacists are not cheap.' Site Lead Brenda

Practice Site Leads are aware that the sustainability of the scheme depends on ability for benefits of the CP role to be locally recognised and managed.

'So the plan to sell the model is to advise the practices this is what they need to do. At the end of the day they're independent contractors, if they're their employees they can do as they wish.' Site Lead Brenda

At Site D, David confirms some early turnover of posts and sites but suggests that the sites who are into their second or third year of the scheme support its sustainability.

'the message I would give is where the pharmacist does properly become part of the practice, then there are virtually no negatives in terms of the role. So once you get over that hurdle of really getting the pharmacists working in the practice as part of the team then it works. It is just getting over that first hurdle' Site Lead David.

Practice Site Lead Emma suggests that CPs and sites need to begin to work autonomously from external support but the third year of the scheme in order for the scheme to be sustainable.

'I think what we are quite conscientious of at the moment is if it has been quite heavily supported. We have been making the decision as the federation as we are going into the 3rd year, they have really got to be self-sufficient. They have got to have some internal peer resilience, the federation can't continue to support them in that role, without that degree of sending, there has been a conscientious decision to say this week we will go into that to sort of say, take the foot off the gas a little bit. So I think the next 12 months will be interesting just to see how the practice take that handover in terms of their day management of their clinical staff really.' Site Lead Emma

At Site F, Site Lead Fred expects his own post to be sustained to support other federation groups in the local area to apply for later waves of the scheme.

At site A no patients had heard of the new role or anything positive about primary care in the news.

'Always people moaning, you never hear the good things. They always emphasise the things that are going wrong, never the things that are going right.'

Patients suggested that positive findings from the research should be widely publicised.

Outcomes summary

Major outcomes from the clinical pharmacist role include:

- Improvements in Capacity
 - There can be increased access for people with LTC
 - There can be increased access to and uptake of vaccinations through the CP role
- Changes in workload (reduction in medication related tasks for GPs)
- Good quality consultations
- Longer holistic appointments
 - Patient data shows quality of appointments with CPs is high
 - Patient satisfaction is linked to the variable length of appointments according to their needs and consistent appointments with one healthcare professional managing their care
 - More holistic care can include the opportunity for CPs to use motivational interview to help patients make lifestyle improvements
 - There is evidence that CPs help patients to make lifestyle improvement such as diet exercise drinking and smoking which have every positive impacts on their overall health and LTC management
 - The benefits of holistic care and better lifestyle choices are difficult to measure but are lifestyle to include reduced overall costs of care including hospital readmissions could be the subject of further study
- Unique skills in medications added to the MDT
 - CP unique skills in medication can improve patient quality of life in ways other professionals might not
 - CPs unique skills can be shared for the benefit of the MDT
- Improved Medication Safety
 - There is evidence of risk minimisation and error prevention leading to better patient outcomes

KPIs collected in the pilot phase did not result in good quality outcomes which was recognised by sites. Future suggestions for data collection include localised practice of research by CPs and SCPs, collated at Federation level by Site leads. NHS England could provide advice on potential KPIs and collate local data at a National level.

Patient stories

Patient A1 had suffered with intractable long standing neuropathic pain ongoing over several years and was on repeat prescriptions for high doses of pregabalin. He was regularly seen at the GP practice, was admitted to hospital several times per year and was under the pain clinic. He was referred to the pharmacist for a medication review and she was able to explore his concerns about other medications (drowsiness while working as forklift operator). The pharmacist was able to work with the patient over several appointments, and take advice from hospital pharmacist colleagues to develop an alternative prescribing regime. Her suggestion was one which had been previously made by the pain clinic but he had been unwilling to try at that time due to his concerns.

Patient A2 was referred to the pharmacist with a rare condition and side effects from medication injections from the hospital. The patient revealed during the consultation with the pharmacist that he was feeling depressed and suffering from night terrors. He was reluctant to take a prescription as he had previously taken anti-depressants for the problem but that it had caused erectile dysfunction. Over the course of six appointments the pharmacist was able to resolve his reactions to the hospital medication through changing the type and dosage and prescribe something to eliminate both night terrors and erectile dysfunction problems.

'Because I am border line diabetic and I have just been put on one tablet, early in the morning I have to take it, but what I was doing, I was having that tablet after my breakfast and it just about gave me time to get to the toilet (laughing). So I came back and spoke to [Chloe], she said you could be having a problem there. I don't want to take you off the tablet as soon as this, so what I recommend you do, instead of taking it at 8 o'clock in the morning, wait until you have had your lunch and take it after your lunch. I must admit it seems to have worked.'
Patient CA

'I originally saw Chloe, I think it was in February this year. I found I was waking up in the night 3 o'clock in the morning, couldn't get back to sleep, 4 o'clock in the morning, couldn't get back to sleep, it was 5 o'clock in the morning and my husband got me an emergency appointment with Chloe. She gave me a form for a blood test, I had the blood tests done. Then I got a call that evening from the emergency doctor, and I had to go the next day to hospital and have a blood transfusion because my haemoglobin was very low. It happened two years' ago as well. But Chloe, I didn't have a clue what was going on with me at the time, so had it not been for her.... I also was diagnosed with diabetes type 2 in 2014, I took metformin for about 5 months, I lost nearly a stone in weight and I was taken off metformin and put on to gliclazide? You have to do your blood sugar before you drive and report the fact to the DVLA which is the law. Anyway, what I was finding, after I had had the blood transfusion, I was finding I would do my blood sugar, and it was fine, drive and drop my husband off, turn the car around, come straight home, and felt tired. I thought I am going to do my blood sugar again. It had gone from 7.6 to about 4.7 in a short time. I though this isn't right and I monitored it for a few days, and then I saw Chloe to ask why this was happening and Chloe explained that they were hypos. I didn't understand fully a lot about diabetes anyway because it is very complicated. Anyway, Chloe said I was suffering from mild hypos. I then had to inform the DVLA, she suggested I might be best to come off it. But she did speak to Dr (name), she didn't just take me off it herself and asked his opinion. Which I thought was very very good. So she confirmed with him and he was in Ament that I should come off it and I am being monitored by diet. But she has been very very helpful, she also advised me on what to eat with diabetes when I said I wasn't sure. Nobody else could do this, I am sorry I have gone on for so long.' Patient CL

'I suppose my one is a Friday, 6 o'clock and I've got 2 hours left in general practice and someone comes in for an issue and I'm their medicines. Or something they haven't been able to get. Or they're high risk warfarin stuff that they just haven't been able to forget to prescribe and they haven't had a medication review and some instances there's some confusion that's happened between the community pharmacy sometimes will by

*miscommunication or low community pharmacist said oh the GP will prescribe your medicine if you don't for go for your med review and it's Friday 6 o'clock and the patient starts panicking. That's something that happens when we've got a changeover of staff if the regular community pharmacist is not there and the locum says it, that's not the message that should ever go out but that does sometimes happen. I suppose if a patient comes in panicking and reassured that you're there to help them and you're going to do your clinical medication review with them then you've got to make sure they have enough warfarin for instance so they don't run out and if they haven't had a review, you still know they're going to need warfarin and if they can confirm the dose, you can check that for instance on a Monday with their anticoag team as well that they will need to check the INR and you put them at ease. I think that's where I got a lot of the compliments from. And also the polypharmacy they love coming off medicines. I tell you what, that's probably the best part of my job in the prescribing element is looking at someone from a different perspective, taking on their opinions and saying "[pharmacist], I can't be a***d to take 20 medicines any more, can you help me?" and actually saying let's do this for 6 months, I need to look at your blood tests as I'm changing stuff particularly with diabetes for instance and say look this is the plan, let's go for this and work together and I want you to feedback to me ever so often. And that seems to work a lot because again you've got no time. You've got the ability to call them back in and manage their condition and someone who knows the medicines better than anyone else.' SCP Charles*

Appendix G – Glossary and abbreviations

Term	Definition	Explanation
Clinical Pharmacist (CP)	A qualified pharmacist working in a patient facing role in Primary Care	<p>Choice of phrase by NHS England to describe pharmacists on this particular funding stream. In this report refers to those funded to participate in this scheme.</p> <p>May also be used interchangeably to describe other pharmacists working in clinical roles</p>
CIC	Community Interest Company	A CIC is a special type of limited company which exists to benefit the community rather than private shareholders.
GP Pharmacist (GPP)	A qualified pharmacist working in a GP Practice.	<p>Usually used as a term to define a Pharmacist working in a GP practice who is NOT on the NHS England CP scheme.</p> <p>Often used to refer to CCG Pharmacists</p>
LTC	Long term Condition	<p>A Long Term Condition is defined as a condition that cannot, at present be cured; but can be controlled by medication and other therapies.</p> <p>Examples of Long Term Conditions are diabetes, heart disease and chronic obstructive pulmonary disease</p>
MDT	The multi-disciplinary team	The multi-disciplinary team which may include a range of primary care professionals including GP, Nurse, HCA and other allied healthcare professionals
Senior Clinical Pharmacist (SCP)	A qualified prescribing pharmacist working in a patient facing role in Primary Care	<p>Choice of phrase by NHS England to describe the highest level of pharmacists on this particular funding stream.</p> <p>Pharmacists at this level are usually Band 8A and qualified prescribers. They usually have responsibility for mentoring CPs.</p>
Routine Service data (RSD)	Data collected routinely through the service provided	Since the CP role job description requires the monitoring of KPIs, they can be considered as data collected routinely in the service
