

**Developing a
Person-Centred approach to
Pharmacy Practice**

Nina Lee BARNETT

**This thesis is submitted in partial fulfilment of the
requirements of Kingston University for the
degree of Doctor of Philosophy by publication.**

June 2017

Acknowledgements

I am grateful to all the collaborators of the publications over the last 20 years submitted as part of this PhD. While they are too numerous to name, I thank them all sincerely. Specifically, I would like to thank Dr Michael Denham, Dr David Lubel, Dr Chris Jenner and Sister Diana Carne for their inspiring guidance and leadership in developing my multidisciplinary work with older people.

I thank colleagues who have helped me to complete this doctorate, commenting on drafts and giving me ideas for content, format and structure as well as providing personal support and encouragement. Colleagues and friends include Dr Wasim Baqir, Dr Alison Beaney, Dr Catherine Duggan, Dr Claire Easthall, Dr Nan Greenwood, Ms Helen Kaymer, Dr Yogini Jani, Mr Barry Jubraj, Dr Ruth Miller, Ms Lelly Oboh, Professor Nicola Stoner and Mr Derek Taylor.

I extend my thanks to my supervisors, Professor Chris Cairns and Professor Mark Fielder, for their patience and wise counsel. I am also indebted to Professor Cairns for pioneering this journey with me, in the hope of encouraging other pharmacists to follow suit. Finally, I thank my family for their patience and understanding in allowing me to complete this work.

Contents

Acknowledgements	2
Contents	3
Abstract.....	7
Chapter 1 Context, Literature review, Aims and objectives	8
1.1 Context for the presented work	8
1.1.1 Career History.....	8
1.2 Literature review.....	12
1.2.1 Literature review methods.....	12
1.2.2 Literature search results.....	13
1.3 Structure and outline of thesis.....	18
1.3.1 Iterations of structure	18
1.3.2 Outline of thesis	23
1.4: Aims and objectives	25
1.4.1 Development of the author’s work	25
1.4.2 Aim.....	26
1.4.3 Objectives:.....	26
Chapter 2 Methodology.....	27
2.1 Methodology of the thesis and outline of methods in research publications	27
2.2 Methods.....	28
2.2.1 Action research	28
2.2.2 Document analysis	30
2.2.3 Dialogue	30
2.2.4 Collaborative research	31
2.2.5 Praxis.....	32
2.2.6 Quantitative studies	32
2.2.7 Combining the methods.....	33
2.3 Publication strategy	34

2.4 Summary of methodology.....	35
Chapter 3: Development of person-centred care in pharmacy practice	36
3.1 Older People	36
3.1.1 Medicines and older people.....	37
3.1.2 Pharmacy practice and older people.....	38
3.1.3 Medicines, older people and pharmacy practice.....	40
3.1.3.1 Medication review.....	40
3.1.3.2 Medication compliance and self-medication	41
3.2 Clinical leadership	42
3.2.1 Pharmacist prescribing.....	43
3.2.2 Consultant Pharmacist	44
3.3 Impact of work with older people and clinical leadership.....	45
3.4 Summary	46
Chapter 4. Implementation of person-centred care in pharmacy practice	47
4.1 Integrated medicines management service (IMMS) to reduce preventable medicines-related re-admission	48
4.1.1 Local development of IMMS	49
4.2 Person-centred care: A coaching approach to pharmacy consultations	57
4.2.1 A coaching approach to medicines adherence	58
4.2.2 The Four Es.....	59
4.2.3. Person-centred consultations: collaborations.....	64
4.2.4 Polypharmacy and deprescribing: a person-centred approach	65
Chapter 5. Summary, recommendations and conclusion.....	69
5.1 Summary	69
5.2 Impact	69
5.3 Limitations.....	71
5.3.1 Development of person-centred care working with older people.	71
5.3.2 Integrated Medicines Management Service (IMMS).....	71
5.3.3 A coaching approach to health.....	72

5.3.4 Polypharmacy and deprescribing	73
5.4 Recommendations	74
5.4.1 Supporting specific patient groups.....	74
5.4.2 Reducing risk of preventable medicines-related re-admission.....	74
5.4.3 A coaching approach to consultations.....	75
5.4.4 Leadership.....	75
5.5 Conclusion.....	76
6 References	77
7 Appendices.....	97
7.1 Appendix 1: Literature search terms	97
7.2 Appendix 2 Iterations of structure	99
8 Authorship statements.....	103
8.1 Summary of authorship statements	103
8.2 Contribution verification emails from co-authors	108
9 Key publications supporting this thesis	135
Older people	135
Impact of prescribing	135
Consultant role.....	135
Local implementation: Integrated Medicines Management Service (IMMS)	136
National implementation	136
Medicines adherence	136
Coaching.....	136
Empathy	136
Polypharmacy.....	137
Deprescribing	137
Multimorbidity	137
Specialist support.....	137
Links to multimedia content	138
Audio.....	138

Video	138
National Television.....	138
Box 1 The Four Es consultation structure: narrative of a patient consultation	63
Figure 1 Author’s citations by year (25 May 2017).....	12
Figure 2 Relationship between areas of publication and content of the author’s work to person-centred care in pharmacy practice with timeline.	20
Figure 3 Illustration of aspects of the author’s work in relation to the patient	21
Figure 4 Outline of this thesis	24
Figure 5 Integration of person-centred care in pharmacy practice with medicines optimisation	Error! Bookmark not defined.
Figure 6 The Four Es consultation structure.....	60
Figure 7 Flow chart to illustrate common features of a standard pharmacy consultation in a hospital setting.	62
Table 1 Structure of thesis with outline content.....	19

Abstract

This thesis describes the author's contribution, from 1997-2017, to medicines optimisation through use of a person-centred care approach to pharmacy practice. It outlines the author's publications in the area of pharmacy practice and older people together with copies of key publications and relevant authorship statements. The thesis is divided into four key themes: pharmacy and older people, clinical leadership, reducing preventable medicines-related hospital readmission and the development of a coaching approach in pharmacy practice.

The thesis begins with describing the growth of the author's skills as a hospital pharmacist working with older people, which provides the content for the first theme. This includes development of the author's research skills and the start of collaboration with a cross-sector multidisciplinary team, led by a national leader in the care of older people.

The second theme, of clinical leadership, incorporates the author's role as the first consultant pharmacist working with older people in England and also as a pharmacist prescriber in intermediate and long-term care. This includes the creation and leadership of the national consultant pharmacist group for England and information about pharmacist prescribing through publications and describes how practice focussed on what mattered to patients.

The third theme focuses on reducing preventable medicines-related re-admissions and includes description of the development of the Integrated Medicines Management Service (IMMS), an award winning service, including delivery of person-centred consultations.

The fourth and final theme outlines the development of a coaching approach to pharmacy practice including the use of health coaching. This includes development of the nationally utilised "Four Es" (Explore, Educate, Empower, Enable), a structured approach to person-centred pharmacy consultations to support medication review, medicines adherence, reducing inappropriate polypharmacy and optimising safe deprescribing. This section of the thesis also describes collaboration with colleagues to develop the nationally recognised "patient-centred polypharmacy process", joint-editing a peer-reviewed themed journal issue on deprescribing and devising and delivering learning events to provide pharmacy support for special populations.

This thesis demonstrates that the author has contributed to the development of person-centred care in pharmacy practice. The author's work in this area supports medicines optimisation, thus improving the patient experience and the provision of safe, effective pharmacy services, which are embedded within everyday pharmacy practice.

Chapter 1 Context, Literature review, Aims and objectives

1.1 Context for the presented work

Evidence from the literature suggests that approximately 10% of all hospital admissions and re-admissions are linked to medication and up to half are considered preventable (Pirmohamed, et al., 2004; Leendertse, et al., 2010). Therefore, reducing preventable medicines-related hospital admission is a priority. This is particularly important for older people because of the risk of an adverse drug reaction leading to admission in this group, estimated to be approximately 20% (Williamson and Chopin, 1980), which is greater than the estimated 10 percent risk in the general population (Kongkaew et al., 2013). The literature suggests that specific high risk medication, non-adherence to medication and lack of monitoring (Howard, et al., 2006; National Institute for Health and Care Excellence, 2009) as well as poor communication at care transition (Witherington, Pirzada and Avery., 2008; Royal Pharmaceutical Society, 2012 a,b), are key factors that influence preventable medicines-related admissions and re-admission. The work detailed in this thesis began while the author was working with older people, at the time of the publication of the National Service Framework (NSF) for Older People (Department of Health, 2001). Identification of the challenges of providing person-centred pharmaceutical care was the driving force for the continuing work.

1.1.1 Career History

The author's career began working as a hospital pharmacist in the speciality of care of older people, in a North West London Hospital in the late 1980s. The author worked on wards serving older people and was a member of a multidisciplinary team led by Dr Michael Denham, past president of the British Geriatrics Society. In contrast to commonly practiced medical care at the time, person-centred care was practiced on these wards. Older people, an often vulnerable, multimorbid and sometimes ignored population, were asked about their values and preferences for care and involvement in decisions about their care. The author's career continued to develop within hospital pharmacy, and broadened to include working in medicines information with primary care as well as providing ward- based services to long stay, intermediate care and mental health units for older people.

Working with older people

It was not until the publication of the NSF for Older People in 2001 that the author had the opportunity to initiate development of person-centred care for pharmacy practice, working with the care of older people team who were based in Northwick Park Hospital in North West

London, UK. The author received funding in 2002, from the local primary care organisation, and devised and completed a study to support the role of the pharmacist within the NSF for Older People. This included medication history taking on admission, medication review with the multidisciplinary team and primary care liaison at the time of and after discharge from hospital. It is here that the author identified a gap in pharmacy practice at the time. The traditional approach to medicines-related care at the time was clinician-centred, focussing on the pharmaceutical and pharmacological effects of medicines, rather than the impact of medicines use and medicines taking on patients; a more person-centred approach. The author identified this as an opportunity to transfer learning from years of observing medical practice with older people into wider pharmacy practice, while recognising the potential benefit of improved pharmacy engagement with patients to support optimal benefit from medicines use going forward. This became a driving force for the author's subsequent practice and research.

Pharmacist prescribing and consultant role

As one of the first cohort of pharmacists to qualify initially as a supplementary pharmacist prescriber in 2004, and then convert the qualification to independent prescribing in 2007, the author prescribed for older nursing home residents, working with a nurse prescriber to provide patient with quicker access to care through improved skill mix. The author also engaged in postgraduate teaching, contributing to the postgraduate master's programme in community pharmacy (King's College London) and master's programme in pharmacy practice (London School of Pharmacy) as well as developing and delivering a pharmacy prescribing programme at King's College London. The author was appointed to the first Consultant Pharmacist for Older People role in England in January 2007, founding a regional and then national group of Consultant Pharmacists, which the author chaired from 2008- Oct 2010 and of which the author is currently joint chair with Professor Nicola Stoner.

Coaching in pharmacy practice

Reflecting on the author's practice experience and engaging with pharmacists working with older people through clinical networks and teaching, the author was aware that clinical pharmacy practice at the time did not include training for pharmacists in person-centred consultation skills. In 2010, the author undertook coaching training to support the hospital pharmacy team and, following discussion with the trainers, identified an opportunity to use a coaching approach with patients. In order to explore these skills in a pharmacy context, the author then undertook further education in health coaching, later becoming a health coach trainer. Following an interaction with a General Practitioner (GP) about medicines in 2011, the author published a personal reflection on person-centred care in relation to medicines, which highlighted the opportunity for pharmacists to consider a new way to consult with patients.

This thinking was developed through a number of work streams. The first was leading work on reducing preventable medicines-related re-admission where the use of health coaching was integrated into patient consultations during admission and before discharge. Pharmacists undertaking patient consultations would routinely offer solutions for the patient's medicines-related problems that the pharmacist identified. From 2014, pharmacists working on reducing preventable medicines-related re-admission were trained to use a coaching approach to pharmacy consultations, focussing on what the patient wanted to achieve from their medicines use and helping them to use their own resources to find solutions. The approach was also used when referring patients to the New Medicines Service (NMS), where paper based referral yielded poor results, with only 1 in 65 patients referred over two months receiving the NMS service after hospital discharge. When a coaching approach was used in consultations, identifying patient goals, as well as having direct contact with community pharmacists, the implementation of NMS rate improved to 9/28 patients over one month following one telephone call (Barnett, Parmar and Ward, 2013a,b). The service to reduce preventable medicines-related re-admission was recognised through a Health Service Journal Value in Healthcare Award in 2015. Following the delivery of health coaching skill development to pharmacy teams in hospital, community and primary care practice, the author secured a £20,000 charitable grant from the local organisation. Health coaching training was then delivered during 2016 to pharmacy and other staff by the author and colleagues, to support optimising medicines-related consultations within the author's organisation. The work on reducing preventable medicines related re-admission including coaching approach to consultations was presented at the British Geriatric Society Spring conference of 2016 and the abstract was published in *Age and Ageing*.

A coaching approach to medicines adherence

With the publication of the NICE adherence guidance in 2009, the author reflected on the practical and perceptual approaches to adherence and how delivering person-centred consultations using coaching approach could support better outcomes from medicines. The author published an article on the challenge of medicines adherence and in 2012, using the concept of health coaching to promote person-centred consultations; the author developed the "four Es" (Explore, Educate, Empower, Enable), a structure for short, medicines-related consultations applicable to the pharmacy context. The four Es structure was presented at conferences and meetings throughout the UK. Working with the Centre for Postgraduate Pharmacy Education (CPPE) and the Department of Health to spread the learning nationally, the author contributed a chapter on health coaching in pharmacy practice. This included contributing to the national Consultation Skills for Pharmacy Practice programme, published in February 2014. The Four Es approach is now taught as part of a number of undergraduate

university courses in the UK. Further collaboration with colleagues with expertise in person-centred pharmacy services and with pharmacy education and consultation led to additional publications. The author recognised that medicines adherence is an important issue for many clinicians and, in collaboration with a cognitive behavioural therapist who was also a pharmacist, published guidance on person-centred consultations for nurses working with cardiology patients. To support the spread of the medicines-related person-centred consultations concept, the author has made recent contributions to two textbooks.

Polypharmacy and deprescribing

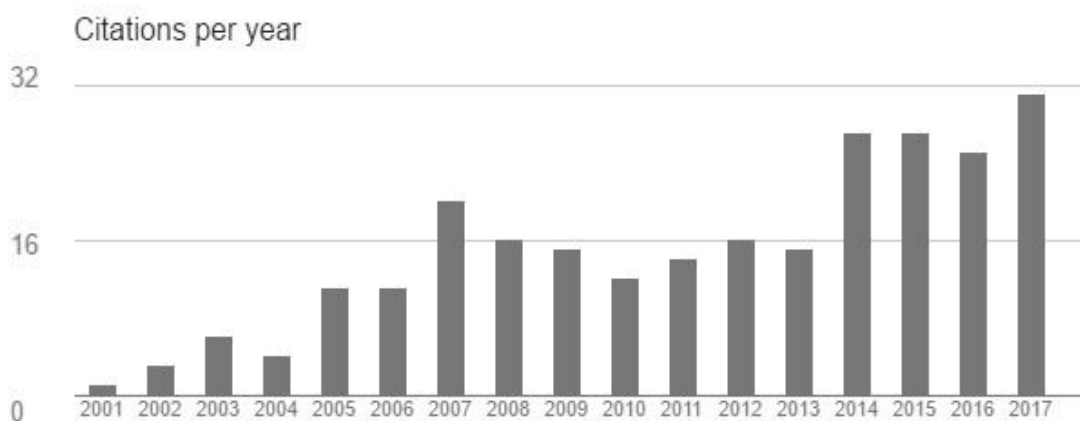
With the increasing concern about medicines wastage and negative consequences of inappropriate use of too many medicines (inappropriate polypharmacy), the author identified that person-centred consultations were of particular value in managing polypharmacy and deprescribing. In 2013, collaborating with a national leader in primary care pharmacy and older people, the author published a review of the challenge of polypharmacy, identifying a gap in patient focus from existing polypharmacy support documents and approaches. This led to development of a person-centred consultation framework for polypharmacy, which was subsequently published in 2015 in a peer reviewed journal. Other collaborations included publication with multidisciplinary colleagues about the need for empathy in pharmacy consultations to support medicines optimisation.

In 2015, the author was commissioned by CPPE to produce videos on the person-centred polypharmacy consultation framework for the CPPE website “media wall” as well as contributing and reviewing the CPPE polypharmacy learning programme (Centre for Pharmacy Postgraduate Education, 2016a,b). The author delivered a keynote address on this work at a joint RPS and Royal College of General Practitioners conference on polypharmacy in April 2016. Having been invited to be one of the only two pharmacist members of the NICE multimorbidity guideline group, the author contributed to this person-centred practice guideline, published in September 2016.

Continuing to promote person-centred care through work as RPS representative for older people, the author has appeared on national television, radio and in print. In addition, having been appointed Visiting Professor in the Institute of Pharmaceutical Science at King’s College London in April 2015, the author teaches clinicians nationally and internationally in the use of health coaching, focusing on a person-centred approach in pharmacy practice. The author has published 53 publications which have been cited 258 times with an H index of 6 (Google Scholar accessed 25 May 2017).

Figure 1 illustrates the author's 258 citations by year from 1997 to 2017

Figure 1 Author's citations by year (25 May 2017)



1.2 Literature review

In preparing this thesis, a literature review was undertaken to identify published national policy in England and the UK, professional guidance and national or learned reports as the primary evidence source. This evidence provides background to understanding the pharmacy context at the time and how this influenced the author's work in development of person-centred care within pharmacy practice.

1.2.1 Literature review methods

A initial review of the literature using the terms "pharmacy practice" and "person-centred care" using related keywords and synonyms was undertaken in Medline, Embase, Social Sciences, International Pharmaceutical Abstracts (IPA), social policy and practice, PsychInfo and Cinahl from 1997 to 2017 (see search strategy appendix 1). Searches combining these terms with "older people" and synonyms were undertaken to identify policy relating to this patient group. The databases were chosen to optimise literature capture relating to person-centred and pharmacy practice. The search included some international literature, focussing on literature from the United States, Australia, Canada and the Netherlands where, despite operating within different health care systems, there are similarities to UK pharmacy practice (The Royal Pharmaceutical Society England, 2013). The results of these searches did not include relevant UK guidance or policy documents and the searches were therefore expanded to include Department of Health (DH) and RPS websites, as well as other professional body and health organisation websites. Contact was also made with specific organisations, such as the Royal College of Physicians, to obtain policy documents not available online or through libraries. These documents were reviewed and references from the publications, which included literature reviews and peer-reviewed papers, were obtained. Other papers from the

author's day-to-day work, identified as having a significant impact on practice, were included. Leaders in UK pharmacy policy development and person-centred care were consulted in order to support identification of key literature. International reports and guidance from countries that lead in pharmacy development, such as Australia, Canada and the United States of America (US), were identified through professional organisation websites and were included where relevant.

1.2.2 Literature search results

1.2.2.1 Patient, Person or People centred care in health

Person-centred care incorporates use of clinician skills, evidence-based knowledge and patient perspective to provide personalised, co-ordinated care which enables people to make the most of their lives (Health Foundation, 2014). International policy (World Health Organisation, 2007) and guidance produced by professional bodies (Nursing and Midwifery Council, 2015; General Medical Council, 2013) has highlighted the need to move from health-care professional centred models of care towards a person-centred model. Guidance from the General Pharmaceutical Council (GPhC) applies this to pharmacy practice (General Pharmaceutical Council, 2017), with "provide person-centred care" as being the first of the recently published nine standards.

Terminology around moving the focus of care from the health provider to the health-care recipient appears in various forms. People who register for or access health-care are defined as patients (Oxford University Press, 2017) and the use of the term "patient-centred" care gained popularity in the early 2000s (World Health Organisation, 2005). The concept of "health-care recipient" focussed care has broadened over time. Both "person-centred" (Health Foundation, 2014) care and "people-centred" care (World Health Organisation, 2007) are terms used to reflect the concept that while patients are people (individuals) receiving health-care, they have lives outside health-care, within families and communities (World Health Organisation, 2007). The author's work relates to developing and embedding this concept in pharmacy practice, moving from clinician-centred care, through patient-centred care, towards person-centred care, which is now the accepted term in health-care (Care Quality Commission, 2014; Health Foundation, 2014; Royal College of General Practitioners, 2014; National Institute for Health and Care Excellence, 2016; General Pharmaceutical Council, 2017).

Person-centred care refers to the care which focuses on an individual receiving health-care (patient), recognising the person's expertise, which includes living with their condition and living their lives with their families and communities. It takes account of their values, preferences and needs to shape and co-create care that optimises their health in the context

of their lives. In recent years, guidance for pharmacy (Royal Pharmaceutical Society and General Pharmaceutical Council, 2014; Royal Pharmaceutical Society Wales, 2014; King's Fund, 2015) has placed a strong emphasis on patient-centred care including the link with professionalism (General Pharmaceutical Council, 2015). The term person-centred care has been applied in pharmacy when working with patient groups (Royal Pharmaceutical Society and National Voices, 2015). In this thesis, the term "person-centred care" is preferred; however, the term "patient-centred care" is applied when the term was specifically used in the literature.

1.2.2.2 Person-centred care: empowering and involving people in their care

In the UK, there has been a social change as people want to have more control of their health. One example contributing to this is the increase in number of over-the-counter medicines, with the UK leading Europe on reclassification (Kelly, 2013) alongside a drive to encourage the public to seek pharmacist advice about managing their own conditions. The importance of self-management and self-care was reflected in the NHS Plan (Department of Health, 2000a), created following public consultation. The NHS plan highlights the public desire for high-quality care centred on patients and identified disempowerment of patients as an issue to be addressed (Department of Health, 2008). "High quality care for all", also known as the "Darzi review", included safety, effectiveness and patient experience as the criteria for provision of high-quality services. The consultation and government response "liberating the NHS: no decision about me without me" (Department of Health 2012) highlighted the appetite at policy level for a culture change that delivers patient involvement at the heart of NHS practice. This was further developed in the NHS England document "Five year forward view" (Department of Health, 2014), which introduced the idea of offering patients the opportunity to be more informed and involved in their care, promoting prevention of illness and supported self-care. This was important in changing the traditional boundaries between patients and health-care professionals to promote collaborative working.

There has been a slow, steady and sustained drive in professional policy and leadership towards increasing self-management and empowering patients to work in partnership with clinicians, (Health Foundation, 2013; All Party Parliamentary Groups on Global Health, 2014; Department of Health, 2014; European Commission, 2014; Health Foundation, 2014; King's Fund, 2014; Royal Pharmaceutical Society Wales, 2014; Department of Health, 2017;) supported in pharmacy by continuing professional education (Centre for Postgraduate Pharmacy Education, 2011). Patients are encouraged to be active participants in care rather than the passive recipients (Coulter and Collins, 2011). Patient activation (Hibbard and Gilbert, 2014), which supports person-centred care, is being adopted within the NHS and licences to use the patient activation measure have been purchased for NHS use in England. In addition

behavioural techniques have been introduced within clinical practice to support improved adherence to treatment, including medicines. This is being promoted in national policy (Department of Health, 2014) supported by emerging evidence (Rollnick, et al., 2010; Health Education England, 2015).

1.2.2.3 Pharmaceutical care and pharmacy practice

In describing pharmacy practice, work in community, hospital, industry and academic disciplines account for the majority of pharmacy practice in the UK. While this thesis primarily focuses on patient-facing pharmacy practice in a hospital setting, work from the author's experience in intermediate (six week in-patient stay), long term bedded units, in primary care with GPs, community matrons and community pharmacists is also included.

The author's work utilises the concept of pharmaceutical care to underpin pharmacy practice. The World Health Organisation uses the term pharmaceutical care in relation to the role of pharmacists in various settings appropriate to different geographies (World Health Organisation, 1994). The widely accepted definition of pharmaceutical care, brought forward by Helper and Strand (Hepler and Strand, 1990) is "Pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life". Whilst the concept of pharmaceutical care was proposed in the US, which operates a different health system to the UK (Weekes, 2014), there are parallels in the provision of clinical pharmacy services, for example review of medication records on admission to hospital, optimising pharmaceutical formulation and working with other health-care professionals to improve medicines-related treatment for patients. The definition has been adopted and expanded in Europe and internationally (American Society of Hospital Pharmacists, 1993; United Kingdom Clinical Pharmacy Association, 1996; Wiedenmayer, et al., 2006; European Directorate for the Quality of Medicines and Health Care, 2012).

For the purposes of this thesis, the terms "medicine or medicines" are used in relation to drugs for therapeutic use and "medication" is used in relation to specific activities, such as medication review. The principle of provision of medicines-related care for patients was introduced in the UK in a report by the Audit Commission (2001). This report used the term "medicines management" to refer to the choice, purchase, and provision, prescribing, administering and reviewing of medicines to produce "informed and desired outcomes of patient care". However, it was the advent of the concept of "medicines optimisation" (Picton and Wright, 2013; Department of Health, 2014a; National Institute of Health and Care Excellence, 2015) which highlighted the importance of person-centred care in pharmacy. Medicines optimisation focuses on the interactions between clinician and patient about medicines, which relates to patient experience, safety and evidence based practice, embedded

within everyday pharmacy practice. The concept of medicines optimisation, in relation to patient-facing pharmacy practice, will be used in this thesis to describe the journey within hospital pharmacy practice towards a person-centred approach to pharmacy practice.

1.2.2.4 Pharmacy policy and practice

Pharmacy contributes to provision of health-care through safe provision of high quality medicines and optimising the use of medicines to improve health. Policy and guidance produced by the World Health Organisation in 1997 (World Health Organisation, 1997), UK government through Department of Health (Department of Health, 2006), as well as other groups (Local Government Association, 2013; Royal Pharmaceutical Society England, 2013) describe the breadth of the pharmacist's role. Pharmacists now serve and support patients in a variety of health-care settings including hospital, general practice and care homes as well as continuing to provide services on the high street.

In a UK hospital setting, the move of hospital pharmacy services from a dispensary-based setting to in-patient wards (Baker, 1967) heralded the beginning of the expansion of the pharmacist's role from a supply function to include provision of clinical and specialist pharmacy services. In 1995, the Royal Pharmaceutical Society of Great Britain (RPSGB) published "Pharmacy in a new age" (PIANA), which was summarised by Professor Marcus Longley (Longley, 2006) as a programme designed to encourage the pharmacy profession to contribute to the wider health-care team through optimising medicine use. Pharmacy services had been highlighted as part of the Department of Health NHS plan in 2000 (Department of Health, 2000). In a separate, related document, entitled "Pharmacy in the future: implementing the NHS Plan" pharmacy specific guidance (Department of Health, 2000a) was published. The stated intention for pharmacists in this document was to "spend more time focussing on individual patient's clinical needs" and to help patients to get the most from their medicines. "Pharmacy in the Future" highlighted the importance of self-care and reinforced the theme, from the NHS plan, of empowering patients to take an active role in managing their own care. While the aims were laudable, pharmacy practice appeared slow to take up the recommendations and it was a paper from 2005, commonly known as the "HOMER" (HOME-based MEdication Review) trial (Holland, et al., 2005), that raised questions about pharmacist skills in the context of providing individualised, person-centred support for safe, effective medicines use as part of the wider health-care team.

The results of the HOMER trial showed an increase in hospital admissions following medication review visits by pharmacists to patients' homes. The authors of the paper suggested that the visits may have caused patients to increase their focus on health problems or may have identified problems that required GP or hospital support. It has also been suggested that this

paper demonstrated a need to improve pharmacists' consultation skills (Wright, 2016). The need for good consultations skills was brought clearly into focus with the introduction of the pharmacist prescribing role (UK Government, 2001; Department of Health, 2006) alongside the continuing development of patient-facing clinical pharmacy roles in hospital and general practice.

The RPS facilitated television coverage of a "scare story", about a sleeping pills being linked to increased risk of death, which the author presented (Barnett, 2012a). This not only developed the author's understanding of a patient perspective on medicines but also put into context the importance of person-centred care in safe, effective use of medicines. However, it was the report of the Francis Inquiry (Francis, 2013) in February 2013, following the distressing events at Mid Staffordshire NHS Trust that brought person-centred care sharply into focus. This report called on all health-care providers to make more effort to find out what patients want and need, and for health-care professionals to deliver care consistently, compassionately and safely. The Francis report stated, in the section 1.121 of the executive summary, that putting patients first was a key theme for improvement. It is noteworthy that there was no explicit mention of the pharmacy service in the report, which may lead the reader to believe that the report does not apply to pharmacy services. However, it has been suggested that the lack of investment in the pharmacy service at Mid Staffordshire NHS Trust, with "worse than expected" clinical pharmacy time available, may have resulted in a more supply-orientated service with little patient contact (Colquhoun, 2013).

Following the Francis Inquiry, the professional body for pharmacy, the "Now or Never" report was produced by RPS (Smith, Picton and Dayan, 2013) calling for the pharmacy profession to focus on the needs of patients. This recommendation was incorporated into the RPS 2013 Medicines optimisation guidance (Picton and Wright, 2013) and an increase in clinical pharmacy patient-facing time has been highlighted in the recent review of hospital pharmacy by Lord Carter of Coles (Winter and Adcock, 2016) . The professional regulator for pharmacy highlighted patient-centred care in its review of standards of conduct, ethics and performance (General Pharmaceutical Council, 2015).

1.3 Structure and outline of thesis

1.3.1 Iterations of structure

The structure for this thesis was originally planned to present the reader with a chronological review of the author's work (appendix 2, iteration 1). This was developed along the lines of themes following dialogue with a pharmacy research colleague (appendix 2, iteration 2). The themed approach aligned the author's publications with the literature published by others in the field. A review of the requirements of this PhD with a colleague who had recently undertaken a PhD in another area of pharmacy practice led to the development of the grid used in the third iteration (appendix 2, iteration 3). From this, and after discussion with the author's supervisors, a modified structure was developed to show development of the various work streams (Appendix 2, iteration 4). A review of a health-related PhD by publication further informed development of the structure (appendix 2, iteration 5) and this was finalised following discussion with a former pharmaceutical industry project manager (appendix 2, iteration 6).

Table 1 overleaf summarises the structure of Chapters 1-5 of this thesis. It divides the author's work into the primary themes of the research from 1997-2017 and provides a brief narrative, in note form, of how the work fits together. Figure 2 provides further detail of the content.

Table 1 Structure of thesis with outline content and themes

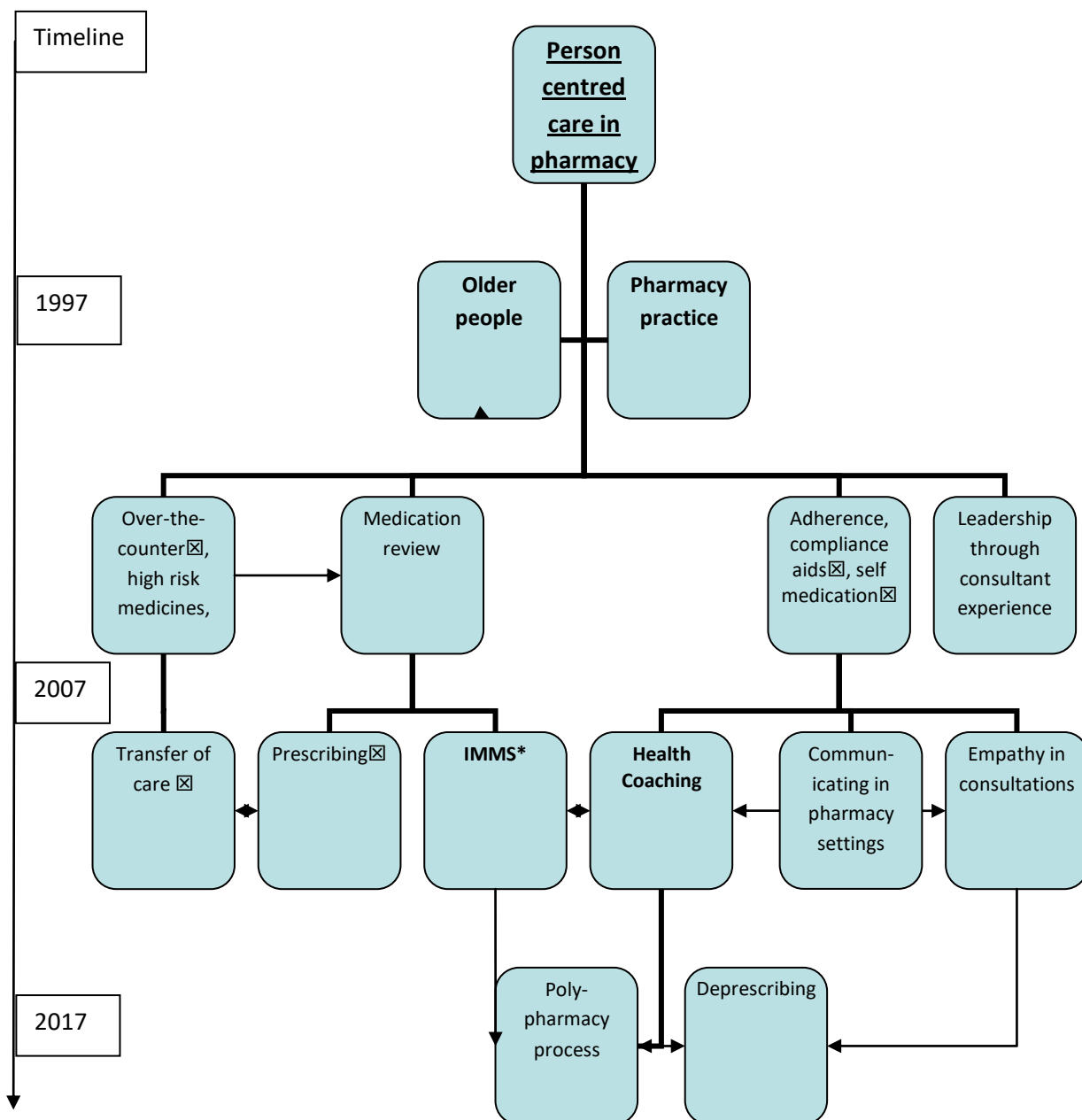
Chapter 1	Chapter 2	Chapter 3	Chapter 4	Chapter 5
Introduction:	Methodology:	Development: Themes Older people, Leadership	Implementation: Themes Integrated medicines management service, coaching approach to consultations	Impact and summary:
Literature search for policy context and guidance for person-centred care and pharmacy practice. Include literature from pharmacy profession, national and international sources. Development of author's work through pharmacy practice with older people in hospital and link with person-centred care through a coaching approach to consultations. Aims and objectives.	Rationale for methods chosen. Examples of usage in author's work. Methods: to include information on: Action research Document analysis Dialogue Collaborative Praxis Quantitative studies (pilots).	Describe skill development in areas of Clinical work with older people, medicines review, compliance aids, self-medication in hospital, long stay and intermediate care settings. Leadership in both the Consultant role and as a pharmacist Prescriber. Comment on Challenges from other published work <i>eg.</i> benefit of medicines review questioned.	Outline local and national implementation Local: Supporting patients at risk of preventable medicines-related re-admission. Development of IMMS and integration of the coaching approach. National : Coaching (behavioural) approach to supporting medicines adherence. Coaching approach to consultations including publications, collaboration, teaching and national contributions, Empathy in pharmacy practice, Polypharmacy and deprescribing. Combining clinical, communication and leadership and education to develop a person-centred (coaching) approach to management of polypharmacy and deprescribing, using multiple health disciplines and collaboration outside health to achieve wide access.	Evidence of impact: Local: IMMS and cross-site development of PICS. National: contribution to: DH, NICE, CPPE and RPS publications and guidance. National/international presentations at conferences. Limitations The variety of behavioural approaches, how studies could have been improved. Potential future work: Validation cross-site of PICS validation of coaching approach and polypharmacy process. Develop work on deprescribing and the law.

Abbreviations: Integrated medicines management service (IMMS), Pharmacy Integrated Care Service (PICS). Department of Health (DH), National Institute for Health and Care Excellence (NICE), Centre for Pharmacy Postgraduate Education (CPPE), Royal Pharmaceutical Society (RPS)

In order to understand the relationship between the elements within the themes of the author's work which formed the structure of this thesis, a more detailed analysis of each theme was required. In addition, it was helpful to consider these elements in relation to the timeline of the various aspects of the work contained in the thesis, including key areas of content and publication. Figure 2 provides a diagrammatic representation of the elements within the key themes with the unifying theme being improving patient care within pharmacy practice. It is important to note that some areas of publication, which formed part of the

development of the author's overall work, are now less relevant to the author's practice and are therefore not being actively pursued.

Figure 2 Relationship between areas of publication and content of the author's work to person-centred care in pharmacy practice with timeline.

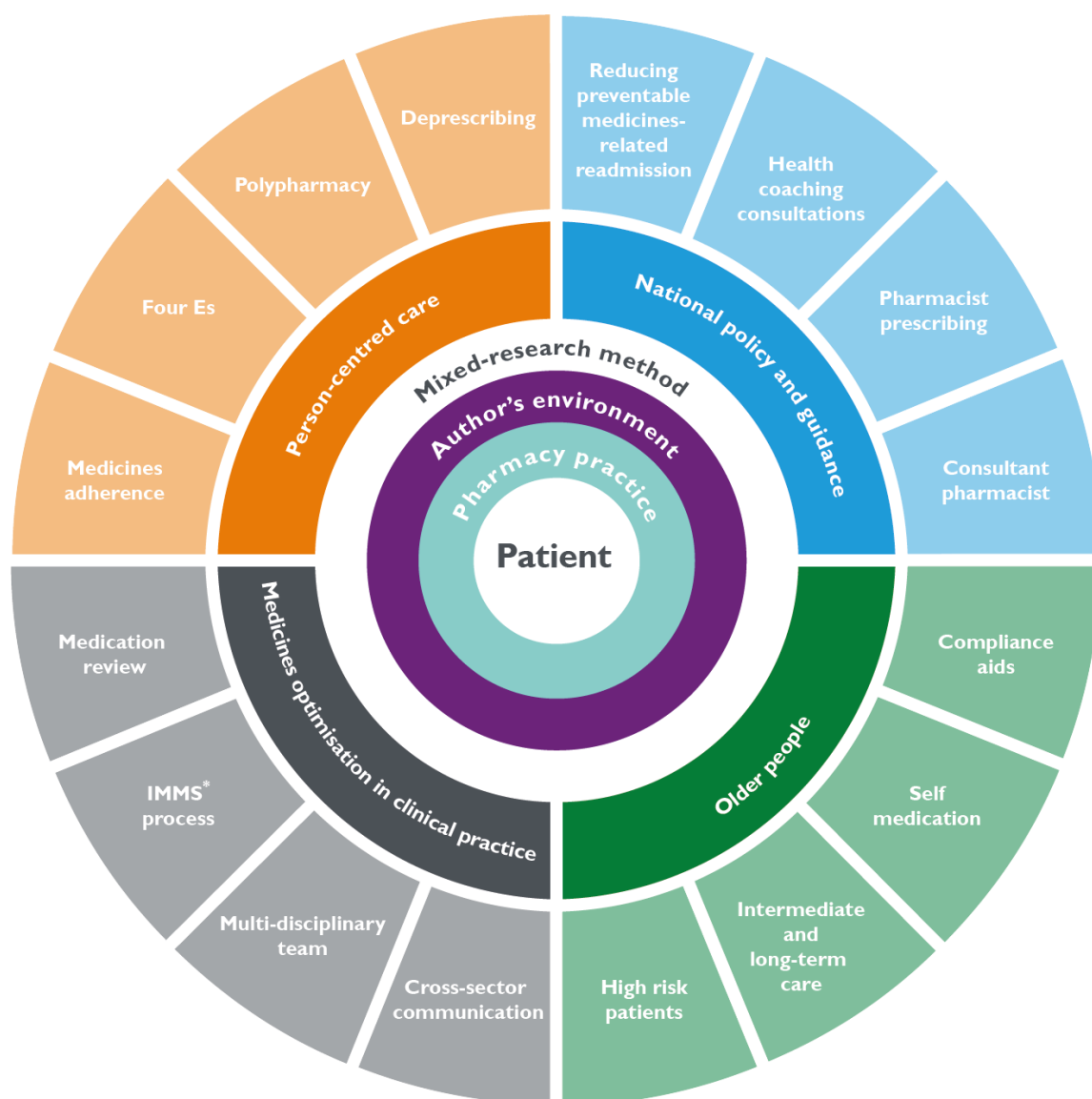


*Integrated Medicines Management Service (IMMS), now known as Pharmacy Integrated Care Service (PICS) ☒ Area of practice not currently pursued.

As outlined in table 2, this thesis describes a mixed-method research, undertaken in the author's practice environment, to advance person-centred care and medicines optimisation. Initially working with older people, the author used policy and guidance, as well as the evidence base, to develop practice linked to a variety of work streams. This is illustrated in

Figure 3 which summarises the overall themes of the author’s work as they relate to the patient, as part of improving person-centred care in pharmacy practice.

Figure 3 Illustration of aspects of the author’s work in relation to the patient



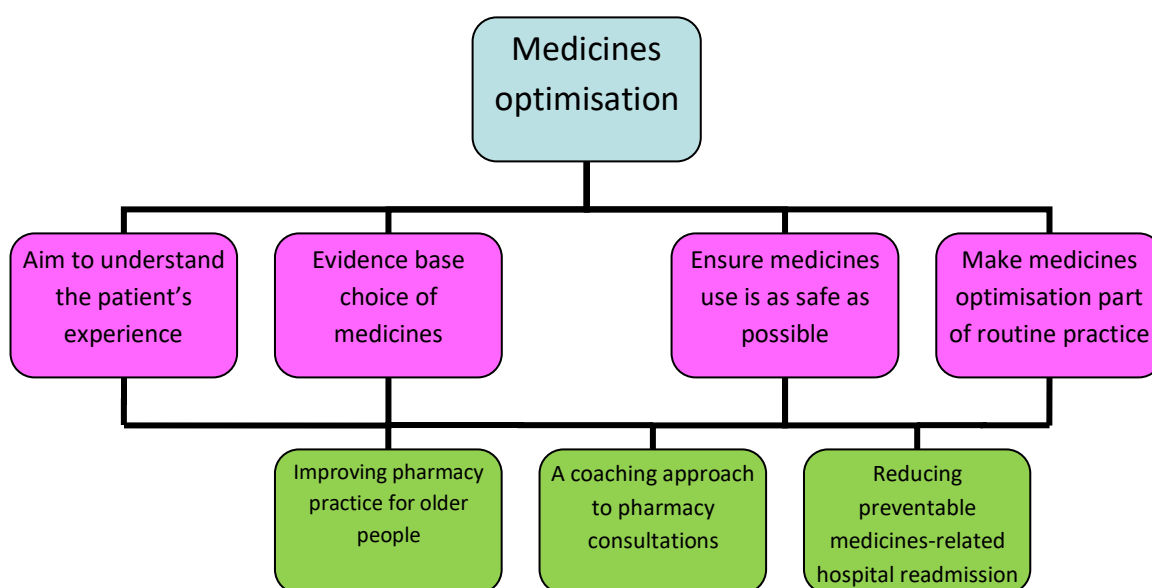
*Integrated Medicines Management Service (IMMS), now known as Pharmacy Integrated Care Service (PICS)

Figure 3 shows the patient at the centre of care and as the reader moves outwards from the centre, the influences on the author’s interaction with the patient are shown. For example, the author’s environment influenced the author’s pharmacy practice. The choice of a mixed methods approach was influenced by the author’s environment. National policy, person-centred care, medicines optimisation and work with older people all influenced the mixed methods research undertaken. Finally, all the elements shown in the outermost ring of the

diagram were part of four broader categories illustrated although, in reality, there is overlap between areas. Another representation would be to view this in three dimensions as an umbrella, where the patient is the central spine of the umbrella and the outer elements are the tips of the spokes.

In summary, the author's work in this thesis should be viewed in the context of overall medicines optimisation as defined by the Royal Pharmaceutical Society (RPS) (Picton and Wright, 2013). The author's work has contributed to medicines optimisation through developing a person-centred approach to consultations in pharmacy practice. This is particularly evident within both the local development and implementation of IMMS and through local and national promotion of a coaching approach to medicines-related patient consultations. As well as supporting safe and efficacious use of medicines and helping practitioners to develop understanding of the patient's experience. Both local development of IMMS and the wider use of a coaching approach to consultations are important contributions to embedding medicines optimisation in every day pharmacy practice. Figure 4 illustrates the link between the author's work and medicines optimisation in hospital-based pharmacy practice, working with older people. The author developed and integrated a coaching approach to pharmacy consultations into pharmacy practice, contributing to reducing preventable medicines-related hospital admission.

Figure 4 Integration of person-centred care in pharmacy practice with medicines optimisation



1.3.2 Outline of thesis

The thesis, in its structure, illustrates the growth of the author's contribution from 1997 to 2017 to the provision of person-centred care in pharmacy practice within a National Health Service (NHS) hospital setting in England. Chapter 1 of this thesis describes the author's career history, presents a literature review of policy relevant to person-centred care in pharmacy practice to provide rationale and justification for the author's work. This is followed by an explanation of iterations for the structure of the thesis to provide the reader with an insight into the development of the thesis.

The methods used in the author's publications are outlined in Chapter 2, identifying examples of publications in which specific methods were used. The majority of methods used were qualitative, based on action research methods, and included praxis, document analysis, dialogue and collaborative methods. A small number of quantitative studies were also undertaken. A brief outline of the methods are included to illustrate the process undertaken, relevance to the overall programme of work and how they fitted together in the development of person-centred care in pharmacy practice. Details of methods used can be found within the individual publications, some of which are included in Chapter 9 of this thesis.

Chapter 3 describes the author's work to support older people in hospital and the author's leadership skill development. This includes information about the author as an early adopter of pharmacist prescribing and pioneer of the consultant pharmacist role, a role designed to support growth of pharmacy professionals as senior practice-based leaders of the profession, contributing to education and research.

Chapter 4 describes the implementation of person-centred care in pharmacy practice, through establishment of IMMS at the author's local hospital. This chapter includes a narrative on the use of health coaching in consultations, initially to improve medicine adherence, later developing models to optimise medicines for patients through managing polypharmacy and deprescribing on national level. The impact of the author's work in each area of development and implementation is included as part of these two chapters.

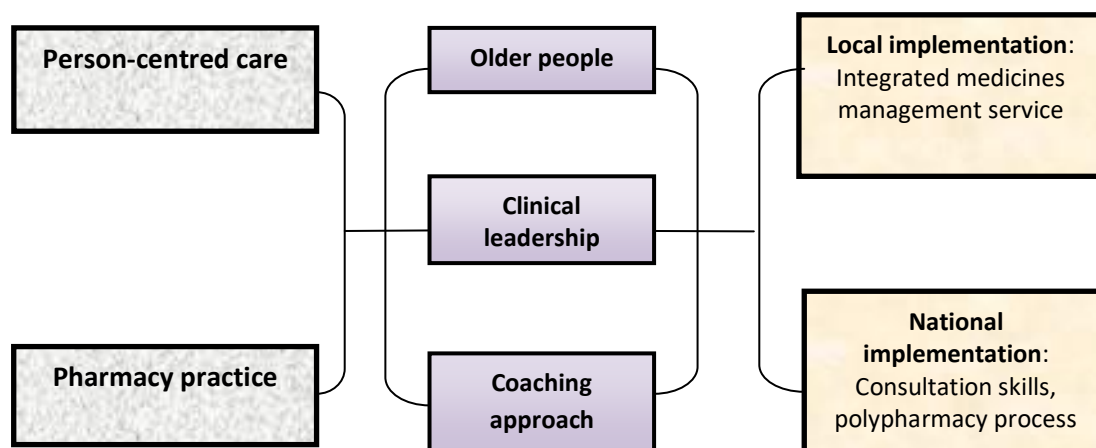
Chapter 5 summarises the author's contributions to developing person-centred care in pharmacy practice and describes limitations to the work. This chapter includes a description of the impact of the author's work promoting change in pharmacy consultations with patients, which includes development of pharmacy services for patients at risk of preventable medicines-related re-admission. This chapter includes recommendations for future practice in the areas of older people, person-centred pharmacy consultations, integrated medicines management service and professional leadership.

Chapters 6 and 7 provide the references and appendices respectively referred to in Chapters 1-5. Chapter 8 lists authorship statements and confirmatory emails for papers which the author of this thesis contributed to, but was not listed as first author, and were referred to within this thesis. Approximate percentages of the author's contribution are provided in the main body of the thesis (Chapters 2-5). The final chapter, chapter 9, concludes the author's key publications arranged in the order of the chapters from Chapters 1-5, including links to non-print media.

While the author has attempted to divide Chapters 1-5 of the thesis into defined sections, the content is sometimes briefly repeated as a number of elements are necessarily interrelated. While convention dictates that abbreviations are explained the first time they are used, the author has repeated writing abbreviations out in full only where it is considered helpful to the reader. For reasons of clarity, references in the text include up to 3 author names, using "et al.," for more than three authors.

The thesis in its structure will describe the key elements of the author's practice, developed over 20 years, and how they are unified under the theme of person-centred care in pharmacy practice. It will also describe the local and national implementation of the key workstreams. Figure 5 summarises the key content covered by this thesis.

Figure 5 Outline of this thesis



1.4: Aims and objectives

1.4.1 Development of the author's work

As previously explained, the overarching aim of the author's published work was to develop person-centred care as part of pharmacy practice. Research between 1997 and 2007 was initially undertaken after learning about the clinical contribution of pharmacists working with older people as illustrated in Figure 2. The author observed that practices from other health disciplines could improve the person-centredness of pharmacy-related health-care. Consultation with colleagues, within and outside the pharmacy profession, during that time and later fostered a shared understanding of the context of the pharmacy practice in relation to care of older people. National guidance, such as the NSF for Older People (Department of Health, 2001) created the bridge between current and potential future practice. Leadership in prescribing pharmacy practice between 2001 and 2011, and in consultant practice from 2007 onwards, improved the author's skills in spreading good practice widely and these skills contributed to greater impact of the work that followed. Ongoing dialogue with pharmacy and health-care leaders from 2005 onwards led to more collaboration to improve person-centred pharmacy practice in the area of medicines adherence, hospital based pharmacy services for people at risk of preventable medicines-related re-admission, polypharmacy and deprescribing. The strategy of publication focussed mainly on widely-read pharmacy journals, some of which were peer-reviewed, on other health professional-focussed journals as well as published work available through open-access health-related websites (NHS Specialist Pharmacy Service, 2017; Barnett, 2016; Centre for Pharmacy Postgraduate Education, 2014). This strategy (see chapter 2, section 2.3) was developed to maximise exposure of both evolving concepts and practice to the relevant audience.

A mixed methods approach, described in chapter 2, was used for development of this work. The various methods chosen reflected the author's interest in developing practice through dialogue and collaboration with pharmacy, policy and clinical leaders. These methods, together with methods supporting innovation through iterative change, were used to influence strategic direction and operational change in practice.

1.4.2 Aim

The aim of this thesis is to describe how the author's work from 1997 to 2017 has interpreted, and later influenced, national policy and professional guidance in developing person-centred care in pharmacy practice.

1.4.3 Objectives:

To describe the contribution of the author's work to:

1. Pharmacy practice in the area of older people.
2. Development of author's leadership role towards implementation of person-centred in pharmacy practice.
3. Advancement of person-centred care in pharmacy practice on a local level, including reducing preventable medicines-related re-admission.
4. Establishment of a "coaching" approach to pharmacy consultations and medicines adherence.
5. Development of medication review in relation to optimising polypharmacy and deprescribing.

Chapter 2 Methodology

The choice of methods used in the author's publications, undertaken as part of this thesis, took account of the strategic and operational aspects of the change required to implement person-centred care in pharmacy practice. The work undertaken was relevant to the pharmacy services practiced at the time, for example, a review of the way pharmacy was practiced for older people was written at a time when national directives began to highlight older people as having increased medicines-related risks. Consideration of this aspect of care for older people helped to develop person-centred care in pharmacy practice appropriate to the context of practice in which the work was being undertaken. This chapter describes the rationale for the chosen methodological approach and outlines the methods used briefly, given the constraints of the introductory section. It will be shown that, as the work was developmental and practice-based, mixed methods and a mainly qualitative approach would most closely address the issues in question. The approach involved action research, including dialogic and collaborative methods, as well as document analysis. Small scale and pilot quantitative studies were included where appropriate to the action research themes. This chapter includes a section on the publication strategy as this was part of the method used to demonstrate the development of, and describe the author's impact on, person-centred care in pharmacy practice.

2.1 Methodology of the thesis and outline of methods in research publications

Action research focuses on resolving specific practical issues and, for this work, involved working with colleagues all of whom were involved in the process of change towards improvement (Waterman et al., 2001; Given, 2008 pp. 4). The processes used were dynamic and iterative. Knowledge was gained through reflection and challenge of practice in pursuit of improvement and further action. Although most of the author's studies utilised qualitative methods, some small scale and pilot quantitative studies were required for the practice element of the work. These are allowed for within the action research methodology, which encompasses both qualitative and quantitative work (Waterman et al., 2001 pp.11). The cyclical nature of action research supports continued learning and is helpful in translating strategic concepts for change and improvement into pharmacy practice. This method is related to Plan Do Study Act (PDSA) cycles (Ranasinghe and Miller, 2007) and the "action effect method" (Reed et al., 2014) used in the successful Collaboration for Leadership in Applied Health Research and Care (CLAHRC) projects in the UK. The combination of collaborative and iterative methods encouraged deepening of the author's understanding of key issues and supported work towards providing practical solutions. The approach is potentially inductive as

the author generated new ideas from observations as part of the action research, rather than work being underpinned by a hypothesis.

Dialogic and collaborative methods were used to optimise input from expert colleagues, generating ideas for practice from conversations and collaborative writing (Paulus, Woodside and Zeigler 2008). This thesis also contains some work which includes elements of praxis, recognising the philosophy that underpinned the author's work. Dialogue supported the aim of this thesis as development of ideas occurred through engagement of the author with colleagues (Costantino, 2012) and patients. Dialogic inquiry is utilised in educational research (Haneda, 2014) between students and teachers. However, it also applicable as a method for colleagues to work together in a dialogic collaborative process to address areas of interest to the collaborators and develop ideas to further their joint interests (Paulus, Woodside and Zeigler, 2008). The author's approach also includes an element of praxis as the author's *raison d'être*, reflected in many of the author's publications, was to do what was "right" in service of patients. The author engaged both as practitioner and thinker in developing a process towards improving care, which included a commitment to make the best judgement about how to act or progress the work with the ultimate aim of improving the patient's quality of life. This forms an important part of action research, where the action, rather than being a simple activity, is creative, collaborative and moving towards improvement or the benefit of the patient (Smith, 1999, 2011). Some of the work included elements of document analysis (Wharton, 2011) where policy and guidance was used to influence development of the work. This mixed method approach, as described above, most closely meets the research aims and objectives.

2.2 Methods

Methods used within this thesis were mainly action research methods, including collaborative research and dialogic methods. Some elements from document analysis and praxis were included as well as a small number of quantitative studies. While the methods chosen could classify broadly as qualitative, the work itself does not create a theory, such as in grounded theory (Glaser and Strauss, 1967), which uses narrative and coding to develop themes. In addition, the author was part of the systems being studied, rather than being outside the systems and used the research process to learn and then modify the intervention for improvement in the next iteration (Dick and Swepson, 2013). The rationale for choice of methods and features of the methods is described in the paragraphs below.

2.2.1 Action research

This method was used as both the cyclic nature of the work and the relationship between the researcher and collaborators, which are key features of action research (Waterman et al.,

2001), were paramount in developing effective outcomes. Methods included exploration, understanding the problem/situation and plans for intervention, with or without undertaking the intervention. Exploration to understand a problem (research) was followed by plans for a pragmatic intervention (action) which usually included observation of existing practice. The intervention was then carried out, followed by more exploration to understand results and changes. This is a cyclic approach where iterative changes are made each cycle until a sufficient understanding or valid intervention or solution is reached. This may be described more appropriately as a “spiral” approach which describes the continuous development and improvement, rather than a cycle which returns to the start. Examples of this from the author’s work include the development of IMMS, initially with a presentation at the British Pharmaceutical Conference in 2009 (Athwal, Barnett and Rosenbloom, 2009), to which the author contributed 25%, followed by Barnett, Athwal and Rosenbloom (2011). Other publications (Barnett, 2011; Barnett, Parmar and Ward, 2013) also use this method to describe developing the New Medicines Service referrals. Barnett and McDowell (2012) and Barnett and Sanghani (2013) use exploration and understanding to describe a coaching approach to support medicines adherence. A continuous quality improvement approach has been used in similar work (Scullin et al., 2007) which led to the development of an integrated medicines management service in Northern Ireland and shares the cyclical nature of action research.

Action research is the most appropriate method for many of the author’s studies. The potential for bias is acknowledged in that the researcher is advocating the policy change rather than critically evaluating it. This risk of bias is minimised through the action of policy implementation which was supported by national and/or professional bodies and underpinned by similar work from other researchers in the field. This method requires the researcher to obtain buy-in and involvement from other working practitioners. This can be challenging in a pressured work environment, particularly if the intervention is complex and/or the burden of work associated with the research is large. These challenges were addressed through engaging with participants to explore what was possible within their work environment and by encouraging participants (professional colleagues) to become invested in the study in which they were participating. In addition, collaborators were aware of the overall strategy and policy driving the change in order to understand application to their own practice, which supports engagement (University of Southern California, 2017).

2.2.2 Document analysis

More usually used in social research (Wharton, 2006) this method was chosen to support the retrieval and analysis of written data from national and professional policy, as well as key primary evidence to shape the direction of change. The author's work included analysis of key NHS policies and the pharmacy implications arising from these policies, guidance from professional pharmacy bodies and guidance from other professions that use medicines to support better health for patients. Literature evaluation was limited to key national and professional policy and key studies. While the authenticity of the documents chosen were not in question, retrieval was undertaken using searches of Department of Health, professional body and organisation websites as well as contacting the organisations directly where required. Formal analysis of content within policy documents was not required as the policies included were underpinned by literature review and evidence from practice. The author undertook interpretation of the policy to provide recommendations for practice in the author's field. Analysis of the evidence on which these recommendations were based was undertaken through review of references and sources for the document and analysis of these papers where appropriate. While the narrow nature of the search and analysis could potentially limit the learning, attempts at literature searching using standard Boolean searches of Pubmed and Embase with keywords such as person-centred care, pharmacy practice, older people, polypharmacy, medicines adherence and deprescribing and synonyms were too broad even when combined. In addition, these searches did not identify documents which influenced pharmacy practice in the direction of person-centred care. The overall methodology relied on the quality of the key documents included, having been underpinned by appropriate literature review, and these documents are explored in the chapters ahead.

2.2.3 Dialogue

The author used the dialogic method, working with other practitioners in the field, to generate ideas. The dialogue leads to practitioners co-constructing a shared vision of a way forward and incorporating the author's interests (Mathison, 2005). This method is linked to the collaborative method as part of action research (Paulus, Woodside and Zeigler, 2008). With an open exchange of ideas between experts, and active practitioners, dialogue was used to construct an understanding about the research subject and develop understanding within the participants themselves. Dialogue as a method was critical to the author's own development through engagement with other people with whom the subject was discussed. This is the relational aspect of dialogue which then transforms the research into a learning experience and effects positive change. The challenge is for the researcher to have insight into both the positive and negative outcomes from this learning and implement change which may be

against the researcher's prior beliefs (Given, 2008 pp. 212-213). This was demonstrated when the first publication on referral to the New Medicines Service resulted in poor referral rates and dialogue with colleagues working in the area promoted new thinking and a change in practice with better outcomes (Barnett, Parmar and Ward, 2013). Examples of use of dialogic methods leading to new insights include Barnett and White (2015), Barnett and Blagburn (2014) and Jubraj et al., (2016), to which the author contributed 20% of the work, Bhandal, Barnett and Clarkson (2016) to which the author contributed 30% of the work and Barnett and Parmar (2016).

2.2.4 Collaborative research

This method was central to the development of the work as dialogue with practitioners, some of whom were experts, led to collaboration in areas of shared interest and inquiry for mutual benefit, which is a feature of this method (Pushor, 2012). The author undertook collaborative research through identifying pharmacy practice leaders with an interest in the various aspects of person-centred practice. Centred on engagement of stakeholders, including practitioners, professional bodies, policymakers and patients, alongside each other, the work developed to identify questions and deliver answers in areas of mutual interest for patient benefit. This method requires the development of relationships to foster collaboration and aligned well with the author's strengths as a researcher. The collaboration required equity between all partners so that working together achieved agreed goals.

The challenge of collaborative research is not insignificant and requires investment in relationships to develop trust and rapport between all collaborators. This takes time and often requires some face to face contact, which can be difficult when researchers are physically distant. It requires awareness of individual's agendas and of areas for potential conflict which must be resolved. This challenge was managed through the author using networking opportunities to develop relationships. The author also built up a reputation for equity in collaborative working in order to minimise potential issues around leadership, coordination, sharing workload and any other potential areas of conflict which can occur in this type of research (Given, 2008 pp. 93). Examples of collaborative research publications by the author, working with pharmacy colleagues on the subject of older people, includes Barnett and Taylor (2004), Barnett and Taylor, (2006) Rutter and Barnett (2007), to which the author contributed 50%. Collaboration with colleagues from other disciplines also led to publications. This included collaboration with a psychologist and coach colleague describing a coaching approach to medicines adherence (Barnett and McDowell, 2013) and collaboration with a pharmacist colleague who also practiced as a cognitive behavioural therapist (Barnett and White 2014). Other examples include Barnett, Oboh and Smith (2016), Bhandal, Barnett and Clarkson (2016)

and Barnett and Parmar (2016), the latter two publications involving collaborations with speech and language therapy colleagues.

2.2.5 Praxis

While not a core method, elements of praxis are key to the philosophy underpinning many of the studies included in this thesis. There was no prior knowledge of the “correct” way to develop person-centred care in pharmacy practice or the desired outcome. In addition, the meaning of person-centred care in specific circumstances was evolving and changing, as is common with learning from continuing research (Smith, 2011). Given that the author’s work extended over 20 years, it could be considered as an ongoing process in which establishment of key relationships between practitioners, for mutual benefit (Tierney and Sallee, 2012) was central to the success of the work. The “commitment to human well being” (Smith, 2011), underpinned much of the author’s work in relation to patient well-being. In the context of this thesis, praxis did not refer to relationships where oppression occurred or where there was imposition of will on others, for example, where clinicians wield their status and power to influence patients’ health related decisions.

2.2.6 Quantitative studies

Quantitative methods were employed for pilot and small scale studies to explore potential ways of implementing change in practice. Prospective cohort studies were used to explore local practice in relation to national concepts. For example, Sood, Amin and Barnett (2005) describe implementation of services supporting the National Service Framework (NSF) for Older People (Department of Health, 2001), to which the author contributed 40%. Fertleman, Barnett and Patel (2005) identify benefits of pharmacists on admission ward rounds, to which the author contributed 40%, and Barnett, Vilasuso, Pettit and Hathi, (2014) describe issues around transfer of care, highlighted as of concern by the RPS. The author was invited and contributed to two publications for the pharmacy professional body (Royal Pharmaceutical Society, 2012 Royal Pharmaceutical Society 2013), as well as video recorded content (Royal Pharmaceutical Society, 2012). The author has contributed to several papers (Barnett et al., 2016b; Barnett, Kalsi and Patel, 2017; Barnett et al., 2017) as well as Lang, Gulhane, Khoda and Barnett. (2017) to which the author contributed 20%. These publications describe services developed from the themes of the NSF for older people (Department of Health 2001). The work contributes to the aim of the recent review of hospital pharmacy services by Lord Carter of Coles (Department of Health, 2016) in providing more patient-focussed care.

While useful for identifying rare occurrences, challenges with cohort studies include the need to follow up large numbers over time. If the data gathered is retrospective, data may be absent and/or of poor quality (Boston University, 2017). Learning from the pilots included that these data did not include matched cohorts and this would be required if the pilots were to be developed into future studies. Undertaking pilots and small scale studies was challenging in a time-pressured hospital pharmacy environment and learning included the need to develop collaboration with academic colleagues for research support in advance of undertaking further work. Given that the overarching strategy was qualitative, the author's publications did not employ quantitative methods to demonstrate causal relationships or support data collection in an experimental design, explore relationships between variables to test theories or include interviews, case studies or surveys. Pilots were used to explore feasibility of ideas and small-scale quantitative studies were conducted to collect data required for the author's local organisation and to support justification of local services.

2.2.7 Combining the methods

Methods as described above were combined in different ways to contribute to the overall research output. Some of the collaborative work was undertaken in a sequential way, that is, it was developed along a specific theme and timeline, where one piece of work led to another on the same theme sequentially. For example, the workstream around consultant pharmacists, developing the author's leadership and research skills, included a variety of publications (Barnett, 2008; Barnett, Mason and Stephens 2009; Mason, Stephens and Barnett, 2010). Other work involved action research using PSDA cycles, dialogue and collaboration and developed iteratively as a cycle or "spiral". An example of this is the development of the Integrated Medicines Management Service (Athwal, Rosenbloom and Barnett, 2011) with both oral presentation (Barnett et al. 2016a,) and abstract following the initial publication (Barnett, et al., 2016b) and a further pilot (Barnett et al., 2017). Other work combined dialogue, collaboration, PSDA cycles and quantitative pilots where some work was sequential, such as development of the patient centred polypharmacy process (Barnett, Oboh and Smith, 2016).

The author's work on polypharmacy developed into related work on deprescribing, including publication of a themed journal issue, of which the author was joint editor, as well as posters and presentations. Examples on the theme of polypharmacy include papers such as a review of challenges in polypharmacy, (Barnett and Oboh, 2014) a description of a new model patient-centred polypharmacy consultation model in the European Journal of Hospital Pharmacy (Barnett, Oboh and Smith, 2016), presentations including at the British Geriatric Society Spring Conference (Oboh and Barnett, 2016) to which the author contributed 50%. Other publications include contributions to learning resources the CPPE polypharmacy learning

resource (Centre for Pharmacy Postgraduate Education, 2016a) and in the CPPE media wall videos (Centre for Pharmacy Postgraduate Education, 2016b). The author presented a keynote lecture on polypharmacy for the Royal College of General Practitioners and RPS Polypharmacy conference (Barnett, 2016) and at the recent Prescribing Research in Medicines Management conference (Barnett, 2017a).

2.3 Publication strategy

The publication strategy chosen was designed to maximise exposure of the author's work to the pharmacy profession, principally through publication in pharmacy professional journals e.g. *Pharmaceutical Journal*, *Clinical Pharmacist*, *European Journal of Hospital Pharmacy*. More recently online-only publications have been included in the publication strategy, such as *Journal of Medicines Optimisation (JoMO)* and *Journal of Pharmacy Management (JoPM)*. The author's publications in the various journals listed will be described in later chapters. Many publications were submitted and accepted by peer-reviewed pharmacy and allied health profession journals. These were chosen in preference to academic journals with higher impact factors to recognise the practice-based nature of the work and align with the aim of reaching a practice-based readership. Publications were also accepted by other non-peer reviewed pharmacy and other health professional journals to maximise exposure, for example the *Health Service Journal*. Contributions were made to books through writing chapters, (Barnett and Goldstein, 2016; Barnett and Tomlin, 2011; Cairns and Barnett, 2009) to which the author contributed 50%, a chapter in the *Clinical Pharmacy Pocket Companion* (Ed. Gray et al., 2015) and a chapter in the *Oxford Handbook of Clinical Pharmacy* (Barnett, 2017). The author's work was disseminated through working with national organisations (CPPE, 2016), and National Institute for Health and Care Excellence (NICE) (2016). As an RPS "ambassador" the author was involved in media work for the British Broadcasting Corporation (BBC) (2012), Independent Television (ITV) (Barnett, 2012a) to promote the development of person-centred care in pharmacy practice. The author has also supported promotion of a person-centred approach, in collaboration with CPPE, through radio broadcasts for an Age UK radio channel, both on the subject of polypharmacy and on supporting people to get the most from their medicines consultations (Age UK and The Wireless Radio, 2016a; Age UK and The Wireless Radio, 2016b).

The author's role in the Medicines Use and Safety (MUS) Division of the National Specialist Pharmacy Service has facilitated contributions to be made freely available through the website www.sps.nhs.uk, which provides open access. Webinars to educate and publicise new developments have been a recent addition to the MUS publicity strategy in which the author's work has featured. This publication strategy continues to develop and links with potential

future work, increasing public awareness of the benefits of person-centred care in pharmacy practice.

2.4 Summary of methodology

This chapter has described a mixed method approach, which mainly features action research, to demonstrate the author's contribution in developing person-centred care in pharmacy practice. The methods were chosen allowed flexibility in developing services according to local need and to meet national strategic requirements, accommodating the changing landscape of pharmacy practice. The combination of action research (including collaborative and dialogic methods) with document analysis provided a platform to utilise existing guidance and policy to shape practice in an innovative and iterative way. The publication strategy illustrates the author's motivation to disseminate the work among pharmacy and other related communities of health-care practitioners. This strategy was developed to encourage reflection, dialogue and experimentation with new practice towards a more person-centred approach to medicines-related patient care.

Chapter 3: Development of person-centred care in pharmacy practice

3.1 Older People

Older people form a considerable proportion of health-care users and as life expectancy increases, health-care resources will become increasingly focussed on the older population (World Health Organisation, 2011). In 1951 male life expectancy was 66.4 years and female life expectancy was 71.5 years in England and Wales and over the 50 year period to 2001 this has risen to 76 years and 80.6 years respectively (Office for National Statistics, 2015). This contrasts to a rise in the UK population from 50.3m to 59.1m (Jeffries, 2005) over the same time period. Importantly, there has been a steady increase in number of people aged 65 years in a 30 year period from 7.4 million in 1971 to 9.4 million in 2001 and the projected rate of growth in 2011 was from 10.5 million to 15.8 million in 2031. In addition, it was predicted that the number of people over the age of 80 will increase by nearly half between 1995 by 2025 (Department of Health, 2001). Finally, data from 2001 showed that there were 637 per 100,000 over 90 (Office for National Statistics, 2014) and this had risen in 2015 to 867 per 100,000 over 90 in England (Office for National Statistics, 2016).

It was in 2001 that the National Service Framework for Older People highlighted the issue of the aging population in relation to health provision and medicines and stated that one fifth of the population was over 60 in England (Department of Health, 2001). The health challenges of increasing older age have been internationally recognised (World Health Organisation, 2011), with older people having significantly more health and social care challenges than their younger counterparts. These include the need to manage co-morbidities in older age as well as the requirements to manage an increased incidence of dementia and frailty (Oliver, Foot and Humphries, 2014). With an aging population comes the need to address the problems associated with increased use of medicines in older people, identified in the National Service Framework for Older People (Department of Health, 2001). Medicines issues include, for example, increased risk of adverse effects from medicines causing morbidity. More recent publications highlight the challenges of inappropriate polypharmacy (Duerden, Avery and Payne, 2013; Jones, 2013) where the risk of adverse effects of medicines and drug interactions was shown to increase with increasing number of prescribed medicines (Maher Jr, Hanlon and Hajjar, 2014; Guthrie, et al., 2015).

3.1.1 Medicines and older people

According to section 1.2.2.2 of the NHS Constitution, and in line with national and international policy, the first of the NHS values is that patient-centred care must be at the heart of all NHS health-care provision (Department of Health, 2015). With pharmaceutical care being part of NHS provision, this requirement includes and is supported by the profession of pharmacy (Centre for Pharmacy Postgraduate Education, 2014; Picton, Dayan and Smith, 2014; General Pharmaceutical Council, 2015). A review of NHS and pharmacy guidance from 1997 onwards revealed three seminal documents (Royal College of Physicians of London, 1997; Department of Health, 2000; Department of Health, 2001) which heralded a fundamental change in medicines-related care for older people. The first edition of a report on Medication for Older People was published in 1984 (Black, Denham, Acheson et al., 1984) for the Royal College of Physicians (RCP) of London and this was the first national document to highlight the risks of inappropriate prescribing in older people. The report, updated in the second edition published in 1997 (Royal College of Physicians of London, 1997), recommended consideration of risk/benefits before prescribing and highlights the benefit of assessment being conducted without reference to age and on an individual basis. The report also reminded prescribers for the need for regular medication review. Looking back at the 1997 report it appears to have been ahead of its time, as many of the recommendations are included in later medication review documents (Shaw, Seal and Pilling, 2002; Clyne, Blenkinsopp and Seal 2008; NHS Cumbria Medicines Management Team, 2013). The theme of medication review was central to many later documents relating to polypharmacy (Duerden, Avery and Payne, 2013; All Wales Medicines Strategy Group, 2014; The Scottish Government and NHS Scotland, 2015;), as well as being included in the recent NICE multimorbidity guidance, (2016), to which the author contributed as a member of the guideline development group.

The RCP 1997 document provides robust guidance on the way forward for medicines-related care of older people and is underpinned by a literature search for key papers. While this document contains some unpublished observations (Duggan, Eccles and Ford, 1996; Tefft and Denham, 1995), it includes a variety of sources including commentaries (Adams et al., 1987) and reference to other specialist body publications (Royal College of Physicians, British Geriatric Society 1992) to substantiate the recommendations.

The work of the author of this thesis began in response to continuing national and international identification of issues surrounding medicines-related care of older people (Royal College of Physicians of London, 1997, Canadian Society of Hospital Pharmacists, 2001, Department of Health, 2001).

Efforts to improve medicines-related care for older people include the introduction of medication review, which has developed over the past two decades in the UK (Zermansky, et al., 2001; Clyne, Blenkinsopp and Seal, 2008; National Institute for Health and Care Excellence, 2009; National Institute of Health and Care Excellence, 2015). However, this has also had its challenges (Holland, et al., 2005). It is interesting to note that many of the clinical challenges highlighted in the NSF for Older People continue to exist, including the medicines-related management of long-term conditions, commonly occurring in older people (Royal Pharmaceutical Society, 2016). The recent RPS “now or never” report (Smith, Picton and Dayan, 2013) highlighted that there is a need for more and better management of long term conditions (LTC) and frailty. “Now or never” described how this can be delivered through improved coordination and increased efficiency, considering the delivery of new models of care. The long-term conditions theme has been developed further in the recent RPS report (Royal Pharmaceutical Society, 2016) and the drive to reduce inappropriate polypharmacy, particularly for the older population (All Wales Medicines Strategy Group, 2014), has gained momentum (The Scottish Government and NHS Scotland, 2015; Duerden, Avery and Payne, 2013).

3.1.2 Pharmacy practice and older people

Pharmacy practice in a UK hospital setting in the 1990s focussed on good pharmaceutical care (United Kingdom Clinical Pharmacy Association, 1996). This grew from the seminal work of John Baker at Westminster Hospital (Baker, 1967) who observed the large number of medication errors due to a number of factors, including poor documentation of medicines orders brought to the pharmacy dispensary by nursing staff. This led to the establishment of ward-based pharmacy services in many hospitals, from the previously dispensary –only based service. It soon became apparent that patient-facing clinical pharmacy service was both possible and beneficial in ensuring provision of safe, effective use of medicines. The UK Clinical Pharmacy Association (UKCPA), formed in 1981, supported networking and education of clinical pharmacy professionals in order to share best practice. Specialist groups developed within UKCPA, including a care of the elderly group, of which the author is a member.

The author, as a pharmacist working with older people for more than 20 years based in a hospital setting, was initially introduced to the concept of multidisciplinary, holistic, patient-centred care by a leading geriatrician, Dr Michael Denham. As chairman of the Royal College of Physicians report on Medicines and Older people (1997) and a past president of the British Geriatrics Society, Dr Denham was champion of multidisciplinary patient-centred care of older people. Collaborating with Dr Denham and a pharmacy researcher, Dr Sally-Anne Francis, then at the School of Pharmacy, University of London, the author contributed to two papers

exploring the pharmaceutical care of older people (Denham and Barnett, 1998), to which the author contributed 40%, and Barnett, Denham and Francis (2000). The first of these papers focussed on clinical aspects of risk and medicines for older people, such as the need for cautious prescribing and monitoring of high risk medicines, identifying adverse drug reactions and drug interactions, in line with the common practice at the time (Royal College of Physicians of London, 1997). The second article, about the lack of exploration by clinicians of over-the-counter medicine use (Barnett, Denham and Francis 2000) considers the dominance of a clinician perspective in consultations to explain the assumption that patients only take what is prescribed. The latter publication followed the author's completion of a Master's degree in Pharmacy practice dissertation which related to this area of practice, considering the lack of information gleaned by clinicians about over-the-counter (OTC) medicines use highlights potential risks, which are echoed by other authors (Honig and Gillespie, 1995). While the costs of OTC medicines were later identified as a risk to reducing access to medicines (Anonymous, 2004a), others suggested that there was benefit of reclassifying prescription-only to over the counter status (Anonymous, 2004b). The author's publication (Barnett, Denham and Francis 2000) summarised the potential hazards of OTC medicines, such as patients being prescribed medicines that they also purchase OTC and masking or delaying diagnosis of serious conditions being treated with OTC medicines. The publication encouraged prescribers to ask patients about their OTC medicines' use.

Over the next five years, the author developed the pharmacy service for older people, describing the role of the pharmacist in the author's organisation's local publication (Anonymous, 2005). Pharmaceutical care for older people was being recognised as an increasingly important speciality (Canadian Society of Hospital Pharmacists, 2001) and the participation of pharmacists in consultant Care of the Elderly ward rounds began to be described in the literature (Burns and Still, 2003). Working with medical and nursing colleagues, the author continued to observe person-centred care as practiced by other health professions. In addition, the author worked to develop understanding of the role of the pharmacist, in relation to patients and as part of the multidisciplinary team (Carne, Barnett and Denham 2002). Through collaborative care delivered with community matrons and General Practitioners (GPs), the author worked to identify and manage medicines' risk for patients at risk of preventable hospital admission. The author also described the expanding role of pharmacists in the care of older people in general practice, intermediate care and acute admission settings (Barnett et al., 2003; Barnett and Taylor, 2004; Sood, Amin and Barnett 2005; Fertleman, Barnett and Patel 2005).

3.1.3 Medicines, older people and pharmacy practice

Alongside the increasing participation of pharmacists in care of older people, the medicines-related content of the National Service Framework for Older People (Department of Health, 2001) introduced the concept of person-centred communication. This led the author to observe patient-clinician communication within the multidisciplinary setting of care for older people. This is reflected in another paper on OTC medicines use (Francis, Barnett and Denham 2005), to which the author contributed 33%, where the author and colleagues identified that two-way communication is needed to encourage safe OTC use in the context of prescribed medicines and that this did not always occur. This paper was the start of the author's consideration of the idea that medicines use requires a mutual responsibility for communication between patients and health professionals that is not always achieved in practice.

3.1.3.1 Medication review

Medication review is included here as an example of a process which benefits from a person-centred approach. The importance of medication review, as part of clinical care for older people, was highlighted both by the Royal College of Physicians (1997) and in the National Service Framework for Older People (Department of Health, 2001). Hailed as a successful pharmacy intervention, following publication of a randomised controlled trial (Zermansky et al., 2001); medication review was suggested to be both a clinically beneficial and cost-effective method of optimising prescribed medicines. The following section will outline the author's contribution to the medication review debate in relation to older people.

In 2005 a paper, published in the British Medical Journal (Holland et al., 2005), raised concerns in the pharmacy community. The paper suggested that medication review was, at best, not effective and, at worst, harmful to patients. This contrasted with previous published literature on medication review, which suggested benefit in terms of identifying medicines related problems in GP practices (Zermansky et al., 2001) and nursing homes (Furniss et al., 2000) . Working with colleagues, the author initiated discussion of the findings of the Holland (2005) paper and published three related "rapid responses" (Bowyer and Barnett, 2005), to which the author contributed 50%, (Barnett and Smith, 2007; Barnett, Taylor and Bowyer, 2007). Discussion with colleagues concluded that sending pharmacists without robust, transparent medication-review training into the homes of patients who did not know them, to undertake medication reviews unconnected with all other health-care interventions and systems, was central to the failure of this medication review initiative. This highlighted the importance of communication between clinicians and patients, the absence of which can derail clinical intent.

When the National Prescribing Centre (NPC) produced guidance on medication review (Clyne, Blenkinsopp and Seal 2008), the author co-wrote an opinion piece and a review (Barnett and Oboh, 2009a; Barnett and Oboh, 2009b) that highlighted a gap in the NPC document. The NPC document did not emphasise that effective communication between the practitioner and patient and between carers and health and social care professionals was essential for effective medication review. In addition, the author wrote an article entitled “Stuck in the middle” about the need for pharmacists to engage patients being critical to success of health-care interventions (Barnett, 2011a).

A recent systematic review and meta-analysis of effectiveness of medication review (Huiskes et al., 2017) concluded that one-off medication reviews in short term situations, while having an effect on medicines-related outcomes, including reducing medicines-related problems, have little effect on clinical outcomes and none on quality of life. No conclusion could be drawn for cost-effectiveness. Other work (Szymanski, 2016) found that a single comprehensive medication review was cost-effective in a hospital setting in the UK. The meta-analysis recommends that one-off medication reviews are no longer carried out. However the review was a meta-analysis of 15 heterogeneous studies in different countries and varying health settings without standardisation of medication review methods, for which there is no accepted practice national standard used in the literature, and this reduces the impact of the conclusion of the meta-analysis.

3.1.3.2 Medication compliance and self-medication

At the same time, work around compliance with medicines was beginning to develop in the pharmacy community in the UK (Horne et al., 2005). The author was involved in discussions with pharmacy colleagues about how to approach the challenge of medicines compliance (Barnett and Taylor, 2006) and continued to learn about person-centred consultations through multidisciplinary working, learning from others through visits to patients and work with community matrons (Jenner and Barnett, 2006), to which the author contributed 50%, and Barnett (2006). The author also commented on the effectiveness of community-based interventions (Barnett et al., 2007). Continuing the work of the National Service Framework (2001) the author sought to address the medicines management “milestone” of self-administration of medicines in the author’s local trust, to support person-centred care for older people. Working with a medical colleague on introduction of hospital self-medication (Vilasuso and Barnett, 2007), to which the author contributed 50%; the author developed an understanding of the importance of patient autonomy in pharmaceutical care. Local work revealed that both the acuity of illness of patients on the care of older people wards and their

lack of desire to self-administer medication made self-administration of medication in an acute setting both ill-advised and impractical.

3.2 Clinical leadership

Clinical leadership is a skill required to implement change in practice. Having published in the field of pharmacy and older people, the author responded to two opportunities in the pharmacy profession at the start of the millennium to develop leadership skills. The first was the establishment of the pharmacist prescriber role following a review for the Secretary of State for Health by Dr June Crown (1999). This review recommended that “The legal authority in the United Kingdom to prescribe, including authorising NHS expenditure, should be extended beyond currently authorised prescribers” to include others, such as pharmacists. This review introduced the concept of independent and dependent, later known as supplementary, prescribing and required that new “non-medical” prescribers, i.e. not medical or dental prescriber, could undertake a prescribing role following specific training. The author enrolled in the first cohort of pharmacists to train as supplementary prescribers and later converted the qualification, achieving independent prescriber status and joining the staff at King’s College London to train other “non-medical” prescribers. The prescriber role supported the author in providing leadership to develop the profession following the Francis Inquiry (2013).

The second opportunity for development of leadership in pharmacy practice was provided by the publication of guidance on Consultant Pharmacists, issued by the Department of Health (2005). The new Consultant Pharmacist role was established to provide patient access to leading pharmacy practitioners with skills in a specific expert area of practice, who also engaged in research and service development, education, mentoring, management and leadership. The author’s role was developed to fulfil the requirements of the Consultant Pharmacist framework (Department of Health, 2005) and a local Consultant Pharmacist post in the Care of Older People was created and approved, to which the author was appointed in January 2007. The author established a consultant pharmacist group in East and South East England (the author’s geographical region of work) and this developed into a national group, of which the author was chair from 2008-2012. The group was incorporated into the RPS in 2012. The author is currently joint chair, with Professor Nicola Stoner, of the national group of over 70 Consultant Pharmacists and in 2015 the author led a national showcase event to highlight the achievements of the post-holders of consultant roles. While there is evidence from publications of the individual practitioners to demonstrate the impact of the roles, examples of which are highlighted in the Consultant Pharmacist Toolkit on the NHS Specialist pharmacy service website (Barnett & Stoner, 2017a), there is no published evidence for the roles overall. The author is currently leading the development of the consultant pharmacist strategy to

support development of roles in England. This was presented at the 2017 Clinical Pharmacy Congress (Barnett & Stoner, 2017b). In addition, the author is leading collaboration between consultant pharmacists working with older people across all four UK countries, establishing this group as a subgroup of the consultant pharmacist group.

3.2.1 Pharmacist prescribing

Pharmacist prescribing presented an opportunity for the profession to expand its contribution to clinical care of patients, through better utilisation of pharmacists' skills in both primary and secondary care services to promote timely provision of clinically appropriate, safe prescriptions. The author demonstrated leadership in pharmacist prescribing through publication in the professional journal section "Agenda for 2003" (Barnett, 2003), describing the evolution of pharmacy practice from a focus on the prescription to one which included the patient perspective. The author also worked with the RPS to develop pharmacists as champions of prescribing to improve pharmaceutical care of older people. The author led the establishment of a supplementary prescribing service in a Harrow Primary Care Trust nursing home with 30 beds. As project lead for the London Pharmacy Supplementary Prescribing team the author described, in a later publication (Barnett and Nicholls, 2005), the benefit of the role to patient care, providing timely, safe access to prescription medicines for patients. In addition, this publication included identification of the importance of a relationship of professional trust and respect between pharmacist prescriber and medical prescriber to the success of this role. The pharmacist prescribing role was promoted to a multidisciplinary prescribing audience through publication of a description of the author's role with case examples (Barnett, 2007). As a newly appointed Consultant Pharmacist in 2007, the author challenged the pharmacy profession to consider how pharmacist prescribing could contribute to hospital ward-based patient care (Barnett, 2008). In a reflection on the prescribing role as an independent prescriber (Barnett, 2012b), the author recognised how pharmacist prescribing, with appropriate prescriber competency and in the right patient situation, provided an opportunity to deliver care focussed on patient-need. This was described in a publication which outlined a case example where a simple modification of a medicines regimen for paracetamol provided improvement to a patient's quality of life. Critics of pharmacist prescribing voiced concerns about the lack of diagnostic skill of pharmacists causing risk to patients (Stewart et al., 2009); however these assertions were not evidence based. Subsequent data on pharmacist prescribing revealed a much lower prescribing error rate for pharmacists than for medical prescribers. One study found an error rate of 0.3% for pharmacist prescribers (Baqir et al., 2014a) compared to a study of foundation year doctors which suggested a mean error rate of 8.9 errors per 100 medication orders (Dornan et al.,

2011). Another publication reviewing error rates, including medicines omissions, in hospital found a rate of 43.8% which was not linked to grade of doctor (Seden et al., 2013). The recent review of hospital pharmacy service by Lord Carter of Coles (Department of Health, 2016) calls for more pharmacist prescribers to contribute to medicines optimisation through direct clinical care (Winter and Adcock, 2016).

3.2.2 Consultant Pharmacist

Once appointed to the role of Consultant Pharmacist, in January 2007, the author published a “comment” article (Barnett, 2008) which identified the role as filling a gap in clinical career progression for NHS employed pharmacists. The author also highlighted the additional responsibilities of the new designation, including professional leadership. However, not all NHS pharmacy service leads viewed the role as a positive addition to NHS pharmacy services, preferring to maintain senior roles in either expert practice or management and leadership. This, together with financial constraints in the NHS, contributed to the patchy uptake of the role by NHS organisations.

Evidence of the author’s leadership to promote the role as part of the pharmacy profession continued with the publication by Barnett, Mason and Stephens (2009). This collaboration, with the national directors for community and primary care and hospital care pharmacy respectively, identified the need for a career structure in pharmacy. This article was followed in 2010 by a call to the profession to develop these roles in support of improving quality of patient care (Mason, Stephens and Barnett 2010) to which the author contributed 33%. The consultant role was described in a book chapter (Barnett and Tomlin 2010), which emphasised the leadership role of consultants alongside clinical expertise, research activity and support for education. Uptake of the role continues to be variable as some lead pharmacists continue to focus on high-level clinical expertise alone. However, the author has continued to promote the consultant pharmacist agenda, highlighting research, education and leadership as integral aspects of senior clinical NHS pharmacy roles. In the author’s role as the joint chair of the RPS Consultant Pharmacist Group, a showcase event was organised in June 2015 to highlight the various areas of expertise to which the consultant pharmacist role had contributed. This was supported by the Chief Pharmacist for England, Dr Keith Ridge, who suggested that the number of Consultant Pharmacists should “increase ten-fold” across the country in the next ten years (Robinson, 2015) from the approximately 50 roles at the time. A stakeholder event followed in January 2016, which led to the development of a consultant pharmacist strategy and was presented at the RPS conference in September 2016. The author and joint chair colleague are currently developing a resource for commissioners of consultant posts and for post-holders. The content from this site will form part of the RPS series of “Ultimate Guides”

and is informed by the author's publications which discussed the potential methods for developing career progression for pharmacists (Barnett, Mason and Stephens., 2009). This resource is being developed with the RPS and will support lead pharmacists who wish to consider establishing consultant roles in the future. The content will be aligned with clinical need in specific geographical areas of England, working with all four UK nations to develop consultant role in all countries and across health economies.

3.3 Impact of work with older people and clinical leadership

The impact of the author's contribution to the specialist area of practice of older people is evident from the case-based work introduced by the author as part of the clinical diploma (1999-2001). This was followed by developing and delivering a Masters level course module on care of older people (2001-2008), both at the School of Pharmacy, University of London. Working with colleagues, the author led the development of a curriculum for pharmacists working with older people, using national guidance and key publications to identify topics, to create content appropriate for practitioner development in that area. The resulting curriculum document was endorsed by the British Geriatrics Society and incorporated into the resources to support the RPS Faculty framework, setting the knowledge standard for pharmacists working in this area of practice. The RPS older people curriculum continues to be requested through the United Kingdom Clinical Pharmacy Association (UKCPA) by practitioners within and outside the UK (Taylor, 2017).

The author was invited to be a member of the project team and contributed to the original edition in 2010 and the updated 2015 edition of CPPE's distance learning programme on older people (Centre for Pharmacy Postgraduate Education, 2015). In addition, the author collaborated with multidisciplinary colleagues to highlight the role of pharmacy in relation to older people (Barnett et al., 2003; Barnett and Taylor, 2004). Development of leadership skills was then essential to allow the author to champion a more person-centred approach in pharmacy practice. The author's advancement of both the pharmacist prescriber role (Barnett, 2003), which resulted in establishing a new pharmacy service for patients in long-care, followed by publication and development of the national consultant pharmacist group, now leading national strategy (Royal Pharmaceutical Society, 2016a), illustrate the growth of the author's skill set in leadership in preparation for the advancement of person-centred care in pharmacy practice.

3.4 Summary

Clinical expertise, as a specialist working with older people, developed during the author's practice working with this patient group. The author's development was supported by a clinical mentor, Dr Michael Denham, who led nationally in the speciality. The clinical environment in which the author worked eschewed a multidisciplinary, person-centred approach to patient care and increased the author's understanding of the patient perspective. Contribution of the author's clinical pharmacy expertise into the multidisciplinary team environment provided an essential foundation to the author's experience, as described in section 3.1.2. This work helped the author to conceptualise how a person-centred approach to care could translate into pharmacy practice which, at the time, was being taught and practiced with an emphasis on the clinical aspects of patient care. Development of the author's research skills was supported both by working with Dr Michael Denham, who was widely published, and through links with local Schools of Pharmacy. The development of the author's leadership skills, through pharmacist prescribing and the consultant pharmacist role, enabled the local person-centred approach to pharmacy practice for older people to be disseminated in the wider pharmacy arena.

Chapter 4. Implementation of person-centred care in pharmacy practice

The following chapter describes the establishment of a cross-sector multidisciplinary clinical service to reduce preventable medicines-related re-admission. This work was initiated following a local project (Barnett and Francis, 2002) to implement the NSF for older people (Department of Health, 2001). This project, undertaken in 2002, demonstrated that medicines-related care could be cost-effective and improve care for patients. In this project, a service was provided to identify patients who required more support with medicines than the standard pharmacy service and provide them with additional pharmacy services. Some patients were identified as requiring support with understanding the rationale for prescribed medicines as well as safe, effective medicines use. The service was designed to improve efficacy and safety of medicines use as part of medicines optimisation and included ensuring those patients' medicines list prior to admission were correct on admission and that communication of medicines changes to the next sector of care was undertaken on discharge. Comprehensive clinical medication review and information from cross-sector communication resulted in identification and management of 213 medicines-related problems in 91 patients. As part of this project, the author undertook the activity of ensuring those patients' medicines list prior to admission was aligned with the hospital list, later known as medicines reconciliation. Some years later medicines reconciliation was highlighted by NICE (National Institute for Health and Care Excellence, 2007) in patient safety guidance, which included national requirements and metrics for undertaking this activity.

The Care of Older People pharmacy service led by the author was developed from initial provision of clinical pharmacy services. Prior to 2004, pharmacists visited wards for older people to provide medicines supply, with minimal time for provision of advice on safe, effective medicines use. The author was successful in obtaining funding from the local organisation, using the data from the 2001/2 project, to provide two dedicated ward-based pharmacists for the four wards for older people. The care of older people service was informed by pharmacy services developing at the same time in Northern Ireland. A study published by Scullin, et al. (2007) describes the Northern Ireland service which focussed on reducing preventable medicines-related re-admission through comprehensive pharmaceutical care throughout the patient's hospital stay. Soon after the publication of the Scullin et al paper (2007) IMMS was established at the author's local organisation, Northwick Park Hospital, incorporating a clinical and communication-based approach to identifying patients at risk and reducing risk of preventable medicines-related re-admission. This included

establishment of an additional pharmacist role, focussing on reducing preventable medicines-related admissions, managed by the author.

In order to develop the communication aspect of IMMS, the author undertook training in a coaching approach to communication and sought to apply this approach to health-related consultations. This was an innovative approach at a time when the benefit of behavioural approaches to improve adherence to lifestyle and medicines was beginning to be explored (Olsen & Nesbitt, 2010). Subsequent health coaching training allowed the author to consider the use of this set of techniques to deliver a coaching approach in pharmacy practice, which led to delivery of health coaching training to over 60 pharmacy staff in the author's organisation in 2016.

Health coaching is designed to raise patients' awareness of their health issues and increase the patient's own responsibility for managing their health (Health Education England, 2015). Interpreted for use in medicines-related situations, this allows health-care professionals to help patients identify what they need to do to improve their own health through medicines. Health professionals can facilitate this with expert knowledge where required. The author identified this skill set as one which promotes person-centred care and this now is supported by national policy (Department of Health, 2014, National Health Executive, 2015). The author became an experienced health coach trainer and developed a coaching approach for pharmacy consultations (Barnett and McDowell, 2012), integrating this approach into IMMS and implementing person-centred care in pharmacy practice locally.

This chapter describes how the author pioneered the national development of a coaching approach to pharmacy consultations, initially to support medicines adherence and latterly to promote the use of person-centred methods in consultations about polypharmacy and deprescribing. The author developed, with colleagues, a nationally recognised process for optimising polypharmacy consultations and led discussion in the literature about the importance of medicines-related person-centred consultations to meet the new legal requirements for informed consent around medicines taking.

4.1 Integrated medicines management service (IMMS) to reduce preventable medicines-related re-admission

The National Service Framework (NSF) for Older People (Department of Health, 2001) provided guidance to develop pharmacy services focussed on high-quality clinical care with good communication between health-care professionals. The supplementary publication to the NSF for Older People, entitled "Medicines and Older People" (Department of Health, 2001a), contained recommendations to improve the quality of clinical care and reduce medicines-related risk for this population. The recommendations included increasing involvement of

older people and their carers in medicines-related treatment decisions in order to improve quality of life as well as addressing poor adherence to medicines. IMMS was developed as a local strategy to respond to the challenges highlighted in the NSF for Older People.

4.1.1 Local development of IMMS

In 2001 the author was successful in obtaining local funding from the local primary care organisation to undertake a six-month hospital-based pilot project addressing key recommendations from the NSF “medicines and older people” document (Department of Health 2001a), including establishing medicines reconciliation, medication review, discharge planning, communication with General Practice and post-discharge follow-up for patients on wards for older people. The pilot, published by Barnett and Francis (2002) described benefits to clinical, communication and cost-related aspects of care and led to the establishment of a pharmacy service for older people within the author’s base hospital in 2004. Benefits included identification of 120 medication history discrepancies in 55 admissions on one care of older people ward. 171 changes to patients’ medicines were initiated. A cost saving of £86.24 per patient per year across the whole health economy was identified. Introduction of patient-centred pharmacy service to provide medication review was estimated to deliver a saving of £29,000 per year.

Around the same time, similar work was being undertaken in other centres to reduce preventable medicines-related re-admission. In the USA evidence was emerging for reduction in adverse effects at 30 days post discharge when full medicines support in hospital and post discharge telephone calls were undertaken (Schnipper et al., 2006). In the UK, a randomised controlled trial, published by Scullin et al., (2007), described a hospital based pharmacy service to patients identified at risk of preventable medicines-related problems at admission, providing pharmacy interventions during hospital admission and at discharge. Patients were randomly assigned to IMMS, providing comprehensive pharmaceutical care (371 patients), or usual care (391 patients). The results of the Scullin et al., (2007) study show a statistically significant reduction for the average length of in-patient stays overall by 2 days, from 9.8 days to 7.8 days ($p=0.003$). The number of re-admissions to hospital was shown to be significantly different between the two groups ($p = 0.027$; Fisher's exact test) with 40.8% of the IMMS group being readmitted within 12 months compared with 49.3% of the usual care population.

The study suggests that for every 12 patients receiving the service, one hospital re-admission within 12 months of discharge can be prevented. This work was reproduced on 2 hospital sites and showed a reduction of average length of stay of 1.49 days (Scullin et al., 2012). This type of service was replicated in other countries (Schnipper et al., 2006; Gillespie et al., 2009).

Through attending and presenting at conferences the author developed links with pharmacists implementing IMMS and continued learning from various publications. Contact with the authors of the Northern Ireland paper (Scullin et al., 2007) helped to develop IMMS at the author's local organisation and address improving transfer of care, communication and clinical care to contribute to improving medicines-related health outcomes for older people.

IMMS was established in 2008 with a full-time pharmacist dedicated to identification and management of patients to reduce risk of preventable medicines-related re-admission. The core service was developed, using a quality improvement approach: in-service Plan Do Study Act techniques (NHS Institute for Innovation and Improvement, 2008) were used as part of action research.

The service included:

- Medicines reconciliation, that is, comparison of pre-admission medicines list with the list of prescribed medicines on admission to ensure prescribing of the correct medicines.
- Medicine optimisation, including stopping or starting medicines, titrating medicines to clinically effective doses etc.
- Medicines consultations with patient and/or carers, including discussion of newly prescribed, stopped and changed medicines. All members of the team received formal training in health coaching during 2014 to support medicines-related consultations.
- Full documentation of medicines changes and monitoring required on the discharge notification sent to GPs and, where appropriate, to pharmacies.
- Medicines-related discharge planning with patients, carers, health and social care teams in primary and secondary care including medicines compliance aid assessment where appropriate and medicines counselling.
- Pre-discharge referral to primary care health and social care professionals, contact with carers and, where appropriate, referrals to community pharmacists for the New Medicines Service or discharge Medicines Use Review.
- Post-discharge telephone follow-up with patient and / or carers to support medicines-related care.

A case management tool was developed to identify risks in the first 50 patients seen in the service (Barnett, Athwal and Rosenbloom, 2009a) with root cause analysis undertaken for the three most complex patients who had repeated admissions. With no nationally accepted risk-identification tool, factors influencing risks were identified from the literature. The information from the initial 50 patients contributed to the development of an evidence-based tool to identify patients at risk of preventable medicines-related hospital re-admission, known as the

“PREVENT[®]” tool. This was developed and established for use in the local service (Barnett, Athwal and Rosenbloom, 2011).

Collaborating with another leading pharmacist working with older people, a joint paper was published to raise the profile of the need to identify older people with medication-related risks (Barnett and Oboh, 2008). Discussion of risk identification tools were later the topic of a publication with a national colleague (Barnett and Seal 2013) where key factors that increased risk of preventable medicines-related re-admission were identified, including medicines adherence and polypharmacy. Preliminary results of IMMS were published (Barnett, Athwal and Rosenbloom 2011) where IMMS at the author’s local organisation was based on the Northern Ireland model (Scullin et al., 2007), as this was the closest health-care system and hospital organisation to the author’s own. These results described reasons for referral to the service and number of preventable medicines-related re-admissions at 30 days for patients managed through IMMS, that is, in the high risk cohort. The ongoing development of the service was published in a descriptive study (Barnett et al., 2016b) and a pilot parallel cohort study published in July 2017 (Barnett et al., 2017).

The author collaborated with a national leader to write a review of the status of services to reduce preventable medicines-related hospital re-admission (Barnett and Blagburn, 2016) identifying the ongoing challenges in understanding the causes of such re-admission. The publication highlighted four themes: a person-centred approach to education, shared decision making, medicines reconciliation on admission and discharge and post-discharge referral to community pharmacy. All these services were provided as part of IMMS. A parallel cohort pilot study was undertaken to explore the potential benefits to patients of the current service in comparison to the standard pharmacy service and an abstract of this work was published in *Age and Ageing* (Barnett et al., 2016a) and presented at the British Geriatric Society conference in Spring 2016. This study showed that IMMS produced a statistically significant reduction in preventable medicines-related hospital re-admission (PMRR) at 30 days post discharge. 119/744 (27%) of patients in the active cohort were readmitted within 30 days of discharge with 2 patients (0.3%) due to a preventable medicines-related re-admission (PMRR) while 17/92 (18.5%) patients in the control group were readmitted within 30 days of discharge of whom 4 had a PMMR (4.4%). The difference between control and IMMS patients readmitted due to PMRR was statistically significant ($P < 0.002$, Fisher’s exact test). However these results were difficult to compare to Scullin et al., (2007) because the author’s organisation required data on reduction of preventable medicines-related re-admission within 30 days and the Scullin work reported results at one year. The Scullin et al., (2007) paper reports unplanned re-admission rates with length of stay and length of time to re-admission over 12 months; however preventable medicines-related re-admissions are not separately

identified due to the challenges of identifying these patients. As current admission coding at the author's local organisation does not provide this information, the author used pharmacist clinical judgement, peer-reviewed by a consultant geriatrician, to identify preventable medicines-related re-admission. However it is acknowledged that this method is subjective and alternative methods have been the subject of discussion with Scullin et al and others working in the field. Furthermore, Scullin et al., (2007) and the author's study reported different measures of success: Scullin et al., (2007) reported reduction in length of stay and number needed to "treat" whereas Barnett et al., (2016b) reported number and type of interventions made as well as an estimate of cost savings in hospital.

While identifying potential for cost and clinical benefits of the service, the paper by Barnett et al., (2016b) included methodological flaws which precluded further work with these data. Despite guidance on statistical requirements including control group size, the control group being smaller than the active cohort together with lack of demographic and clinical condition/morbidity data for the control group meant that comparison of the two groups was not possible.

In addition, while the PREVENT[®] tool was used to identify patients in Barnett et al. (2016b), the re-admissions were assessed according to whether they were medicines-related or not. It would have been preferable to assess re-admissions using the PREVENT[®] criteria, as these criteria were used to identify patients on initial admission. Peer-review of reason for re-admission was undertaken by a peer independent of the study and this could have been improved if more than one peer reviewer had been involved. As mentioned earlier, the re-admissions were also reviewed in relation to 30 days where the original study (Scullin et al., 2006) reviewed re-admissions at one year. A larger study is required to detect the influence of reducing preventable medicines-related re-admission on the overall re-admission rate.

The literature suggests that 5-20% of admissions are medicines-related (Williamson and Chopin, 1980; Pirmohamed et al., 2004), and an unknown number of preventable medicines-related re-admission, making comparison with the author's data difficult. All the aforementioned issues will be addressed in future data collection. Nevertheless, the experience invaluable in developing the author's understanding of undertaking research in practice and has provided important information for the future development of the service.

4.1.1.2 Health coaching and integration of a person-centred approach within IMMS

Developments in person-centred care as part of IMMS began with a personal reflection (Barnett, 2011) following the author's training in health coaching. While a systematic review of the health and wellness coaching literature (Wolever et al., 2013) defined health coaching as "a patient-centred process that is based upon behaviour change theory and is delivered by health professionals with diverse backgrounds", this review concluded that there is no overarching definition of the interventions referred to as "health coaching" in the literature.

Health coaching focuses on the patient's identification of their health-related needs. It uses techniques from psychology and performance coaching to help the patient identify a health-related goal and develop their own options for solving the issues they raise. It can be considered as an umbrella term for a number of behavioural change methods. Health coaching has been identified in the NHS 5 year forward view (Department of Health, 2014) as a method of supporting healthier behaviours and can be applied to medicines adherence (Wolever and Dreusicke, 2016). The author chose to use health coaching to develop person-centred care in pharmacy practice as it provided an "umbrella" of behaviour change techniques. The author was aware of other behavioural change techniques beginning to be used in pharmacy practice, such as motivational interviewing (Stanton and Lyon, 2015) and cognitive behavioural therapy (White, 2014). The author sought out other practitioners working with behaviour change, such as health psychologists Dr Angel Chater (then at UCL School of Pharmacy) and Dr Vivian Auyeung (King's College London), collaborating to develop the coaching approach and contribute to the wider person-centred care arena. One such collaboration resulted in co-authoring of a paper on empathy in clinical consultations (Jubraj et al., 2016) to which the author contributed 20%.

The use of health coaching in consultations supports patient empowerment and can contribute to increasing patient activation, promoting shared decision making and improving patient engagement with health-care to contribute to better health outcomes and quality of life. A potential opportunity arose in 2016 to collaborate with primary care and use the recently purchased local licences for use of the Patient Activation Measure (NHS England, 2017). This is a validated tool to support clinicians in working with patients towards increased self-care. However organisational issues precluded the inclusion of the PAM tool as part of IMMS.

The author used health coaching skills and techniques to develop a coaching approach to pharmacy consultations as part of IMMS delivered pharmacy health coaching training programmes within the author's organisation from 2014 onwards. The first programme, co-

delivered with The Performance Coach in 2014, was part of a health coaching programme accredited by the European Mentoring and Coaching Council, working with Portsmouth University. The coaching approach became integral to the development of IMMS, described by Barnett, Dave, and Athwal et al. in 2016 and health coaching training has now been commissioned for health-care professionals working in the North West London area.

The benefit of a coaching approach to consultations was demonstrated through video recorded consultations in which the author demonstrated the techniques applied to pharmacy practice (Imperial College London, 2014). The author also pioneered the use of a person-centred approach in the dispensary setting. This included using the coaching principles to develop a consultation structure suitable for very short (2-5minute) pharmacy consultations (Barnett and Flora, 2017) enabling use of a coaching approach to more patients within the author's organisation. In order to provide learning opportunities about person-centred short consultations, video consultations were created with an educationalist colleague, Barry Jubraj, and CPPE, to support integration of a coaching approach into pharmacy practice in short consultations (Barnett and Jubraj, 2014a, Barnett and Jubraj, 2014b).

4.1.1.3 Multidisciplinary teams in the context of integrated medicines management

The integrated medicines management service adopted a multidisciplinary team approach from its inception, having developed from the discipline of working with older people, where this is embedded in clinical care. The IMMS pharmacist was encouraged to attend medical ward rounds in order to identify pharmaceutical issues from a person-centred, as well as a clinical, perspective and make recommendations at the point of clinical decision-making. This has been demonstrated to be of value in the published literature (Bednall, McRobbie and Russell, 2003; McFadzean et al., 2003) with regard to emergency admissions to hospital.

The author undertook a retrospective audit of pharmacist interventions on the general medical acute admission unit and prospectively gathered data when the pharmacist attended post-admission ward rounds (Fertleman, Barnett and Patel 2005). This study demonstrated the benefit of attending the medical ward round to patient care in terms of intervention rate and clinical risk reduction, as well as cost-effectiveness. This included the identification of discrepancies in medication admission history in 52/53 (98%) patients seen by the pharmacist on the post-admission ward round, compared to 26/50 (52%) when medication admission histories were undertaken in a standard ward pharmacy setting. In addition, pharmacists on the post-admission ward round stopped 42 medicines in 19 patients compared to 5 medicines in 3 patients seen as part of the standard ward pharmacy service. This work was undertaken at a time when stopping a medicine, also known as deprescribing, was not routinely considered.

As approximately two-thirds of emergency admissions at that time were older people, this contributed to local evidence of need for pharmacist integration into multidisciplinary teams both within IMMS and in wider pharmacy services. These findings were supported with later work demonstrating pharmacist value in intermediate care (up to six weeks after hospital admission) (Amin, Dave and Barnett, 2011), to which the author contributed 33%. This audit showed that the rate of interventions in an intermediate care setting (up to six weeks rehabilitation care) was 2.2 per patient and was comparable to other published hospital-based intervention audits (1- 5.5 interventions per patient) reinforcing the need for clinical pharmacy services in this setting. The author developed and implemented pharmacy services as part of a prevention of hospital admission “Rapid Response” service (Barnett, Kalsi and Patel, 2017). This paper described the contribution of a pharmacist to prevention of medicines-related admissions. With an average number of 9 regular medications, the pharmacist identified that 68 (30%) of the 229 patients reviewed had a medicines-related issue or error with potential for moderate or severe harm, as classified using the National Patient Safety Agency 2011 definition of harm scale (National Patient Safety Agency, 2011).

4.1.1.4 Medicines support for special populations

The author contributed to person-centred patient support with practical aspects of medicines use through collaboration with multidisciplinary colleagues in areas not yet addressed by the pharmacy profession. This included production of a resource for improving medicines-related communication about anticoagulation with patients after stroke and practical guidance for medicines use in patients with swallowing difficulties.

This work evolved from a learning event provided for pharmacists in 2014, where pharmacists involved in care of patients after stroke identified a gap in practice when consulting with patients about safe use of anticoagulation therapy. Working with speech and language therapy colleagues, the educational material on anticoagulation therapy currently provided for pharmacy consultations was recognised as not suitable for people with receptive and expressive aphasia. This condition, which manifests as difficulty with speech and understanding, commonly follows stroke and anticoagulant medication is often prescribed. The author organised a further learning event and invited speech and language therapists to work with pharmacists in optimising communication for people with aphasia. Collaborating with speech and language therapists and pharmacists, the author facilitated co-creation of a set of slides which explained anticoagulation therapy in a suitable format for patients with aphasia. This was a novel communication tool for pharmacists and was distributed through the author’s organisation’s open-access website (Barnett, 2016). Working with a leading pharmacist and a senior speech therapist, the author published a description of the tool to

support consultations for people with aphasia following stroke (Bhandal, Barnett and Clarkson 2016).

Using similar methods which included a learning event and collaboration with speech and language therapists, the author worked with a pharmacist expert on managing medicines for patients with swallowing difficulties after stroke and co-produced a guide to optimising medicines for patients with swallowing difficulty (Barnett and Parmar 2016). This guide is now being incorporated into the work of the Dysphagia and Medicines Advisory Group, led by the Patients Association.

4.1.1.5 Cross-sector pharmacy communication

The author identified from the literature that cross-sector communication was a factor in hospital re-admission (Witherington, Pirzada and Avery, 2008) and published an article about the need to improve communication at transfer of care (Barnett, 2011), highlighting patient and clinician issues. The author later contributed to an RPS report (Royal Pharmaceutical Society, 2012) describing the author's local service and contributed to a video to illustrate transfer of care issues (Royal Pharmaceutical Society, 2012). Learning from the literature, cross-sector communication within IMMS was strengthened to include referral to the community pharmacy New Medicines Service (NMS) and to support discharge Medicines Use Review (MUR) consultations, introduced in 2011 (NHS Employers and Pharmaceutical Services Negotiating Committee, 2013). This was described in Barnett, Parmar and Ward (2013a) and later identified in the author's work with Dr Julia Blagburn (Barnett and Blagburn, 2016). When referrals to NMS and MUR were initially undertaken through IMMS, referrals were written and faxed to the nominated community pharmacy. This yielded poor results; only 1.5% (1/65) of referrals resulted in a review. The change to include person-centred consultations, identifying what patients wanted from follow-up, as well as telephone contact with community pharmacists, improved referral rates to 33% (9/28) after one month and increased to 12/28 after a second telephone call (Barnett, Parmar and Ward, 2013a,b,c). The emphasis on good communication between secondary and primary care was highlighted in an audit of medicines-related discharge information (Barnett et al., 2014), to which the author contributed 25%. This led to the development of discharge consultations which included discussion of the patient's involvement in safer transfer of information on discharge to the next care setting. Referral from hospital to community pharmacy has developed nationally including establishment of an electronic referral system to improve transfer of care and referrals for community pharmacy services (Clark, 2016). Recent examples include the multiple award-winning "Refer to Pharmacy" service in East Lancashire (Gray, 2015), and the transfer of care project using PharmOutcomes in the North East of England (Nazar et al., 2016).

4.2 Person-centred care: A coaching approach to pharmacy consultations

Health coaching was being promoted nationally to support management of long-term conditions in general practice as part of patient-centred care (National Health Executive, 2015). Following training in a coaching approach to health consultations, the author published a personal reflection on person-centred care developed from the author's experience of being prescribed a long term medicine by a General Practitioner (Barnett, 2011) . The author also began to use health coaching skills to develop person-centred consultations for IMMS patients.

Pharmacy consultations at the time were commonly focussed on provision of information that the clinician considered important to the patient to promote safe and effective medicines use. A coaching approach to consultations added the patient's perspective to the discussion, promoting concordant consultations through development of a partnership between patient and clinician. It also supported the patient in thinking about how they can make the best use of their medicines to improve their health and finding their own solutions to challenges around medicines taking and use. This "bipartite" approach to a consultation contrasted with the traditional "unipartite" pharmacy approach, which relied on pharmacy staff offering solutions to patients for medicines-related problems.

The health coaching approach was chosen as it aligns with all four principles of the RPS medicines optimisation agenda (Picton & Wright, 2013), particularly supporting principle 1, which identifies the patient experience as a key part of medicines optimisation. In addition, a health coaching approach supports shared decision making, which has also been integrated into pharmacy services (Blagburn et al., 2016). The coaching approach was highlighted in a King's Fund report (Coulter and Collins, 2011) promoting consultations which encourage a joint approach between clinician and patient to health-care choices. The aim of these consultations is to value contributions from both parties, where the patient contributes their expertise on their life situation, experience of illness and medicine taking and the clinician contributes their health expertise and experience. The first three standards of the recently revised GPhC Standards for Pharmacy Professionals (General Pharmaceutical Council, 2017) relate to the provision of person-centred care, working in partnership and communicating effectively. The health coaching approach can help pharmacy professionals to put these standards into practice and supports incorporation of shared decision making, which remains a national priority (NHS England, 2017).

4.2.1 A coaching approach to medicines adherence

The issue of patients taking medicines as prescribed was brought to international attention following the WHO report on medicines adherence (World Health Organization, 2003). This report identified that adherence to long-term therapies in the developed world was only about 50% and outlined factors influencing non-adherence. In the UK, Horne, Weinman, Barber et al., (2005) provided a national perspective and described the then current thinking around supporting adherence. The author was exposed to patient perspectives on how people use and take medicines, through working with a multidisciplinary team, undertaking visits to patients' homes with community matrons (Barnett, 2006; Jenner and Barnett, 2006;).

Recommendation of compliance aids such as multi-compartment containers for organising weekly medicines into morning, lunchtime, afternoon and evening, was commonplace in the author's local organisation. These were often recommended for patients who were perceived to have difficulty remembering to take their medicines and/or who were prescribed a large number of medicines. When these patients were reviewed by the pharmacy team, it became apparent that many requests for a multi-compartment compliance aids (MCAs) from health-care staff were for situations not always addressed by provision of MCAs. The literature highlighted potential risk of MCAs in terms of pharmaceutical stability (The Mid-Yorkshire Hospitals NHS Trust., 2006) and patient safety (Nunney and Raynor, 2001) while questions about the need for MCAs (Bhattacharya, 2005) were also highlighted. This led the author to develop and implement a local policy to highlight patients' medicines support needs when referrals for MCAs were received. The policy focussed on the patient's perception of their need for MCA support, as well as a clinical assessment (Barnett, Patel and Lam, 2007a) and a further publication highlighted these issues, (Athwal, Vadher and Barnett 2011) to which the author contributed 40%. The author was also involved in conversations with pharmacy colleagues nationally about how to approach the "MCA challenge" and this led to a publication in the *Pharmaceutical Journal* with the chair of the Care of the Elderly group for the UKCPA (Barnett and Taylor, 2006). This publication identified the need to use a structured method to identify a patient's medicines support needs, rather than "default" to an MCA, with the risks of inappropriate use of these containers, such as pharmaceutical degradation of medicines.

With the publication of NICE guidance on medicines adherence (National Institute for Health and Care Excellence, 2009) the author collaborated with a consultant pharmacist colleague to provide interpretation of the guidance (Barnett and Oboh 2009). This publication highlighted the importance of patient involvement in decisions about medicines and identifying patient beliefs about medicines to improve adherence effectively. A recent publication has

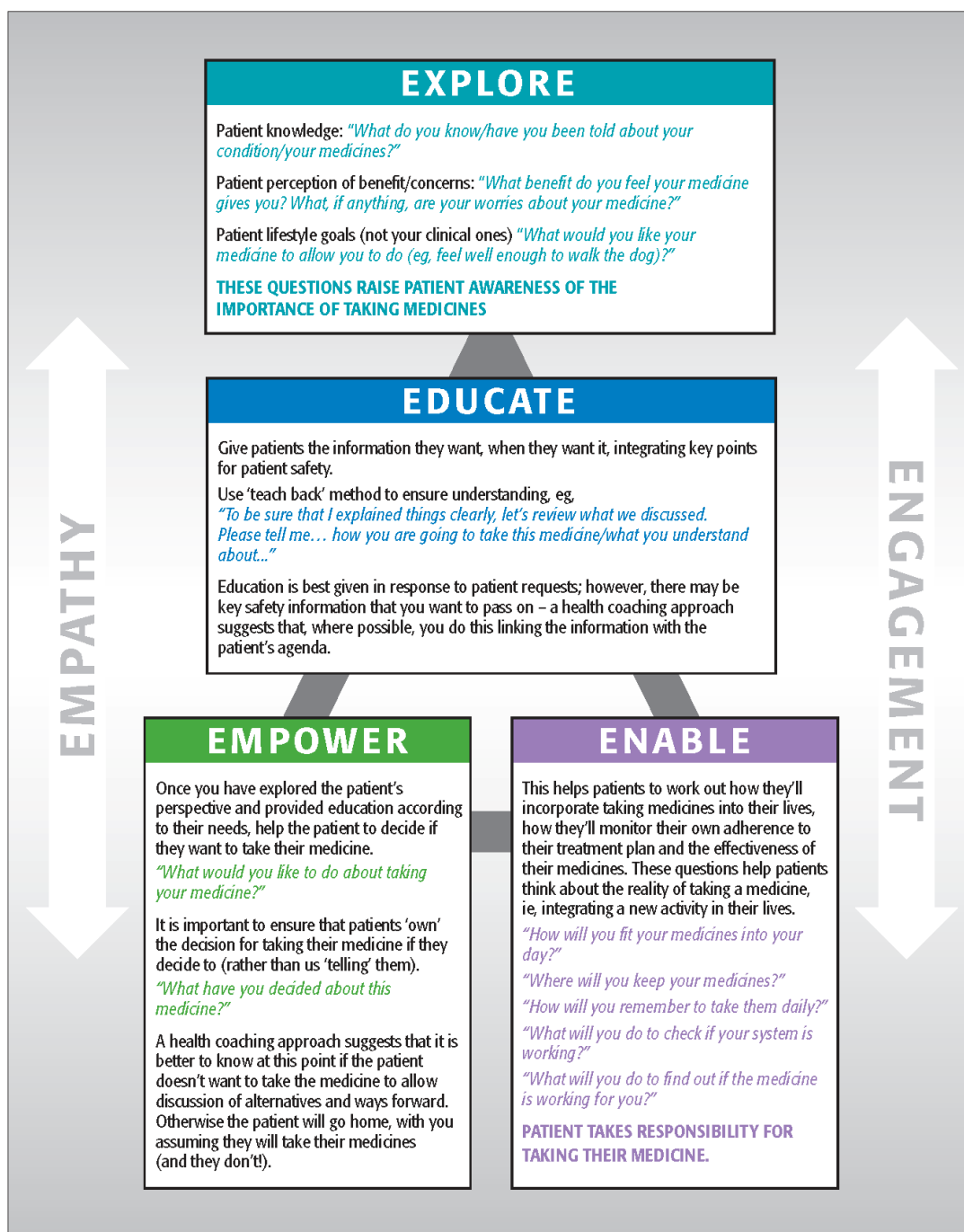
demonstrated a statistically significant correlation between medicines adherence and 30 day hospital readmission rates (Rosen et al., 2017). While the need for practical support with medicines was still evident (Anonymous, 2012) and continues to be important (Barnett and Goldstein, 2016), the development of health coaching as part of pharmacy practice had encompassed both practical and perceptual issues. A coaching approach to medicines adherence addressed both practical and perceptual issues through questioning and exploring with patients to find methods of resolving medicines-related issues. Rather than simply offering solutions determined by the health care professional, the coaching approach promoted use of the patient's own resources to solve medicines –related problems.

4.2.2 The Four Es

Working with the concept of health coaching and the author's experience in pharmacy practice, the author developed a structure for short pharmacy consultations (Barnett, 2011), known as the "Four Es" (Explore, Educate, Empower and Enable) (see Figure 6), The author wrote about how this could potentially support improved medicines adherence and the risks to adherence when patients are disengaged (Barnett and McDowell, 2012; Barnett, 2012c,d) The Four Es is a structure built on the "GROW" model (Whitmore, 1992), which is widely used in business and performance coaching and includes four elements (Goal, Reality, Options and Will). This model was modified to align with pharmacy structures for consultations and was developed by the author into the Four Es (Barnett, N L., 2011), illustrated in Figure 6 overleaf.

Figure 4 The Four Es consultation structure

The four Es – Supporting **ExcEIlEncE** in medicines adherence



Source: ©Copyright 2013 Nina Barnett. All rights reserved. North West London Hospitals Trust

FEBRUARY 2014

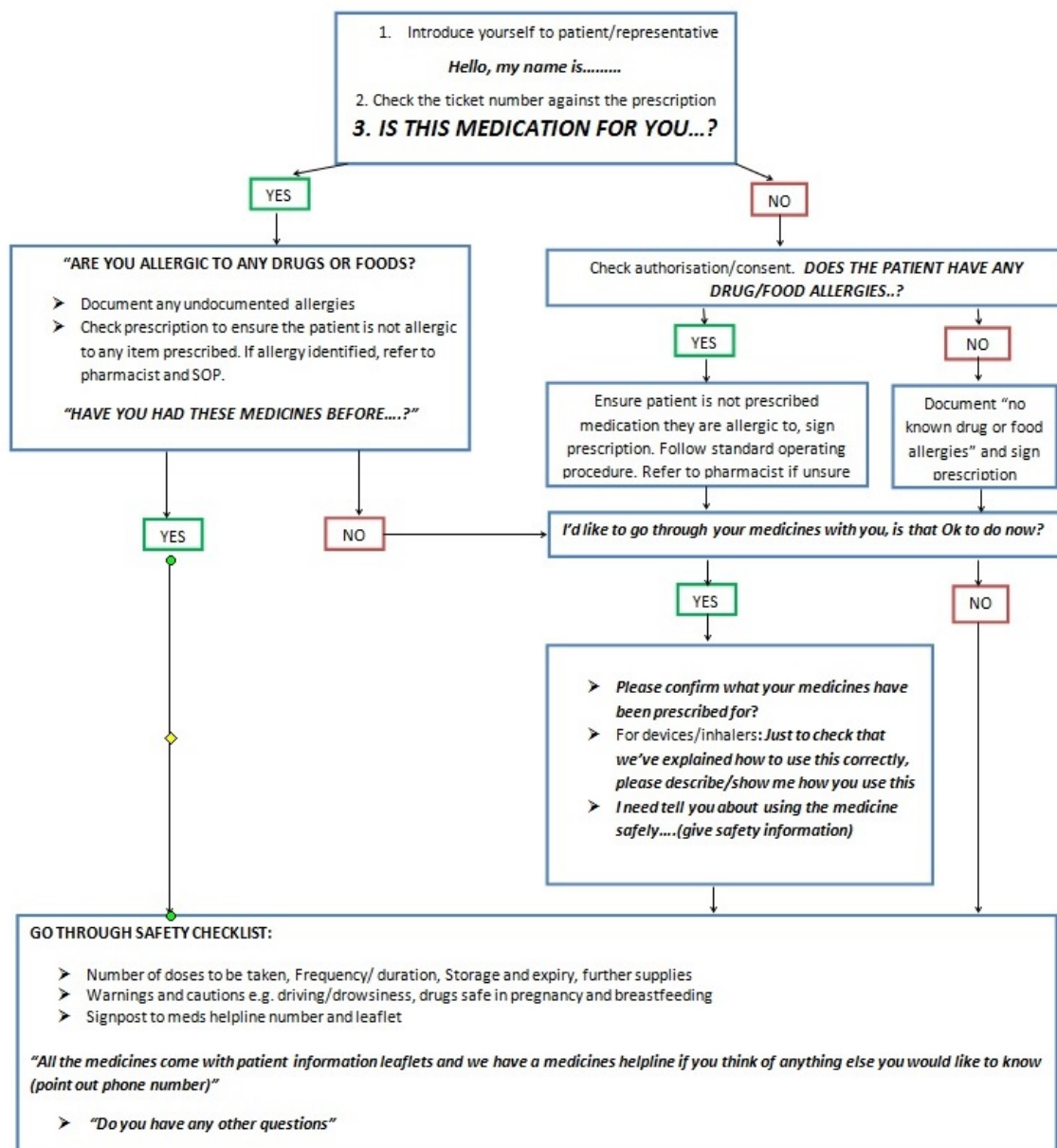
Reproduced with permission from the Centre for Postgraduate Pharmacy Education (Centre for Pharmacy Postgraduate Education, 2014).

The Four Es consultation structure begins with identification of the topic of conversation which is usually introduced by the pharmacist, contrasting with a coaching conversation where it is identified by the "coachee". Rather than the commonly used method of the pharmacist telling

the patient what they expect the patient to want or need to know and giving safety information, the four Es requires the pharmacist to use the “Explore” questions (see Figure 6, uppermost box) to identify the patient’s agenda. The pharmacist asks about what the patient already knows about the medicines, what they may be concerned about and the potential benefits of the medicine they perceive from a health and person-centred perspective. Education about medicines (Figure 6, second box) is delivered in line with questions asked by the patient and safety information may be added in where relevant. The patient is then asked, using a non-judgemental approach, to consider their decision in the context of taking the medicine, which is highlighted by the “Empower” stage of the structure, illustrated as the bottom left hand text box in Figure 6. Once a decision has been made, the pharmacist supports the patient decision using the “Enable” questions. This is illustrated in the bottom right text box of Figure 6 where the pharmacist helps the patient to think about what they need to do to put their decision into practice and how they will maintain and monitor their chosen path.

The Four Es should be viewed in comparison to other commonly used pharmacy consultations structures used in practice. While there are no standard procedures for pharmacy consultations, the following flow chart (Figure 7) illustrates the key features of common pharmacy consultations as observed in a hospital setting, for the purposes of comparison.

Figure 5 Flow chart to illustrate common features of a standard pharmacy consultation in a hospital setting.



As an example of the application of the Four Es, an anonymised case study is presented in Box 1 overleaf.

Box 1 The Four Es consultation structure: narrative of a patient consultation

Mrs A was a patient in her mid-50s recovering from stroke. Prior to her admission she had been fit and well, living alone and independently. Her pre-admission prescription was for only one antihypertensive medicine. When the pharmacist came to discuss medicines prescribed post-discharge, the pharmacist used a coaching approach to the consultation and asked the patient what she already knew about her medicines. The patient replied that she was very comfortable taking her antihypertensive, as she had done effectively for years. The patient said that the need for two weeks aspirin treatment, followed by long-term clopidogrel had been explained by ward staff and she was happy to take these medicines. When the pharmacist asked about the only other medication on the prescription, simvastatin, the patient replied that she was “less comfortable” about this medication. The pharmacist asked what worried the patient and the patient explained that she had seen a television programme, introduced by a leading medical professor, cautioning viewers about the side effects of “statins”.

EXPLORE

Rather than trying to persuade the patient of the benefit or need for simvastatin, the pharmacist tried to understand the patient’s point of view and asked the patient what she had learnt from the programme. The patient proceeded to explain that she understood muscle pain to be common and having been debilitated by her stroke, she did not want any other impediments to returning to normal physical function. She also mentioned that the professor had talked about liver damage and this was important to her as her father had died of liver cancer. The pharmacist showed empathy and told the patient that, given the information learnt from the programme, it was understandable that the patient was reticent to take a “statin”. The pharmacist then asked the patient if the programme had mentioned how often these side effects happen. The patient replied that she did not remember and the pharmacist then offered the patient the opportunity to look at the incidence of the side effect, which the patient accepted.

EDUCATE

Together the pharmacist and patient reviewed the incidence of side effects and the pharmacist explained the liver-related blood tests required and that the liver damage, if it occurred, was not linked to cancer. The pharmacist also told the patient about the incidence of muscle pain, acknowledging that it was common. Given the patient’s concern about physical function, the pharmacist recommended that should muscle pain occur, the patient could stop the medication and return to the GP to discuss alternative treatment. Finally, the pharmacist asked the patient if the programme had mentioned the benefits of using “statins” after a stroke. When the patient replied that it had not and that she was interested to learn about the benefits the pharmacist then outlined the benefits.

EMPOWER

Using the Four Es method, the pharmacist asked the patient what she now thought about the simvastatin, following their conversation. The patient said that she would be prepared to consider taking the medication for two weeks and would monitor herself for muscle pain. If it occurred, the patient would stop the medicine and return to the GP. If not, the patient said she would continue the medication and return to her GP one month after hospital discharge for liver function tests.

ENABLE

The pharmacist closed the consultation by asking the patient about how she would integrate the new medicines into her daily routine, giving the patient the opportunity to come up with her own ideas. The pharmacist discussed the practicalities of notifying the GP and making an appointment with the patient and confirmed the steps the patient would take to monitor both their adherence and side effects of medication.

While the “Enable” stage may involve discussing how, when and where a patient will take their medicine, it may also be used where a patient chooses not to take a medicine. In this situation the pharmacist can explore what the patient wishes to do to improve their health, discussing alternatives which may include lifestyle or diet changes. The Four Es process can be used to support the implementation of these changes. The author published a peer reviewed article including the Four Es to support medicines adherence, (Barnett, 2014) which reflected the current thinking around practical and perceptual approaches to adherence.

The Four Es consultation structure has had local impact and has been taught as part of health coaching training in hospital and community pharmacists with ongoing anecdotal reports of use in practice. It is now being used in the author’s organisation by pharmacy staff trained in health coaching in areas such as general medicine, care of older people and HIV. The structure has had national impact on pharmacy consultations skills through inclusion in the CPPE document on consultation skills, for which the author wrote the health coaching chapter (CPPE, 2014). This is now being taught in university courses (King’s College London 2015/ 2016, 2016/17, UCL School of Pharmacy 2016/17) and to postgraduate diploma students in Leeds (2016/17). Further developments of person-centred consultations have been published in a multidisciplinary journal, developing support for special groups of patients and offering a structured approach to patient consultations (Barnett, 2016).

4.2.3. Person-centred consultations: collaborations

The author collaborated on several publications to promote the use of health coaching to support medicines adherence. This included the publication of a peer reviewed paper (Barnett and Sanghani 2013) which described how the coaching approach to consultation fitted into the overall consultation paradigm. This was followed by an article, written with communication leaders and educators in pharmacy, on a practical approach to embedding person-centred care into pharmacy practice (Barnett, Varia and Jubraj 2013). The effectiveness of cognitive behavioural approaches in medicines adherence was subject to a meta-analysis (Easthall, Song and Bhattacharya, 2013) and, despite high heterogeneity of studies, suggested an overall benefit.

The benefit of a coaching approach to pharmacy consultations was recognised within the author’s organisation. The author obtained a £20,000 grant from the organisation’s charitable fund to commission and co-deliver health coaching training for the wider pharmacy team and to promote the use of a coaching approach in ward, dispensary and clinic consultations. Positive post-course evaluation provided some evidence of perceived participant benefit and participant anonymised patient case studies are currently being collected for evaluation.

The author commented on the use of cognitive behavioural therapy as another behavioural technique to support medicines adherence (Barnett, 2013b), later collaborating with a cognitive behavioural therapist and pharmacist. Cognitive behavioural therapy uses identification of patient's thoughts, feelings and behaviours around medicines taking to help patients resolve issues with adherence. The author continued this collaboration and published an article in a nursing journal which described the potential for behavioural approaches to support medicines adherence for patients with cardiovascular conditions (Barnett and White 2015). The author continued to work on development of practical approaches to person-centred pharmacy consultations, presenting at a pharmacy technician conference and publishing a review of the coaching approach as it applied in pharmacy practice in the UK pharmacy technician journal (Barnett, 2015). Other collaborations included a publication on reducing preventable medicines-related re-admission with an award-winning colleague who delivered person-centred pharmacy services service in a large NHS hospital trust (Barnett and Blagburn 2014). A further collaboration with pharmacy education leaders led to publication of a blog which challenged readers to consider how patient-centred their current consultations felt and identified time as a perceived barrier to empathy in pharmacy consultations (Barnett, Grimes and Jubraj 2015). This led to collaboration between the author and academic pharmacy and psychology colleagues, further developing the concept of empathy within pharmacy consultations (Jubraj et al., 2016). This publication highlighted the importance of person-centredness to the inclusion of empathy in consultations to the pharmacy profession.

These collaborations have developed the author's understanding of how the pharmacy team can use behavioural change techniques to maximise the benefit of medicines to patients. Working with experts helped the author to integrate additional techniques in pharmacy-related health coaching. Collaboration with pharmacy education colleagues highlighted the importance of embedding the "human" aspects of consultation early in the pharmacy career pathway.

4.2.4 Polypharmacy and deprescribing: a person-centred approach

Working with a national leader in primary care pharmacy and older people, Lelly Oboh, a review on the challenge of polypharmacy (Barnett and Oboh, 2014) was published. In addition, the author championed the need to address polypharmacy, as a central part of the provision of person-centred care, in another publication identifying the clinical risks of ignoring inappropriate polypharmacy and highlighting resources to help practitioners (Barnett, 2015c). The author and colleague identified that widely publicised and high-quality polypharmacy support documents (Duerden, Avery and Payne 2013; All Wales Medicines Strategy Group; 2014, NHS Scotland and the Scottish Government, 2015) mainly focussed on the role of the

clinician in managing polypharmacy, with less emphasis on the patient perspective. Having incorporated a person-centred approach to medication review in the author's practice for several years, the author approached a leading medicines information pharmacist, Katie Smith, to collaborate with Oboh and the author. Smith conducted a literature search around person-centred medication review to manage polypharmacy and established this was poorly covered. Using Oboh and the author's experience and the available literature, the group collaborated to develop a person-centred consultation framework for polypharmacy (Barnett, Oboh and Smith, 2015c), published in peer reviewed journal (Barnett Oboh and Smith, 2016). This framework was included in CPPE's polypharmacy learning programme and the author recorded video consultations, to describe the process, for the CPPE polypharmacy media wall (Centre for Pharmacy Postgraduate Education, 2016). The framework has also been included in a summary of deprescribing for prescribers to reduce inappropriate polypharmacy (Dowden, 2017). The author was invited to contribute a blog and deliver a keynote session on patient-centred polypharmacy at a joint RPS and Royal College of General Practitioners conference on polypharmacy in April 2016 (Barnett, 2016a, b), to participate in the RPS polypharmacy working group (Tang, 2016) and deliver a keynote presentation to the recent Prescribing and Research in Medicines Management (UK and Ireland) conference (2017).

In parallel with the issue of polypharmacy being raised by the profession, the concept of deprescribing was gaining momentum (Hilmer, Gnjidic and Le Couteur, 2012; Scott et al., 2015; Thompson and Farrell, 2013). Deprescribing can be described as the process of stopping medicines (Anonymous, 2014) or, more informatively, as "the process of tapering, stopping, discontinuing, or withdrawing drugs, with the goal of managing polypharmacy and improving outcomes" (Thompson and Farrell, 2013). However, as early as 2003, the importance of cautious reduction and cessation of medication as a collaborative effort between patient and clinician, was recognised (Woodward, 2003). Success consists of minimising inappropriate polypharmacy and optimising deprescribing, achieved by collaboration between the clinician and the patient.

The author was commissioned to co-edit a special themed deprescribing issue of the European Journal of Hospital Pharmacy, published in January 2017 to which the author contributed 50%. The author sourced a contribution from a person with multiple medical conditions, known as multimorbidity, and this was included in the publication to help clinicians understand the patient perspective (Barnett-Cormack, 2017). In addition, the author contributed to three publications in the themed issue (Barnett and Jubraj, 2017; Barnett and Kelly, 2017; Poots, Jubraj and Barnett 2017). The author contributed 25% to Poots, Jubraj and Barnett (2017). The themed issue was accompanied by a podcast (Soundcloud for BMJ Talk Medicine, 2016).

The author has also highlighted the issues of changes in the UK law which may affect deprescribing, where legislation about patient consent to treatment has moved towards a patient-focused requirement in treatment discussion. The changes in the law are explained in relation to medical practice by Lee (2017) and the author published a paper (Barnett and Kelly, 2017), in collaboration with a pharmacist who is also a medical negligence solicitor, to describe potential issues for deprescribing practice. A further paper with case examples has been accepted for publication in a widely read prescribing journal (Barnett & Kelly, 2017). The author has recently collaborated with Dr Daniel Sokol, a leading medical ethicist and barrister, publishing a paper (Barnett and Sokol 2017) to describe the potential implications of the recent change in the law following the Montgomery Judgement (UK Supreme Court. *Montgomery Appellant v Lanarkshire Health Board*, 2015). This change requires clinicians to undertake more person-centred consultations in order to fulfil the requirements for informed patient consent to treatment. While support for the implications of the change in law is being provided for medical professionals (General Medical Council, 2015), the relevance for pharmacy practice has yet to be explored. This area is an opportunity for future work to establish “Montgomery compliant” consultations in pharmacy practice. The author has been invited to contribute written guidance on the Montgomery Judgement led by the Academy of Medical Royal Colleges as part of the Shared Decision Making collaborative at NICE. Other work being developed by the author includes distribution of a pharmacy survey, working with an academic law colleague, to explore pharmacists’ current knowledge of the new developments around patient consent leading to an audit of pharmacy consultations with patients to assess “Montgomery compliance”.

4.3 Implementation: Impact and Summary

This chapter has described the author’s contribution to developing and implementing person-centred care in pharmacy practice at local and national level. This includes the establishment and implementation of IMMS which incorporates person-centred consultations as part of the process of delivering high quality care to patients. The national impact of the author’s work is demonstrated through having been invited and contributing to national publications on the subjects of polypharmacy and deprescribing. The author has promoted the use of person-centred pharmacy practice in older people through delivery of presentations at national events. Subjects have included the specialist needs of older people, IMMS, a coaching approach to pharmacy consultations, medicines adherence, medication review, polypharmacy and deprescribing. These have been delivered to audiences at national and international events including the Older People Pharmacy network annual learning event, UKCPA conferences, British Geriatric Society conference, the annual Clinical Pharmacy Congress and World Organization of Family Doctors (WONCA) Europe. The author led the IMMS team to

win a national award for this service (Health Service Journal, 2015). Using leadership skills to drive the person-centred consultation agenda forward using a coaching approach, the author's has contributed to national continuing professional development. This is demonstrated through the author's work with CPPE, helping to embed new approaches to consultations, such as the Four Es and the patient centred polypharmacy process, into everyday practice. The author, as joint guest editor of the publication of the European Journal of Hospital pharmacy themed issue, identified and commissioning a broad spectrum of contributions to this issue. These publications will inform and may influence Europe-wide practice through dissemination of knowledge in this area of practice.

Chapter 5. Summary, recommendations and conclusion

5.1 Summary

This thesis has described the author's contribution to developing and integrating a person-centred approach to pharmacy practice from 1997 to 2017, using examples from the author's work with older people as a consultant pharmacist and prescriber. This led to innovations including implementation of the development of person-centred care in pharmacy practice through establishment of a service to reduce risk of preventable medicines-related hospital re-admission. Integration of a coaching approach to pharmacy consultations in the author's local organisation provides another example of the author's innovation in this area. In addition, the author promoted the use of a coaching approach nationally to support medicines adherence, developing a structure for pharmacy consultations, leading to work on a person-centred approach to polypharmacy and deprescribing consultations.

5.2 Impact

The impact of the author's work has been demonstrated locally and nationally. In the author's organisation, London North West Healthcare NHS Trust, IMMS was originally provided on one hospital site and is now being merged with similar provision on another site and established de novo on a third hospital site. The new, merged service is being rolled out across the three hospital sites.

The IMMS work suggests that there is a potential saving of over £3 for every £1 spent on employing a pharmacist to undertake IMMS work, or a return on investment (ROI) of >2 (Barnett et al., 2017). This finding is in line but with a lower ROI with data reported from other IMMS sites where savings calculated including opportunity costs suggested a return of between £5 and £8 per every £1 spent on service provision (Scott et al., 2015). The author's work has been nationally recognised through the Health Services Journal award in 2015 in the category of "Value and Improvement in Clinical Support Services" (Health Services Journal, 2015).

The combined service, known as the Pharmacy Integrated Care Service (PICS) includes all the key features of IMMS and the service has been rolled out to all three sites in the organisation. PICS provides person-centred consultations to patients, by pharmacists trained in a coaching approach to consultations, in hospital and after discharge to support provision of medicines-related care across the organisation.

The author's work described in this thesis has demonstrated national impact through the author's involvement in NICE guideline development. The importance of person-centred review is enshrined in the recent NICE multimorbidity guidance (2016). The author contributed to this guideline, as a member of the NICE guideline development group (2014-2016), participating in approximately 15 meetings over 18 months to develop the guidelines with national expert colleagues and patients. The guideline was published in September 2016 (National Institute for Health and Care Excellence, 2016). The author also collaborated with two other guideline group members to raise the profile of the guidance by publishing a summary of the guideline, with recommendations for practice and examples (Barnett, Payne and Rutherford, 2016), in a journal for prescribers.

The author has had a national impact on the pharmacy profession through the professional and wider media, influencing consultation methods in pharmacy practice towards more person-centred consultations. The author has promoted person-centred care to the public through radio interviews (Barnett, 2012a, Age UK and The Wireless Radio, 2016) and has contributed to various RPS professional reports (Royal Pharmaceutical Society, 2012, 2013) including delivering a keynote presentation (Barnett, 2016) on the patient-centred polypharmacy process. Consultation models, such as the Four Es and the patient-centred polypharmacy process, which have been solely or collaboratively created by the author, have been included in national educational documents for CPPE (Centre for Pharmacy Postgraduate Education, 2014; Centre for Pharmacy Postgraduate Education, 2016). The author's Four Es model is now incorporated into UK undergraduate and postgraduate pharmacy teaching by the author at King's College London and University College London and person-centred pharmacy consultations are being taught abroad (Cullinan, 2016).

5.3 Limitations

Limitations to the author's work are described below according to the sections to which they relate.

5.3.1 Development of person-centred care working with older people.

This is recognised to be a very broad area of practice and the author's work has been necessarily limited in its scope. The author's exposure to pharmacy practice with older people was limited to local work and initially as a novice researcher, was reliant on others, such as the author's postgraduate MSc supervisor (Dr Sally Anne Francis) and mentor (Dr Michael Denham) for support in publishing work in the area for knowledge and practice. It is therefore possible that the work was not initially representative of pharmacy practice in older people. However this is mitigated by the work being underpinned by national policy and guidance (Royal College of Physicians of London, 1997, Department of Health, 2001) and aligned with published literature at the time, as described in section 3.1. In addition, the author's membership of UKCPA, which has a "care of the elderly" group, allowed increased exposure to, and learning from, colleagues in a similar area of practice through email groups and conferences, posters, presentations and networking.

The author's work with older people is limited to a mainly hospital setting and does not explore how lessons learnt working with older people applies to community pharmacy settings. The author makes assumptions about the need for person-centred care in pharmacy practice and this is supported by the GPhC (General Pharmaceutical Council, 2015). In addition, while there is a generally a paucity of literature around the establishment of person-centred care in pharmacy practice, the author is not aware of literature that suggests person-centred care is already fully developed and embedded in other areas of pharmacy practice.

5.3.2 Integrated Medicines Management Service (IMMS).

This service, developed alongside other similar services in the UK, incorporates person-centred consultations as part of the service delivered to patients which has been shown to reduce preventable medicines-related re-admission. However, the pilot study had a number of limitations which are described in chapter 3. As a result of reflection on this, the author has developed a better understanding for the need for detailed and research planning in advance of work to be undertaken. While the author's earlier work was identified to be in line with publications at the time, collaboration with authors working in similar areas may have been of value in reducing or eliminating some or all of these limitations from the start. In the later phases of the work, the author collaborated with a number of researchers and practitioners.

Challenges with data collection resulting in a lack of data continuity and lack of group matching from earlier work is now being addressed by use of an improved data collection tool, informed by tools being used at other centres, and with the involvement of a statistician at the outset of the new work. Expert feedback provided following submission to British Medical Journal publications, including Quality and Safety and European Journal of Hospital Pharmacy will be used to further support the improvement of future research. The author is seeking collaboration with an academic partner for the next phase of work.

Development of person-centred care through IMMS is also limited by the lack of formal patient experience feedback. While only anecdotal feedback was received in the pilot study, information is currently being sought to develop a validated patient experience survey that is acceptable to the author's organisation, which will be embedded within the Pharmacy Integrated Care Service.

5.3.3 A coaching approach to health

While behavioural approaches to consultations, including health coaching, were being nationally promoted (Health Education England, 2015) , there was no national consensus on the "best" behavioural approach to use in a pharmacy setting. Different approaches would bring different strengths and weaknesses depending on the setting in which they were applied and some may be more effective than others in different settings. The author chose a coaching approach as it encompassed a number of behavioural approaches (Wolever et al., 2013). Health coaching has been used in other health settings, for example, to support lifestyle changes (Olsen & Nesbitt, 2010) , and is being introduced into pharmacy practice (Lonie et al., 2017) there is no published literature on the use of health coaching in hospital pharmacy practice, other than the author's work. It is possible that other approaches would also have achieved the aim of developing person-centred care in pharmacy practice.

A recent Cochrane Collaboration review of interventions enhancing medication adherence (Nieuwlaat et al., 2014) revealed that interventions were complex, with multiple components. Interventions were provided by allied health professionals, some of whom were pharmacists, and included bespoke care, education and behavioural change support techniques such as motivational interviewing or cognitive behavioural therapy. However, the trials reviewed shared no common characteristics and the few that reported improvements in adherence and clinical outcomes demonstrated only a small effect. The COM-B model (Michie, van Stralen and West, 2011) describes behaviour change methods applied to medicines adherence (Jackson et al., 2014) but there is no consensus as to the optimal behavioural change method.

The use of health coaching to support person-centred care aligned with the Cochrane Collaboration review of the key elements of patient-centred care (Dwamena et al., 2012). Health coaching has been used to improve health in a number of areas, such as weight management, improving physical activity, as well as medication adherence, suggesting that this behavioral intervention is effective in improving health behaviours including around medicines (Olsen and Nesbitt, 2010). The author collaborated with pharmacy and health psychology colleagues to decide upon the choice of a singular approach but is mindful that no approach has been proven to be successful. It is possible that multiple approaches may be more effective, but evidence is lacking.

Emerging evidence suggests that improving medicines adherence can contribute to reducing 30-day hospital readmissions (Rosen et al., 2017) and the benefits of health coaching to medicines adherence had been identified both in trials (Thom et al., 2015; Wolever and Dreusike 2016) and through reviews (Olsen and Nesbitt, 2010; Anonymous, 2014a), which lends some validity to its use. However, there continues to be a paucity of robust data in the area and a recent systematic review by the Cochrane collaboration in 2014 (Nieuwlaat et al., 2014) concluded that existing studies varied so widely that they could not be combined through statistical analysis to deliver conclusions about ways to improve medicines adherence. This conclusion has been supported by a more recent review (Marcum, Hanlon and Murray, 2017).

5.3.4 Polypharmacy and deprescribing

This is an emerging area of practice and there are currently no nationally approved, evidence based consultations models. While there are no large trials of polypharmacy and deprescribing tools tested in practice (Scott, Anderson and Freeman, 2017), smaller studies have shown efficacy of models, for example, the Good Palliative Geriatric Algorithm (Garfinkel, Zur-Gil and Ben-Israel., 2007). The collaborative process, co-authored with colleagues Katie Smith and Lelly Oboh, was tested by Lelly Oboh in a community setting in South London in 82 patients (Smith, Oboh and Barnett, 2016) showing that the model could be used in a community setting for polypharmacy medication reviews. However, it is recognised that this model not yet been tested in the hospital environment. The robustness of the model comes from its foundation in well-researched, published national guidance.

The author's involvement in deprescribing and the implications of new case law is an emerging area of work and implications are yet unknown. Collaboration with pharmacy and legal expert colleagues is intended to help to develop stronger arguments to support the safety of deprescribing.

5.4 Recommendations

5.4.1 Supporting specific patient groups.

The author's work with older people provided the author with an insight into specific groups of patients where a person-centred approach can improve pharmacy practice (Barnett, N., 2016). This included people with physical impairment, speech impairment and swallowing difficulty. The author developed national learning events to explore the contribution of pharmacists to specific patient groups. This included the development of the tool, in the form of a set of slides, to support people with aphasia in consultations about anticoagulants (Bhandal, Barnett and Clarkson., 2016). Another learning event led to the development of a flow chart to help pharmacists and nurses optimise medication for patients with swallowing difficulty (Barnett and Parmar, 2016). Both of these resources benefited from collaboration with experts including speech and language therapy colleagues, a consultant pharmacist in anticoagulation and a lead pharmacist for stroke services within the author's organisation, which houses a nationally leading stroke service. The author is currently continuing this theme of work, through collaboration with the Royal National Institute for Blind People (RNIB) and Moorfields Eye Hospital, to develop person-centred medicines-related care for people with sight loss.

5.4.2 Reducing risk of preventable medicines-related re-admission.

The IMMS work is now being rolled out across the author's local organisation across all three hospital sites within the trust, evolving into the Pharmacy Integrated Care Service (PICS), which will provide pharmacy support in an equitable way across the author's organisation. Working with expert colleagues the author is developing a more robust data set for use within PICS. This will include recording of patient demographics, co-morbidities and classifying re-admissions using the PREVENT[®] criteria, aligned with the tool used to identify patients on admission to the service. The PICS team are reviewing methods of embedding exploration of patient experience in the service. The service will provide a standardised training programme for all pharmacy staff, including in how to conduct person-centred consultations, as well as a standard procedure for PICS activity. Training for clinical staff that can refer patients to PICS will be conducted through a rolling programme for specific staff groups, for example, occupational therapists, nurses and junior doctors. Future development may include collaboration with other centres delivering similar services such as the Northumbria Healthcare SHINE project (Baqir et al., 2014), Newcastle Hospital's MAGIC programme (Health Foundation, 2013; Blagburn et al., 2016,) and the Lewisham LIMOS service (Lai et al., 2015). These services have shown benefit in reducing medicines-related problems and re-

admission. It is hoped that collaboration will lead to publications and develop national recommendations for all hospital trusts to provide similar services to patients.

5.4.3 A coaching approach to consultations

The current focus of the author's coaching- related approach to consultations involves patient-facing pharmacy staff within the author's organisation in order to embed the approach into everyday practice. Working with local clinical pharmacy colleagues, the author is currently developing a consultation structure, using a coaching approach, which aligns with the processes of medicines reconciliation, medication review and discharge consultations on a hospital ward. The next steps may include working with colleagues outside the hospital environment to develop bespoke consultations structures that meets the needs of both patients and organisations. The long-term aim is to work with national organisations supporting skill development in a coaching approach for patient-facing pharmacy staff in all sectors of practice.

5.4.4 Leadership

While the author is no longer practicing as pharmacist prescriber, the author continues to lead the consultant pharmacist group in the UK, developing a strategy with the RPS to increase equitable provision of consultant pharmacist support for patients in the NHS. On completion of this doctorate, it is the author's intention to demonstrate that a PhD by publication, currently uncommon in pharmacy practice, is both possible and beneficial in terms of further development of research skills for experienced pharmacy practitioners. The author, in collaboration with the author's pharmacy supervisor and the professional development and support lead at the RPS, intends to publish a paper describing the various routes for senior practitioners to develop their research skills, including a description of the author's journey towards attainment of a PhD by publication.

5.5 Conclusion

This thesis demonstrates that the author has contributed to the development of person-centred care in pharmacy practice. Evidence to support this conclusion includes the author's development of person-centred care working in pharmacy practice with older people, the development and use of leadership skills as a consultant pharmacist and as a pharmacist prescriber as well as pioneering the use of health coaching in pharmacy practice. The author has established an award-winning local service which incorporates person-centred consultations. Nationally promoting the use of coaching-based, structured, person-centred pharmacy consultations, the author has advocated for person-centred medication review and contributed to improving medicines adherence, reducing inappropriate polypharmacy and optimising safe deprescribing. These contributions to development of person-centred care in pharmacy practice support medicines optimisation, improving the patient experience and the provision of safe, effective pharmacy services, embedded in everyday pharmacy practice.

6 References

Adams, K. R., Al Hamonz, S., Edmund, E. & Tallis, R. C., 1987. Inappropriate prescribing in the elderly. *Journal of the Royal College of Physicians*, Volume 21, pp. 39-41.

Age UK and The Wireless Radio, 2016a. *Martyn talks to pharmacists Nina Barnett and Layla Fattah about the issues surrounding polypharmacy*. [Online]

Available at: <http://www.thewirelessradio.com/listen-again/?filterBy=51&pg=2>

[Accessed 13 04 2017].

Age UK and The Wireless Radio, 2016b. *Agenda with Martyn Lewis expert advice on getting the most from your appointment time with doctors and pharmacists*. [Online]

Available at: <http://www.thewirelessradio.com/listen-again/?filterBy=51&pg=1>

[Accessed 28 03 2017].

All Party Parliamentary Groups on Global Health, 2014. *Patient empowerment: for better quality, more sustainable health services globally*. [Online]

Available at: <http://www.appg->

[popdevrh.org.uk/APPG%20Patient%20Empowerment%20Report.pdf](http://www.appg-popdevrh.org.uk/APPG%20Patient%20Empowerment%20Report.pdf)

[Accessed 19 02 2017].

All Wales Medicines Strategy Group, 2014. *Polypharmacy: Guidance for Prescribing*, Llandough: All Wales Medicines Strategy Group.

American Society of Hospital Pharmacists, 1993. Medication Therapy and Patient Care: Organization and Delivery of Services—Statements. ASHP Statement on Pharmaceutical Care. *Am J Hosp Pharm.*, Volume 50, p. 1720–3.

Amin H, Dave K and Barnett N. 2011. Ways clinical pharmacists can add value in intermediate care settings. *Clinical Pharmacist*, Volume 3 pp.378-9

Anonymous, 2004a. OTC statins: a bad decision for public health. *Lancet*, Volume 363, p. 1659.

Anonymous, 2004b. Over-the-counter simvastatin given the go-ahead. *Pharmaceutical Journal*, Volume 272, p. 595 .

Anonymous, 2005. A day in the life of... Nina Barnett, Specialist Pharmacist on the PCT's Older People's ward. *Impact*, 10 Spring, Spring(10), p. 7.

Anonymous, 2014. Describing deprescribing. *Drug and Therapeutics Bulletin*, p. 52:25.

Athwal, D., Vadher, G. & Barnett, N., 2011. Compliance aids: an elephant in the room. *Pharmaceutical Journal*, Volume 286, pp. 75-76.

Audit Commission, 2001. *A spoonful of sugar. Medicines management in NHS Hospitals*, London: The Audit Commission.

Baker, J. A., 1967 . A Recent developments in the pharmaceutical service at Westminster Hospital. *Journal of Hospital Pharmacy* , pp. 400-6.

- Baqir, W; Crehan, O; Murray, T; Campbell, D; Copeland, R. 2014., Pharmacist prescribing within a UK NHS hospital trust: nature and extent of prescribing, and prevalence of errors. *European Journal of Hospital Pharmacy*, 22(2), pp. 79-82.
- Barnett, N., 2006. Matron's mate. *Health Service Journal*, 16 11, pp. 26-27.
- Barnett, N., 2007. Nonmedical prescribing for patients in long term care. *Prescriber*, Volume 18, pp. 23-24.
- Barnett, N., 2008. "Consultant Pharmacist." - What does it mean?. *Hospital Pharmacist*, Volume 15, p. 34.
- Barnett, N., 2008. Prescribing on the wards – is it coming of age?. *Hospital Pharmacist*, Volume 15, p. 234.
- Barnett, N., 2011. Adherence: A taste of my own medicine. *Pharmaceutical Journal*, Volume 287, p. 201
- Barnett, N., 2011a. Stuck in the middle?. *Clinical Pharmacist*, Volume 3, p. 194.
- Barnett, N., 2012. *British Broadcasting Corporation (BBC) news online Warning over 'low prescribing' for elderly 13 July 2012*. [Online]
Available at: <http://www.bbc.co.uk/news/health-18817307> [Accessed 19 02 2017].
- Barnett, N., 2012a. *Pharmacist Nina Barnett will be explaining what the new BMJ research on sleeping pills means for patients ITV News at 13.42, 28 February 2012*. [Online]
Available at: http://www.rpharms.com/what-s-happening-/news_show.asp?id=449 [Accessed 19 02 2017].
- Barnett, N., 2012b. Reflections of an independent prescriber. Groundbreaking? No. Good Value? Indeed. *Clinical Pharmacist*, Volume 4, p. 21.
- Barnett, N., 2012c. Find out the patient's agenda around medicines. *Clinical Pharmacist*, Volume 4, p. 310.
- Barnett, N., 2012d. One step closer to medicines optimisation for everyone. *English Pharmacy Review*, Issue 5, p. 66.
- Barnett, N., 2013. Look on the bright side. *Clinical Pharmacist*, Volume 5, p. 60.
- Barnett N. 2015a Patient centred consultations to support medicines adherence: a coaching approach. *Pharmacy Technician Journal*. September p 28-29
- Barnett, N., 2015b. Patient Consultation. In: Gray A, Wright H., Bruce L., Oakley J. *Clinical Pharmacy Pocket Companion*. London: Pharmaceutical Press, pp. 334-339.
- Barnett, N., 2015c. Tackling Polypharmacy For Our Patients' Sake - Putting Patients At The Centre. *Pharmacy Management*, 31(2), pp. 32-33.
- Barnett, N., 2016. *Consultations about oral anticoagulants for patients with aphasia*. [Online]
Available at: <https://www.sps.nhs.uk/articles/warfarin-consultation-for-patients-with-aphasia/> [Accessed 6 3 2017].

- Barnett, N., 2016a. *Polypharmacy – even the word has a negative connotation*. [Online] Available at: <http://blog.rpharms.com/england/2016/03/30/polypharmacy-even-the-word-has-a-negative-connotation/> [Accessed 19 02 2017].
- Barnett, N., 2016b. *Polypharmacy: A GP and Pharmacist's Perspective. The Challenge of Polypharmacy, From Rhetoric to Reality. 20 April 2016 keynote presentation*. London: Royal Pharmaceutical Society and Royal College of General Practitioners.
- Barnett, N., 2017. Health coaching and adherence. In: P. Wiffen, M. Mitchell, M. Snelling & N. Stoner, eds. *Oxford Handbook of Clinical Pharmacy*. Oxford: Oxford University Press, pp.14-16.
- Barnett, N., 2017a. *Patient-centred Care and Polypharmacy: a pharmacy perspective Keynote presentation at PRIMM conference 27 Jan 2017*. London: Prescribing Research in Medicines Management (PRIMM) .
- Barnett, N., Athwal, D. & Rosenbloom, K., 2009a. *"is medicines management a risky business" (Unpublished data)*. London: Harrow Integrated Medicines Management Service
- Barnett, N., Athwal, D. & Rosenbloom, E. K., 2009b. *2009b "audit of older vulnerable patient's discharge medication"*. London: Harrow Integrated Medicines Management Service (unpublished data).
- Barnett, N., Athwal, D. & Rosenbloom, K., 2011. Medicines-related admissions: you can identify patients to stop that happening. *Pharmaceutical Journal*, Volume 286, pp. 471-2.
- Barnett, N. & Blagburn, J., 2014. Pharmacy counter consultations should never be just a tick-box exercise. *Pharmaceutical Journal*, 292(7793), p. 48.
- Barnett, N. & Blagburn, J., 2016:. Reducing preventable hospital admissions: A way forward. *Clinical Pharmacist* , 8(1), p. DOI: 10.1211/PJ.2016.20200365.
- Barnett, N L; Dave, K; Athwal, D; Parmar, P; Ward, C., 2016a. Impact of an integrated medicines management (IMM) service on preventable medicines-related readmission (PMRR) to hospital. *Age and Ageing*, 45(suppl_1), p. i1.
- Barnett, N.L., Dave, K., Athwal, D., Parmar, P., Kaher, S. and Ward, C., 2016b. Impact of an integrated medicines management service on preventable medicines-related readmission to hospital: a descriptive study. *Eur J Hosp Pharm*, pp.ejhpharm-2016.
- Barnett, N; Francis, S A; Jenner, C; Lubel, D; Denham, M., 2003. Back to the future. *Heath Service Journal*, 01 03, p. 32.
- Barnett, N; Dave, K; Athwal, D; Parmar, P; Kaher, S; Ward, C., 2017. Impact of an integrated medicines management service (IMMS) on preventable medicines related re-admission to hospital: A pilot parallel cohort study. *Journal of Pharmacy Management*, 33(3), pp. 77-87.
- Barnett, N. & Goldstein, R., 2016. Pharmaceutical and Health Care Needs of Older People and Their Carers. In: G. Harding & K. Taylor, eds. *Pharmacy Practice*. Boca Raton, Florida: CRC Press, pp. 267-282.
- Barnett, N. & Jubraj, B., 2014a. *What would be helpful to you right now? Making the difference in a short consultation*. [Online] Available at: <https://vimeo.com/150664602> [Accessed 6 3 2017].

- Barnett, N. & Jubraj, B., 2014b. *What would be helpful to you right now? Making the difference in a short consultation. Debrief.* [Online] Available at: <https://vimeo.com/150664603> [Accessed 6 3 2017].
- Barnett, N., Kalsi, D. & Patel, A., 2017. Contribution Of A Pharmacist To The Rapid Response Service In Prevention Of Medicines-related Admission. *Journal of Pharmacy Management*, pp. 5-12.
- Barnett, N. & Kelly, O., 2017. Legal implications of deprescribing: a case scenario. *Prescriber*, 28 March, Volume March, pp. 49-52.
- Barnett, N. L., 2003. Just look at the benefits supplementary prescribing can bring to older people. *Pharmaceutical Journal*, Volume 271, p. 715.
- Barnett, N. L., 2011. The new medicines service and beyond – taking concordance to the next level. *Pharmaceutical Journal*, Volume 287, p. 653.
- Barnett, N. L., Dave, K., Athwal D., Parmar, P. & Ward, C. 2017. Impact of an integrated medicines management service (IMMS) on preventable medicines related re-admission to hospital: A pilot parallel cohort study. *Journal of Pharmacy Management*, 33(3), p.77-87.
- Barnett, N. L., Denham, M. J. & Francis, S. A., 2000. Over-the-counter medicines and the elderly. *Journal of the Royal College of Physicians of London*, 35(5), pp. 445-446.
- Barnett, N. L. & Flora, K., 2017. Patient-centred consultations in a dispensary setting: a learning journey. *European Journal of Hospital Pharmacy*, Volume 24, pp. 107-109.
- Barnett, N. L. & Francis, S. A., 2002. *National Service Framework for Older People: The role of the pharmacist. Pilot study, Final report.* [Online] Available at: https://www.researchgate.net/publication/311733556_NATIONAL_SERVICE_FRAMEWORK_FOR_OLDER_PEOPLE_THE_ROLE_OF_THE_PHARMACIST_PILOT [Accessed 19 02 2017].
- Barnett, N. & Jubraj, B. 2017. A themed journal issue on deprescribing. *Eur J Hosp Pharm*, 24(1), pp.1-2.
- Barnett, N. & Kelly, O., 2017. Deprescribing: is the law on your side?. *Eur J Hosp Pharm*, 24(1), pp.21-25.
- Barnett, N. L., Mason, J. & Stephens, M., 2009. Meeting the needs of our patients — the case for “pharmacist registrars”. *Pharmaceutical Journal*, Volume 283, p. 71.
- Barnett, N. L., Taylor, D. & Bowyer, C., 2007. Making medication reviews work for patients. Rapid response to Salter C et al. *British Medical Journal*, p. doi:10.1136/bmj.39171.577106.55 (published 20 April 2007).
- Barnett, N., Varia, S. & Jubraj, B., 2013. Adherence: are you asking the right questions and taking the best approach. *Pharm J*, 291, p.153.
- Barnett, N. L., Vilasuso, M., Pettitt, D. & Hathi, A., 2014. Avoid medication inaccuracies with new technology. *Health Service Journal*, 17 02.

- Barnett, N., Mason, J. & Stephens, M., 2009. Meeting the needs of our patients — the case for “pharmacist registrars” *The Pharmaceutical Journal* 2009; 283: 71. *Pharmaceutical Journal* 2009; 283: 71, Volume 283, p. 71.
- Barnett, N. & McDowell, A., 2012. Developing your consultation skills to support medicines adherence. *Clinical Pharmacist*, 4(9), pp. 266-268.
- Barnett, N. & Nicholls, J., 2005. Learning from practice experiences. *Pharmaceutical Journal*, Volume 275, p. PM3.
- Barnett, N. & Oboh, L., 2008. Target old people with medication risks. *Pharmaceutical Journal*, Volume 280, p. 276.
- Barnett, N. & Oboh, L., 2009a. A new medication review guide from NPC Plus and the Medicines Partnership will benefit both pharmacists and patients. *Pharmacy in Practice*, March/Apri, pp. 53-54.
- Barnett, N. & Oboh, L., 2009b. Interpreting guidance on medicines adherence. *British Journal of Clinical Pharmacy*, Volume 1, pp. 283-5.
- Barnett, N. & Oboh, L., 2014. When less is more: the challenge of Polypharmacy. *Eur J Hosp Pharm*, Volume 21, pp. 63-64.
- Barnett, N., Oboh, L. & Smith, K., 2016. Patient-centred management of polypharmacy: a process for practice. *European Journal of Hospital Pharmacy*, Volume 23, pp. 113-117.
- Barnett, N. & Parmar, P., 2016. How to tailor medication formulations for patients with dysphagia. *Pharmaceutical Journal*, 297(7892), p. online | DOI: 10.1211/PJ.2016.20201498.
- Barnett, N., Parmar, P. & Ward, C., 2013a. Supporting continuity of care: referral to the NMS after discharge from hospital. *Pharmaceutical Journal*, Volume 290, p. 178.
- Barnett, N., Parmar, P. & Ward, C., 2013b. Development and evaluation of hospital referrals for the New Medicines Service. *Pharmacoepidemiology and drug safety*, Volume 671-2, p. 22.
- Barnett, N., Payne, R. & Rutherford, A., 2016. NICE multimorbidity guideline: coping with complexity in care. *Prescriber*, 27(12), pp. 41-46.
- Barnett, N. & Sanghani, P., 2013. A coaching approach to improving concordance. *International Journal of Pharmacy Practice*, 21(4), p. 270–272.
- Barnett, N. & Seal, R., 2013. Medicines optimisation from principles to practice: risk assessment tools. *Pharmaceutical Journal*, Volume 291, pp. 49-50.
- Barnett, N. & Smith, F., 2007. Reflections on the latest investigation into medication review by pharmacists. *Pharmaceutical Journal*, 278(7452), p. 582.
- Barnett, N. & Sokol, D. 2017. Why pharmacists need to re-evaluate what information they provide to patients. *Pharmaceutical Journal*, 298(7897), online DOI:10.1211/PJ.2017.20202226
- Barnett, N. & Stoner, N., 2017a. *Consultant Pharmacist Toolkit*. [Online] Available at: <https://www.sps.nhs.uk/articles/consultant-pharmacist-toolkit/> [Accessed 21 05 2017].

Barnett, N. & Stoner, N., 2017b. *Consultant Pharmacist Strategy*. ExCel, London: Clinical Pharmacy Congress, Closer Still Media.

*Barnett, N. & Taylor, D., 2004. Care of the Elderly – How pharmaceutical care has developed. *Hospital Pharmacist*, Volume 11, pp. 225-230.

Barnett, N. & Taylor, D., 2006. Compliance is a complex matter. *Pharmaceutical Journal*, Volume 276, p. 380.

Barnett, N., Taylor, D., Goodyer, L. & Bowyer, C., 2007. *Effectiveness of visits from community pharmacists for patients with heart failure: HeartMed randomised controlled trial 9 May 2007 (online) Maximising health benefits from community based interventions rapid response to:* [Online] Available at: <http://www.bmj.com/rapid-response/2011/11/01/maximising-health-benefits-community-based-interventions> [Accessed 19 02 2017].

Barnett, N. & Tomlin, M., 2011. Consultant Pharmacists. In: M. Stephens, ed. *Hospital Pharmacy*. London: Pharmaceutical Press, pp. 271-280.

Barnett, N. & White, D., 2015. Medicines adherence and coaching in cardiology. *British Journal of Cardiac Nursing*, 10(8), pp. 390-3.

Barnett-Cormack, S., 2017. Managing medicines in multimorbidity: a patient perspective. *Eur J Hosp Pharm*, 24(1), pp.34-36.

Bednall, R., McRobbie, D., Russell, S. & West, T., 2003. A prospective evaluation of pharmacy contributions to post-take ward rounds. *Pharmaceutical Journal*, Volume 271, p. 22–3.

Bhandal, S., Barnett, N. & Clarkson, K., 2016. Development of an aphasia-friendly warfarin consultation tool for patients after stroke. *British Journal of Neuroscience Nursing*, 12(3), pp. 112-117.

Bhattacharya, D. 2005 Indications for Multi compartment Compliance Aids (MCA) - also known as Monitored Dosage also known as Monitored Dosage Systems(MDS) –provision. Royal Pharmaceutical Society.

<https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Support/toolkit/indications-for-mds.pdf> [Accessed 19 02 2017].

Black, D; Denham, M J; Acheson, R M; Drury, V M; W, Grimley Evans., 1984. Medication for the Elderly. A report of the People Royal College of Physicians. *Journal of the Royal College of Physicians (London)*, Volume 18, pp. 1-17.

Boston University, 2017. *Cohort studies*. [Online] Available at:

http://sphweb.bumc.bu.edu/otlt/MPH-Modules/EP/EP713_CohortStudies/EP713_CohortStudies_print.html [Accessed 19 02 2017].

Bower, A., 2017. *Personal Communication Alex Bower, Editor in Chief, Journal of Pharmacy Management*. [Interview] (10 02 2017).

*Bowyer, C. & Barnett, N., 2005. Does the HOMER trial signal the end for pharmacist medication reviews?. *Pharmaceutical Journal*, Volume 274, p. 620.

- Burns, N. & Still, E., 2003. Pharmaceutical care – a model for elderly patients. *Hospital Pharmacist*, Volume 10, pp. 266-268.
- Cairns, C. & Barnett, N., 2009. Care of Older People Case Studies. In: S. Dhillon & R. Raymond, eds. *Pharmacy Case Studies*. London: Pharmaceutical Press, pp. 409-441.
- Canadian Society of Hospital Pharmacists, 2001. *Pharmaceutical care: statement on drug therapy in the elderly*, Ottawa: Canadian Society of Hospital Pharmacists.
- Care Quality Commission, 2014. *Guidance for Providers: Regulation for service providers and managers: Regulation 9: Person-centred care*. [Online]
Available at: <http://www.cqc.org.uk/content/regulation-9-person-centred-care>
[Accessed 19 02 2017].
- Carne, D., Barnett, N. & Denham, M. J., 2002. The best of both worlds. *Health Service Journal* , 07 03, pp. 30-31.
- Centre for Pharmacy Postgraduate Education, 2014. *Consultation skills for pharmacy practice: taking a patient-centred approach*. [Online]
Available at: <http://www.consultationskillsforpharmacy.com/docs/docb.pdf>
[Accessed 19 02 2017].
- Centre for Pharmacy Postgraduate Education, 2015. *Older People A CPPE distance learning programme*, Manchester: Centre for Pharmacy Postgraduate Education.
- Centre for Pharmacy Postgraduate Education, 2016a. *Polypharmacy*. [Online]
Available at: <https://www.cppe.ac.uk/programmes/l/polypharm-p-01/> [Accessed 19 02 2017].
- Centre for Pharmacy Postgraduate Education, 2016b. *Welcome to CPPE's Polypharmacy media wall*. [Online] Available at: <https://www.cppe.ac.uk/therapeutics/polypharmacy>
[Accessed 19 02 2017].
- Centre for Postgraduate Pharmacy Education, 2011. *Patient-centred care*. [Online]
Available at: <https://www.cppe.ac.uk/programmes/l/ptcentred-p-01> [Accessed 19 02 2017].
- Clark, C., 2016. Transfer of care: how electronic referral systems can help to keep patients safe. *Pharmaceutical Journal*, 297(7891), p. DOI: 10.1211/PJ.2016.20201492.
- Clyne, W., Blenkinsopp, A. & Seal, R., 2008. *A Guide to Medication Review*, Liverpool: National Prescribing Centre.
- Colquhoun, A., 2013. What the pharmacy profession can learn from Mid Staffordshire's failings. *Pharmaceutical Journal*, Volume 290, p. 170 .
- Costantino, T. E., 2012. Dialogue. In: L. Given, ed. *The SAGE Encyclopedia of Qualitative Research Method*. Thousand Oaks, California: SAGE Publications, Inc, p. 213.
- Coulter, A. & Collins, A., 2011. *Making shared-decision making a reality. No decision about me, without me*, London: The King's Fund.
- Crown, J., 1999. *Review of prescribing, supply and administration of medicines.*, London: Department of Health.

*Denham, M. J. & Barnett, N., 1998. Drug Therapy and the older person - The role of the pharmacist. *Drug Safety*, 19(4), pp. 243-250.

Department of Health, 2000. *Pharmacy in the future: implementing the NHS Plan*, London: Department of Health.

Department of Health, 2000a. *The NHS Plan A plan for investment A plan for reform*. [Online] Available at: http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_118522.pdf [Accessed 19 02 2017].

Department of Health, 2001. *National Service Framework for Older People*, London: Department of Health.

Department of Health, 2001a. *Medicines and Older People. Implementing medicines-related aspects of the NSF for Older People*, London: Department of Health.

Department of Health, 2005. *Guidance for the Development of Consultant Pharmacist Posts*, London: Department of Health.

Department of Health, 2006. *A Guide to Implementing Nurse and Pharmacist Independent Prescribing within the NHS in England*, London: Department of Health.

Department of Health, 2008. *High Quality Care For All*. [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228836/743_2.pdf [Accessed 19 02 2017].

Department of Health, 2012. *Liberating the NHS: No decision about me, without me. Government response*. [Online] Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216980/Liberating-the-NHS-No-decision-about-me-without-me-Government-response.pdf [Accessed 19 02 2017].

Department of Health, 2014. *Five Year Forward View*. [Online] Available at: <https://www.england.nhs.uk/wp-content/uploads/2014/10/5yfv-web.pdf> [Accessed 19 02 2017].

Department of Health, 2014a. *Medicines optimisation dashboard*. [Online] Available at: <https://www.england.nhs.uk/ourwork/pe/mo-dash/> [Accessed 19 02 2017].

Department of Health, 2015. *The NHS Constitution for England*. [Online] Available at: <https://www.gov.uk/government/publications/the-nhs-constitution-for-england/the-nhs-constitution-for-england> [Accessed 19 02 2017].

Department of Health, 2016. *Operational productivity and performance in English NHS acute hospitals: Unwarranted variations*, London: Department of Health.

Department of Health, 2017. *Shared Decision Making*. [Online] Available at: <https://www.england.nhs.uk/ourwork/pe/sdm/> [Accessed 19 02 2017].

Dick, B. & Swepson, P., 2013. *Action research FAQ: "frequently asked questions" file*. [Online] Available at: <http://www.aral.com.au/resources/arfaq.html> [Accessed 19 02 2017].

- Dornan, T; Ashcroft, D; Heathfield, H; Lewis, P; Miles, J., 2011. *An in depth investigation into causes of prescribing errors by foundation trainees in relation to their medical education. EQUIP study.*, London: General Medical Council.
- Dowden, A., 2017. Deprescribing: reducing inappropriate polypharmacy. *Prescriber*, 28(2), pp. 45-49.
- Duerden, M., Avery, T. & Payne, R., 2013. *Polypharmacy and medicines optimisation. Making it safe and sound*, London: The King's Fund.
- Duggan, S., Eccles, M. & Ford, G. A., 1996. *Audit of prescribing in 65-80 year olds patients in primary care practices in the northern region.* s.l.:(unpublished observations).
- Dwamena, F., Holmes-Rovner, M., Gaulden, C. M. & Jorgenson, S., 2012 . Interventions for providers to promote a patient-centred approach in clinical consultations. *Cochrane Database Syst Rev.*, 12(CD003267.), p. doi: 10.1002/14651858.CD003267.pub2.
- Easthall, C., Song, F. and Bhattacharya, D., 2013. A meta-analysis of cognitive-based behaviour change techniques as interventions to improve medication adherence. *BMJ open*, 3(8), p.e002749.
- European Directorate for the Quality of Medicines & HealthCare, EDQM, 2012. *Pharmaceutical Care. Policies and Practices for a Safer, More Responsible and Cost-effective Health System* , Strasbourg: Council of Europe.
- Fertleman, M., Barnett, N. & Patel, T., 2005. Improving medication management for patients: The effect of a pharmacist on post-admission ward rounds. *Quality and Safety in Health Care*, Volume 14 , pp. 207-211.
- Francis, R., 2013. *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*, London: The Stationery Office.
- Francis, S. A., Barnett, N. L. & Denham, M. J., 2005. Switching of prescription drugs to over-the-counter status: Is it a good thing for the elderly?. *Drugs and Aging*, 22(5), pp. 361-370.
- Furniss, , L; Burns, , A; Craig, S K L; Scobie, S; Cooke, J; Faragher, B.,2000. Effects of a pharmacist's medication review in nursing homes. *The British Journal of Psychiatry*, 176(6), pp. 563-567.
- Garfinkel, D., Zur-Gil, S. & Ben-Israel, J., 2007. The war against polypharmacy: a new cost-effective geriatric-palliative approach for improving drug therapy in disabled elderly people. *Israel Medical Association Journal.*, 9(6), pp. 430-4.
- General Medical Council, 2013. *Good Medical Practice*. [Online] Available at: http://www.gmc-uk.org/guidance/good_medical_practice/communication_partnership_teamwork.asp [Accessed 19 02 2017].
- General Pharmaceutical Council, 2015. *Patient-centred professionalism in pharmacy. A review of the standards of conduct, ethics and performance*. [Online] Available at: https://www.pharmacyregulation.org/sites/default/files/patient_centred_professionalism_in_pharmacy_april_2015_0.pdf [Accessed 19 02 2017].

General Pharmaceutical Council, 2017. *Standards for Pharmacy Professionals*. [Online] Available at: https://www.pharmacyregulation.org/sites/default/files/standards_for_pharmacy_professionals_may_2017_0.pdf [Accessed 21 05 2017].

General Pharmaceutical Council, 2017. *Standards of conduct, ethics and performance*. [Online] Available at: <http://www.pharmacyregulation.org/sites/default/files/standards-for-pharmacy-professionals-not-yet-in-effect.pdf> [Accessed 26 03 2017].

Gillespie, U., Alassaad, A., Henrohn, D. & Garmo, H., 2009. A comprehensive pharmacist intervention to reduce morbidity in patients 80 years or older: a randomized controlled trial. *Archives of Internal Medicine.*, 169(9), pp. 894-900.

Given, L. M. (., 2008. *The SAGE Encyclopedia of Qualitative Research Methods*. Thousand Oaks, California: Sage Publications Inc.

Glaser, B. G. & Strauss, A. L., 1967. *The Discovery of Grounded Theory. Strategies for Qualitative Research*. New Brunswick (U.S.A.) and London (U.K.): Transaction Publishers .

Gray, A., 2015. Refer-To-Pharmacy: Pharmacy for the Next Generation Now!. *Pharmacy*, Volume 3, pp. 364-371.

Guthrie, B., Makubate, B., Hernandez-Santiago, V. & Dreischulte, T., 2015. The rising tide of polypharmacy and drug-drug interactions: population database analysis 1995–2010. *BMC Medicine*, Volume 13, p. 74.

Haneda, M., 2014. Dialogic Inquiry. In: D. Coghlan & M. Brydon-Miller, eds. *SAGE Encyclopedia of Action Research Coghlan D & Brydon-Miller M (Editors)*. Thousand Oaks: SAGE Publications Ltd, pp. 257-259.

Health Foundation, 2013. *The MAGIC programme: evaluation*. [Online] Available at: <http://www.health.org.uk/publication/magic-programme-evaluation> [Accessed 19 02 2017].

Health Foundation, 2014. *Person-centred care made simple*, London: The Health Foundation.

Health Education England, 2015. *Health Coaching for Behaviour Change Programme*. [Online] Available at: https://eoeleadership.hee.nhs.uk/Health_Coaching_Training_Programmes [Accessed 19 02 2017].

Hepler, C. & Strand, L. M., 1990. Opportunities and responsibilities in pharmaceutical care. *American Journal of Hospital Pharmacy*, 47(3), pp. 533-43.

Hibbard, J. & Gilbert, H., 2014. *Supporting people to manage their health. An introduction to patient activation*, London: King's Fund.

Hilmer, S. N., Gnjidic, D. & Le Couteur, D., 2012. Thinking through the medication list Appropriate prescribing and deprescribing in robust and frail older patients. *Australian Family Physician*, 41(12), pp. 924-928.

Holland, R; Lenaghan, E; Harvey, I; Shepstone, L; Lipp, A; Christou, M; Evans, D; Hand, C., 2005. Does home based medication review keep older people out of hospital? The HOMER randomised controlled trial. *British Medical Journal*, Volume 330, p. 293.

Honig, P. K. & Gillespie, B. H., 1995. Drug interactions between prescribed and over-the – counter medication. *Drug Safety*, Volume 13, pp. 296-303.

Horne, R; Weinman, J; Barber, N; Elliott, R; Morgan, M., 2005. *Concordance, adherence and compliance in medicine taking, Report for the National Co-ordinating Centre for NHS Service Delivery and Organisation*. [Online] Available at: http://www.netscc.ac.uk/hsdr/files/project/SDO_FR_08-1412-076_V01.pdf [Accessed 19 02 2017].

Howard, R L; Avery, A J; Slavenburg, S; Royal, S; Pipe, G; Lucassen, P; Pirmohamed, M., 2006. Which drugs cause preventable admissions to hospital? A systematic review. *British Journal of Pharmacology*, 63(2), pp. 136-147.

Huiskes, V. J., Burger, D. M., van den Ende, C. H. & van den Bemt, B. J., 2017. Effectiveness of medication review: a systematic review and meta-analysis of randomized controlled trials. *BMC Family Practice*, 18(5), pp. DOI: 10.1186/s12875-016-0577-x.

Imperial College London, 2014. *Stroke Pathway (Vimeo)*. [Online] Available at: <https://vimeo.com/78354273> [Accessed 6 3 2017].

Jackson, C., Eliasson, L., Barber, N. & Weinman, J., 2014. Applying COM-B to medication adherence. *European Health Psychologist*, 16(1), pp. 7-17.

Jeffries, J., 2005. *The UK population: past, present and future*, London: Office for National Statistics.

Jenner, C. & Barnett, N., 2006. *Community matrons can make a difference. Rapid response in British Medical Journal (online)*. [Online] Available at: <http://www.bmj.com/rapid-response/2011/10/31/community-matrons-can-make-difference> [Accessed 19 02 2017].

Jones, E., 2013. *Polypharmacy: Guidance for Prescribing in Frail Adults*, Caerleon: Aneurin Bevan Health Board.

Jubraj, B; Barnett, N L; Grimes, L; Varia, S; Chater, A; Auyeung, V., 2016. Why we should understand the patient experience: clinical empathy and medicines optimisation. *International Journal of Pharmacy Practice*, 24(5), p. 367–370.

Kelly, S., 2013. We must not let Europe slow down the pace of British POM-to-P switches. *Pharmaceutical Journal*, Volume 290, p. 283.

King's Fund, 2014. *People in control of their own health and care. The state of involvement*. [Online] Available at: <https://www.kingsfund.org.uk/publications/people-control-their-own-health-and-care> [Accessed 19 02 2017].

King's Fund, 2015. *Patient-centred care delivered through pharmacy Implementing new models of care*. [Online] Available at: <https://www.kingsfund.org.uk/events/patient-centred-care-delivered-through-pharmacy> [Accessed 19 02 2017].

- Kongkaew, C; Hann, M; Mandal, J; Williams, S; Metcalfe, D; Noyce, P R; Ashcroft, D M., 2013. Risk factors for hospital admissions associated with adverse drug events. *Pharmacotherapy*, 33(8), pp. 827-37.
- Lang, S. J., Gulhane, N., Khoda Vyas, H. & Barnett, N., 2017. Medicines reconciliation pilot at transfer of care: admission to a community-based early supported discharge ('step-down') and prevention of admission ('step-up') service. *European Journal of Hospital Pharmacy*, 24(3), pp. 152-156.
- Lee, A., 2016. Bolam'to 'Montgomery'is result of evolutionary change of medical practice towards 'patient-centred care. *Postgraduate medical journal*, pp.postgradmedj-2016.
- Leendertse, A. J., Visser, D., Egberts, A. C. & van den Bemt, P. M., 2010. The relationship between study characteristics and the prevalence of medication-related hospitalizations: a literature review and novel analysis. *Drug Safety*, 33(3), pp. 233-244.
- Lai, K., Howes, K., Butterworth, C. and Salter, M., 2015. Lewisham Integrated Medicines Optimisation Service: delivering a system-wide coordinated care model to support patients in the management of medicines to retain independence in their own home. *Eur J Hosp Pharm*, 22(2), pp.98-101.
- Local Government Association, 2013. *Community pharmacy Local government's new public health role*, London: Local Government Association.
- Longley, M., 2006. Pharmacy in a New Age: start of a new era?. *The Pharmaceutical Journal*, Volume 277, p. 256.
- Lonie, J M; Austin, Z; Nguyen, R; Gill, I; Tsingos-Lucas, C. 2017. Pharmacist-based health coaching: A new model of pharmacist-patient care. *Research in Social and Administrative Pharmacy*, 13(3), pp. 644-652.
- Maher Jr, R. L., Hanlon, J. T. & Hajjar, E. R., 2014. Clinical Consequences of Polypharmacy in Elderly. *Expert Opinion on Drug Safety*, 13(1), p. 10.1517/14740338.2013.827660.
- Marcum, Z. A., Hanlon, J. T. & Murray, M. D., 2017. Improving Medication Adherence and Health Outcomes in Older Adults: An Evidence-Based Review of Randomized Controlled Trials. *Drugs and Aging*, 34(3), p. 191–201.
- Mason, J., Stephens, M. & Barnett, N., 2010. Releasing the potential of consultant pharmacists in the new NHS arena. *Pharmaceutical Journal*, Volume 285, p. 467.
- Mathison, S., 2005. *Encyclopedia of Evaluation*. Thousand Oaks, California: Sage Publications Inc.
- McFadzean, E., Isles, C., Moffat, J. & Stewart, D., 2003. Is there a role of a prescribing pharmacist in preventing prescribing errors in a medical admissions unit?. *Pharmaceutical Journal*, 270(7255), pp. 896-899.
- Michie, S., van Stralen, M. M. & West, R., 2011. The behavior change wheel: A new method for characterizing and designing behaviour change interventions. *Implementation Science*, 6(42), pp. Doi:10.1186/1748-5908-6-42.

National Institute for Health and Care Excellence, 2007. *Technical patient safety solutions for medicines reconciliation on admission of adults to hospital*, London: National Institute for Health and Care Excellence.

National Institute for Health and Care Excellence, 2009. *Medicines adherence: involving patients in decisions about prescribed medicines and supporting adherence Clinical guideline [CG76]*. [Online] Available at: <https://www.nice.org.uk/guidance/cg76> [Accessed 19 02 2017].

National Institute of Health and Care Excellence, 2015. *Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes. NICE guideline [NG5]*. [Online] Available at: <https://www.nice.org.uk/guidance/ng5> [Accessed 19 02 2017].

National Institute for Health and Care Excellence, 2016. *Multimorbidity: clinical assessment and management NICE guideline [NG56]*. [Online] Available at: <https://www.nice.org.uk/guidance/ng56> [Accessed 19 02 2017].

National Patient Safety Agency, 2011. *NPSA releases Organisation Patient Safety Incident reporting data (England)*. [Online] Available at: <http://www.npsa.nhs.uk/corporate/news/npsa-releases-organisation-patient-safety-incident-reporting-data-england/> [Accessed 6 3 2017].

Nazar, H; Brice, S; Akhter, N; Kasim, A; Gunning, A; Slight, S P; Watson, N., 2016. New transfer of care initiative of electronic referral from hospital to community pharmacy in England: a formative service evaluation. *BMJ Open*, 6(e012532.), pp. doi: 10.1136/bmjopen-2016-012532.

NHS Cumbria Medicines Management Team, 2013. *Clinical Medication Review A Practice Guide*. [Online] Available at: <http://www.cumbria.nhs.uk/ProfessionalZone/MedicinesManagement/Guidelines/MedicationReview-PracticeGuide2011.pdf> [Accessed 19 02 2017].

NHS Employers and Pharmaceutical Services Negotiating Committee, 2013. *Guidance on the Medicines Use Review service*. [Online] Available at: <http://www.nhsemployers.org/~media/Employers/Documents/Primary%20care%20contracts/Pharmacy/MUR%20Guidance.pdf> [Accessed 6 3 2017].

NHS England, 2017. *Patient activation and PAM FAQs*. [Online] Available at: <https://www.england.nhs.uk/ourwork/patient-participation/self-care/patient-activation/pa-faqs/#11> [Accessed 23 4 2017].

NHS Institute for Innovation and Improvement, 2008. *Plan, Do, Study, Act (PDSA) What is it and how can it help me?*. [Online] Available at: http://webarchive.nationalarchives.gov.uk/20121108074656/http://www.institute.nhs.uk/quality_and_service_improvement_tools/quality_and_service_improvement_tools/plan_do_study_act.html [Accessed 19 02 2017].

NHS Specialist Pharmacy Service, 2017. *The first stop for professional medicines advice*. [Online] Available at: <https://www.sps.nhs.uk/> [Accessed 19 02 2017].

Nieuwlaat, R; Wilczynski, N; Navarro, T; Hobson, N; Jeffery, R., 2014. *Interventions for enhancing medication adherence (Review)*, Chichester, UK.: John Wiley & Sons, Ltd

Nunney, J. and Raynor, D.K., 2001. How are multi-compartment compliance aids used in primary care?. *Pharmaceutical Journal*, 267, pp.784-789.

Nursing and Midwifery Council, 2015. *The Code Professional standards of practice and behaviour for nurses and midwives*, London: Nursing and Midwifery Council .

Oboh, L. & Barnett, N., 2016. *Optimising medicines and Deprescribing for older people*. Liverpool: British Geriatric Society conference 12 May 2015.

Office for National Statistics, 2014. *Statistical bulletin:Estimates of the Very Old (including Home People, population and community Births, deaths and marriages Ageing Estimates of the Very Old (including Centenarians) for the United Kingdom: 2002-2012*, London: Office for National Statistics.

Office for National Statistics, 2015. *How has life expectancy changed over time?*. [Online] Available at: <http://visual.ons.gov.uk/how-has-life-expectancy-changed-over-time/> [Accessed 19 02 2017].

Office for National Statistics, 2016. *Statistical bulletin:Estimates of the very old (including centenarians), UK: 2002 to 2015*, London: Office for National Statistics.

Oliver, D., Foot, C. & Humphries, R., 2014. *Making our health and care systems fit for an ageing population*. [Online] Available at: https://www.kingsfund.org.uk/sites/files/kf/field/field_publication_file/making-health-care-systems-fit-ageing-population-oliver-foot-humphries-mar14.pdf [Accessed 19 02 2017].

Olsen, J. & Nesbitt, B., 2010. Health coaching to improve healthy lifestyle behaviors: an integrative review. *American Journal of Health Promotion.*, 25(1), pp. e1-e12.

Oxford University Press, 2017. *English Oxford Living Dictionaries*. [Online] Available at: <https://en.oxforddictionaries.com/definition/patient> [Accessed 19 02 2017].

Page E. 2014. How good are your consultation skills? *Pharmaceutical Journal*, 292(7802/3), p. 328

Paulus, T., Woodside, M. & Zeigler, M., 2008. Extending the Conversation: Qualitative Research as Dialogic Collaborative Process. *Qualitative Report*, 13(2), pp. 226-243.

Picton, C., Dayan, M. & Smith, J., 2014. *Now more than ever: why pharmacy needs to act*. [Online] Available at: <https://www.nuffieldtrust.org.uk/research/now-more-than-ever-why-pharmacy-needs-to-act> [Accessed 19 02 2017].

Picton, C. & Wright, H., 2013. *Medicines Optimisation: Helping patients to make the most of medicines*, London: Royal Pharmaceutical Society.

Pirmohamed, M; James, S; Meakin, S; Green, C; Scott, A K; Walley, T J; Farrar, K; Park, B K; Breckenridge, A M., 2004. Adverse drug reactions as cause of admission to hospital: prospective analysis of 18 820 patients. *British Medical Journal*, 329(7456), p. 15.

Poots, A.J., Jubraj, B. and Barnett, N.L., 2017. Education around deprescribing: 'spread and embed' the story so far.

Prescribing and Research in Medicines Management (UK and Ireland), 2017. *Deprescribing – is less more? PRIMM 28th Annual Scientific Meeting*. London, Prescribing and Research in Medicines Management (UK and Ireland).

Pushor, D., 2012. Collaborative Research. In: L. M. Given, ed. *The SAGE Encyclopedia of Qualitative Research Methods*. Thousand Oaks, California: SAGE Publications, Inc, pp. 92-94.

Ranasinghe, D. & Miller, P., 2007. *Action research for continuous quality improvement in aged care*. Lismore, New South Wales: Southern Cross University Pres.

Reed, J E; McNicholas, C; Woodstock, T; Issen, L; Bell, D., 2014. Designing quality improvement initiatives: the action effect method, a structured approach to identifying and articulating programme theor. *BMJ Quality and Safety*, Volume 23, p. 1040–1048.

Robinson, S., 2015. Consultant pharmacist numbers 'should rise ten-fold'. *Pharmaceutical Journal*, 295(7874/5), p. DOI: 10.1211/PJ.2015.20069078.

Rollnick, S; Butler, C C; Kinnersley, P; Gregory, J; Mash, B., 2010. Motivational interviewing. *British Medical Journal*, Volume 340, p. c1900.

Rosen, O Z; Fridman, R; Rosen, B T; Shane, R; Pevnick, J M ., 2017. Medication adherence as a predictor of 30-day hospital readmissions. *Patient Preference and Adherence*, Volume 11, pp. 801-810.

Royal College of General Practitioners, 2014. *Inquiry into Patient Centred Care in the 21st Century*. [Online] Available at: <http://www.rcgp.org.uk/policy/rcgp-policy-areas/inquiry-into-patient-centred-care-in-the-21st-century.aspx> [Accessed 19 02 2017].

Royal College of Physicians and British Geriatrics Society. , 1992. *High quality long term care for older people*, London: Royal College of Physicians .

Royal College of Physicians of London, 1997. *Medication for older people.*, London: Royal College of Physicians of London.

Royal Pharmaceutical Society and General Pharmaceutical Council, 2014. *Using standards and guidance to ensure patient centred professionalism in the delivery of care A joint statement*. [Online] Available at: <http://www.rpharms.com/news-story-downloads/rps-gphc-joint-statement.pdf> [Accessed 19 02 2017].

Royal Pharmaceutical Society and National Voices, 2015. *The role of pharmacy in delivering person-centred care*. [Online] Available at: <https://www.rpharms.com/promoting-pharmacy-pdfs/nat-voices---rps---event-report-4pp-web.pdf> [Accessed 19 02 2017].

Royal Pharmaceutical Society Wales, 2014. *Your Care, Your Medicines: Pharmacy at the heart of patient-centred care*. [Online] Available at: <http://www.rpharms.com/wales-pdfs/YourCareYourMedicines.pdf> [Accessed 19 02 2017].

Royal Pharmaceutical Society, 2012a. *Getting your medicines right*. [Online] Available at: <http://www.rpharms.com/previous-projects/getting-the-medicines-right.asp?> [Accessed 19 02 2017].

Royal Pharmaceutical Society, 2012b. *Keeping patients safe when they transfer between care providers – getting the medicines right*, London: Royal Pharmaceutical Society.

Royal Pharmaceutical Society, 2013. *Improving patient outcomes. The better use of multi-compartment compliance aids*, London: Royal Pharmaceutical Society.

Royal Pharmaceutical Society, 2016. *Improving Care for People with Long Term Conditions*, London: Royal Pharmaceutical Society.

Royal Pharmaceutical Society, 2016a. *RPS Roadmap to Advanced Practice Appendix 3*, London: Royal Pharmaceutical Society.

Rutter, T. & Barnett, N., 2007. Good management: A milestone in self management. *Health Service Journal*, 09 07.

Schnipper, J. L., Kirwin, J. L., Cotugno, M. C. & Wahlstrom, S. A., 2006. Role of pharmacist counseling in preventing adverse drug events after hospitalization. *Archives of Internal Medicine*, 66(5), pp. 565-71.

Scott, I A; Hilmer, S N; Reeve, E; Potter, K; Le Couteur, D; Rigby, D., 2015. Reducing inappropriate polypharmacy: the process of deprescribing. *JAMA Intern Medicine*, 175(5), pp. 827-34.

Scott, I., Anderson, K. & Freeman, C., 2017. Review of structured guides for deprescribing. *European Journal of Hospital Pharmacy*, 24(1), pp. 51-57.

Scott, M G; Scullin, C; Hogg, A; Fleming, G F; McElnay, J C., 2015. Integrated medicines management to medicines optimisation in Northern Ireland (2000–2014): a review. *European Journal of Hospital Pharmacy*, 22(4), pp. 222-228.

Scullin, C; Hogg, A; Luo, R; Scott, M B; McElnay, J C., 2012. Integrated medicines management – can routine implementation improve quality?. *Journal of Evaluation in Clinical Practice*, 18(4), pp. 807-815.

Scullin, C., Scott, M. G., Hogg, A. & McElnay, J. C., 2007. An innovative approach to integrated medicines management. *Journal of Evaluation in Clinical Practice*, 13(5), pp. 781-8.

Seden, K; Kirkham, J J; Kennedy, T; Lloyd, M; James, S., 2013. Cross-sectional study of prescribing errors in patients admitted to nine hospitals across North West England. *BMJ Open*, Volume 3, pp. e002036. doi: 10.1136/bmjopen-2012-002036.

Shaw, J., Seal, R. & Pilling, M., 2002. *Room for Review A guide to medication review: the agenda for patients, practitioners and managers*., London: Task Force on Medicines Partnership and The National Collaborative Medicines Management Services Programme.

Smith, J., Picton, C. & Dayan, M., 2013. *Now or Never: Shaping pharmacy for the future*, London: Royal Pharmaceutical Society.

Smith, K., Oboh, L. & Barnett, N., 2016. *Polypharmacy and Deprescribing: Road Testing the Patient-centred approach to Deprescribing*. Copenhagen, World Organization of Family Doctors (WONCA) Europe.

Smith, M. K., 1999, 2011. *what is praxis?*. [Online] Available at: <http://infed.org/mobi/what-is-praxis/> [Accessed 19 02 0217].

Sood, J., Amin, S. & Barnett, N., 2005. A medicines management service has a positive impact on older people's care. *Pharmacy in Practice*, Volume 16, pp. 359-363.

Soundcloud for BMJ Talk Medicine, 2016. *Deprescribing: a special issue from EJHP Unlimited*. [Online] Available at: https://soundcloud.com/bmjpodcasts/deprescribing-a-special-issue-from-ejhp?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+ejhp%2Fpodcasts+%28Latest+from+EJHP+podcasts%29 [Accessed 28 03 2017].

Stanton, L. & Lyon, R., 2015. Using adherence therapy and motivational interviewing to address patients' concerns about their experiences with medication. In: C. Picton, ed. *Measuring and improving patients' experience of care*. London: Royal Pharmaceutical Society, pp. 7-8.

Stewart, D C; Johnson, G; Bond, C M; Diack, H L; McCaig, D J; Cunningham, C., 2009. Views of pharmacist prescribers, doctors and patients on pharmacist prescribing implementation. *International Journal of Pharmacy Practice*, 17(2), pp. 89-94.

Szymanski, T., 2016. *Cost-Effectiveness analysis of comprehensive medication review (CMR) for patients acutely admitted to hospital*. Vienna, International Society for Pharmacoeconomics and Outcomes Research.

Tang, W., 2016. *Personal communication*. Royal Pharmaceutical Society, London.

Taylor, D., 2017. *Personal communication, Chair of United Kingdom Clinical Pharmacy Association Care of the Elderly Group*. Leicester: s.n.

Tefft, M. & Denham, M. J., 1995. *Drug use amongst the elderly*. North West Thames Regional Health Survey 1989-91. North West Thames: (unpublished observations).

The European Commission , 2014. *EMPATHiE Empowering patients in the management of chronic diseases*. [Online] Available at: http://ec.europa.eu/health/sites/health/files/patient_safety/docs/empathie_frep_en.pdf [Accessed 19 02 2017].

The Royal Pharmaceutical Society England, 2013. *New models of pharmacy: what is emerging and what is possible. A review of the literature in A Shared Focus: Comparing the Australian, Canadian, United Kingdom and United States Pharmacy Learning Outcome Frameworks and the Global Competency Framework*, London: The Royal Pharmaceutical Society.

The Scottish Government and NHS Scotland , 2015. *Polypharmacy Guidance March 2015* , Edinburgh: NHS Scotland and the Scottish Government.

Thom, D.H., Willard-Grace, R., Hessler, D., DeVore, D., Prado, C., Bodenheimer, T. and Chen, E., 2015. The impact of health coaching on medication adherence in patients with poorly controlled diabetes, hypertension, and/or hyperlipidemia: a randomized controlled trial. *The Journal of the American Board of Family Medicine*, 28(1), pp.38-45.

Thompson, W. & Farrell, B., 2013. Deprescribing: What Is It and What Does the Evidence Tell Us?. *Canadian Journal of Hospital Pharmacy*, 66(3), p. 201–202.

- Tierney, W. G. & Sallee, M. W., 2012. William G. Tierney & Margaret W. Sallee Edited by: Lisa M. Given Book Title: The SAGE Encyclopedia of Qualitative Research Methods CPraxis. In: L. Given, ed. *The SAGE Encyclopedia of Qualitative Research*. Thousand Oaks, California: SAGE Publications, Inc., pp. 676-680.
- UK Government, 2001. *Health and Social Care Act*. London: Her Majesty's Stationery Office.
- UK Supreme Court. *Montgomery v Lanarkshire Health Board* [2015] UKSC 11 (11 March 2015)
- United Kingdom Clinical Pharmacy Association, 1996. *The UKCPA Statement on Pharmaceutical Care*, Leicester: United Kingdom Clinical Pharmacy Association.
- University of Southern California, 2017. *Organizing Your Social Sciences Research Paper: Types of Research Designs*. [Online] Available at: <http://libguides.usc.edu/writingguide/researchdesigns> [Accessed 19 02 0217].
- Vilasuso, M. & Barnett, N., 2007. Self-medication - take it or leave it. *Pharmaceutical Journal* 2007;278:72. *Pharmaceutical Journal*, Volume 278, p. 72.
- Waterman, H., Tillen, D., Dickson, R. & de Koning, K., 2001. *Action research: a systematic review*, Southampton: The National Coordinating Centre for Health Technology Assessment.
- Weekes, H., 2014. Hospital pharmacy practice: US versus UK. *Tomorrow's Pharmacist*, p. online | URI: 11138998.
- Wharton, C., 2006. Document analysis. In: V. Jupp, ed. *The SAGE Dictionary of Social Research Methods*. Thousand Oaks, California: Sage Publications Inc., pp. 80-81.
- White, D., 2014. A service evaluation of acceptability and patient experience of pharmacy consultations conducted within a CBT framework. *European Journal of Hospital Pharmacy*, Volume 21, pp. 170-174.
- Whitmore J., 1992. *Coaching for performance: growing human potential and purpose: the principles and practice of coaching and leadership*. London, UK: Nicholas brierley publishing.
- Wiedenmayer, K; Summers, R S; Mackie, C A; Gous, A G; Everard, M., 2006. *Developing pharmacy practice. A focus on patient care*, Geneva: World Health Organization and International Pharmaceutical Federation.
- Williamson, J. & Chopin, J. M., 1980. Adverse reactions to prescribed drugs in the elderly: a multicentre investigation. *Age and Ageing*, 9(2), pp. 73-80.
- Winter, G. & Adcock, H., 2016. Carter review calls for more clinical pharmacists to be deployed by NHS trusts. *Pharmaceutical Journal*, 296(7886), p. DOI: 10.1211/PJ.2016.20200670.
- Witherington, E. M., Pirzada, O. & Avery, A. J., 2008. Communication gaps and readmissions to hospital for patients aged 75 years and older : observational study. *Quality and Safety Health Care*, 17(1), pp. 71-75.
- Wolever, R. Q. & Dreusicke, M. H., 2016. Integrative health coaching: a behavior skills approach that improves HbA1c and pharmacy claims-derived medication adherence. *BMJ Open Diabetes Research and Care*, Volume 4, p. e000201.

Wolever, R. Q., Simmons, L. A., Sforzo, G. A. & Dill, D., 2013. Wolever RQ, Simmons LA, Sforzo GA, et al. A Systematic Review of the Literature on Health and Wellness Coaching: Defining a Key Behavioral intervention in Healthcare. *Global Advances in Health and Medicine.*, 2(4), pp. 38-57.

Woodward, M. C., 2003. Deprescribing: Achieving Better Health Outcomes for Older. *Journal of Pharmacy and Practice Research*, Volume 33, p. 323–8.

Working party of the Royal College of Physicians., 1997. Medication for Older People Royal College of Physicians (London) 1997;31:254-7. *Journal of the Royal College of Physicians (London)*, Volume 31, pp. 254-7.

World Health Organisation, 1994. *The Role of the Pharmacist in the Health Care System*, New Delhi: World Health Organisation.

World Health Organisation, 1997. *The Role of the Pharmacist in the Health-Care System - Preparing the Future Pharmacist: Curricular Development, Report of a Third WHO Consultative Group on the Role of the Pharmacist Vancouver, Canada, 27-29 August 1997*, Geneva: World Health Organisation.

World Health Organisation , 2005. *Preparing a health care workforce for the 21st century The Challenge of chronic conditions Competency 1 patient centred care*. [Online]
Available at: http://www.who.int/chp/knowledge/publications/workforce_report.pdf?ua=1
[Accessed 19 02 2017].

World Health Organisation, 2007. *People-Centred Health Care A policy framework*, Western Pacific Region: World Health Organisation Geneva.

World Health Organisation, 2011. *Global Health and Aging*. [Online]
Available at: http://www.who.int/ageing/publications/global_health.pdf
[Accessed 19 02 2017].

Wright, D., 2016. *A rapid review of evidence regarding clinical services commissioned from community pharmacies*, London: NHS England.

Zermansky, A., Petty, D. R., Raynor, D. K. & Freemantle, N., 2001. Randomised controlled trial of clinical medication review by a pharmacist of elderly patients receiving repeat prescriptions in general practice. *British Medical Journal*, Volume 323, p. 1340.

*References provided on USB drive (back pocket of thesis)

BLANK

7 Appendices

7.1 Appendix 1: Literature search terms

MeSH terms: aged, pharmacy service, hospital (includes clinical pharmacy service) patient-centered care, medication adherence,

EMBASE terms: Patient centred care, collaborative care, patient focussed care, Pharmacy practice, pharmaceutical care, medicines management, medicines optimisation Older people , elderly, geriatrics, aged, older people, in-patients hospital Clinical Pharmacy Service, In-patients, Patients, Pharmaceutical care = pharmaceutical service pharmacists.

Additional terms considered from exploded keywords, terms from references identified: Person centred, patient centred, people centred care, old, older, elderly , aged, geriatrics, “pharmacy practice”, “pharmaceutical care”, “medicines optimisation”, “drug management”, “medicine management”, “medication review” “health coaching” “patient empowerment” “patient activation” “shared decision making” “ empathy”

NICE evidence 2.2.17 Database(s) Search Term

1 [AMED](#), [BNI](#), [CINAHL](#), [EMBASE](#), [HBE](#), [HMIC](#), [Medline](#), [PsycINFO](#), [PubMed](#)((patient OR people OR person) AND (centred OR centred)) AND care).ti,ab [View](#) Results [\[23,446\]](#) [Edit](#)

2 [AMED](#), [BNI](#), [CINAHL](#), [EMBASE](#), [HBE](#), [HMIC](#), [Medline](#), [PsycINFO](#), [PubMed](#)("pharmaceutical care" OR "pharmacy practice" OR "medicines optimisation" OR "pharmacist").ti,ab [View](#) Results [\[74,599\]](#) [Edit](#)

3 [AMED](#), [BNI](#), [CINAHL](#), [EMBASE](#), [HBE](#), [HMIC](#), [Medline](#), [PsycINFO](#), [PubMed](#)(old OR older OR aged OR elderly OR geriatric).ti,ab [View](#) Results [\[9,960,571\]](#) [Edit](#)

4 [AMED](#), [BNI](#), [CINAHL](#), [EMBASE](#), [HBE](#), [HMIC](#), [Medline](#), [PsycINFO](#), [PubMed](#)(((((patient OR people OR person) AND (centred OR centred)) AND care) AND ("pharmaceutical care" OR "pharmacy practice" OR "medicines optimisation" OR "pharmacist"))) AND (old OR older OR aged OR elderly OR geriatric)).ti,ab Results [\[23\]](#)

Allied and Complementary Medicine (AMED) British Nursing Index (BNI), Cumulative Index of Allied and Nursing Health Literature (CINAHL) Excerpta Medica (EMBASE), Health Business Elite (HBE) Health Management Information Consortium (HMIC) , Medline and PubMed (general medical databases) Psychology and allied fields (PsychInfo)

OVID 2.2.17

International Pharmaceutical Abstracts 1970 to January 2017, **Social Policy and Practice** 201701

((patient or people or person) and (centred or centred) and care and ("pharmaceutical care" or "pharmacy practice" or "medicines optimisation" or "pharmacist") and (old or older or aged or elderly or geriatric)).mp. [mp=ti, hw, rw, ab, tn, pt, an] Results 2

Example of where author's work contributed

OVID Embase medline psychoinfo social policy and practice International pharmaceutical abstracts

1. (patient or people or person) and (centred or centred) and care). 18351

7. "pharmaceutical care" or "pharmacy practice" or "medicines optimisation". 36173

3. older or aged or elderly or geriatric 9067941

10. (medication or medicine or medicines) and review) 448800

33. "health coaching" 796

1 and 3 and 7 = 26

7 and 33= 4 3 are the same one by me

"health coaching" and "pharmacy" 32 (2 by the author)

2. ((medicine or medication or medicines) and (adherence or compliance)) 119838

3. "health coaching" 724

4. (pharmacy or pharmacist). 274460

2 and 3 and 4 = 16

Remove duplicates 9 (2 papers are mine)

7.2 Appendix 2 Iterations of structure

First iteration: chronological, linking health professional and pharmacy activity with author's activity, outputs and impact

Key: Centre for Pharmacy Postgraduate Education (CPPE) Department of Health (DH) General Pharmaceutical Council (GPhC) Integrated Medicines Management Service (IMMS) Medicines use review (MUR) Multidisciplinary team (MDT) National Institute for Health and Care Excellence (NICE) National service framework (NSF) New medicines service (NMS) Older people (OP) Royal college of Physicians (RCP) Royal Pharmaceutical Society (RPS) Shared Decision Making (SDM) World Health Organisation (WHO)

Potential chapter headings:	Health professionals and pharmacy activity	Author's activity	Outputs and Impact
Introduction	What is person-centred care, why important What is pharmacy practice, breadth, my focus	Brief history of hospital pharmacy practice to give context. What did I identify that was missing from pharmacy practice and what was the patient perspective on health care?	
Methodology	What methods were used in papers	What did I use? Literature review, observation of current practices (literature and direct), identification of professional standard for pharmacy. What were other profs doing. How could this apply to pharmacy? Gaps and how to fill them (what can we take from others into our practice?)	
1980s and 90s	Development from ward to clinical pharmacy Geriatrics, therapies and medicine activity Link to community pharmacy. Clinical to specialist pharmacy Development of person centred care outside pharmacy	What did I identify - over-the-counter medicines, clinical approach compared to person centred team approach MDT on the geriatric wards, holistic care, ward round (junior pharmacist role) person centred care in medicine Primary care and medicines information experience, academic (MSc/ diploma). Focus on older people speciality with holistic view	OP- related articles, work with universities on modules for older people
4 2000s	NSF for older people document, RCP document. Focus on pharmacy input, medication review, prescribing specialism of OP. Adherence who 2003	Need for clinical and communication (referenced in publications. Model effective behaviours on published successes, OP project, medicines reconciliation, medication review, consultation and communication. Interface support, person-centred, holistic, clinical care	OP Services developed, prescribing services, RPS prescriber work, mentoring, communication Pharmacy case studies (book)
5 2010s	Prescribing in general practice, Patient-focussed care (community and hospital) National imperative long term conditions and self management	Use in all sectors including community domiciliary, general practice, clinics, hospital prescribing. National roles, national publications, supporting national organisations, papers on coaching, behaviour change, integrating into routine pharmacy practice pharmacy and others. Behavioural change to support medicines optimisation integrated into postgraduate, undergraduate and prescribing competencies. Person-centred concept introduced into polypharmacy, deprescribing.	
6 Summary, recommendations	Patient facing clinical care – medicines optimisation, included in all undergraduate programmes, research needed to optimise efficacy of training and matching skills to roles person-centred to collaborative to patient perspective care.		

Second iteration

	Summary of evidence to support my contribute to the development of Person-centred Care in Pharmacy Practice				
	Introduction: Person-centred care, pharmacy practice, older people	Pharmacy practice working with older people	Development of pharmacy practice 1997 to date	Challenges to medicines optimisation in pharmacy practice	Development of a person-centred approach – models of care
Literature /national documents	Definition UK and similar philosophies of care world health organisation, US, Canada, and Australia?	RCP and NSF Spoonful of sugar, , medication review, cross sector, intermediate and integrated care	Ward, clinical, prescribing, community pharmacy medication review, General practice-based pharmacists	Polypharmacy, multimorbidity, deprescribing, meds adherence	SDM, Self care, behaviour change, Health Foundation, King's fund, DH drive
My contribution and Ideas generated for practice	Idea from medicines to move into pharmacy. Pharm as part of MDT, collaborative working	Developing clinical and communication practice. Patient life outside health and clinical focus	leaders consultant practice, OP curriculum, interface work MUS NMS in community pharmacy. Developing a person-centred approach	National thinking for pharmacy (all above). How to change pharmacy practice to patient-centred practice	Coaching approach to consultations, empathy in pharmacy practice

Notes: Explain all the key terms in introduction, key documents, what is person-centred care, what is pharmacy practice (UK and international models where philosophy of care is similar), why important breadth, my focus. Provide brief history of hospital pharmacy practice to give context. Include what did I identify that was missing from pharmacy practice - patient perspective on health care? Methods Qualitative, action research based, dialogic collaborative praxis

Third iteration

	Introduction: Person-centred care, pharmacy practice, older people	Pharmacy practice working with older people	Development of pharmacy practice 1997 to date	Medicines optimisation challenges and models of care Development of a person-centred approach
Literature/ national documents	Definition of person-centred care, pharmacy practice, context of older people. Use WHO docs, link to UK bodies and definitions in similar philosophies of care US, Canada, Australia	Key docs incl. RCP, NSF Spoonful of sugar. MDT working, med review, cross sector working, development of intermediate and integrated care	Journey through ward, clinical, prescribing pharmacy practice, Community medication review (MUR/NMS), newer patient facing work for general practice-based pharmacists	Polypharmacy, multimorbidity, deprescribing, medicines adherence Shared decision making, Self-care, behaviour change. Supported by health foundation King's fund, DH. National documents, Five year forward view with pharmacy and national documents preceding them.
My contribution and Ideas	Publications about older people. Idea	Publications developing clinical and	Publishing consultant practice in pharmacy (pharmacy leaders),	Publishing to help put above in practice developing national

generated for practice	from medicine (geriatrics) to move into pharmacy. Pharmacy as part of MDT, collaborative, cross sector working	communication practice in parallel. Considering the patient life outside the traditional (medicines) health and clinical focus	prescribing, developing older people curriculum (RPS), new models of care and interface work Developing a person-centred approach,	thinking for pharmacy (all above). Publishing support for how to change pharmacy practice to patient-centred practice. Coaching approach to consultations, empathy in pharmacy practice work with CPPE, DH, NICE
------------------------	--	--	---	--

Fourth iteration after discussion with the author's supervisors

Introduction: Person-centred care, pharmacy practice, older people Publications about older people. Geriatrics to Pharmacy as part of multidisciplinary team collaborative, cross-sector working	Literature from Pharmacy and national context My contribution and Ideas generated for practice	Pharmacy practice working with older people, RCP, NSF Publications developing clinical and communication practice in parallel. Considering the patient life outside the traditional (medicines) health and clinical focus	Leadership in pharmacy practice 1997 to date: new consultant and pharmacist prescribing roles Publishing consultant practice in pharmacy (pharmacy leaders), prescribing, developing older people curriculum (RPS), new models of care and interface work Developing a person-centred approach,	Medicines optimisation through medicines adherence and health coaching, supporting patients at risk of preventable medicines-related re-admission, medication review, polypharmacy and deprescribing Publishing to help put above in practice developing national thinking for pharmacy (all above). Publishing support for how to change pharmacy practice to pt. centred practice. Coaching approach to consultations, empathy in pharmacy practice work with CPPE, DH, NICE
---	---	--	---	---

Fifth iteration following review of health-related PhD by publication

Introduction: Explain Person-centred care, pharmacy practice, older people Outline publications that influenced practice Geriatrics to Pharmacy as part of multidisciplinary team collaborative, cross-sector working	Methodology: explanation of methods used in various publications and how these methods were fit for purpose, with examples of where used in my work	Developing skills in Pharmacy practice: Older people - Considering the patient life outside the traditional (medicines) health and clinical focus, learning leadership skills to later take forward person-centred work in pharmacy	Medicines optimisation through: Compliance aids to medicines adherence and health coaching Coaching approach to consultations, empathy in pharmacy practice work with CPPE, DH, NICE. Medication review and supporting patients at risk of preventable medicines-related re-admission, polypharmacy and deprescribing. Publishing to help put above in practice developing national thinking for pharmacy (all above) Publishing support for how to change pharmacy practice to patient-centred practice.
Literature from Pharmacy and national context (DH, RCP, NSF, WHO etc). Put into context what I contributed and Ideas generated for practice. State aims and objectives	Action research Document analysis Dialogue Collaborative Praxis Quantitative pilots	Older people (clinical, curriculum) In-patient and intermediate care Consultant (leadership) Prescriber (new consultations)	Describe new models of care and interface work Developing a person-centred approach through coaching Developing pharmacy work through patients at risk of preventable medicines-related re-admission, Combining the two in the polypharmacy and deprescribing work

Sixth iteration following discussion with pharmacy project manager

Introduction:	Methodology:	Development:	Implementation:	Impact:
<p>Explanation of Person-centred care, pharmacy practice, older people Outline publications that influenced practice Geriatrics to Pharmacy as part of multidisciplinary team collaborative, cross-sector working</p>	<p>Explanation of methods used in various publications and how these methods were fit for purpose, with examples of where used in my work</p>	<p>Clinical, communication, leadership, education Clinical skills and considering the patient life outside the traditional (medicines) health and clinical focus, learning leadership skills to later take forward person-centred work in pharmacy.</p>	<p>Local: supporting patients at risk of preventable medicines-related re-admission (integrated medicines management service, IMMS), National :Coaching approach to consultations, empathy in pharmacy practice work polypharmacy and deprescribing Publishing to help put above in practice developing national thinking for pharmacy (all above) Publishing support for how to change pharmacy practice to patient-centred practice.</p>	<p>Local: changes to local processes National: contribution to DH, NICE , CPPE, RPS. National and international publications and conferences. Change to practice. Recommendations with guidelines e.g. prescriber guidelines, GPhC, RPS, consultations skills frameworks</p>
<p>Literature from Pharmacy and national context (DH, RCP, NSF, WHO etc). Put into context what I contributed and Ideas generated for practice. State aims and objectives</p>	<p>Method include: Action research Document analysis Dialogue Collaborative Praxis Quantitative pilots</p>	<p>Older people (clinical, leadership, education) In-patient and intermediate care, including medication review(clinical) Consultant (leadership) Prescriber (leadership, education) Medicines adherence, med review, health coaching (communication, education) Link all 3 deprescribing, polypharmacy</p>	<p>IMMS patients local pharmacy work reducing at risk of preventable medicines-related re-admission, describe new models of care and interface work coaching, person-centred approach through use within IMMS, teaching, CPPE, DH, NICE Medication review using a coaching approach to polypharmacy and deprescribing Combining clinical, communication and using leadership and education to develop coaching, polypharmacy and deprescribing work. Cross discipline work to spread message, collaboration outside health (deprescribing, law)</p>	<p>Summarise comparison of author's work to existing work in the area and highlight contributions and challenges from other published work and author's own work. Describe recommendations for future work.</p>

The authorship statements have been removed from the electronic copy of the thesis. They can still be viewed in the print copy.

9 Key publications supporting this thesis

This section offers the reader a selection of the author's publications referred to Chapters 1-5 of this thesis. The publications are arranged according to the themes described in Chapters 3 and 4, to provide evidence of the author's contribution to developing a person-centred approach to pharmacy practice. The publications have been reproduced in full and may be viewed on the credit card USB drive, found in the plastic pocket at the end of this thesis, together with video and audio files.

Older people

Denham M and Barnett N.L. Drug Therapy and the older person - The role of the pharmacist. *Drug Safety* 1998 Vol 19 No 4 p243-250

Barnett N and Francis SA 2002 National Service Framework for Older People: The role of the pharmacist, pilot study. Final Report.

Barnett N.L. Taylor D. Care of the Elderly – How pharmaceutical care has developed. *Hospital Pharmacist* 2004 vol11 p225-230

Bowyer, C. & Barnett, N., 2005. Does the HOMER trial signal the end for pharmacist medication reviews?. *Pharmaceutical Journal*, Volume 274, p. 620.

*Barnett, N. L., D. & Bowyer, C., 2007. Making medication reviews work for patients. Rapid response to Salter C et al. *British Medical Journal*, p. doi:10.1136/bmj.39171.577106.55 (published 20 April 2007).

Barnett N and Oboh L. A new medication review guide from NPC Plus and the Medicines Partnership will benefit both pharmacists and patients. *Pharmacy in Practice*. March/April 2009 p53-54

Impact of prescribing

Barnett N. Nonmedical prescribing for patients in long term care. *Prescriber*. 2007;18;23-24

Barnett N. Prescribing on the wards – is it coming of age? *Hospital Pharmacist* 2008;15:234

Consultant role

Barnett N. "Consultant Pharmacist."- What does it mean? *Hospital Pharmacist* 2008;15:34

Mason J, Stephens M and Barnett N. Releasing the potential of consultant pharmacists in the new NHS arena. *Pharmaceutical Journal* 2010;28:467

Local implementation: Integrated Medicines Management Service (IMMS)

Fertleman M, Barnett NL, and Patel T. Improving medication management for patients: The effect of a pharmacist on post-admission ward rounds. *Quality and Safety in Health Care* 2005 vol14

Athwal D, Barnett NL and Rosenbloom EK. Medicines-related admissions: you can identify patients to stop that happening. *Pharmaceutical Journal* 2011;286:471-2

Barnett, N. & Blagburn, J., 2016:. Reducing preventable hospital admissions: A way forward. *Clinical Pharmacist*, 8(1), p. DOI: 10.1211/PJ.2016.20200365.

Barnett, N., Parmar, P. & Ward, C., 2013a. Supporting continuity of care: referral to the NMS after discharge from hospital. *Pharmaceutical Journal* Volume 290, p. 178.

Barnett NL Dave K Kaher S Parmar P and Ward C. Impact of integrated medicines management services (IMMS) on preventable medicines-related re-admission to hospital: A descriptive study. *European Journal of Hospital Pharmacy* 2016 doi:10.1136/ejhpharm-2016-000984

National implementation

Medicines adherence

Barnett N and Oboh L. Interpreting guidance on medicines adherence. *British Journal of Clinical Pharmacy* 2009:1:283

Barnett NL. Adherence: A taste of my own medicine. *Pharmaceutical Journal* 2011:287:201

Barnett N Varia S and Jubraj B. Adherence: Are you asking the right questions and taking the best approach? *Pharmaceutical Journal* 2013;291:153

Coaching

Barnett, N. L., 2011. The new medicines service and beyond – taking concordance to the next level. *Pharmaceutical Journal*, Volume 287, p. 653.

Barnett, N. & Sanghani, P., 2013. A coaching approach to improving concordance. *International Journal of Pharmacy Practice*, 21(4), p. 270–272.

Barnett N. 2015 Patient centred consultations to support medicines adherence: a coaching approach. *Pharmacy Technician Journal*. September p 28-29

In Consultation skills for pharmacy practice: taking a patient-centred approach Chapter 5 Health Coaching March 2014 Centre for Postgraduate Pharmacy Education

Empathy

Jubraj B, Barnett NL, Grimes L, Varia S, Chater A, and Auyeung V. Why we should understand the patient experience: clinical empathy and medicines optimisation. *International Journal of Pharmacy Practice* Article first published online: 21 APR 2016 | DOI: 10.1111/ijpp.12268

Polypharmacy

Barnett NL Oboh K and Smith K. Patient-centred management of polypharmacy: a process for practice *Eur J Hosp Pharm* ejhpharm-2015-000762 Published Online First: 23 December 2015 doi:10.1136/ejhpharm-2015-000762

Deprescribing

Barnett N and Sokol D. Why pharmacists need to re-evaluate what information they provide to patients *The Pharmaceutical Journal*, Vol 298, No 7897, online | DOI: 10.1211/PJ.2017.20202226 (accessed 6.2.17)

Barnett N, Jubraj B. A themed journal issue on deprescribing. *Eur J Hosp Pharm* January 2017 Vol 24 No 1p 1-2

Barnett, N. & Kelly, O., 2017. Legal implications of deprescribing: a case scenario. *Prescriber*, 28 March, Volume March, pp. 49-52.

Multimorbidity

Barnett, N., Payne, R. & Rutherford, A., 2016. NICE multimorbidity guideline: coping with complexity in care. *Prescriber*, 27(12), pp. 41-46.

Specialist support

Bhandal S Barnett N and Clarkson K. Development of an aphasia-friendly warfarin consultation tool for patients after stroke. *British Journal of Neuroscience Nursing* 2016;12(3):112-117

Barnett N Parmar P. How to tailor medication formulations for patients with dysphagia. *Pharmaceutical Journal* 2016:297:7892 published online 23 Aug 2016

Barnett NL Improving pharmacy consultations for older people with disabilities. *Journal of Medicines Optimisation* 2016:2(4) p 72-76

Links to multimedia content

Audio

1. Barnett N and Jubraj B. 2016. BMJ talk medicine. Deprescribing: a special issue from the European Journal of Hospital Pharmacy Podcast.
<https://soundcloud.com/bmjpodcasts/deprescribing-a-special-issue-from-ejhp>
2. Barnett N and Fattah L. 15 June 2016a. Agenda with Martyn Lewis: Polypharmacy.
<http://www.thewirelessradio.com/templates/radio/console/index.aspx?feature=c29af761-27f6-49bc-be5b-ee232fa98751&url=http%3a%2f%2fwww.thewirelessradio.com%2fradio-rss-feed%2f%3ffeature%3dc29af761-27f6-49bc-be5b-ee232fa98751&homepage=http://www.thewirelessradio.com/&radioPlayerPageID=185> 0 min to 18mins
3. Barnett N and Grimes L. 21 Sept 2016. Agenda with Martyn Lewis: Getting the most from your appointment time.
<http://www.thewirelessradio.com/templates/radio/console/index.aspx?feature=3d2b1827-56ab-46c7-b80a-307df0fcf56e&url=http%3a%2f%2fwww.thewirelessradio.com%2fradio-rss-feed%2f%3ffeature%3d3d2b1827-56ab-46c7-b80a-307df0fcf56e&homepage=http://www.thewirelessradio.com/&radioPlayerPageID=185> 23 mins to 43 mins

Video

4. Post discharge consultation. Stroke Pathway. Imperial College London. 2014.
<https://vimeo.com/78354273>
5. Barnett N and Jubraj B. Centre for Pharmacy Postgraduate Education. 2015. What would be helpful to you right now:
 - 5a. Making a difference in a short consultation.
<https://www.youtube.com/watch?v=fOSMjHikqw>
 - 5b. Making a difference in a short consultation debrief.
<https://www.youtube.com/watch?v=sW7j5PK946M>
6. Centre for Pharmacy Postgraduate Education (CPPE) Polypharmacy media wall. 2016.
 - 6a. Patient and carer consultation
https://player.vimeo.com/external/158648408.hd.mp4?s=3ff5225135d7404d3634a0284750c196ef2326bd&profile_id=113&download=1
 - 6b. Patient-centred polypharmacy process consultation
https://player.vimeo.com/external/158648407.hd.mp4?s=cd542907e7073dacd21bdeac3391bacff4c467ff&profile_id=113&download=1

National Television

7. Independent Television News (ITV) . Nina Barnett will be explaining what the new BMJ research on sleeping pills means for patients at 13.42, 28 February 2012
<https://www.youtube.com/watch?v=MebKtH7LLgU&feature=youtu.be>

All multimedia content accessed 7 June 2017